

# **DOOR COUNTY COMPREHENSIVE AND FARMLAND PRESERVATION PLAN 2035**

## **VOLUME I: VISION AND GOALS**

**Adopted by the Door County Board of Supervisors on December 16, 2014**

**Effective January 1, 2015**

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# CHAPTER 1: INTRODUCTION

This chapter provides an overview of Wisconsin's comprehensive and farmland preservation planning laws, followed by an explanation of the processes used to develop this plan and a brief description of the contents of this plan volume. Farmland preservation planning law requires Door County to have the farmland preservation portion of this plan certified by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and adopted by the county no later than December 31, 2014. Note that the county's comprehensive plan, which was originally adopted in 2009, is not required to be updated until 2019; however, it is being updated now and combined with the farmland preservation plan because of the similar statutory requirements for both plans.

Farmland preservation planning law requires consideration of the same topics as does the comprehensive planning law, and both laws have the same public participation, hearing, notification, and adoption requirements. Also, by adopting this updated comprehensive plan in 2014, future updates will be more in line with the release of decadal Census publications; the next update of this plan will happen no later than 2024.

## **OVERVIEW OF WISCONSIN'S COMPREHENSIVE AND FARMLAND PRESERVATION PLANNING LAWS**

### **COMPREHENSIVE PLANNING LEGISLATION REQUIREMENTS**

Wisconsin's Comprehensive Planning Law – 1999 Wisconsin Act 9, codified in s. 66.1001, Wis. Stats., also referred to as the “Smart Growth” legislation, was signed into law on October 27, 1999. This legislation defined a comprehensive plan, detailed numerous land use regulations and programs that needed to be consistent with a comprehensive plan starting January 1, 2010, and listed mandatory procedures for adopting a comprehensive plan. Comprehensive plans are required by this state law to incorporate a twenty-year vision, although plans are to be updated no less than every ten years. Since its initial adoption, the Comprehensive Planning Law has been amended several times, most significantly with regard to the consistency requirement. According to the amended version of s. 66.1001, Wis. Stats., beginning on January 1, 2010, the actions of a town, village, city, or county with regard to any zoning or subdivision ordinance, or official mapping program, are those which must be consistent with that community's comprehensive plan. The County of Door, with both zoning and subdivision ordinances, was required to have a comprehensive plan in place by 2010.

The Comprehensive Planning Law does not mandate how a community should grow. Rather, it offers an outline of the topics and information to be addressed within a plan. While a municipality may choose to include additional topics, a comprehensive plan must include at least the nine “elements” referred to in the legislation (listed below) and as defined by the Comprehensive Planning Law:

- Issues and Opportunities
- Housing
- Transportation
- Utilities and Community Facilities
- Agricultural, Natural, and Cultural Resources
- Economic Development
- Intergovernmental Cooperation
- Land Use
- Implementation

From this background information, the community is to develop its goals and policies, thereby providing a rational basis for local land use decisions. The law requires public participation, based on a written public participation plan that details how the plan will be developed, adopted, implemented, and updated. Per s. 66.1001(4), Wis. Stats., Procedures for Adopting Comprehensive Plans, the county is required to adopt a public participation plan that establishes communication methods, information distribution procedures, and public meetings for every stage of the plan preparation. Door County's public participation plan can be found on the Planning Department's Web site at

<http://map.co.door.wi.us/planning/>. Plans must also include specific implementation objectives, policies, and programs, including agencies that will be responsible for implementation items and the timeframes within which those implementation measures will occur.

## FARMLAND PRESERVATION PLANNING LEGISLATION REQUIREMENTS

Wisconsin's farmland preservation law, sometimes called the "Working Lands Initiative," is codified in Ch. 91, Wis. Stats., as authorized by Act 28 in June 2009. Wisconsin counties are required to have an adopted farmland preservation plan that meets statutory requirements in place no later than January 1, 2016, with staggered deadline dates based on a county's population density increase between 2000 and 2007. Door County is required to adopt a plan no later than December 31, 2014. The two main components of farmland preservation planning, as outlined in s. 91.10, Wis. Stats., are public participation and plan content. The same public participation procedures for adoption of a comprehensive plan also apply to a farmland preservation plan. Note that the Public Participation Plan for the farmland preservation plan, adopted by the Door County Board of Supervisors in 2011, may be found on the Planning Department Web site at <http://map.co.door.wi.us/planning/>. For future updates of this Door County Comprehensive and Farmland Preservation Plan, there will be only one public participation plan that addresses both statute requirements.

Per the farmland preservation planning law, the county's farmland preservation plan must state the county's policy related to farmland preservation and agricultural development. The plan needs to address issues that may affect farmland preservation and agricultural development in the county, including those that relate to population and economic growth, housing, transportation, utilities, communications, business development, community facilities and services, energy, waste management, municipal expansion, and environmental preservation. The plan must specifically address the following:

- Agricultural uses, specialties, resources, and infrastructure.
- Trends and forecasts related to agricultural land use, agricultural production, enterprises related to agriculture, and the conversion of agricultural lands to other uses.
- Goals and actions to preserve farmland and promote agricultural development in the county, including goals pertaining to the development of agriculture-related enterprises.
- Policies, goals, strategies, and proposed actions to increase housing density in areas that are not identified for agricultural development.

The county's plan must also include maps and text that clearly delineate and describe the rationale for areas that the county plans to preserve for agricultural and agriculture-related uses. These areas may include undeveloped natural resource and open space areas, but may not include any area that is planned for nonagricultural development within 15 years after the date on which the plan is adopted. Finally, the farmland preservation plan must be consistent with the county's comprehensive plan.

## **DESCRIPTION OF OVERALL PLANNING PROCESS AND PUBLIC PARTICIPATION**

Following are descriptions of the processes used to develop the Door County Comprehensive Plan 2030 (adopted in 2009) and the Door County Comprehensive and Farmland Preservation Plan 2035 (this plan, adopted in 2014). The 2009 process provided the initial framework for a comprehensive plan and involved a plan oversight committee (Core Planning Committee), visioning meetings, work group meetings, and a review of municipal comprehensive plan goals. With only five years having passed since the 2009 adoption, and conditions not having changed drastically, a scaled-down process was used for the 2014 plan update. The 2014 plan update process relied on the Resource Planning Committee for guidance in lieu of a separate oversight committee. The original oversight committee members and all other participants from the 2009 process were contacted and their input requested, but no additional visioning or work group meetings were held. Also, a full review of the municipal comprehensive plan goals was not done for the 2014 process. The county is required to update this plan again in 10 years (2024) and will likely conduct a similar process as used for the 2009 version at that time.

## **DOOR COUNTY COMPREHENSIVE PLAN 2030 PROCESS**

The Door County Planning Department and Door County Resource Planning Committee are primarily responsible for the overall development of the county's comprehensive plan in compliance with the requirements of the comprehensive planning legislation. For the 2009 adoption of this plan, the Planning Department coordinated its plan development process with the county's nineteen municipalities, of which some were not doing a municipal comprehensive plan, some had already adopted municipal-level plans, and some were at varying stages of their plan development. Some of the coordination issues involved in developing the county plan adopted in 2009 were:

- Incorporation/recognition of completed municipal plans in the county plan. Planning staff:
  - evaluated completed plans for contradictions between them;
  - evaluated completed plans against products (vision statements and goals) emerging from the county process; and
  - looked for potential ordinance administration issues for towns in county zoning.
- Analyzing and recreating, for county-level use, local-level land use maps (i.e., developing overall land use map categories and explanations).
- Coordination with consultants/planners working in the municipalities in the midst of developing comprehensive plans. (Same activities as outlined above, as appropriate given the municipality's stage of plan development.)
- Coordination with the municipalities not undertaking their own comprehensive plans (ensuring participation and input with regard to current and future land use maps, goal setting, etc.).

In addition to coordinating with the nineteen municipalities, the development of the 2009 version of this plan involved efforts from several different county departments and committees, and work groups comprised of local experts and residents. Following is a description of the primary participants and their responsibilities:

- **Door County Planning Department (DCPD)** – DCPD planners were responsible for researching and writing Volume II, Resource Report; acted as facilitators, researchers, and writers for work group meetings and products; and acted as overall coordinators of the project and process, including communications, visioning and work group meetings, open houses, and public hearings. Planners also wrote Volume I, Vision and Goals, of the plan after the Resource Report, visioning, and goal-setting work items were completed. The DCPD Geographic Information Systems Mapping Specialist created all maps found in both volumes of the plan and worked with municipalities to develop the future land use maps.

- **UW-Extension (UW-EX)** – UW-EX staff provided some assistance in meeting facilitation.
- **Core Planning Committee (CPC)** – The county board-established ad-hoc CPC was advisory in nature, providing general guidance to the process and reviewing and approving DCPD work documents (e.g., public participation plan, element goals and actions, chapter drafts, vision statements and goals from work group efforts, etc.). The CPC totaled 21 members, consisting of one representative from each local unit of government and two representatives from the Resource Planning Committee. Each municipality also had an officially designated alternate.
- **Work Groups** – Six work groups – comprised of interested local residents and local, regional, and state agency representatives and experts – helped draft the individual element vision statements and goals, objectives, and action items for each element. Work groups were guided by the overall vision statement as approved by the CPC, element vision statements, information from Volume II, the Resource Report, and goals from completed municipal plans. Each of the six work groups met four times.
- **Resource Planning Committee (RPC)** – As the oversight committee for DCPD, the RPC oversaw the comprehensive plan creation and adoption. In addition to frequent updates on the progress of the plan’s development at regular business meetings, two RPC members participated in the CPC.
- **Door County Board of Supervisors** – The Board of Supervisors established the CPC to give overall guidance and ensure input from local municipalities as to the development of the county plan. Per state statute, the Board of Supervisors is responsible for the final adoption of a comprehensive plan.

Highlights of and timeline for the process used for developing the Door County Comprehensive Plan 2030 (2009 adoption) are outlined below.

- **CPC** (January 2007): County Board resolution establishing the CPC.
- **Public Participation Plan** (April 2007; original draft was adopted in December 2005): County Board resolution adopting the final/updated Door County Comprehensive Plan 2030 Public Participation Plan. Note that the Public Participation Plan, as well as a list of all persons involved in developing the plan, may be found on the DCPD Web site: <http://map.co.door.wi.us/planning/>.
- **Visioning Meetings** (October 2006 – May 2007): Four visioning sessions were held in the Towns of Washington, Baileys Harbor, and Forestville, and the City of Sturgeon Bay. Public input was gathered at these meetings regarding the county’s assets and vision for the future; ranking exercises were also conducted on this input.
- **General Vision Statement** (August 2007): CPC approval of the draft vision statement intended to guide the overall development of the plan and element work groups. The draft vision statement was developed based on responses given at the four county-wide visioning sessions.
- **Inventory of Municipal Plans** (November 2007): DCPD staff members inventoried completed municipal plan goals in order to identify similarities and any potential conflicts. Summary goals were developed based on specific municipal goals and incorporated into the county plan.

- **Work Groups** (January – May 2008): Six topical work groups each met four times between. Meetings entailed going over background information (county-level visioning documents, goals from completed municipal plans, and Resource Report), participating in visioning exercises to aid staff in developing draft element vision statements, finalizing draft element vision statements, and developing draft county-wide goals and action items. Work groups were organized to address the comprehensive plan element topics as follows:
  - Historical and Cultural Resources
  - Agricultural and Natural Resources
  - Housing and Economic Development
  - Utilities, Community Facilities, and Transportation (which typically broke into three smaller groups at the work group meetings)
  - Land Use
  - Intergovernmental Cooperation
- **Creation of 2007 (“Current”) Land Use Maps** (late 2007 – 2009): Created and finalized with all 19 municipalities.
- **CPC Finalization and Approval of Resource Report** (April 2009): Final review and approval of the Resource Report – Plan Volume II – by the CPC.
- **CPC Finalization and Approval of Element Vision Statements and Goals and Future Land Use Maps** (April and June 2009):
  - 16 of 19 municipal future land use maps approved.
  - Plan Volume I, Vision and Goals, and the Town of Sturgeon Bay’s future land use map approved. Also approved were the future land use maps yet to be submitted by the Town of Gardner and City of Sturgeon Bay for “conversion” into the county’s future land use map legend.
- **RPC Review and Sponsorship of Plan** (July 23 and 30, 2009): RPC review of CPC-sponsored version of the plan and accompanying maps; RPC members made changes they deemed appropriate and then sponsored the plan for open house meetings and public hearing.
- **Open House Meetings** (August 2009): Four open house meetings were held in the Towns of Washington, Baileys Harbor, and Forestville, and the City of Sturgeon Bay.
- **Public hearing before RPC** (September 17 and 23, 2009): The first of two public hearings regarding the plan took place before the RPC; the committee passed a resolution recommending to the county board adoption of the plan at a business meeting held later in the month.
- **Adoption by County Board** (October 27, 2009): The second of two public hearings regarding the plan took place before the Door County Board of Supervisors; the board adopted the plan as an ordinance at a business meeting immediately following the hearing.

## DOOR COUNTY COMPREHENSIVE AND FARMLAND PRESERVATION PLAN 2035 PROCESS

As with the comprehensive plan, the DCPD and RPC are primarily responsible for the overall development of the county’s farmland preservation plan, in compliance with the requirements of the state’s farmland preservation legislation. As explained previously, the county’s farmland preservation plan is now incorporated into the county’s comprehensive plan. The process described below goes over the work that was done to meet the farmland preservation planning requirements and to update the comprehensive plan.

The DCPD coordinated the development of the farmland preservation portion of this plan with the county's 14 towns, several different county departments and committees, DATCP, agricultural operators, and other persons indicating interest. Primary participants were as follows:

- Door County Soil and Water Conservation Department (SWCD)
- UWEX
- Agricultural operators - specifically those in Exclusive Agricultural (EA) zoning, under individual contracts with DATCP, or in SWCD programs
- Town of Clay Banks officials
- DATCP staff members
- Other persons or agencies indicating interest

Highlights of and the timeline for the process used for developing the Door County Comprehensive and Farmland Preservation Plan 2035 (this plan) are outlined below.

- **DCPD, SWCD, UWEX, and DATCP "Plan for Planning" Meeting** (October 2010)
- **Visioning/Planning Kick-Off Meeting** (November 30, 2010): DCPD and SWCD gave an overview and Q&A regarding the state-level farmland preservation programs and the county planning process. All farmers, local officials, and interested members of the public were invited to attend; two press releases were issued and a mailing was sent to fruit growers, farms in EA zoning, farms with DATCP contracts, and municipal officials.
- **RPC Meeting** (January 6, 2011): Review of kick-off meeting; consensus by RPC to develop a combined comprehensive and farmland preservation plan.
- **DATCP Grant Application** (January 14, 2011): DCPD submitted grant application to cover part of the cost of preparing a farmland preservation plan, pursuant to s. 91.10, Wis. Stats.
- **Public Participation Plan** (January 25, 2011): Door County Board of Supervisors adopted a public participation plan for farmland preservation planning.
- **Condensed Version of Kick-Off Meeting** (Educational/Discussion Meeting for Local Officials, January 31, 2011): DCPD presented a condensed version of the kick-off meeting to local officials.
- **Meetings with Town of Clay Banks officials** (February 2011 - December 2012): DCPD staff members met with Town of Clay Banks officials approximately 11 times to outline all options available to the town. Presentations on EA and farmland preservation zoning rules were included in these meetings.
- **RPC Meeting** (February 17, 2011): Review of condensed version of kick-off meeting and meeting with Town of Clay Banks officials.
- **DATCP Planning Grant Tentatively Awarded** (May 3, 2011): DATCP notified Door County that it had been tentatively awarded a 2011 Farmland Preservation Planning Grant.
- **Draft Farmland Preservation Maps** (Educational/Discussion Meeting for Local Officials, March 31, 2011): DCPD gave an overview and held a Q&A session regarding the state-level farmland preservation programs and the county planning process; explained development of the farmland preservation maps, drafts of which were handed out that evening, and the process for town review of those maps; and discussed proposed changes to the farmland preservation program happening at the state level.

- **RPC Meeting** (June 16, 2011): Review /approval of resolution accepting grant award from DATCP.
- **RPC Meeting** (November 17, 2011): Review of planning efforts at the county-level and with Town of Clay Banks officials.
- **RPC Meeting** (February 2, 2012): Update on DATCP's approval of county's request to extend the farmland preservation plan deadline to 12/31/2014; educational meeting with Town of Clay Banks scheduled for February 16th.
- **RPC Meeting** (May 17, 2012): Review of planning efforts at the county-level and with Town of Clay Banks officials.
- **DATCP and RPC Meetings** (June 21, 2012): Staff members met with DATCP to discuss plan development and adoption issues; updated RPC on planning efforts that same day.
- **Background Information Collection on Legislation Requirements** (May 2011 - December 2013): DCPD reviewed municipal plans completed since adoption of county comprehensive plan; reviewed and updated Resource Report volume of county comprehensive plan; and researched and incorporated new farmland preservation planning legislation requirements.
- **DATCP Preliminary Submittal** (September 2013): A draft of the Comprehensive and Farmland Preservation Plan 2035 was submitted to DATCP for preliminary review and feedback.
- **RPC Meeting** (October 3, 2013): Review of comprehensive and farmland preservation planning process.
- **Draft Current Land Use Maps** (Educational/Discussion Meeting for Local Officials, October 29, 2013): DCPD gave an overview of the county-level comprehensive and farmland preservation planning process and handed out draft current land use maps along with instructions for reviewing and updating; municipalities to return maps at the January educational/discussion meeting.
- **RPC Meeting** (December 19, 2013): Review of comprehensive and farmland preservation planning process to-date and overview of drafts of Volume I, Vision and Goals, and Volume II, Resource Report; also review of proposed reorganization of goals and action items from 2009 plan.
- **Public and Municipal Input Request** (December 2013 - January 2014): DCPD sent email to work group members from the 2009 planning process and all local municipal officials letting them know where to find draft plan documents and how to give input.
- **Draft Future Land Use Maps** (Educational/Discussion Meeting for Local Officials - January 30, 2014): DCPD distributed draft future land use maps, along with instructions for reviewing.
- **RPC Meetings** (February 6, March 27, and April 3, 2014): Review of draft Volume I, Vision and Goals, and Volume II, Resource Report.
- **Open House Meeting:** (April 22, 2014): An open house meeting for final review of the plan by the public was held at the Government Center. A mailing and e-mailing of the invitation and press release for the open house was sent on Friday, April 3, 2014. Municipal officials were notified of open house meeting details on March 19, 2014.

- **Final Review/Sponsorship by RPC of Plan** (May 29, 2014): RPC review of final draft version of plan and accompanying maps; sponsorship of plan for submittal to DATCP for certification of the farmland preservation portion.
- **Plan Submitted to DATCP for Certification** (July 1, September 26, and October 14, 2014): The plan was submitted to DATCP for conditional certification on July 1 and DATCP subsequently responded with requested changes. Staff members made the requested changes and submitted the plan to DATCP again for conditional certification on September 26. DATCP again responded with requested changes, which staff members made and again resubmitted the plan on October 14 for conditional certification.
- **Public hearing before RPC** (October 16, 2014): The first of two public hearings regarding the plan took place before the RPC; the committee passed a resolution recommending to the county board adoption of the plan at a business meeting following the public hearing.
- **Hearing and adoption via ordinance by County Board** (December 2014): The second of two public hearings regarding the plan took place before the Door County Board of Supervisors; the board adopted the Door County Comprehensive and Farmland Preservation Plan 2035 as an ordinance at a business meeting immediately following the public hearing.

## **OVERVIEW OF VOLUME I, VISION AND GOALS**

The Door County Comprehensive and Farmland Preservation Plan 2035 consists of two volumes. This volume – Volume I, Vision and Goals – provides the issues, opportunities, and vision statements for the required topic areas, and the overall plan goals, policies, and action items. Volume II, the Resource Report, provides the demographic and other information required by the Wisconsin statutes for comprehensive and farmland preservation plans. This volume refers readers to the appropriate chapter(s) within the Resource Report for background information.

Volume I is comprised of 11 chapters. This chapter, Chapter 1, provides a description of the overall planning process and public participation efforts used to develop the Door County Comprehensive and Farmland Preservation Plan 2035. Chapter 2 contains the Smart Growth legislation language regarding a plan's Issues and Opportunities element; the general issues and opportunities identified during the development of the plan; a brief summary of demographic information and trends for Door County; the results of visioning meetings and exercises and the overall vision statement used to guide the development, adoption, and implementation of the plan; and a summary list of the plan's goals regarding all topics. Chapters 3 through 10 provide information on the statutorily required plan elements, organized by the topics of historical and cultural resources, agricultural and natural resources, housing and economic development, transportation, utilities, community facilities, land use, intergovernmental cooperation, and implementation. Presented within each chapter are: the exact Smart Growth legislation requirements for that topic area; issues and opportunities surrounding the topic, as identified during the original 2009 visioning and work group meetings and reviewed/updated in 2014; a brief overview of data/current conditions for that topic; and a vision statement specific to that topic. Chapter 9, Land Use, also contains discussion of the plan's future land use maps and of potential conflicts between existing and future land uses.

Due to the overlapping and intertwined issues, opportunities, and goal and action item ideas that came from the work groups and others who participated in the development of the plan, all plan goals, policies, and implementation action items, for all plan topics, are located together, in Chapter 11, Implementation. Potential cooperating agencies and general timelines are also listed with the action items. Chapter 11 also contains the exact Smart Growth legislation requirements for this topic and the process for implementing and updating this plan.

Please note that many Door County municipalities have completed and adopted their own comprehensive “Smart Growth” plans; readers are advised to refer to those municipal level plans, as well as this plan. Those municipalities are:

- City of Sturgeon Bay\*
- Village of Egg Harbor\*
- Village of Ephraim\*
- Village of Forestville\*
- Village of Sister Bay\*
- Town of Baileys Harbor
- Town of Brussels\*
- Town of Clay Banks
- Town of Egg Harbor\*
- Town of Gardner
- Town of Gibraltar
- Town of Liberty Grove
- Town of Nasewaupee
- Town of Sevastopol
- Town of Sturgeon Bay
- Town of Union\*

\* Per the Comprehensive Planning Law consistency requirements (as amended), these municipalities, due to the types of ordinances they are administering as of December 2014, are required to have in place a municipal-level comprehensive plan.

Note, too, that the Town of Jacksonport has adopted a town land use plan, although it does not address all of the statutorily required elements for a comprehensive plan. The remaining municipalities in the county – the Towns of Forestville and Washington – have chosen to date to not develop municipal-level comprehensive plans.

## **CHAPTER 2: ISSUES AND OPPORTUNITIES**

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(a), Wis. Stats., the Issues and Opportunities element of a comprehensive plan shall include: "Background information on the local governmental unit and a statement of overall objectives, policies, goals and programs of the local governmental unit to guide the future development and redevelopment of the local governmental unit over a 20-year planning period. Background information shall include population, household and employment forecasts that the local governmental unit uses in developing its comprehensive plan, and demographic trends, age distribution, educational levels, income levels and employment characteristics that exist within the local governmental unit."

## **GENERAL ISSUES AND OPPORTUNITIES**

For planning purposes, an issue is typically defined as an internal weakness or an external threat that needs to be addressed, while an opportunity is an internal strength or an external trend that could be capitalized upon. The general issues and opportunities found below regarding Door County were identified by participants in the four county-wide visioning meetings held in 2006-2007 and reviewed/revised again for the 2014 planning process. (The issues and opportunities noted, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff.) Note that lists summarizing the issues and opportunities identified during those meetings also can be found in Chapter 2 of the Resource Report.

One overarching theme arising out of the visioning meetings was the topic of sustainability. Sustainability is often described as a "three-legged stool" comprised of the economy, the environment, and social systems. Achieving sustainability requires equal attention to and balance between all three areas – human needs and desires will be met, but in a manner that ensures preservation of the natural environment. Participants at visioning meetings identified the many socially and environmentally conscientious residents living in Door County as presenting a great resource in trying to make the county's current economic, environmental, and social systems more sustainable.

One issue identified as posing a threat to achieving sustainability in Door County is the area's nearly complete reliance on oil and other non-renewable or fossil fuel sources for its energy use. Note that this is not unique to the area, nor is the fact that the county lacks the infrastructure to utilize renewable energy resources available to it, such as wind. However, the county's significant renewable energy resources (primarily wind) presents an opportunity for the development of such infrastructure, which could lead to less dependency on outside energy sources and potentially help to control costs.

As residents stated in visioning meetings, achieving sustainable growth in Door County also means that development needs to be balanced with preservation of the area's diverse and abundant natural and scenic resources, ensuring natural resource and habitat quality as well as recreational opportunities. This should be achieved through effective and efficient public and private land use management programs and ordinances. Door County already has a good base of protected lands to continue to enhance through future land protection and acquisition efforts. The county's water resources are also still largely of exceptional quality, and can be further protected for continued usage by humans and wildlife and for scenic and recreational purposes.

While tourism, a major contributor to the county's economy, depends on the county's open space and natural beauty for its profitability, many residents believe tourism could also ultimately lead to a decrease in the quantity or quality of these natural assets. Tourism enhancement programs in Door County, as in other areas, have traditionally focused only on increasing the number of visitors. Recently, however, in Door County and other areas, this focus is shifting to include recognition and work toward mitigation of tourism's potential impacts on natural resources, as well as promotion of "green" tourist activities. Tourism promotion in the county can become more sustainable by extending beyond traditional quantity-based programs into quality-based programs that focus on

education and appreciation of the county's natural and cultural assets, which the Door County Visitor Bureau has already begun to initiate. The county's unique geology, including the Niagara Escarpment, already provides a base for some tourism activities and can be further promoted as part of an eco-tourism program. Additionally, the county has a wide variety of cultural and historical resources that can be used, expanded, or improved upon to support eco-tourism and educational programs for both tourists and residents.

A major economic development opportunity for Door County continues to be the relatively clean, safe, and beautiful environment, offering a high quality of living that can aid in attracting clean and green businesses. Additionally, the county is rich in non-metallic mineral resources, which will themselves continue to provide employment, as well as the sand and gravel necessary for local municipal and construction uses. On the other hand, the county's economy is perceived to be out of balance, due to an increasing reliance on tourism, particularly in Northern Door. Tourism throughout the county is largely seasonal in nature and, therefore, typically comprised of lower-paying jobs without benefits. Southern Door's economy is seen as somewhat more diverse economically, comprised of agriculture, some tourism, and some manufacturing, and its location also offers residents easier access to jobs outside the area, such as in Green Bay and the Fox Valley. The economy in the Sturgeon Bay area is perceived to be more balanced, with a mix of tourism, nearby agriculture, and the majority of the county's manufacturing businesses.

Door County is increasingly viewed as less accessible to people of all incomes and ages, resulting in less economic, social, and cultural diversity. Lack of diversity in employment options in the county is perceived to be preventing young people from moving or staying here, with youth pursuing better job opportunities elsewhere. This issue, combined with housing costs that do not correlate with local incomes, is seen as keeping young people from living and raising families here. Increased economic development, though, may help spur more affordable/alternative housing initiatives. Establishing public/private programs that increase the supply of affordable housing will likewise help to attract and keep young people in the area. Transportation accessibility and options have been significantly improved, but could still be enhanced through greater community and government support for transportation initiatives.

Agriculture and its associated activities have long played important roles in the county's social and economic systems, but agriculture everywhere faces decreasing diversity. Fewer and fewer local, small family farms remain in operation, resulting in less food security, economic self-sufficiency, and rural character. Agriculture in Door County is most prevalent in the southern portion of the county, but it too is relatively limited in its diversity or threatened by various outside forces. While agriculture directly affects the county's economy, it is also closely intertwined with community character, an asset ranked at the top and described as a key piece of their future vision by residents at visioning meetings. A struggling agricultural economy leaves rural land vulnerable to potentially sprawling new residential development, as agricultural operators may be forced to sell land in order to support themselves or retire. This threatens the county's rural community character and aesthetically, economically, and environmentally valuable open space and scenic vistas. Additionally, the loss of agricultural areas to new development was identified as a threat to the small-town character of the county's town and village centers.

Although continuing to decline, Door County still has a diverse agricultural economy to preserve, presenting opportunities for local governments and the broader community to support local agriculture and the remaining family farms. Local programs and incentives could be established to make locally-grown food more accessible to residents. Maintaining a diverse agricultural economic base contributes significantly to preserving the county's beautiful scenery, open space, and rural/small-town character. Ensuring that new development is dense and contiguous to existing development will also help preserve these assets. Municipalities still have opportunities to undertake long-range planning and design for the city, village, and town centers to help maintain the county's small-town character and sense of community.

Door County's community facilities were frequently mentioned at the visioning meetings as both top county assets and integral to the future of the county. Recreational facilities around the county's roughly 300 miles of coastal shoreline, plus lakes, streams, and wetlands, offer tourists and residents high quality beaches, parks, fishing, and other recreation. Maintaining and improving the county's recreational infrastructure is essential to the long-term health of residents and to promoting more recreation-based tourism, although the county's trail system outside of our parks was characterized as very limited and increasingly difficult to acquire as the cost of land increases. The existing snowmobile trail system presents an opportunity, though, in that it has the potential to be expanded and developed into a multi-use trail system.

Other community facility issues identified at the visioning meetings include the county's school system, year-round cultural and educational activities, and an aging population. While the county has good school systems, most are faced with declining enrollment. A lack of year-round cultural and educational opportunities for people of all ages, particularly in the tourism off-season, was perceived as a weakness. On the other hand, opportunity exists in that the county already has strong cultural assets, including the arts, music, theatre, history, and architecture, which can grow into year-round education and economic development activities.

Finally, the county also faces an aging population that will greatly increase the demand for senior support and health care services. This presents potential opportunities, though, to establish medical-related facilities that would serve an aging population, as well as enhance both economic development and tourism. Public/private partnership opportunities to offer increased and better services for seniors should also arise. Other potential business opportunities may be created based on the county's increasing number of retirees, who will require more specialized services as they age.

#### ***Note Regarding Issues and Opportunities for Specific Plan Topics***

In addition to the general issues and opportunities identified in visioning meetings and described above, the work group participants also identified specific issues and opportunities for each of the Smart Growth plan topics. These are provided in Chapters 3 – 10, and are based on work group participants' responses to two questions:

- Within the context of your preferred future vision for the county, what are the key issues we currently face with regard to this topic?
- Again, within the context of your preferred future vision, what opportunities are available to or should be pursued for the county with regard to this topic?

#### **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapters 2, 4, and 5 of Volume II, Resource Report, of this plan for detailed demographic, housing, and employment information, as required by the comprehensive planning legislation for the Issues and Opportunities element of this plan.*

Between the 2000 and 2010 Censuses, Door County's year-round population of 27,961 residents decreased by 176 people (0.6%), to 27,785 residents. However, between 2010 and 2013, the Wisconsin Department of Administration (DOA) estimates that the county's population grew slightly, to 27,966 residents. This growth occurred through net migration (the number of residents moving into the county minus those leaving), rather than through natural population increase (births minus deaths), which is estimated to have been negative for the same timeframe. The DOA projects Door County's population will decrease by a total of 1,165 residents between 2010 and 2040, the fifth highest loss in the state. Although net migration for the county is expected to be positive for this time frame, a negative natural growth (deaths outnumbering births) will more than off-set the population

gain from migration.

In addition to its year-round population, Door County has many seasonal residents (part-time) and tourists either visiting for a day or staying overnight in one of the many lodging or camping facilities. Although difficult to estimate, one study found the county's full-time equivalency population is between 20% and 161% higher than its year-round population, depending on the month. Applying this estimate to the 2010 year-round population for Door County, there are between 33,342 and 72,519 additional full-time equivalent people in the county, depending on the month.

In 2010, Door County's median age was over 10 years older than the state, at 49.4 years compared to 38.5 years for the state. Only two Wisconsin counties, Iron and Vilas, had older median ages than Door County. The county's 65 and older population is expected to grow much more quickly than the state's same population between 2010 and 2040. In 2010, the county's 65 and older population consisted of 23% of the population, compared to 14% for the state. In 2040, Door County's 65 and older population is expected to be at 38%, compared to only 24% for the state.

At the same time, county residents aged 24 and younger are decreasing as a proportion of the county's population. In 2010, the number of Door County residents aged 65 years and older was approximately the same as those aged 24 and younger, both consisting of 23% of all residents. By 2040, county residents aged 24 and younger are projected to decrease to 21% of the population, while residents aged 65 and older are projected to increase to 38% of the population. This trend towards a declining youth and a ballooning senior population will affect nearly all aspects of living and working in Door County, as identified by the work groups and outlined in the issues and opportunities sections of Chapters 3 – 10 in this volume.

### **GENERAL QUALITATIVE RESULTS OF COUNTY-WIDE VISIONING MEETINGS**

At each of the four county-wide visioning meetings held between 2006 and 2007, participants first viewed a presentation with county-level demographic and other trend information. Following the presentation, attendees participated in two public input exercises. The first exercise dealt with the question: "What are Door County's greatest assets?" and the second with the question: "What words or phrases best capture your vision for Door County's future?" Below is a summary description of the responses given to these questions at these meetings, which were also reviewed, discussed, and refined at CPC and work group meetings. A more detailed and quantitative analysis of the visioning meeting responses is provided in Chapter 2, Issues and Opportunities, Volume II. (Note: Actual meeting minutes and subsequent write-up materials analyzing results from the four meetings may be found on the DCPD Web site, <http://map.co.door.wi.us/planning/>, as can CPC and work group meeting minutes and follow-up materials.) The vision statement resulting from the 2009 plan was reviewed and revised for the 2014 plan update.

### **DOOR COUNTY'S GREATEST ASSETS, IDENTIFIED BY VISIONING MEETING PARTICIPANTS**

Participants at the four visioning meetings believe the county's greatest assets include its natural beauty, scenery, and plentiful open space, as well as the quantity and quality of its drinking water. Rural scenic beauty was mentioned frequently and described as being both natural and pastoral in character, including farmland and buildings. The abundance of surface water, parks, and wildlife habitats greatly contributes to the county's natural beauty, as well as providing the resources for a variety of recreational opportunities. Public recreational infrastructure, providing access to these areas for a variety of activities, is believed to be equally valuable.

Cultural and historical assets, including the arts, music, theatre, galleries, maritime history and features, and other historical features are highly valued and contribute to making the county unique, especially in the northern part of the county. Washington Island was described as a unique destination, as both part of a peninsula and an island, with an indescribable "island mystique." It is valued for its small-town flavor, peaceful lifestyle, and fellowship of community where people are generally supportive and close-knit. Southern Door was described as unique in that rural areas have

remained in agriculture and people are still able to make a living through agriculture.

## **VISIONING MEETING EXERCISE RESULTS REGARDING DOOR COUNTY'S FUTURE**

A common theme among all four meetings regarding a vision for the county's future was achieving a diverse natural and human community that balances human needs/wants with environmental needs. Specifically mentioned issues critical to achieving this goal are economic self-sufficiency, affordable housing, controlled and balanced development, and maintaining rural character. Other generally agreed upon themes are to maintain a place to live that offers beauty, convenience, safety, and tranquility; creating a sense of place through a balance between growth and preservation of the county's natural and cultural resources; and long-range planning and "design" for town and village centers.

Increased employment opportunities in tandem with affordable housing in order to retain the county's youth and to attract young families were identified as critically important components of the county's future. Preserving agriculture was cited as critical to both the economy and protecting rural character, particularly for the Central and Southern Door areas where it is still prevalent. Diverse and widespread agricultural activity helps to keep agricultural areas as rural and supports planning efforts for new development to be dense and contiguous to existing development in order to preserve open space.

Widely envisioned for Door County are more renewable energy resources for its electricity and transportation needs. Improvements in public transportation to-and-from the county could be achieved through a regional transportation system. Within the county, a transportation system that is user-friendly for motorists, bicyclists, and pedestrians, as well as scenic, with green screening/buffers of development along highways was envisioned.

Also envisioned for Door County's future is a comprehensive health care system with health care education to promote the long-term wellness of all. Medical-related facilities, to serve as both tourism-enhancement and economic development tools, were also identified as potentially valuable additions to the county's future. In addition, there will be increased/better support services for the elderly and more workshops/educational seminars, particularly in the off-season, available to both residents and tourists.

### **GENERAL VISION STATEMENT**

In order to provide overall guidance to the planning effort – particularly to the CPC and work group members helping to develop element vision statements and goals – DCPD staff members created a draft vision statement based on the visioning meeting work described above. The CPC reviewed and approved the draft vision statement in August of 2007. The final version, approved upon plan adoption and changed very little from the original 2007 version approved by the CPC, may be found below. Note that specific, individual topic vision statements were also drafted based on work group participants' responses to the question: "What words or phrases best capture your preferred future vision for the county with regard to this work group's designated topics?" These topic-level vision statements can be found in Chapters 3 – 10 of this document.

## **VISION STATEMENT FOR DOOR COUNTY**

In the year 2035, Door County has an exceptional quality of life preserved for both present and future generations through a sustainable balance between its economic activities, the preservation of its natural environment, and its social systems. The county's beautiful scenery and rural character are maintained through both public and private preservation of large areas of undeveloped natural and pastoral open space. People are making a living through agriculture, thus keeping rural areas in agricultural use and preserving rural character at the same time. Public access to and recreational opportunities utilizing green space and the water are diverse and widespread.

Door County residents and visitors value and protect the county's natural resources for the long-term enjoyment of all and continue to responsibly realize their economic benefits. Tourism is recognized as dependent on the health of the natural environment; tourism programs are sustainable and include education about preserving the county's unique natural and cultural landscape. Ground and surface water quality are continually monitored and maintained for use as drinking water and enhanced recreational opportunities. Renewable energy resources are promoted and used whenever possible as the county strives to become less dependent on outside energy sources. New development is aesthetically and ecologically sensitive, occurring contiguous to existing development and with minimal harm to the natural environment.

Door County is a diverse place with a wide range of year-round housing, employment, and transportation options that are accessible to people of all ages and incomes. Both non-profit and for-profit ventures capitalize on the depth and breadth of our residents' knowledge and social consciences for advancement of the arts, education, health care, and research that promotes the long-term wellness of all. Through public and private partnerships, health care and support services for senior residents are widely available. High-quality educational programs, both formal and informal, and cultural activities are also available year-round to people of all ages.

## **SUMMARY LIST OF PLAN GOALS**

Work group participants first identified their collective future vision and issues and opportunities related to the plan topic(s) they were addressing. They then spent their remaining meetings discussing potential strategies or action items that might be employed to address the issues or take advantage of the opportunities they had identified. DCPD staff took those vision statements, issues, opportunities, strategies, and action items and reorganized them as goals, objectives, and action items, which were then reviewed and approved by the CPC and ultimately finalized and adopted by the RPC and County Board in 2009.

For the 2014 updated version of this plan, the original work group members involved in developing the 2009 version were asked to review and provide input on updating the goals, objectives, and action items. Based on their responses and input from the RPC, revisions were made and a final version prepared for review by all participants from the original planning process and the general public. Information on how to review the revised goals, policies (replacing "objectives"), and action items was mailed to all original plan participants, as well as posted on-line. An open house meeting for final review and comment on the entire plan was held on April 22, 2014, for which a press release was issued. The final goals, policies, and action items agreed upon and adopted for the Door County Comprehensive and Farmland Preservation Plan 2035 may be found in Chapter 11. Listed below are the overall goals:

**GOAL 1.** Improve communication and knowledge regarding land use issues between all levels of government and residents, and support or initiate cooperative efforts on issues requiring multi-jurisdictional coordination.

**GOAL 2.** Preserve and protect the county's surface water, groundwater, wildlife habitats, and natural features.

**GOAL 3.** Protect existing agriculture and promote sustainable agricultural operations.

**GOAL 4.** Maintain, preserve, and enhance the community's rural atmosphere and agricultural heritage.

**GOAL 5.** Preserve historic sites and community character, and support, as appropriate, cultural and historical festivals, events, and activities.

**GOAL 6.** Encourage quality affordable housing and economic opportunities for the current and future population.

**GOAL 7.** Support the development, maintenance, and up-grading of utilities, community facilities, and services in an efficient, coordinated, and cost-effective manner to service the current and future needs of the community's residential and commercial uses.

**GOAL 8.** Support the development - at the lowest possible environmental and social cost - of a transportation system that is safe, economical, efficient, integrated, inter-modal, and interconnected, and adaptable to changes in demand and technology.

# **CHAPTER 3: HISTORICAL AND CULTURAL RESOURCES**

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(e), Wis. Stats., the Agricultural, Natural, and Cultural Resources element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under s. 295.20(2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources." (Note that s. 295.20(2), Wis. Stats., outlines a property owner's right to register and potentially later extract nonmetallic mineral resources, as well as how those rights may be protected from changes in planning or zoning designations.)

*Note: This chapter will address the historical and cultural resource aspects of these statutory requirements, while Chapter 4 will address the agricultural and natural resource aspects.*

## **HISTORICAL AND CULTURAL RESOURCES ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Some local municipalities are struggling to garner support for municipal-level historic preservation efforts.
2. Lack of education and regulation regarding historic buildings
  - Tearing down old buildings that could/should be saved or moved
  - Historically inappropriate renovations/additions to old buildings
  - No design standards for new buildings (especially commercial)
  - Lack of nostalgia ("outside" developers, younger generation) for how we used to be/look
3. Uncertain support for cultural activities
  - Major supporters of the arts are aging, moving away, or cutting back support
  - Wealth or even inclination to support or patronize not there with upcoming generation
  - Losing/not attracting young people (housing and job issues) – need people to cultivate
  - Demands for year-round cultural opportunities, being more of a year-round destination
  - Can requests be fulfilled? Would people attend? (attendance problem now, especially in winter)
  - Is it feasible or desirable for the county to be more of a year-round destination?
  - Geography of county and arts/cultural event attendance – can't get people up north to drive down to Sturgeon Bay/south and vice-versa
4. Competition between non-profits for funding and a general lack of coordination
  - Number of non-profits increasing – efforts not always coordinated/aware of other efforts
  - Decreasing government dollars for arts, culture, etc.
  - People need to be thinking more about the big picture
5. Changing trends affecting long-term ties with the county – Door County's market overall is aging and up-coming generation vacations differently
  - Families now don't seem to come here as much as families did previously

- Door County is seen as a place with little for kids to do
  - Parents used to decide where they wanted to vacation; now, parents seem to pick vacations based on things they think their kids will like
  - Families don't "repeat" vacations like they used to – world is "smaller"
6. We need on-going outreach to municipal officials to make sure they become more involved in local historical and arts non-profits.
  7. Business owners and artists don't necessarily feel a responsibility to the community in terms of how development looks, how we're marketing ourselves (the "message"), working cooperatively.

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The opportunities listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Increasing demand for more year-round cultural activities
2. County-wide marketing
3. Partnering on new programs, such as an arts education "system"
4. Strong existing non-profits can be cultivated to branch out into new activities and/or used as models/support for other non-profits
  - Door County Community Foundation establishment
  - Birch Creek expansion
  - Björklunden expansion
  - Crossroads and Peninsula School of Art – both successful/expanding; offering more activities for families
5. Recent interest from municipal officials in design/historic preservation ordinances/standards
6. Tourism is still a major economic engine, compared to many other areas

## **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 3 of Volume II, Resource Report, of this plan for detailed information on historical and cultural resources, as required by the comprehensive planning legislation for the Agricultural, Natural, and Cultural Resources element of this plan.*

Door County hosts a variety of associations and organizations dedicated to preserving and enhancing the county's historical and cultural heritage. Surrounded by water, Door County has a unique maritime history, evident in the county's museums, lighthouses, and shipwrecks. Many maritime-related and other archaeological and historical sites are listed on both the national and state historic registries; 66 sites in Door County are on both the state and national registers, with one additional site on the national register. Additionally, many other buildings, structures, and objects not listed on these registries have been recorded by several studies and inventories conducted at both the state and local levels.

Cultural resources in the county are abundant and open to the public in large part due to the many arts and humanities associations, private businesses, and other agencies that operate schools, galleries and studios, theater groups, performing arts centers, and festivals. A variety of indoor and outdoor spaces are utilized by both local and non-local artisans and performers to showcase original works of art. In addition to creating and viewing original work, there is also a breadth of educational opportunities for people of all ages to learn about the natural environment, art, folk art, dance, drama, history, horticulture, literature, and many other topics. Lastly, there are several private wineries, breweries, and cooking schools contributing to the culinary culture of the county.

### **HISTORICAL AND CULTURAL RESOURCES VISION STATEMENT**

In the year 2035, Door County's numerous cultural resources – including the arts, historical resources, and those natural and agricultural resources key to the county's cultural identity – are being actively maintained and preserved, with the work of cultural organizations supported by county-wide networks. The county's cultural offerings and arts industry are thriving, supported by community residents and visitors of all ages through donations of time and funding as well as patronage. Door County's historical resources – buildings and other sites and structures, museums, and landscapes – have been identified for maintenance and preservation; efforts are coordinated and supported by an array of community-driven financial and educational resources. The county has established a system offering education, guidance, and support for local historic preservation and design boards. Historic preservation and other ordinances and standards preserve historic structures and provide for attractive new development through design standards – particularly for commercial buildings, signage, and parking – and by strictly limiting and beautifying highway corridor development.

# **CHAPTER 4:**

# **AGRICULTURAL AND NATURAL RESOURCES**

## **SMART GROWTH LEGISLATION REQUIREMENTS**

As noted in Chapter 3, per s. 66.1001(2)(e), Wis. Stats., the Agricultural, Natural, and Cultural Resources element of a plan shall contain: "A compilation of objectives, policies, goals, maps and programs for the conservation, and promotion of the effective management, of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, wetlands, wildlife habitat, metallic and nonmetallic mineral resources consistent with zoning limitations under s. 295.20(2), parks, open spaces, historical and cultural resources, community design, recreational resources and other natural resources." (Note that s. 295.20(2), Wis. Stats., outlines a property owner's right to register and potentially later extract nonmetallic mineral resources, as well as how those rights may be protected from changes in planning or zoning designations.)

*Note: This chapter will address the agricultural and natural resource aspects of these statutory requirements; Chapter 3 addressed the historical and cultural resource aspects. Note also that there are additional legislative requirements regarding agricultural resources discussed in Chapter 7, Agricultural Resources, Volume II, Resource Report.*

## **AGRICULTURAL AND NATURAL RESOURCES ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Agricultural advocacy groups and natural resource protection groups don't always realize that their resources are intertwined, facing similar issues – need to combine/coordinate efforts
2. General agricultural issues:
  - Consolidation of farms
    - Due to increasing costs, pressures
    - Younger generation doesn't want to take over
  - Large farm operations with unsound practices can impact thousands of acres of land and many people
  - Dairying decreasing dramatically in Northern Door, both in number of farms and number of animals
  - People move into agricultural area, then complain about practices, especially re: manure and animals
    - Need to educate people about where and how food is produced
  - Most grocery stores and restaurants don't want to deal with small farmer/producer; they want large truck loads of perfect-looking product
    - Local economy needs to demand: "We want this here" in order for local produce to be carried

3. Development/financial pressures on agricultural and natural resource land

- Southern Door, due to highway 57 expansion:
  - Potential for sprawl from Green Bay
  - Potential for heavy development
  - Potential loss of more agricultural land
- Financial issues causing people, especially farmers, to sell forest land
  - Forest land is now taxed as recreational land, if not enrolled in Managed Forest Law program
- Land is retirement income for many
- Risks for farming far too big, particularly for the small farmer
  - Profit margins are too small.
  - Weather risks – 2007's lack of rain, for example
- Dropping enrollment in Managed Forest Law program
  - Managed Forest Law program not as good a deal for property owners as it used to be – not much, if any, financial incentive to enroll or remain enrolled
  - Until a few years ago, Door County had roughly 20,000 acres enrolled in the MFL program(s) for roughly 20 years
    - Decreasing now – more land is being withdrawn than enrolled annually
    - People pulling out of contracts before they are up – \$ “penalty” is nothing to developer

4. Improper management and fragmentation of agricultural and forest land

- Need 100+ acre blocks to preserve real beauty of open space (ag. land, forested, etc.)
- Agricultural land being sold off in pieces, fragmented
  - Development doesn't look good, either – long driveways, utility poles and lines, homes scattered
  - Lots turn into weed patches, possibly contributing to invasive species problems
  - Property owners with 10-20 acres sometimes look for farmers to rent “excess” land to, who usually grow hay. Property owner gets lower taxes but no one else (including the farmer) really benefits.
- Forest lands also being partitioned and developed
  - Large chunks of forest, especially in Northern Door, converting to residential
  - Upland/hardwood forest particularly threatened
  - Lots created and sold are often not maintained with sound forestry practices
    - Forest management perceived as a negative word.

5. Regulatory issues

- Zoning ordinance regulations re: clear-cutting: 1) do they really prevent clear-cutting? and 2) do they work with DNR/managed forest regulations?
- Although we say we want local products, we make it difficult for farmers to be profitable:
  - Agricultural operations limited in what they can process, advertise, and sell on-site
  - Processing facilities are not allowed on most agriculturally zoned properties, and can

- also be difficult to establish due to state regulations
- And, if operations were allowed, employees would be required (job creation, a good thing), but there's no affordable housing available
- Large-lot agricultural zoning (10, 20 acres) promotes large "estate" land ownership, fragments agricultural lands – we're gobbling up more agricultural land/open space than small lot requirements
  - Town plan implementation in the county – many towns are looking at (or have already established) larger parcel sizes in interior areas and are also decreasing density for "downtown" areas – more agricultural and natural resource land will be lost/developed
- Conservation subdivisions would help conserve land
  - May not sell well to buyers
  - Only a few have been done in county
  - Can use shared wells and septic systems, helping protect water quality
- Some economic issues regarding agricultural land have to be dealt with at the state/federal level
- Wisconsin DATCP and DNR – limited staff, funds to help ensure viability of agriculture and protection of natural resources from agriculture
- Siting regulations
  - State rules regarding large animal unit operations
  - Orchards (use of pesticides, etc.) – will or should siting of orchards be regulated?

## 6. Water quality/protection

- People are pointing fingers at agricultural uses due to increasing awareness of groundwater issues, blaming farmers for their water quality problems
- Large volumes of manure spread over land impacts the groundwater; how much impact depends partly on the weather
- Nutrient management plans are not being followed by some farmers
  - Time/effort/cost to do so, timing issues due to weather dictating farmer's schedule – they aren't necessarily ignoring plans because they want to purposefully engage in bad practices
  - DNR management and enforcement is lacking
  - State has put a lot of resources into the program but have not gotten much in return
- City/county plan coordination, especially with regard to well recharge areas for the city's wells
  - Need to coordinate with Sevastopol, too – some recharge areas slated for commercial development
- Improper siting, installation, maintenance of sewage/private septic systems may be endangering groundwater quality

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The opportunities listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Education/awareness starting to increase re: issues such as groundwater protection, land fragmentation
2. Most farmers are much more “up to speed” with regard to sound practices, due to SWCD programs, etc.
3. Larger farm(er)s might be more responsible regarding the environment, because they are more regulated; also, they are often owned by extended families which have built-in succession
4. Southern Door farmland going on the market is mostly being purchased by other farmers
  - Hiring people, keeping open space
  - Many are renting out land to other farmers rather than selling it
5. State and regional programs/projects/initiatives
  - State Working Lands Initiative – maybe results/implementation will help
  - Dairy Gateway Project – could follow model to establish something similar in Door County
  - Great Lakes Compact may help us protect Lake Michigan
  - Influence the state to shift support to smaller farmers, including marketing local foods (some support now for value-added activities and diversification)
6. “Buy local” movement
  - Rising fuel costs may have positive impact on sales of locally produced food; food items in a typical grocery store travel an average of 1,500 miles
  - Local economy/purchasing power can dictate that they want local produce in the stores
  - Large seasonal population means growers here don’t have to ship their product long distances – people are already coming here and many will buy local products

## BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS

*Please refer to Chapters 6 and 7 of Volume II, Resource Report, of this plan for detailed information on agricultural and natural resources, as required by comprehensive and farmland preservation planning legislation requirements for this plan.*

## AGRICULTURAL RESOURCES

Door County's unique climate, geology, topography, soils, and hydrology serve as the foundation for the county's agricultural and natural resource activities. Its temperate climate and rocky soils have played a large role in the past success of the county's apple and cherry industries. Despite favorable conditions for orchards, the county's geographic isolation and external economic forces have contributed to the downward trend in both the number and size of orchards. Overall, the number of farms in Door County, including orchards and other types of farming, has been in decline, with losses occurring in the number of mid-size farms. Between 1987 and 2012, the number of farms 50 – 499 acres in size has declined, while the number of large farms (500+ acres in size) and small farms or “hobby” farms (less than 50 acres in size) has grown. The number and acreage of small farms has gone up partly due to niche agriculture in the areas of organic and sustainable

farming, market farms, and viticulture.

## NATURAL RESOURCES

Both agricultural and developed lands contribute to runoff pollution that negatively impacts both surface and ground water. The fractured bedrock and shallow soils that exist in Door County leaves the ground water particularly susceptible to runoff and other types of pollution. The county's surface waters, including Lake Michigan and interior waterbodies, are also degraded by runoff pollution, E. Coli contamination, algae/cladophora, and invasive species. Many federal, state, and local regulations are in place in order to protect these water resources, but climate change, certain agricultural practices, and new development pose significant challenges to maintaining and improving water quality, as well as broader ecosystems.

Other natural features that provide transition between land and water, including areas such as floodplain, shoreland, and wetlands, are critically important to the health of ground and surface water and are also protected by a variety of regulations at all levels of government. Together, Door County's waters, wetlands, woodlands, and other natural areas make up ecosystems that provide important and irreplaceable habitat for wildlife species, including many rare natural communities and species that thrive here. Human interaction with these ecological communities threatens both the existence and quality of many of these habitats. A variety of federal, state, and local planning and protection initiatives are currently working towards protecting the remaining ecologically significant areas in the county.

## **AGRICULTURAL AND NATURAL RESOURCES VISION STATEMENT**

In Door County in the year 2035, residents and visitors alike share a deep respect and appreciation of the county's unique biological, geological, and topographical diversity. They view themselves as part of the natural community within which they live, work, and play, and participate in individual and organizational efforts to protect the county's significant ecosystems, water resources, shoreline areas, Niagara Escarpment, and other important natural features. Residents and visitors understand how their activities affect the county's water resources – particularly Lake Michigan and Green Bay – and vice-versa, recognize those resources as important to themselves, the county, and the state for environmental, economic, and health reasons.

Large, contiguous areas of critical agricultural and natural resource lands, including forested lands and those housing biologically diverse communities, are being preserved and maintained by private and public landowners, providing environmental as well as economic and other benefits to residents and visitors. Proper management of these lands is accomplished through a variety of means, including education and economic incentives, with natural resource protection and agricultural advocacy organizations working together to address the challenges they face in their preservation efforts. Agricultural operations and associated business activities are thriving economically, and supported by county residents, visitors, and businesses, who understand the importance of buying locally-produced products.

# **CHAPTER 5: HOUSING AND ECONOMIC DEVELOPMENT**

## **SMART GROWTH LEGISLATION REQUIREMENTS**

*Note: This chapter will address both the housing and economic development requirements of the state statutes for comprehensive plans.*

Per s. 66.1001(2)(b), Wis. Stats., the Housing element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs of the local governmental unit to provide an adequate housing supply that meets existing and forecasted housing demand in the local governmental unit. The element shall assess the age, structural, value and occupancy characteristics of the local governmental unit's housing stock. The element shall also identify specific policies and programs that promote the development of housing for residents of the local governmental unit and provide a range of housing choices that meet the needs of persons of all income levels and of all age groups and persons with special needs, policies and programs that promote the availability of land for the development or redevelopment of low-income and moderate-income housing, and policies and programs to maintain or rehabilitate the local governmental unit's existing housing stock."

Per s. 66.1001(2)(f), Wis. Stats., the Economic Development element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs to promote the stabilization, retention or expansion, of the economic base and quality employment opportunities in the local governmental unit, including an analysis of the labor force and economic base of the local governmental unit. The element shall assess categories or particular types of new businesses and industries that are desired by the local governmental unit. The element shall assess the local governmental unit's strengths and weaknesses with respect to attracting and retaining businesses and industries, and shall designate an adequate number of sites for such businesses and industries. The element shall also evaluate and promote the use of environmentally contaminated sites for commercial or industrial uses. The element shall also identify county, regional and state economic development programs that apply to the local governmental unit."

## **HOUSING AND ECONOMIC DEVELOPMENT ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

#### **1. General issues**

- Youth are not involved in this (or other) planning processes. Is our vision shared by young people?
- We are not pursuing bonding power and other funding sources available to subsidize plans and ideas
- Land is too expensive for most people, especially in Northern Door
- Increased fuel (transportation) costs
- Lack of air transportation to get here

- Geology of county and water quality will (or should) affect how housing and economic development activities are established in order to manage increasing seasonal population and tourism levels.
- Technology infrastructure may not be able to support tech (or tech-dependent) jobs
- Dual career couples – hard to find two jobs here even if a couple wants to move here
- Good quality health-care – affordability issue (many tourism-related jobs don't offer benefits)

## 2. Workforce readiness/availability

- Workforce is getting older, not being replaced – true for tourism, agriculture, and manufacturing
  - We're not keeping enough high school (or bringing back other) graduates in(to) the county
- People are not being trained for the jobs that are out there
  - There are job openings in all levels in the county, particularly in manufacturing
  - Should training be offered at NWTC to further economic development goals? For example, NWTC does not provide training in business planning, entrepreneurship, or marketing. (Note: DCEDC does.)
  - Basic job skills are lacking in northeast WI generally (and probably other areas of state, country)
- Employers report that many young people want to work but lack fundamental skills such as:
  - knowing how to dress properly for work
  - punctuality/timeliness
  - attendance
  - a general sense of responsibility
  - Note: Door County Job Center already offers some local training to develop these skills.

## 2. Tourism industry

- Is there enough for tourists to do here for longer and/or winter visits?
- Weather is an uncontrollable factor, year-round
- Extending the season might be difficult
  - Maybe need more indoor activities in winter
  - Indoor ice arena could be big draw (hockey leagues, etc.)

## 3. Housing issues

- Lack of housing options for senior residents
- \$140,000 or less is affordable, given Door County's workers' incomes, but few houses in Northern Door are available at this price
- Lack of affordable housing affects:

- economic well-being of residents (spending huge chunk of income on housing)
- employers' ability to get/keep workers
- school population (young families leaving)
- workforce supply (young families leaving)
- Habitat for Humanity has constructed only one home north of Institute since 2001
- Larger inland homes are sitting on the market for a very long time
- Trend (mostly by non-residents) is to build relatively large homes
  - Perpetuates perception that Door County is comprised of wealthy people
  - Not affordable/not easy to re-use or sell (unless on water)
  - No real regulations to limit size
  - Environmentally unfriendly
- Land too expensive unless donated or significantly discounted. Public/private partnerships are needed to subsidize affordable housing

#### 4. Regulatory issues

- Several municipalities in the county have decreased multi-family density allowances
- Some municipalities have petitioned for larger lot sizes (sometimes the same that petitioned for decreased multi-family density allowances)
- Education/attitudes
- We don't really think of ourselves as a county. Distinct economic engines drive different areas of the county, plus individual (and municipal) agendas, interests.
- County board turnover – committees re-hash same, or similar, issues every time there is a new member
- Follow-through on issues – often doesn't happen
- Many objections – often primarily to looks of – multi-family housing, but this is one of more affordable ways to provide workforce housing

### OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The opportunities listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

#### 1. We have local resources we could tap into, enhance, or market more effectively:

- Arts/cultural offerings
- Lots of educated, wealthy retirees – give them equity/entrepreneur investment opportunities

- Airport(s) are an underutilized resource, particularly coming into Sturgeon Bay
  - Door County could be a place for meetings/conferences.
  - Air transportation can sustain and grow business – bring business people here for conferences.
  - DCVB has hired someone to work doing group sales.
2. Other areas have tackled these problems – learn from them
    - Other states offer tax credits/incentives for developers to build affordable housing
    - Municipalities in other areas subsidize the land for affordable housing
  3. State/national opportunities
    - Unused bonding power(s), state and federal grants not being pursued
    - Housing starts for homes with small square footages (1,200 to 1,500 range) are more common
    - Interest in eco-tourism – Door County has lots of activities to offer
    - Tech industry (or tech dependency) is increasing nationally; could grow those industries here
    - Increased transportation costs creates a market for locally produced supplies
    - Health care industry – growing nationally, good opportunity to expand here due to aging population

## **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapters 4 and 5 of Volume II, Resource Report, of this plan for detailed housing and economic development information, as required by the comprehensive planning legislation for the Housing and Economic Development elements of this plan.*

### **HOUSING**

In 2010, Door County had 23,966 housing units, with approximately 52% of those classified as occupied (usual place of residence) and 48% classified as vacant (i.e., an occasional/seasonal residence). Compared to the state's 15% vacancy rate, Door County has an extremely high proportion of seasonal residences, especially in Northern Door where the vacancy rate is 66%.

U.S. Census median home values are significantly higher in Door County than in neighboring counties and the state. Estimated at \$190,000 in 2011, Door County's median home value for owner-occupied housing units is \$21,000 higher than the state's estimated median home value for owner-occupied homes, at \$169,000. In addition, Multiple Listing Service (MLS) data for 2011 shows median housing values to be much higher in Northern Door than in the rest of the county. The median sale price of homes in Northern Door in 2011 was \$193,500, compared to \$124,950 for the City and \$158,000 for Southern Door for the same year. Not surprisingly, calculations comparing median household incomes to median-priced homes in all three areas show that Northern Door households earning the median household income must spend over what is typically

considered affordable in order to afford a median-priced home. Lastly, according to the National Low Income Housing Coalition, rental housing costs across Door County are considered high. By their estimate, an employee earning the average hourly wage in Door County must work the equivalent of 1.5 full time jobs in order to afford a 2-bedroom fair-market rental apartment.

While housing affordability will be an on-going issue in Door County, primarily in Northern Door, the availability of land for new housing units does not seem to be an issue. The DOA estimated a total of 24,314 housing units in Door County in 2013. Based on the DOA's population projection through the year 2040, the number of housing units in Door County in 2040 is projected to be 29,666, an increase of 5,352 (22%) new housing units from 2013. An analysis of existing vacant property assessed for residential purposes shows that there is sufficient land area to accommodate these housing units, taking into account both the probable number of parcels and acreage per unit needed. Nearly three-quarters of the vacant and minimally developed parcels are in Northern Door, however, the large majority of housing unit growth (64%) happened in this area between 1970 and 2010.

## **ECONOMIC DEVELOPMENT**

Door County's economy is largely comprised of the agriculture, manufacturing, and tourism industries. With the county's heavy reliance on tourism, leisure and hospitality jobs rank first in total number of jobs at over 23%, but earned less than 13% of the county's total payroll in 2011. For the same year, retail trade jobs, closely associated with leisure and hospitality, made up 14% of the total jobs in Door County, but earned less than 11% of the county's total payroll. Higher-paying jobs in manufacturing, including shipbuilding, comprised over 14% of the total number of jobs in the county in 2011 and earned over 21% of the total payroll.

Economic development plans for the northeast Wisconsin region and Door County project that health care will be a major growth industry, producing more jobs that pay wages commensurate to manufacturing wages. In 2011, health care and social assistance jobs made up almost 12% of the total number of jobs in the county and earned approximately 17% of the county's total payroll. Economic development plans also predict Door County's marine service businesses will continue to grow, building off of the existing shipbuilding cluster.

Average annual wages paid to Door County workers in all industries, except leisure and hospitality, were less than the state's average. This is reflected in the median earnings data – wages, salaries, and self-employment income – for Door County, which was less than neighboring counties and the state. The county's average median household income, which includes both earned and non-earned income, was also less than neighboring counties and the state. However, Door County's per capita personal income, which also includes both earned and non-earned income, was significantly higher than these same areas. High per capita income, in conjunction with low median household income and earnings, indicates that a much smaller proportion of households are accounting for the bulk of the wealth in Door County than in other areas. In addition to low wages, other labor and economic development challenges include the seasonal tourism cycle and an aging population. Economic development activities designed to address these specific issues are focusing on the development of new and existing businesses, a skilled workforce, and increasing community cash flow.

## **HOUSING AND ECONOMIC DEVELOPMENT VISION STATEMENT**

In the year 2035, persons of all ages and income levels are living and working in Door County, involved in local, community-level activities but aware of their connection to the global environment. Housing and economic development activities are socially and environmentally responsible, supporting community-wide efforts to be as self-reliant as possible, with homes and businesses county-wide served by a variety of transportation options and quality, high-speed telecommunications infrastructure. Housing options include affordable, mixed types in areas close to schools and services, with options for senior residents that help them maintain their homes and independence for as long as possible.

Economic development efforts seek to further create jobs that pay a living wage and offer benefits, attracting and retaining young workers and families to the area. Many of the county's well-educated, retired residents are in their "second careers," investing in local entrepreneurial efforts and energizing/mentoring the youth in the county. The area's manufacturing sector is strong, particularly the shipbuilding industry and its related service/support businesses. Local agricultural and orchard operations are thriving, supported by residents, business owners, and visitors favoring to purchase locally-grown products. The tourism industry is strong; successful efforts to lengthen the county's "season" have enabled many tourism-focused businesses to maintain operations year-round.

## CHAPTER 6: UTILITIES

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(d), Wis. Stats., the Utilities and Community Facilities element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs to guide the future development of utilities and community facilities in the local governmental unit such as sanitary sewer service, storm water management, water supply, solid waste disposal, on-site wastewater treatment technologies, recycling facilities, parks, telecommunications facilities, power-generating plants and transmission lines, cemeteries, health care facilities, child care facilities and other public facilities, such as police, fire and rescue facilities, libraries, schools and other governmental facilities. The element shall describe the location, use and capacity of existing public utilities and community facilities that serve the local governmental unit, shall include an approximate timetable that forecasts the need in the local governmental unit to expand or rehabilitate existing utilities and facilities or to create new utilities and facilities and shall assess future needs for government services in the local governmental unit that are related to such utilities and facilities."

*Note: This chapter will address the utilities aspects of these statutory requirements, while Chapter 7 will address the community facilities aspects.*

## **UTILITIES ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Potential inadequate access in some areas of the county
  - Phone (cell service coverage; land-line redundancy; land lines are aged and therefore poorly insulated)
  - Power service back-up
  - Public sewer and water
2. Need more local and state-level staff/time/money to maintain or improve/enhance existing programs, regulations, education
  - Wells/water quality/testing
  - Private septic systems
  - Clean sweep programs
  - Recycling
3. Lack of consistency/coordination/cooperation/agreement between municipalities or between government agencies
  - Garbage and recycling
  - Connection between zoning and land qualities (soil type and depth, water quality, etc.)
  - Criteria for extension of services (sewer and water)
4. Lack of recycling/proper disposal practices for toxic materials like coolants, etc. (auto/machine/boat repair shops, etc.)
5. Lack of understanding and awareness among general public re: many of these issues

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Educational opportunities – awareness is already increasing
  - Highly-publicized water quality/septic system problems
  - Knowledgeable people/contacts/resources in the county – planning meetings are providing people/agencies/local governments with new resources/knowledge
  - Government cooperation
2. Willingness/desire to address some of these issues
  - Private citizens getting involved now, not just government
  - More awareness now re: renewable energy
  - Conservation is or will increase due to increasing utility rates
3. Renewable energy resource available (wind) – can also provide money to municipalities, too; could use that money to address other issues (utilities or other)

## **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 9 of Volume II, Resource Report, of this plan for detailed information regarding utilities, as required by the comprehensive planning legislation for the Utilities and Community Facilities element of this plan.*

Utilities in Door County include municipal wastewater treatment (sewer) systems; private on-site wastewater treatment systems (POWTS); water supply systems; storm water management systems; electric service; natural gas and other types of heating fuels; renewable energy; and telecommunications. There are ten municipal wastewater treatment facilities in the county that serve approximately one-third of all housing units; POWTS serve the other two-thirds. Most, approximately 70%, of the county's drinking water supply comes from the ground: three areas in the county are served by municipal water systems, providing water for less than one-third of all households, while private wells serve the other two-thirds.

Non-renewable energy sources provide the vast majority of Door County's power and heating supply, including coal and nuclear powered electricity and natural gas. Wisconsin Public Service provides the majority of power to all municipalities, except for the Sturgeon Bay Utilities service area and the Town of Washington. Sturgeon Bay Utilities is customer-owned and a member of a regional power company that provides services to customer-owned electric utilities. The Town of Washington has their own private cooperative that serves the island.

In 2006, the state had set a goal of 25% of its electricity and transportation fuels to come from renewable energy sources by 2025, supported by a federal conservation block grant program to assist municipalities with projected. Door County passed a resolution in 2009 to support the "25 x 25" program and was to form an ad-hoc committee that would promote energy independence at the county-level; however, in 2013, this block grant was closed, most likely due to federal sequestration cuts.

## **UTILITIES VISION STATEMENT**

In the year 2035, Door County and its municipalities continue to work toward sustainability, high levels of service and standards, and long-term environmental protection with regard to sanitary sewer service systems, on-site wastewater treatment systems, storm water management, water supply systems, solid waste and recycling disposal, telecommunications facilities, and power generation. Policies and standards support public health, connectivity and coordination of utilities and facilities, conservation of natural resources, and conservation and efficient use of energy.

Specifically, residents, visitors, businesses, and regulatory agencies operating in the county are:

- minimizing waste streams;
- held to a high level of maintenance, particular with regard to protection of water quality;
- striving to achieve long-term water quality;
- expanding and improving utilities as possible, particularly with regard to infill;
- working to ensure back-up sources for power, phone;
- continuing to expand use of and opportunities to establish renewable and alternative energy services;
- offering on-going public education efforts regarding these issues; and
- working always to achieve balance between improving facilities and maintaining natural and scenic resources.

## CHAPTER 7: COMMUNITY FACILITIES

## **SMART GROWTH LEGISLATION REQUIREMENTS**

As noted in Chapter 6, per s. 66.1001(2)(d), Wis. Stats., the Utilities and Community Facilities element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs to guide the future development of utilities and community facilities in the local governmental unit such as sanitary sewer service, storm water management, water supply, solid waste disposal, on-site wastewater treatment technologies, recycling facilities, parks, telecommunications facilities, power-generating plants and transmission lines, cemeteries, health care facilities, child care facilities and other public facilities, such as police, fire and rescue facilities, libraries, schools and other governmental facilities. The element shall describe the location, use and capacity of existing public utilities and community facilities that serve the local governmental unit, shall include an approximate timetable that forecasts the need in the local governmental unit to expand or rehabilitate existing utilities and facilities or to create new utilities and facilities and shall assess future needs for government services in the local governmental unit that are related to such utilities and facilities."

*Note: This chapter will address the community facilities aspects of these statutory requirements; Chapter 6 addressed the utilities aspects.*

## **COMMUNITY FACILITIES ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Cost of land
2. Lack of education/awareness/understanding
  - NIMBYism (Not In My Back Yard)
  - Misinformation regarding trail liability
  - Volunteer liability issues
    - The DNR and county have policies against certain activities that volunteers want to do (i.e., they can't let volunteers use chainsaws)
3. Lake Michigan water levels, quality, access
  - Low water levels; encourage higher authorities to do something about it; affects invasive species and creates shoreline ownership issues
  - Water recreational use is threatened; where does funding come from to develop recreational uses
  - Potential withdrawal of water from Lake Michigan
  - Lake access for rescue services

4. Geographically isolated county and emergency services logistics; no connectors except from the south
5. Aging population – affects:
  - Cemeteries
  - Health-care
  - Emergency services
  - Funding for schools
  - Trail development
6. Alcohol use and its impact on emergency services
7. Taxes – funding formula for the schools needs to change
8. Creating more recreational infrastructure requires permanent/more personnel to “man” the additional properties.

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Tourism opportunities
  - Great place for more trails; generate more tourism through development of recreational infrastructure
2. Financial opportunities
  - Grant opportunities for recreation development
3. Communication between conservation/preservation and user groups – common concerns and goals
  - Establish a non-profit coordination council for conservation/preservation agencies and user groups
  - Many people in the county with a lot of time and intelligence; good volunteer base
  - Work with the DNR and Parks
  - Get the DNR to stop fighting snowmobiling

## **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 9 of Volume II, Resource Report, of this plan for detailed information on community facilities, as required by the comprehensive planning legislation for the Utilities and Community Facilities element of this plan.*

Door County's community facilities include administrative facilities; solid waste (garbage) disposal and recycling; road maintenance; protective and emergency services; educational facilities; libraries; health care facilities; child care facilities; cemeteries; churches; and recreational resources. The Wisconsin Department of Natural Resources (DNR) oversees solid waste disposal, recycling, open burning and trash incineration, and composting in the state. Door County implements DNR policy through a variety of ordinances, including solid waste management, recycling, and outdoor refuse burning and fireworks. Additionally, the county regularly takes pharmaceuticals at the Sheriff's Department and conducts occasional clean sweeps for electronic equipment and hazardous substances through the Highway Department.

Protective and emergency services in Door County are comprised of: law enforcement through a county police department and jail, several municipal police departments, and town constables; ten local fire departments; and a county-owned and operated emergency ambulance services department. Other community facilities in the county consist of five public school systems, four private schools, a technical college, and eight county libraries. Door County also has one hospital and a wide variety of public and private, for-profit and non-profit, health care organizations. Additionally, there are several types of assisted living facilities, adult direct care services, and child care facilities in the county. Finally, recreational resources in the county include state, county, and local parks and recreation centers, including marinas and boat-launching facilities, golf courses, and trail facilities.

## **COMMUNITY FACILITIES VISION STATEMENT**

In the year 2035, Door County continues to work with its municipalities and other community and government agencies to improve communication, education, and information-sharing as well as to implement long-range planning with regard to shared goals and related improvements, programs, and services, particularly with regard to issues such as:

- preservation of wild space and green space;
- establishment of a multi-purpose trail network;
- expansion of existing and establishment of more county parks;
- establishment or improvement of safe harbors and waterway access points; and
- on-going maintenance, improvement, or expansion, as needed, of rescue services and facilities (police, fire, emergency services), cemeteries, health care facilities, child care facilities, libraries, and schools.

## CHAPTER 8: TRANSPORTATION

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(c), Wis. Stats., the Transportation element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs to guide the future development of the various modes of transportation, including highways, transit, transportation systems for persons with disabilities, bicycles, electric personal assistive mobility devices, walking, railroads, air transportation, trucking and water transportation. The element shall compare the local governmental unit's objectives, policies, goals and programs to state and regional transportation plans. The element shall also identify highways within the local governmental unit by function and incorporate state, regional and other applicable transportation plans, including transportation corridor plans, county highway functional and jurisdictional studies, urban area and rural area transportation plans, airport master plans and rail plans that apply in the local governmental unit."

## **TRANSPORTATION ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. General limitations/restrictions
  - Limited volunteers or staffed positions to work on transportation issues
  - Limited land availability to establish certain options
  - Government regulations can hinder efforts
  - Insufficient finances/funding sources
  - Decreasing lake level (harbors, water/ferry transportation)
  - County's geography – narrow, rural, isolated
  - Education/attitudes
  - Focus/reliance on highways, private vehicles, oil
  - Education needed on other options
  - Education needed on why we should work together
  - Trust, ownership of potential new activities
  - Turn-over of county board supervisors
    - Education process needs to be done every other year
    - Will the Smart Growth plan provide for consistency when supervisors are asked to make decisions
2. Reliance on vehicles that use petroleum-based products
  - Fuel costs, availability
3. Lack of options for non-vehicular transportation
  - Dangerous conditions on main roads
  - Lack of bike racks
4. Truck traffic
  - Number of trucks on the roads
  - Wear and tear
  - Trucking corridors

5. Safety
  - Speed limit enforcement
  - Truck traffic
  - Lack of infrastructure for non-vehicular transportation
6. Public transportation systems
  - Specialized non-profit shuttles and taxi services, and private for-profit taxi services exist
  - No general bus services
7. Airports
  - Airport facilities in the county seem to be underutilized, particularly Cherryland
  - County-wide planning for air transportation needs and facilities does not happen

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Community members generally have spirit of cooperation
2. Geography
  - Numerous harbors, provide an opportunity for water transportation
  - Use of ferries
  - We have open land for pedestrian walkways and bicycle paths
3. New or potential expansion of options
  - Potential airport expansion
    - Cherryland expansion
    - Even existing airport facilities in the county seem to be underutilized
    - Increased airport facilities and air travel could help sustain the businesses we have (tourism and manufacturing) as well as encourage more business to the area
    - Airports could help to market the area for conference and educational purposes as relates to the travel aspect of getting here
  - 4-lane highway—better for trucking and safer
  - Park and Ride
    - Could have a mini-bus running from these to specific places
    - We have an existing informal park and ride system in the county.
    - For example, we anecdotally know that people are meeting at places with large parking lots (Wal-Mart, Target, etc.) and then carpooling from there, leaving their cars all day.
4. Door County Transportation Consortium activities, momentum

## **BRIEF OVERVIEW OF DATA/SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 8 of Volume II, Resource Report, of this plan for detailed transportation system information, as required by the comprehensive planning legislation for the Transportation element of this plan.*

Door County's transportation network is supported by the Wisconsin Department of Transportation (WisDOT), which is involved in all modes of transportation, including state highways, public transit, air, rail, water, bicycle, and pedestrian. Much of the funding for county and town road maintenance and construction comes from WisDOT through general transportation aid. There are also three movable bridges in the City of Sturgeon Bay that are owned and funded by WisDOT. Other supporting/connecting roadway infrastructure includes two trucking terminals in the City, one park-and-ride lot in Southern Door, rustic road designations, and bicycle and pedestrian facilities. The county also has three airports; the main airport, owned and operated by Door County, accommodates corporate jets, small passenger and cargo jet aircraft used in regional service, and small airplanes. The county's water transportation system includes the Port of Sturgeon Bay and multiple ferry services, with the United States Coast Guard stationed here to oversee multiple facets of water transportation and recreational water usage.

Door-Tran, a local non-profit that coordinates and provides transportation services, has been operating a shared-ride taxi and public connector system in Door County since 2009. The shared-ride taxi, Door 2 Door Rides, offers public transportation at an affordable price in the Sturgeon Bay and Town of Nasewaupee area and in the Northern Door County area. Shuttles also run from the City of Sturgeon Bay to and from Egg Harbor, Valmy, Sister Bay, Algoma, and Brussels. Door-Tran plans on expanding Door 2 Door Rides service to the gap that currently exists between the City of Sturgeon Bay and Northern Door service area.

## **TRANSPORTATION VISION STATEMENT**

In the year 2035, Door County, its municipalities, and its transportation providers continue to work to provide a variety of transportation systems, networks, and options that are safe, reliable, financially and logically available to all residents, and reliant as much as possible on renewable energy sources. Systems are well-maintained and attractive, with as little impact as possible on environmental and scenic resources.

## CHAPTER 9: LAND USE

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(h), Wis. Stats., the Land Use element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps and programs to guide the future development and redevelopment of public and private property. The element shall contain a listing of the amount, type, intensity and net density of existing uses of land in the local governmental unit, such as agricultural, residential, commercial, industrial, and other public and private uses. The element shall analyze trends in the supply, demand and price of land, opportunities for redevelopment and existing and potential land-use conflicts. The element shall contain projections, based on the background information specified in [the Issues and Opportunities element of the plan], for 20 years, in 5-year increments, of future residential, agricultural, commercial and industrial land uses including the assumptions of net densities or other spatial assumptions upon which the projections are based. The element shall also include a series of maps that shows current land uses and future land uses that indicate productive agricultural soils, natural limitations for building site development, floodplains, wetlands and other environmentally sensitive lands, the boundaries of areas to which services of public utilities and community facilities, as those terms are used in [the Utilities and Community Facilities elements of the plan], will be provided in the future, consistent with the timetable described in [the Utilities and Community Facilities elements of the plan], and the general location of future land uses by net density or other classifications."

## **LAND USE ISSUES AND OPPORTUNITIES**

### **ISSUES**

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#### 1. Problems and pressures for agriculture

- Financial pressures – often easier to sell/develop than farming for a living (or need to sell land for retirement money)
- Loss of mid-size farms (small/niche/local and big/commercial will survive)
- Loss of fruit producers (cherry, especially)
- Regulatory issues
  - Farms staying just under 1,000 units or segmenting operations to avoid regulation
  - Local zoning – large lot size requirements and limitations regarding on-site value-added activities (processing, selling)
  - Renting farm land primarily to get rid of manure; growing of crops, secondary

#### 2. Need more preservation of large tracts for environmental corridors and agriculture

- Development is scattered, fragmenting natural resources and agriculture
- Financially difficult

3. Zoning needs to be revised, be more flexible
  - Mixture of uses may need to be looked at
  - Large-lot zoning is fragmenting natural and agricultural resources
4. Lack of employment and affordable housing opportunities
  - Hard to retain/attract youth
  - Lack of light industrial sites
4. Lack of transportation options
  - Limited supply of oil in the world
  - Change/adapt lifestyles to allow people to get what they need without driving (or with driving vehicles powered by alternative energy)
  - Need paths (walking, biking) connecting residential and commercial areas, etc.
5. Water quality problems
  - Do we need to ban steel holding tanks?
  - Septic system technology and standards – do state standards work here?
  - Well testing/drilling and water quality issues
  - Geology – fragmented bedrock contributes significantly to quality issues
6. Population trends
  - Commuter populations, Door County to Green Bay (and vice-versa)
  - Aging and decreasing year-round population

## OPPORTUNITIES

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The opportunities listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Brussels and Union zoning ordinances – chance to see how separation of lot size from density is working with regard to preservation of open space, clustering of housing
2. Potential to develop entrepreneurial efforts
  - Eco-tourism “big” now – Door County has many eco-friendly activities
  - Organics industry – take advantage of increasing awareness/sales/interest
  - Service industries for senior residents and visitors
3. Potential to use/market the Door County brand
  - Marketing Door County products works – see Door County Coffee & Tea
  - Agriculture – opportunities for preservation of, tourism related to, and provision of food for community
    - Most food grown here leaves for canning/distribution elsewhere – figure out how to use/sell here (use growing “buy local” movement)

## **SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 10 of Volume II, Resource Report, of this plan for detailed land use information, as required by the comprehensive planning legislation for the Land Use element of this plan.*

Land use inventories are conducted within large geographic areas in order to classify the approximate type and amount of land currently dedicated to specific purposes. Several land use inventories have been conducted for Door County in the past, with the most recent having been completed by the Planning Department in 2007 and then updated in 2014. Woodlands, wetlands, and natural areas are the county's largest land use, covering more than 38% of the total land area, followed by agricultural uses, covering more than 37% of the county's total land area, and open space/fallow fields covering more than 10%. Residential uses cover more than 5% of the total land area. The other land use categories, containing a combined total of approximately 20% of the county's total land, are parks and recreation, transportation, water features, industrial, commercial, communications/utilities, and governmental/institutional.

There are a variety of land use management plans, ordinances, and policies in place in Door County at the county and municipal levels designed to enforce existing land use regulations and achieve future land use goals. County-level plans include this comprehensive and farmland preservation plan, a land and water resource management plan, a comprehensive forest plan, and a park and outdoor recreation plan. County-level ordinances include zoning, land division, floodplain, telecommunications, wind energy, airport height, and addressing.

County-wide, between 2002 and 2013, the assessed valuation of all land and improvements increased by 33%. For the same timeframe, the assessed valuation of all land and improvements for residential uses increased by 40%, while the acreage of residential uses dropped by 6,856 acres (10%). Possibly accounting for this drop in residentially assessed land is the fact that the DNR & Exempt land use category, for the 2002 – 2013 time frame, increased by 7,441 acres (16%). DNR Managed Forest Law land is typically taxed at a lower rate than residential land and the occurrence of the Great Recession may have triggered large amounts of land to be converted from residential to DNR Managed Forest land.

Also between 2002 and 2013, acreage of commercial uses grew by 573 (10%) and assessed valuation of this land and its improvements grew by 11%. For the same timeframe, acreage of agricultural uses decreased by 7,634 (7%) and acreage of undeveloped land increased by 7,953 (36%). It is likely that the large majority of this agricultural land was converted to fallow fields, which falls under the “undeveloped” assessment category.

Since roughly 90% of all real estate sold in Door County is listed with the Door County Board of REALTORS® Multiple Listing Service (MLS), the MLS records provide a market-based (rather than assessed) perspective of real estate trends in the county. Between 2003 and 2013, the annual total sold price of all properties listed on the MLS decreased by over \$28 million (17%) and the average annual sold price of \$254,543 decreased by over \$53,000 (21%), to \$201,193. For the same timeframe, residential inland home sales were the most stable, with its average sold price decreasing by only 1.6%, compared to the average sold price for waterfront/view homes, which decreased by almost 30%. Similarly, the average sold price for residential and hotel condominiums also dropped drastically between 2003 and 2013, with an overall decrease of 22% for residential condominiums and 44% for hotel condominiums. The average MLS sold price for commercial/industrial property in 2013 was \$193,520, a decrease of \$684,867 (78%) from the 2003 average sold price of \$878,387. For the same timeframe, the average sold price of inland vacant land decreased by \$31,358 (32%), while the average sold price of waterfront/view vacant land decreased by only \$5,469 (3%).

Projections for potentially needed residential land through the year 2040 were done based on the current number of housing units and their associated residentially assessed acreage and parcel acreage (which could include other types of assessed land). Based on the existing density of residentially assessed acreage, there is enough vacant and minimally developed land assessed as residential to accommodate the projected 5,352 new housing units to be built in Door County between 2013 and 2040. Additionally, the large majority of this acreage is located within areas already targeted for residential growth by the future land use maps. (Also see the analysis of the future land use map, below, with regard to adequacy of areas designated on the future land use maps for residential development.)

Based on the existing density of residentially assessed parcel acreage, there is not enough vacant and minimally developed land within the areas planned for higher-density residential growth to supply the current average parcel size for the projected 5,352 new housing units. However, the “parcel area” method of projecting the amount of land needed for future housing is an overestimation because the method includes the entire acreage of a property, even if that property is assessed as having more than one type of land use. Furthermore, there are sufficient additional acres of vacant and minimally developed land that is assessed as residential to make up for this potential parcel “shortage” within areas planned for lower-density residential growth.

Projections for potentially needed commercial and industrial land through the year 2040 were developed based on the ratio of the current land area comprised of such activities to the current land area comprised of residential uses. These projections were then compared against the amount of commercially assessed vacant and minimally developed land within the future land use commercial, industrial, and downtown core areas. Potentially, the county has a “shortage” of between 718 and 1,000 acres within the future land use commercial, industrial, and core areas. Mitigating this potential shortage is the fact there is additional acreage of vacant and minimally developed commercially assessed land located in other future land use categories. Also, Door County’s projected net population growth through 2030 is expected to come from in-migration, primarily from retirees moving to the county. As such, the demand projections for commercial and industrial uses are likely to be overestimating what will actually be needed.

### **LAND USE VISION STATEMENT**

In the year 2035, Door County’s rural land uses are balanced between residential and economic activities and natural resource preservation. Communities’ central development areas (existing “downtowns” and “hamlets”) are unique, with well-maintained and preserved historic sites, and are separated from each other by undeveloped highway corridors. Large, contiguous areas of open space and natural features are maintained, protecting ground (drinking) and surface water quality, wildlife habitat, and environmental corridors while providing scenic vistas and recreational activities for both residents and tourists to enjoy. Farming practices are profitable and sustainable; residents are able to make a living off the land while also being good stewards. There are diverse farm types and prosperous small family farms. Housing is clustered, on small lots, or adjacent to or within communities, with access to walking and biking routes to commercial and recreational activities. Business expansion and establishment is accommodated by provision of sufficient land areas for such activities, as well as logical, consistent regulations regarding where and what types of businesses may be established, allowing the business community to provide the goods, services, and jobs community members and visitors want and need.

### **FUTURE LAND USE**

*Note that future land uses for the incorporated areas of the county – the City of Sturgeon Bay and the Villages of Egg Harbor, Ephraim, Forestville, and Sister Bay – are shown on the county-level land use map, although the county does not have any zoning, subdivision, or official mapping programs in effect in these areas.*

## FUTURE LAND USE MAPS - 2009 PROCESS

For the 2009 adoption of this plan, the county-wide future land use map was developed, by necessity, in a piecemeal fashion. For municipalities that had already created their own future land use maps as part of their municipal comprehensive planning processes – the Towns of Baileys Harbor, Brussels, Gardner, Gibraltar, Liberty Grove, Nasewaupee, and Union; the Villages of Egg Harbor, Ephraim, and Sister Bay; and the City of Sturgeon Bay – Planning Department staff took those municipal-level maps and “translated” their land use categories into the county-level land use categories. For example, a municipality may have designated two or more small-lot residential land use categories on their municipal map, which were then translated simply into “residential” for the purpose of the county-level map. Current information regarding wetlands, government and institutional land uses, parks and recreation, communication and utilities facilities, and transportation were then overlaid onto the new maps, as in many cases the county had information more recent and accurate than the original municipal maps for these types of uses and land cover. Also examined were the 2007 (then “current”) land use maps for each of these municipalities, so as to ensure review of any discrepancies between existing and projected/desired uses.

The Towns of Egg Harbor, Jacksonport, Sevastopol, and Sturgeon Bay created future land use maps that dealt only with either certain kinds of land uses, or certain areas of the municipality. For these towns, staff took the municipal-level maps and translated the legend categories provided into the county-level legend. The current information regarding wetlands, government and institutional land uses, parks and recreation, communication and utilities facilities, and transportation were then overlaid. For the remaining, unmapped areas of the towns, Planning staff members developed future land use designations by reviewing current land uses, development patterns, and zoning maps. Likewise, the future land use maps created for the Towns of Clay Banks, Forestville, and Washington and the Village of Forestville – municipalities that did not develop any kind of future land use maps of their own – were created by staff after reviewing current land uses, development patterns, and zoning. Planning Department staff then distributed the maps to each of the county’s 19 municipalities for review, comment, and corrections. Maps were then reviewed and approved by the ad-hoc Core Planning Committee, the oversight body established by the county board to oversee the county comprehensive plan development.

## FUTURE LAND USE MAPS - 2014 UPDATE

In January of 2014, Planning Department staff again distributed the future land use maps described above to each of the county’s 19 municipalities for review, comment, and corrections. The corrected maps were then synthesized into the final county-level future land use maps.

Described in the following section are the land use categories depicted on Maps 9.1 A – C, Future Land Use, which can be found at the end of this volume. These general land use categories largely match those categories used in creating the current land use maps, with the addition of “rural residential” and “mixed commercial/residential” categories and the replacement of the two categories “agricultural” and “open/fallow” with “rural/agricultural.” Boundaries of “core areas” – a term and land use category first used in the county’s 1995 Door County Development Plan – are also depicted on the county-wide future land use maps. Core areas are found only in towns and are referenced in the Door County Zoning Ordinance as areas allowing higher multiple-occupancy development densities and, in some instances, decreased setbacks. Core area boundaries were reviewed by towns in their review and approval of the county-level future land use maps.

Note that larger-sized versions of these county-level future land use maps are available from the Door County Planning Department for all 19 municipalities. Those maps depict wetlands larger than two acres in area and also areas served by public sewer (as of 2014), features not shown on the smaller-scale maps in this plan volume. ***Important note: While the county Planning Department can provide more detailed municipal-level versions of these county future land use maps, still more specific future land use maps are available from those municipalities which have themselves developed and adopted their own comprehensive plans. Those municipal-level***

***plan maps and accompanying goals, policies, and action items should be consulted for more detailed information as to desired land use activities or guidelines regarding development activities – many proposed land uses or projects might require review and approval by multiple levels of government. All municipalities - except for the Towns of Forestville, Jacksonport, and Washington - have adopted their own municipal-level comprehensive Smart Growth plans as of the date of this county plan adoption.***

## FUTURE LAND USE CATEGORIES

Future land use category designations are not intended to serve as zoning designations, but rather indicators of desired types of development and land uses. Mapped future land use categories will, however, be one consideration when petitions are presented to the county requesting county zoning ordinance map amendments. (Other considerations will include input from the affected town[s] with regard to the municipal-level future land use map or any pertinent goals and action items, if any, and any pertinent goals, policies, and action items from the county plan.)

Note that there are several areas on the county-level future land use maps where the boundaries of particular land use categories are not meant to be specifically defined, due to loosely defined boundaries on the municipal-level future land use maps. Any proposed map amendments for these areas will need to be evaluated with even more care than usual. Those areas are: 1) the proposed commercial area at the intersection of State Trunk Highway 42 and Europe Bay Road (Town of Liberty Grove), 2) the proposed mixed use area around the community of Namur (Town of Union), 3) two proposed residential areas along State Trunk Highway 42 and one along State Trunk Highway 57 just north of the City of Sturgeon Bay (all three in the Town of Sevastopol), and 4) proposed mixed use areas in/near the communities of Valmy and Institute (both in the Town of Sevastopol). Finally, note that, per the town's request, the majority of the Town of Egg Harbor – outside areas governed by county shoreland zoning – is depicted as an unbounded mixture of rural/agricultural, residential, and commercial uses.

### Core Areas

The areas encompassed by the core area boundaries consist of existing built-up communities and their planned expansion areas. These communities already contain a fairly dense mixture of commercial, residential, and institutional uses. In many cases public sewer already exists. In general, future high density (re)development, whether commercial, residential, or mixed-use, should be directed to these areas. Guidelines for these areas are as listed below.

- Maintain the vital community character of these core areas by encouraging future commercial, residential, and institutional uses to locate in these areas.
- Allow higher density development in accordance with the availability of and capability of wastewater treatment systems.
- Within individual development core areas, guide the future development pattern by identifying suitable locations for each type of desired development (e.g., retail, single family residential, mixed-use, townhouses, etc.).
- Promote orderly and rational expansion of these communities, particularly by avoiding a linear strip development pattern along major roads in favor of a more compact development pattern. Where possible, communities should strive to maintain a distinct “edge” to their built-up areas.
- Avoid sprawl by maintaining undeveloped parts of the core areas as lower density rural lands until such land is actually needed to accommodate growth from the central parts of the core areas.

- Encourage infill development and redevelopment.

Targeting much of the projected commercial and higher-density residential development to core areas will serve to allow the county to grow with minimal “sprawling,” utilize sewer or planned sewer extensions, expand commercial and industrial uses contiguous to existing such uses, and maintain the rural atmosphere of outlying areas of the county. Core areas are therefore those areas of the county deemed to be designated for “Smart Growth,” as defined by the Wisconsin legislation’s 14 municipal planning goals.

**Residential** – Areas designated as “Residential” are intended to be developed predominantly with single-family uses, or, where allowed by zoning or other ordinance, mobile homes, group quarters, or non-transient multi-family buildings. Some parcels designated as “Residential” may currently contain duplexes, multi-family developments, or resorts, if those uses are located on parcels currently zoned for primarily single-family residential development, or if the municipality wished to ensure that the long-term development of the property would be primarily residential rather than commercial in nature. “Residential” areas include the majority of the county’s shorelines and areas containing smaller lots and/or emerging small-lot residential development patterns.

**Rural Residential** – Areas designated as “Rural Residential” are intended to develop with predominantly single-family residential uses, generally on larger parcels and in areas removed from designated community centers, core areas, or “downtowns.” These areas consist primarily of wooded uplands, areas where agricultural activity has greatly diminished, and certain areas adjacent to existing developed areas. Typically, public sewer is not available, though some of these areas have been platted or are beginning to develop at relatively low densities. Development in these areas should continue at modest densities and be consistent with the generally rural character of these areas. Commercial activity should be discouraged except for uses that are compatible with lower density residential development.

**Commercial** – “Commercial” areas are those intended for development with retail sales, trade of goods and/or services, commercial offices, and commercial lodging establishments and are found largely in community centers, core areas, or “downtowns.” Commercial areas should maintain defined boundaries, avoid excessive access points to major roads by encouraging shared driveways or internal circulation patterns, and have buffering or screening of light industrial uses and storage and parking areas from adjacent public rights-of-way and residential areas. Highway corridor development should avoid further strip development and loss of community separation by limiting future development density, employing stringent setbacks, and requiring screening of new uses. Note that the future land use maps depict many “outlying” (i.e., non-core) commercial areas, reflecting existing commercial zoning or businesses such as multiple occupancy developments; when redevelopment is proposed for the latter, it should be undertaken carefully and with consideration for neighborhood compatibility.

**Mixed Commercial/Residential** – Areas designated as “Mixed Commercial/Residential” are intended to accommodate a variety of commercial and residential activities, typically higher-density and in designated community centers, core areas, or “downtowns.” There are also several small “Mixed Commercial/Residential” areas scattered throughout the county outside the core areas, most of which have historically been minor development nodes and which are usually situated at a major crossroads. Unlike core areas, public sewer is not expected to extend to any of these outlying areas. Development in these outlying areas should avoid large-scale projects that would conflict with the “small-town” character of these communities, alter the visual quality of the surrounding areas, or create conflicts with surrounding agricultural uses.

*For further guidance, see also the detailed explanations of core areas and the commercial and residential land use categories, as applicable.*

**Industrial** – “Industrial” lands are intended for uses such as fabrication, wholesaling, or long-term storage of products and for extraction (mining) or transformation of materials.

**Transportation** – Lands designated as “Transportation” include existing or planned parking facilities, airports, marine transportation areas, and non-motorized-related transportation areas.

**Communications/Utilities** – Those areas shown as “Communications/Utilities” denote areas where the generation, processing, and/or transmission of electronic communications or of water, electricity, petroleum, or other transmittable products is occurring currently, or where the disposal, waste processing, and/or recycling of byproducts is occurring.

**Governmental/Institutional Facilities** – Those areas shown as “Governmental/Institutional Facilities” denote existing or planned expansions of public and private facilities for education, health, or assembly; cemeteries and related facilities; and government facilities used for administration or safety. (Note that public utilities and outdoor recreation areas are categorized separately.)

**Parks and Recreation** – Land designated for “Parks and Recreation” are appropriate for out-of-doors sport and general recreation facilities, camping or picnicking facilities, nature exhibits, and protected historical and other cultural amenities.

**Rural/Agricultural** – “Rural/Agricultural” areas cover much of southern and central Door County, where there are currently relatively stable agricultural lands with few non-agricultural uses, as well as most of the cleared areas located within the northern part of the county, which has more limited or discontinued agricultural activities. These areas are not planned for non-agricultural development in the next 15 years, however, lands in this category can, and most likely will, contain residential uses compatible with agriculture. Agricultural and related operations in these areas should be protected by ensuring development is at low density levels.

**Woodland/Wetland/Natural** – Lands designated as “Woodland/Wetland/Natural” are primarily in a natural state, and include wetlands, woodlands, and public and private conservancy areas. Note that lands in this category can – outside of wetland and conservancy areas – and most likely will, contain very low-density residential uses in upland areas. The character of these regions should be protected by discouraging any development that would adversely impact the environmental quality or natural beauty of these areas. Maintenance of these natural areas should include continued private stewardship and public ownership or, if necessary, acquisition of easements or additional public lands.

## FARMLAND PRESERVATION MAPS

Farmland preservation planning law requires maps and text that clearly delineate and describe the rationale for areas that the county plans to preserve for agricultural and agriculture-related uses. These areas may include undeveloped natural resource and open space areas, but may not include any area that is planned for nonagricultural development within 15 years after the date on which the plan is adopted.

For all of the towns except for the Town of Clay Banks, the Planning Department staff created draft farmland preservation plan maps based solely on two land use categories from the future land use maps described previously. (See Maps 9.2 A - C.) The process for creating these maps is described below.

- 1) The Rural/Agricultural future land use designations were renamed “farmland preservation areas,” and
- 2) The Woodland/Wetland/Natural Area future land use area were also converted to farmland preservation areas, except for conservation areas (such as Land Trust, Nature Conservancy, or The Ridges ownership, state ownership, etc.). The conversion of Woodland/Wetland/Natural land use designations to farmland preservation areas was done because there are now uses involving wooded areas that can count as agriculture, and because Woodland/Wetland/Natural land adjacent to agricultural land is eligible for the per acre income tax credit.
- 3) Properties with any other future land use designation besides Rural/Agricultural or Woodland/Wetland/Natural are shown as “nonfarmland preservation areas.”

The farmland preservation map for the Town of Clay Banks was created differently because of their Exclusive Agricultural (EA) zoning. On the Town of Clay Banks farmland preservation map, all properties zoned EA are shown as farmland preservation areas, as well as most areas zoned Estate or Prime Agricultural. The Estate and Prime Agricultural lands are included because these zoning districts allow farming and most of the land is currently being farmed.

In the event land use designations conflict between future land use and farmland preservation maps, the farmland preservation map will supersede the future land use map. For example, if a property owner in the Estate areas described above wishes to rezone to a denser residential category, it would be inconsistent with the Door County Comprehensive and Farmland Preservation Plan 2035. However, if and when a property owner decides to discontinue farming, the property may still be used for residential purposes to the extent that the Estate zoning allows. In this situation, any properties where farming has been discontinued will be shown as non-farmland preservation during the next update of this plan.

Note that the farmland preservation map for the Town of Egg Harbor does not have any farmland preservation areas. This is because the town’s future land use map allows for any type of residential or commercial development anywhere in the rural/agricultural areas, exhibiting the potential for significant loss of agricultural or open space lands.

Draft farmland preservation maps were handed out to municipalities at a March 2011 educational/discussion meeting for local officials. Staff members gave an overview of the state-level farmland preservation planning programs and the county’s planning process, followed by a question-and-answer session. Staff members also explained the development of the farmland preservation maps and the process for town review of those maps. The farmland preservation mapping process was re-explained at a January 2014 educational/discussion meeting for town officials to ensure all understood how the maps were being developed. Since the farmland preservation maps were created based on the comprehensive plan future land use maps via the process described above, there are no conflicts between the two maps.

### **OTHER MAPS ASSOCIATED WITH FUTURE LAND USE**

Per state statutes, the land use element of a comprehensive plan shall include maps showing productive agricultural soils, natural limitations for development, floodplains, wetlands and other environmentally sensitive lands, public utilities and community facilities, and the general location of future land uses. Refer to the list below for the Resource Report maps which should be reviewed in conjunction with the future land use maps. All maps can be found at the end of the Resource Report, Volume II of this plan.

- Productive agricultural soils - Map 6.2: Prime Agricultural Soils

- Natural limitations for building site development
  - Map 6.1: General Soil Associations
  - Map 6.4: Surface Water Features
  - Map 6.5: Major Wetland Areas
  - Map 6.6: Shorelands and Floodplains
- Floodplains - Map 6.6: Shorelands and Floodplains
- Wetlands and other environmentally sensitive lands
  - Map 6.4: Surface Water Features
  - Map 6.5: Major Wetland Areas
  - Map 6.8: Preserved Lands
- Boundaries of utilities and facilities - Maps 10.1 A – C, 2014 Land Use (shows public sewer service areas and utilities such as communication, electric substations and transmission lines, and other utilities)

## **EXISTING/POTENTIAL CONFLICTS BETWEEN MUNICIPAL PLANS AND COUNTY PLAN**

Door County municipalities that completed their own comprehensive plans identified within those plans internal conflicts or conflicts with other municipalities. The Town of Nasewaupee also identified a conflict between the town's plan and the county's shoreland zoning regulations. Specifically, the town plan indicates that the county shoreland zones are in some cases more restrictive and in some cases less restrictive than preferred town "management areas" in terms of shoreland development density and minimum lot size. Note that the town has not approached the county to resolve these potential conflicts since its plan was adopted in 2003. When/if the town wishes to further its plan implementation, county staff can assist with appropriate map and/or text amendments.

The county-level future land use maps for this comprehensive plan were created so as to completely accommodate and not conflict with local municipal plan future land use maps. This process has resulted in several internal conflicts within this plan, between the future land use map (based on the towns' maps) and the goals, policies, and action items (developed by the work groups and the Core Planning Committee). These conflicts and their potential resolutions are listed below.

- 1) The Town of Nasewaupee's future land use map includes significant commercial expansion along the STH 57 corridor, which conflicts with several goals, policies, and action items advocating the minimization of commercial sprawl along the highway corridors. Since the county has no zoning jurisdiction in this area, there is currently no resolution available to the county to address this issue. On the other hand, given that the county only has shoreland zoning jurisdiction in the town, no actual/official conflicts are expected to arise.
- 2) The Town of Egg Harbor's future land use map allows for any type of residential or commercial development anywhere in the rural/agricultural areas, exhibiting the potential for sprawl, adjacent siting of conflicting land uses, and significant loss of agricultural or open space lands. Again, as with Nasewaupee, since the county has no zoning jurisdiction in this area, there is currently no resolution available to the county. Given that the county only has shoreland zoning jurisdiction in the town, though, no actual/official conflicts are expected to arise.
- 3) The Town of Sevastopol's future land use map includes commercial expansion along STH 42/57, which conflicts with several goals, policies, and action items advocating the minimization of commercial sprawl along the highway corridors. To resolve any potential conflicts this might create, the Resource Planning Committee will need to carefully review any rezoning and conditional use permit applications within this highway corridor. Conditions that address screening, traffic issues (frontage and reverse frontage roads, strict sign regulations), and design would be appropriate.

- 4) The Town of Sevastopol has also mapped three alternative housing “bubbles” that are not located near any existing commercial centers or residential developments. Again, review by the Resource Planning Committee of any rezoning and conditional use permit applications within these alternative housing “bubbles” should be cautiously considered and include conditions that address screening, traffic issues (frontage and reverse frontage roads, strict sign regulations), and design.
- 5) The Town of Gardner has mapped residential development along many road corridors throughout the town, exhibiting the potential for sprawl, adjacent siting of conflicting land uses, and loss of agricultural or open space lands. As with the Towns of Egg Harbor and Nasewaupee, since the county has no zoning jurisdiction in this area, there is currently no resolution available to the county. Given that the county only has shoreland zoning jurisdiction in the town, though, no actual/official conflicts are expected to arise.
- 6) The City of Sturgeon Bay’s comprehensive plan future land use map includes extraterritorial land use areas, encompassing a 1.5 mile radius beyond the city limits, which conflicts with the county’s future land use map in several locations:
  - The county’s future land use map designates approximately 50 acres of land in the Town of Sturgeon Bay, located between 18th Avenue and Highway 42/57 to the south of Alabama Street (CTH “T”), as future commercial use. The city’s extraterritorial future land use map designates only a strip of road frontage along Alabama as future commercial use, with the remaining portion of the area in question designated as residential use.
  - The county’s future land use map designates stretches of commercial use along the STH 42/57 highway corridor in the Towns of Nasewaupee and Sevastopol, conflicting with the city’s extraterritorial future land use map which shows these areas as primarily agricultural. As discussed above, the county’s map for these areas is actually in conflict with county plan goals, policies, and action items; see discussions #1 and #3 above as to how these conflicts will be addressed.

### **EXISTING/POTENTIAL CONFLICTS BETWEEN FARMLAND PRESERVATION AND MUNICIPAL EXPANSION (ANNEXATION)**

In order to identify potential conflicts between farmland preservation and future expansion by incorporated municipalities, Planning Department staff reviewed the comprehensive plans of towns and incorporated areas that border one another. (No municipalities in the county have a farmland preservation plan.) Of the five incorporated areas in the county, only the City of Sturgeon Bay and the Village of Sister Bay show extraterritorial planning jurisdiction on their future land use maps. These extraterritorial planning areas were compared against the county farmland preservation maps to identify any potential conflicts in the event of annexation. The only significant area with conflicting future land uses is in the Town of Liberty Grove, bordering the Village of Sister Bay. The Village future land use map shows a 160-acre area as residential, whereas the town and county future land use maps and the county farmland preservation map show it as agricultural. Further discussion on all incorporated areas and potential annexation issues with bordering towns are described below.

- Village of Ephraim. The Village of Ephraim borders the Towns of Gibraltar and Liberty Grove. The Village’s comprehensive plan does not mention annexation and its future land use map does not show any extraterritorial planning areas.
  - The majority of bordering parcels in the Town of Gibraltar are mapped as farmland preservation area. This area is not being used agriculturally and is primarily wooded or wetland. About one-half of the bordering properties are zoned “wetland” or “conservation area” and the other one-half is zoned for agricultural uses. The town’s plan mentions annexation as an issue and proposes to “encourage the development of border

agreements with neighboring villages, if and when, annexation issues arise.”

- Only a small bordering area is designated as farmland preservation in the Town of Liberty Grove. This area is currently a tree plantation and zoned for agricultural uses (Heartland-10).
- Village of Egg Harbor. The Village of Egg Harbor shares borders with the Towns of Egg Harbor and Gibraltar. There is no farmland preservation designated areas in either town along these borders.
- Village of Forestville. The Village of Forestville borders only the Town of Forestville. The Village of Forestville’s comprehensive plan does not mention annexation and the Town of Forestville does not have a comprehensive plan. Considering that the Wisconsin Department of Administration projects the Village’s population to decline by over 15% between 2010 and 2040, and that the area does not have a significant seasonal population, annexation by the Village does not seem likely.
- Village of Sister Bay. The Village of Sister Bay borders only the Town of Liberty Grove, including some areas mapped as farmland preservation. As mentioned previously, the Village has designated a 160-acre area with a residential future land use, while the town and county plans have it designated as agricultural. This area is zoned for agricultural uses and is currently being farmed. Both the Village of Sister Bay and the Town of Liberty Grove list annexation as a top-ten concern in their comprehensive plans. Both plans also state that they should “determine common areas of development between communities before development or annexation” to possibly resolve any future conflict.
- City of Sturgeon Bay. The City of Sturgeon Bay borders the Towns of Nasewaupee, Sevastopol, and Sturgeon Bay. Its extraterritorial planning map shows some very small areas designated as farmland preservation that have future non-agricultural uses, with only one area that is currently being farmed.
  - Town of Nasewaupee. Small areas in the Town of Nasewaupee are mapped as farmland preservation, but designated by the City as “rural residential” on its future land use map. These areas are not currently being used agriculturally. Note that Door County does not have zoning jurisdiction in this area.
  - Town of Sevastopol. There are no farmland preservation areas along this border.
  - Town of Sturgeon Bay. A minor area along Lily Bay Road is designated as a farmland preservation area by the town and county, but “public & institutional” and “rural residential” future land use by the City. This area is zoned for agricultural uses and is currently being farmed.

# **CHAPTER 10: INTERGOVERNMENTAL COOPERATION**

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(g), Wis. Stats., the Intergovernmental Cooperation element of a comprehensive plan shall contain: "A compilation of objectives, policies, goals, maps, and programs for joint planning and decision making with other jurisdictions, including school districts, drainage districts, and adjacent local governmental units, for siting and building public facilities and sharing public services. The element shall analyze the relationship of the local governmental unit to school districts, drainage districts, and adjacent local governmental units, and to the region, the state and other governmental units. The element shall consider, to the greatest extent possible, the maps and plans of any military base or installation, with at least 200 assigned military personnel or that contains at least 2,000 acres, with which the local governmental unit shares common territory. The element shall incorporate any plans or agreements to which the local governmental unit is a party under s. 66.0301, 66.0307 or 66.0309. The element shall identify existing or potential conflicts between the local governmental unit and other governmental units that are specified in this paragraph and describe processes to resolve such conflicts."

*Note that s. 66.0301, Wis. Stats., outlines how and for what purposes municipalities may enter into agreements for various projects and purposes, including municipal boundary agreements, while s. 66.0307, Wis. Stats., further details how municipalities may adopt and implement a cooperative plan regarding boundary issues. Section 66.0309, Wis. Stats., describes the methods for creation, organization, powers, duties, and membership considerations for regional planning commissions.*

## **INTERGOVERNMENTAL ISSUES AND OPPORTUNITIES**

### **ISSUES**

*These issues were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The issues listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

#### 1. State-level conflicts, issues, mandates

- Issues with state regarding "Family Care"
- Regionalization of economic development programs; e.g., revolving loan funds
- Planning Department staff and Department of Natural Resources staff do not always agree on interpretation/administration of NR 115
- Department of Transportation-initiated projects - are the projects being planned for us the ones we really want and need?

#### 2. Conflicts within the county

- Comprehensive planning and zoning issues
  - Need county-wide framework for planning and conflict resolution
  - Zoning regulations/restrictions
    - Will we at some point disallow development in agricultural areas?
- Coordination of county agencies/committees with towns and their needs – is the county set up to be user-friendly, efficient, cooperative?

- Turf wars – between county and city, county and towns, school districts, etc.
- 3. Demographic issues
  - Aging population – long-term care and other services, schools and funding, etc.
  - Income separation in the county – most are either low or high income; fewer in the middle
- 4. School consolidation/service sharing and funding
  - Sturgeon Bay and Sevastopol consolidation should be explored further
  - Regional (county-level) administration should be considered/pursued such as sharing superintendent(s), services
  - School funding system needs to be revised
- 5. Government service provision
  - Increasing costs – collective bargaining, insurance
    - Leading to privatization of services/departments
  - Bureaucratic mindset
    - Government has no incentive to be proactive – change is foisted on you

## **OPPORTUNITIES**

*These opportunities were originally identified by persons participating in comprehensive planning work group and Core Planning Committee meetings held for the 2009 planning process. They were reviewed/revised again by the Resource Planning Committee, original work group members and plan participants, and the public for the 2014 planning process. The opportunities listed here, therefore, are not necessarily to be considered as conclusions based on fact or opinions shared by County of Door elected officials or staff members.*

1. Telecommunications options are improving and costs are decreasing
2. We have the chance to say what/how we want our programs/infrastructure/services to be set up, since some of these initiatives are just beginning
  - Can bring community members into what's happening in the community with regard to planning and other issues
3. Intergovernmental cooperation in Door County is good with regard to telecommunications and emergency/rescue services – lessons there might be helpful to other issue areas

## **SUMMARY OF CURRENT CONDITIONS**

*Please refer to Chapter 11 of Volume II, Resource Report, of this plan for detailed information regarding intergovernmental cooperation, as required by the comprehensive planning legislation for the Intergovernmental Cooperation element of this plan.*

The primary political subdivision in the State of Wisconsin is the county, of which there are 72 in the state. Door County is governed by an elected Board of Supervisors, representing 21 Supervisory Districts, which is primarily responsible for policy-making, law-making, budgetary approval, and cooperative decision-making. Policy is set through the adoption of plans, budgets, ordinances, and resolutions. Much of this work is conducted through the county's various committees, which also

oversee the county's departments. Door County's programs and services are primarily funded by property taxes.

With regard to land use issues, the primary types of county and municipal interactions in Door County are relationships required by or established with the Wisconsin Departments of Administration and Natural Resources, and the Bay-Lake Regional Planning Commission. Land use relationships primarily involve comprehensive planning, zoning, land use education and discussion forums, and plat review. A wide variety of other cooperative relationships outside of land use also exists between Door County, local municipalities and other governments, and non-governmental agencies.

#### **INTERGOVERNMENTAL COOPERATION VISION STATEMENT**

In the year 2035, Door County and the government units with which it interacts – local, regional, and state level – communicate and cooperate to provide efficient and effective government services. Officials from all levels of government within the county meet on a regular basis to communicate and coordinate services, including active communication between municipal officials and county board committees. Local- and county-level elected and appointed officials are offered and take advantage of educational and training opportunities regarding their roles as elected officials and also the issues and programs they manage. A unified web-based system provides links to local municipalities and regulatory information, allowing for easy access to government information at all levels within the county.

## CHAPTER 11: IMPLEMENTATION

## **SMART GROWTH LEGISLATION REQUIREMENTS**

Per s. 66.1001(2)(i), Wis. Stats., the Implementation element of a comprehensive plan shall contain: “A compilation of programs and specific actions to be completed in a stated sequence, including proposed changes to any applicable zoning ordinances, official maps, or subdivision ordinances, to implement the objectives, policies, plans and programs contained in [all other elements of the comprehensive plan]. The element shall describe how each of the elements of the comprehensive plan will be integrated and made consistent with the other elements of the comprehensive plan, and shall include a mechanism to measure the local governmental unit's progress toward achieving all aspects of the comprehensive plan. The element shall include a process for updating the comprehensive plan. A comprehensive plan under this subsection shall be updated no less than once every 10 years.”

## **PLAN IMPLEMENTATION GOALS, POLICIES, AND ACTION ITEMS**

Beginning on page 70 are all of the Door County Comprehensive and Farmland Preservation Plan 2035 goals, policies, and action items. All are derived from the 2009 and 2014 planning processes, which included visioning, workgroup, committee, and open house meetings, as well as input gathered through email correspondence.

These goals, policies, and action items are derived and reformatted from the goals, objectives, and action items in the original implementation chart found in Volume I, Vision and Goals, Door County Comprehensive Plan 2030 (adopted in 2009). The reformatted version below uses a “policies” category instead of an “objectives” category. Also different is that all of the policies are grouped together and all of the action items are grouped together, under the associated goal, rather than trying to list action items specific to each policy. Often, an action item will help achieve more than one policy.

## **EXPLANATION OF GOALS, POLICIES, AND ACTION ITEMS**

For each goal, there is a set of policies and a set of action items. Also listed for each goal are potential cooperating departments and agencies that might be involved in the action item implementation. The goals, policies, and action items are described below.

**Goals:** Goals are general statements of desired outcomes of the community and broadly described.

**Policies:** Policies are subsets of goals, but more specific. They are part of on-going processes and will be achieved through execution of associated action items.

**Action Items:** Action items are a set of projects or services necessary to help achieve the goals and policies.

## **PROCESSES FOR IMPLEMENTING AND UPDATING PLAN**

### **IMPLEMENTING**

**Door County Planning Department (DCPD):** After plan adoption, staff members will review existing programs and ordinances for changes required to ensure consistency with the plan. Those changes requiring sponsorship or adoption by the Resource Planning Committee will be brought to the committee. Staff members will also review/refer to the plan frequently to guide the planning and zoning programs and be responsible for updating the plan.

**Resource Planning Committee (RPC):** All current and future members of the RPC will receive a copy of this plan. The RPC will conduct periodic reviews to determine progress in meeting plan goals. The RPC will also refer to the appropriate sections of the plan when evaluating applications for conditional use permits and deciding upon recommendations to the county board regarding zoning map or text amendment petitions.

**Door County Board of Adjustment:** The comprehensive plan will be implemented in part by the Board of Adjustment when administering the zoning ordinance through requests for variances.

**Door County Municipal Boards and Commissions:** DCPD staff will work with municipal boards and commissions to implement plan goals, in conjunction with and assisting in municipal plan implementation efforts.

**Door County Board of Supervisors:** The plan will be made available to the current and future supervisors so they may use it as appropriate in policy, programming, and budgeting decision-making.

#### **UPDATING**

Wisconsin's comprehensive planning legislation states that comprehensive plans must be updated and re-adopted at least every ten years. Legally, therefore, this plan needs to be revised and re-adopted no later than December 2024.

To ensure compliance with and progress toward plan goals, however, and to determine if an update is needed sooner, a five-year review of the plan should be undertaken by the Resource Planning Committee.

The process for minor revisions to the plan shall be determined by staff and the RPC on a case-by-case basis. If background data is updated, but it is determined that trends and issues have not really changed, the RPC may choose to simply publicize and have a public hearing to adopt the plan with updated background data.

**GOAL 1. Improve communication and knowledge regarding land use issues between all levels of government and residents, and support or initiate cooperative efforts on issues requiring multi-jurisdictional coordination.**

**Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Promote proper understanding and implementation of the comprehensive plan.
2. Coordinate growth, consistent with the county and municipal future land use maps and goals.
3. Continue to establish and improve planning- and zoning-related relationships.
4. Offer assistance to all municipalities, not just areas under county jurisdiction.
5. Promote communication and sharing of planning- and zoning-related information and resources between the county and the towns, villages, and city.
6. Communicate and coordinate land use decision-making processes and plan/ordinance implementation activities with municipalities and other governing agencies.
7. Discuss and regularly review zoning and planning issues with local, county, and regional agencies.
8. Develop educational tools to help municipal officials visualize the effect of potential policies, zoning districts, etc.
9. Develop increased and on-going educational and information-sharing opportunities for local elected/appointed officials and the general public.
10. Support and participate in, as appropriate, educational programs and activities for elected officials, government staff members, and private citizens.
11. Limit the use of critical sites for critical use. For example, a shipyard has to be built on the water, but hotels, restaurants, multi-family condominium complexes, etc. do not necessarily have to be.

**Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

**Door County Departments:**

- Information Systems
- Soil & Water Conservation
- University of Wisconsin-Extension

**Outside Agencies:**

- City, villages, towns
- Local business/community associations
- Local conservation groups
- Property owner associations

**Time Frame: On-going**

1. Ensure new development is as consistent as possible with the comprehensive plan by creating or updating zoning, subdivision, and other ordinances and programs.
2. Work with local elected officials at educational meetings on analyzing the vision for the county expressed in the comprehensive and farmland preservation plan and evaluate and prioritize the plan's goals and actions to implement this vision.
3. Develop model ordinances (zoning and others), including residential development architecture/design, commercial development design, and lighting ordinances.
4. Write staff reports – with recommendations – for issues going to public hearing (text and map amendments, conditional use permits, variances), using the plan as the basis for the recommendation. The plan should be referred to in order to:
  - a. evaluate new developments/projects/subdivisions to see if they fit vision, goals, etc.
  - b. guide decisions regarding requests for rezonings (map amendments), text amendments, conditional use permits, and variances.
5. Include an “executive report” (condensed version of staff report) on RPC agendas that briefly explains the agenda item, including staff interpretation of the issues and potential staff recommendation to approve/deny.
6. Record reasons for individual rezonings on a RPC decision document (similar to what Board of Adjustment does for variances now).
7. Ensure that the burden of proof rests on the applicant and not on the RPC for conditional use, zoning amendment, and other permit applications.
8. Assist towns in understanding the appropriate criteria by which to evaluate proposed zoning changes or development proposals.
9. Provide 5-year updates to the full county board on the Smart Growth plan and its implementation.

**Time Frame: 1 - 5 Years**

10. Develop a process for identifying and resolving potential land use conflicts.
11. Evaluate conducting more outreach to local officials, such as:
  - a. holding planning meetings for local elected and appointed officials more frequently
  - b. addressing topics and issues towns have identified as important in their plans to discuss with each other, not just planning/zoning issues
12. Create criteria by which the Board of Adjustment and the RPC may evaluate development proposals and provide them with a list of standard questions and issues to consider when evaluating rezoning and other requests.
13. Develop a “book” of information – explanation of municipal issues, ordinances, etc. – to help guide local elected officials in decision-making so that all municipalities are operating off of the same standards.
14. Develop “build out” scenario maps.
15. Provide links to all local municipal Web sites.

**Time Frame: 5 - 10 Years**

16. Collect models and research intergovernmental agreements in other areas, their periodic review, expiration of agreements, and plans for future agreements.
    - a. Work with municipalities to address potential conflicts through the development of border or other cooperative agreements, including annexation, extraterritorial, and zoning/plat review.
    - b. For example, the county could assist municipalities in considering when/why/how annexation should be considered/undertaken.
- 

**GOAL 2. Preserve and protect the county's surface water, groundwater, wildlife habitats, and natural features.****Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Be proactive about working with public and private - local, county, regional, and state - agencies to preserve, protect, and improve the quality of surface water, ground water, and wildlife habitat.
2. Support and participate in as appropriate coordinated and cooperative relationships with the state and local units of government regarding topics, such as:
  - a. assisting in grant writing for acquisition of lands containing significant natural features.
  - b. funding and staffing educational and regulatory programs.
  - c. offering incentives to protect natural resources.
3. Support and participate in as appropriate local education efforts regarding natural resource protection, preservation, and conservation, including:
  - a. regulations regarding natural resources.
  - b. criteria for decision-making.
  - c. voluntary land stewardship and good management practices.
  - d. sharing of information between landowners and conservation groups.
4. Identify, preserve, and protect natural features, including escarpments, bluffs, steep slopes, drumlins, dunes, rockholes, bluffs, woodlands, ridge and swale complexes, shoreland vegetation, wooded areas, and wetlands.
  - a. Revise or undertake zoning and other land use management ordinances and regulatory programs to prevent any negative environmental impacts that might result from development.
  - b. Designate environmental corridors around sensitive areas, including unzoned areas.
  - c. Guide growth to planned growth areas with appropriate infrastructure for high density development and minimize impact to natural resources within growth areas.
  - d. Base land use decisions, at least in part, on soil types.
  - e. Develop a better understanding of permeable geological structures, including the bedrock and associated karst features, and consider the impact of new zoning regulations or districts on areas with known significant geological features.
  - f. Cooperate with public and private agencies in determining future uses of escarpment areas.
5. Manage the impact of new development on water quality through appropriate land use designations, decisions, and conditions.
  - a. Concentrate intense waterfront recreational facilities, especially marinas, in order to reduce impact on water quality.
  - b. Consider basing land use decisions, at least in part, on soil types and the SWCD's analysis of what that means for the proposed development.

6. Partner with county Soil and Water Conservation and Sanitarian Departments to review and potentially update ordinances, programs, and policies in order to better protect water quality.
  - a. Research and evaluate how to use watershed boundaries and natural drainage patterns to guide allowable types and intensities of development.
  - b. Improve management of runoff.
  - c. Support Sanitarian/Board of Health inspection programs designed to evaluate and determine suitability for new septic systems.
7. Adequately regulate quarry operations.
  - a. Existing and future mining sites should not negatively impact natural resources or residents.
  - b. Operations should affect neighbors as little as possible (noise, hours, etc.).
  - c. Scenic views, the natural environment, and rural characteristics should be preserved.
  - d. Incompatible uses should not be developed adjacent to one another (quarrying operations should be adjacent to compatible uses).

### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies.*

#### **Door County Departments:**

- Parks
- Sanitarian
- Soil & Water Conservation

#### **Outside Agencies:**

- City, villages, towns
- Local conservation groups
- Property owner associations
- WI Department of Natural Resources

#### **Time Frame: On-going**

1. Identify and discuss shared natural resources.
2. Evaluate all rezoning and development proposals for potential impact on natural features.
3. When reviewing and deciding upon conditional use permit applications, consider significant geological features and how they will be affected.
4. Inform residents of proposed mining sites.

#### **Time Frame: 1 - 5 Years**

5. Evaluate using officially identified natural features/resource maps as an overlay to guide land use decision-making.
  - a. Research regulatory mechanisms to preserve and protect environmental corridors. (i.e., how have other areas translated identification of those corridors into protection?).
  - b. Corridors would need to be reviewed and approved by the county and local municipalities.
6. Study watersheds - determine boundaries, drainage patterns, impervious surface capacity, etc. - and develop a county-wide map of drainage areas.
  - a. Examine existing regulations in regard to impervious surfaces and potentially reduce impervious

- surface allowances within known drainage areas.
- b. Research and evaluate requiring developers to study the impact a development will have on water quantity and quality.
- 7. Consider county-level coordination of agricultural and natural resource preservation efforts, particularly with regard to education and landowner outreach.
  - a. DCPD could serve as coordinators.
  - b. Consider coordinating some efforts with The Ridges, which is doing a lot of education and outreach.
- 8. Rewrite Chapter 5, Natural Features Protection Requirements, Door County Zoning Ordinance, to better protect natural and geological features.
  - a. Review and undertake education efforts regarding zoning restrictions that limit shoreline vegetation removal, mitigate the visual impact of bluffscape and shoreline vegetation clearing, and shoreline building setbacks.
  - b. Create natural area buffers around wetlands, such as “stepped” setbacks, depending on the district and/or use.
  - c. Research and evaluate how to use existing inventory of karst features to help guide development.
  - d. Examine existing regulations in regard to filling crevices and rock holes to see if effective and/or if other regulations need to be adopted.
- 9. Consider requiring a tree plan for major land divisions within woodland areas.
- 10. Amend the definition of “junk” in zoning ordinances so as to include hazardous or toxic substances. Those substances should not be allowed to accumulate at all, even within current square footage allowances for junk.

#### Time Frame: 5 - 10 Years

- 11. Revise the zoning ordinance and other ordinances to eliminate or minimize fragmentation of environmental corridors.
- 12. Evaluate providing incentives and options to landowners to retain contiguous areas of agricultural lands, natural areas, and open spaces, such as conservation subdivisions, purchase of development rights and/or transfer of development rights programs, and other tools.
  - a. Research purchase and/or transfer of development rights programs as a way to balance private property rights with conservation and other community-level goals.
  - b. Research other county-level programs (Mission Peninsula, Michigan, for example).
  - c. Consider lower permit fees for developments preserving natural resources and/or providing recreation areas.
- 13. Review/analyze/change zoning classifications based on results of a maximum density study.
  - a. Calculate the maximum density the county can support based on hydrology, soil type and depth, geology, etc. to figure out homes per acre that the county’s geology can support without sewer/water.
- 14. Research existing drinking water quality programs in other areas that would help the county update its ordinances, programs, and policies.
  - a. Research Minnesota regulations and standards regarding testing requirements and how it is determined which types of septic systems can go where.
- 15. Support and participate in as appropriate Department of Natural Resources outreach and education regarding sustainable forestry practices, including:

- a. education on locally harvested timber and how it is being used.
  - b. conveying that forest lands are a renewable resource available to the county for economic and environmental benefit and that managed forests provide better habitat for wildlife.
  - c. informing people about DNR forestry staff and programs.
16. Revise zoning ordinances such that regulations regarding clear-cutting/forestry practices match DNR sustainable forestry recommendations.
    - a. Create explicit “exemptions” from zoning ordinance clear-cutting restrictions for DNR managed forestry enrollees and persons reclaiming forested lands for agricultural use.
    - b. Modify rules for non-enrollees in DNR forestry programs to coincide with sound forestry management practices.
  17. Identify areas with potential sources of infrastructure materials for future development (i.e., sand, stone, and gravel).
- 

### **GOAL 3. Protect existing agriculture and promote sustainable agricultural operations.**

#### **Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Develop local plans, ordinances, and programs to help retain large, contiguous areas of prime agriculture.
2. Minimize conflicts between agricultural and other uses and discourage adjacent uses which may negatively impacting farming.
3. Encourage local food sources to serve present and future generations.
4. Support the preservation of small family farms, as well as low-impact and emerging agricultural operations.
5. Encourage development in areas with less productive soils.
6. Encourage development on smaller parcels of land.

#### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

##### ***Door County Departments:***

- University of Wisconsin-Extension

##### ***Outside Agencies:***

- City, villages, towns
- Local agricultural groups
- Door County Cooperative
- Door County Visitor Bureau
- WI Department of Natural Resources
- WI Department of Trade, Agriculture, and Consumer Protection

#### Time Frame: On-going

1. Investigate incentives to retain the most productive farmland – as determined by factors such as soil type – in agricultural use.
2. Review new development proposals for potential negative impacts on farming, so as to identify and address at public hearings.

#### Time Frame: 1 - 5 Years

3. Ensure zoning and other regulations are not impeding establishment of new agricultural uses, the expansion or maintenance of existing operations, or the development of businesses/industries needed to support agriculture.
  4. Assist local agricultural operators in producing, processing, and selling crops locally by allowing appropriate processing and sales options on-site for agricultural uses.
  5. Examine zoning maps for high-density residential uses adjacent to agriculture and revise if appropriate.
- 

### **GOAL 4. Maintain, preserve, and enhance the community's rural atmosphere and agricultural heritage.**

#### **Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Preserve rural character by retaining/preserving large areas of natural and open space that provide scenic views.
2. Work cooperatively with developers and government agencies to promote development patterns that reflect rural character.
3. Regulate new development to fit in with the county's communities by minimizing its visual impact.
4. Avoid or mitigate highway corridor development so as to minimize blending of communities and to preserve the county's scenery by leaving open/green space between communities.
  - a. Any future corridor development should be well-screened and designed.
5. Encourage county-wide signage standards and elimination of billboards.
6. Encourage alternative development styles, including conservation/cluster developments, as alternatives to conventional developments.

### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

#### **Door County Departments:**

- Historical Museum
- Parks
- University of Wisconsin-Extension

#### **Outside Agencies:**

- City, villages, towns
- Local historical societies and foundations
- Local user groups
- Door County Visitor Bureau
- WI Department of Natural Resources
- WI Department of Transportation – Scenic Byways Program
- WI Historical Society

#### **Time Frame: On-Going**

1. Consider the appearance of new development, particularly along highway corridors, when reviewing conditional use permits and rezoning petitions.

#### **Time Frame: 1 - 5 Years**

2. Consider county-wide signage standards and elimination of billboards, possibly through county-wide regulations or development of a model signage ordinance.
  3. Review zoning ordinances for any potentially necessary amendments to improve corridor appearance and minimize blending of communities.
- 

### **GOAL 5. Preserve historic sites and community character, and support, as appropriate, cultural and historical festivals, events, and activities.**

#### **Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Establish education efforts for municipal officials, developers, business owners, and residents regarding historic preservation and design standards.
2. Pursue county-level historic preservation programs and ordinances to encourage upkeep, preservation, and re-use of old buildings and out-buildings.
3. Regulate new development to fit in with the county's communities by minimizing its visual impact.
4. Encourage (re)construction in keeping with a community's character.
5. Consider the impact of development on adjacent cultural and historical resources, minimize any negative impacts, and discourage adjacent incompatible land uses.

6. Consider adopting zoning, design review, and/or historic preservation regulations that maintain rural character through appropriate site design standards, such as buffers, setbacks, landscaping, fencing, vehicle entryway design, parking, architecture, construction materials, lighting, signage, and service area design.
7. Minimize the destruction of or negative impacts to historic buildings and historic, scenic, scientific, archaeological, and cultural sites caused by the reconstruction of existing or the construction of new transportation facilities.
  - a. Consider access point standards and traffic and pedestrian flow when developing design review or historic preservation regulations.
  - b. Consider the aesthetic quality of transportation facilities and the areas through which they pass.
  - c. Consider transportation access and improvement in order to promote desirable land use patterns.

### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

#### **Door County Departments:**

- Historical Museum
- University of Wisconsin-Extension

#### **Outside Agencies:**

- City, villages, towns
- Local arts associations
- Local business/community associations
- Local conservation organizations
- Local historical societies and foundations
- Door County Community Foundation
- Door County Visitor Bureau
- WI Historical Society

#### **Time Frame: 1 - 5 Years**

1. Create a Door County Historic Preservation Commission, which would:
  - Identify and recruit potential sites with willing property owners for voluntary preservation efforts.
  - Support municipalities or others working on preservation.
  - Support and coordinate municipal, agency, and other preservation efforts.
  - Look into a county-level historic preservation ordinance, which would allow the county to apply for “Certified Local Government Status” from the State Historic Preservation Board. This designation would give the county access to increased funds/support for preservation non-profits.
  - Encourage preservation of places on the Door County Historical Society sites list and other inventories that are not yet preserved.
2. Examine zoning and other ordinances governing cultural and historical resource institutions for potential unnecessary or illogical requirements.

**Time Frame: 5 - 10 Years**

3. Develop educational information on the value of historic preservation/design standards and design ordinances, and the benefits of being on state/federal historic registries, such as:
    - a. the importance of design ordinances and historically (re)designing buildings.
    - b. the value to the county of design standards.
    - c. the value of being on state/federal historic registries.
  4. Investigate financial tools out there for municipalities to help support historically appropriate (re)development.
  5. Explore funding options, code problems, etc. regarding adapting, reusing, and maintaining older buildings.
  6. Evaluate providing all permit applicants (zoning or building, county-wide) with information regarding historic preservation and design – no zoning or building permit would be issued without acknowledgment that material had been received.
- 

**GOAL 6. Encourage quality affordable housing and economic opportunities for the current and future population.****Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Enact regulatory changes at the local level that will encourage provision of affordable housing and allow for desired housing and economic development.
2. Support the expansion of strong existing industries and businesses in the county.
3. Support the promotion of new industries, trends, and economic development implementation ideas that fit Door County.
4. Locate new commercial/industrial development within areas served by sewer, storm water drainage facilities, electric power, and communications; areas contiguous to existing commercial/industrial development; or designated commercial/industrial neighborhoods or parks.
5. Support and participate in as appropriate the provision of telecommunications and other infrastructure needed to attract new and appropriate businesses to the county.
6. Provide a range of housing types, densities, and lot size options, with smaller minimum lot sizes and higher densities in areas where appropriate, such as in or adjacent to existing residential areas, downtowns, hamlets, or other commercial areas, or, areas served by public sewer, facilities, and other infrastructure, etc.
7. Develop programs, policies, and ordinance language that encourage “green” building.

## **Action Items**

The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies.

### **Door County Departments:**

- *Airport*
- *Information Systems*
- *University of Wisconsin-Extension*

### **Outside Agencies:**

- *City, villages, towns*
- *Door County Housing Partnership*
- *Door County Economic Development Corporation*
- *Door and Kewaunee County Business Education Partnership*
- *Door County Visitor Bureau*
- *Door-Tran*
- *Local agricultural groups*
- *Local airports*
- *Local arts associations*
- *Local business/community associations*
- *Local conservation organizations*
- *Local development organizations*
- *Local utilities*
- *Schools*
- *Shipbuilding cluster businesses*
- *We Are Hope, Inc.*

### **Time Frame: On-going**

1. Identify preferred growth areas that offer the best opportunities to site new businesses and then assess and improve community facilities, services, and infrastructure needed to foster economic growth in these areas.
2. Continually monitor local population characteristics as to changing demographics/characteristics and distribute any information relevant to housing agencies and organizations.
3. Review zoning regulations to ensure they do not prohibit or excessively restrict desirable economic development activities.
4. Consider creating more light industrial sites to foster business opportunities.

### **Time Frame: 1 - 5 Years**

5. Examine current zoning maps and ordinance text to ensure we have enough area available for economic development, including new agricultural uses.
6. Research/consider adopting/amending zoning to encourage or require more affordable, alternative, and denser housing options, such as inclusionary zoning, and mandated provision of employee housing for new businesses.
  - a. Consider amendments that would separate lot size from density (like Brussels and Union have done), perhaps in combination with a requirement that those homes/lots be clustered.

- b. Research/consider requiring developments (such as land divisions and multiple occupancy developments) to designate a certain percentage of the units/lots to be sold/rented to low- to moderate-income residents.
  - c. Explore other ordinance tools to encourage or require affordable housing.
  - d. Research/create a “workforce housing” zoning district along the lines of Sister Bay’s district:
    - District would not be placed on zoning maps, but would rather be created as an option within the zoning ordinance text for which property owners/developers/town officials could petition to establish.
    - The only or primary use allowed would be workforce housing; all other uses would have to be supportive of the housing development.
    - Consider requiring establishment of this district (or some other affordable housing provision) when someone is petitioning to rezone to commercial; the housing would need to be located relatively nearby.
- 

**GOAL 7. Support the development, maintenance, and up-grade of utilities, community facilities, and services in an efficient, coordinated, and cost-effective manner to service the current and future needs of the community’s residential and commercial uses.**

**Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Support and participate in, as appropriate, efforts determining adequate staffing and funding levels to establish, improve, and maintain programs, regulations, and education efforts by exploring and implementing solutions to financial issues and constraints.
  - a. Help determine how the aging population affects community facilities issues.
2. Support or participate in, as appropriate, joint planning efforts to acquire, maintain, and improve public recreation infrastructure in order to provide adequate and safe public recreation space.
3. Assist as appropriate with updates to county and town outdoor recreation plans.
4. Locate new commercial/industrial development within areas served by sewer, storm water drainage facilities, electric power, and communications; areas contiguous to existing commercial/industrial development; or designated commercial/industrial neighborhoods or parks.
5. Work to achieve consensus between the county, municipalities, and providers as to where we want our energy sources to be located (based on or with specificity re: type).
  - a. Ensure decisions/goals are not in conflict with each other or with general “Smart Growth” principles.
6. Develop programs, policies, and ordinance language that encourages “green” building.

### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

#### ***Door County Departments:***

- Emergency Services
- Highway
- Parks
- Sheriff
- University of Wisconsin-Extension

#### ***Outside Agencies:***

- City, villages, towns
- Local fire departments
- Local haulers/recyclers
- Local schools
- Local utilities
- Nicolet Federated Library System
- WI Department of Natural Resources

#### **Time-Frame: On-going**

1. Periodically monitor population characteristics in relation to services provided, review facilities to determine any need for new or expanded services, and explore options for maintaining/improving upon the level of existing services.
2. RPC decision-making should include consideration of matters related to pertinent utilities and community facilities.

---

### **GOAL 8. Support the development - at the lowest possible environmental and social cost - of a transportation system that is safe, economical, efficient, integrated, inter-modal, and interconnected, and adaptable to changes in demand and technology.**

#### **Policies**

*The implementation of these policies will be an on-going process, to be undertaken by the DCPD/RPC.*

1. Support, as appropriate, public and private transportation that is accessible to all people regardless of age, abilities, and income.
2. Avoid or minimize the negative impact on environmental corridors, natural areas, significant wildlife habitats, endangered species, wetlands, and waterways resulting from the location of transportation facilities.
3. Enhance scenic vistas while avoiding or minimizing any negative impacts on natural resources resulting from the location of transportation facilities.
4. Require, when appropriate, safe and convenient pedestrian, bike, and walking paths, sidewalks, and crosswalks, particularly within dense or community core areas, that connect to residential and commercial areas.

5. Encourage dense housing developments to be built near jobs and services, in order to minimize automobile dependency.

### **Action Items**

*The implementation of these action items will be undertaken by the DCPD/RPC, potentially in cooperation with the following Door County departments, including their associated oversight committees, and outside agencies:*

#### ***Door County Departments:***

- *Airport*
- *Emergency Services*
- *Highway*
- *Parks*
- *Sheriff*
- *Soil and Water Conservation*

#### ***Outside Agencies:***

- *City, villages, towns*
- *Door County Economic Development Corporation*
- *Door County Silent Sports Alliance*
- *Door County Visitor Bureau*
- *Local airports*
- *Local business/community associations*
- *Local ferries*
- *Local utilities*
- *WI Department of Natural Resources*
- *WI Department of Transportation*
- *U.S. Coast Guard*

#### **Time-Frame: On-going**

1. Review and revise zoning so as to allow appropriate land uses that do not require automobile transportation, e.g., uses in conjunction with residences and agricultural operations.
2. Help implement the county bicycle/pedestrian plan.
3. Continue assisting Door Tran and Door 2 Door with research, editing, etc.
4. Address safety and efficiency issues by identifying dangerous intersections, providing adequate traffic controls, assessing lines-of-sight, providing appropriate access points, maintaining a minimum Level of Service (LOS) on all highways and roads, and other appropriate safety/efficiency methods.
  - a. Points of vehicle ingress and egress should be properly located and controlled to prevent safety problems and traffic congestion on adjacent arterial streets.
  - b. Adjacent streets should be capable of accommodating any increased traffic associated with new commercial development.
  - c. Protect highway corridors – particularly State Trunk Highways 42, 57, and 42/57 – as high-speed, limited access corridors in order to encourage:
    - Traffic safety (speed, cross-traffic, intersection issues when/if corridors compromised).
    - Road functionality (high-speed, limited access transportation system routes).
  - d. Any highway corridor development should only be served by “reverse frontage roads” (developments take access from frontage roads located behind the development).
    - Allows for beautification of any new development or even some existing development

- (parking and driveways behind development, land along highway for screening landscaping, etc.).
- Allows safer traffic movement for areas already developed (existing driveways could be eliminated) and any new areas that might be developed.
- e. Minimize the use of cul-de-sacs, which can act as barriers for many transportation options and for safety vehicles.

**Time-Frame: 1 - 5 Years**

5. Review land use regulations for areas surrounding air transportation facilities for consistency with FAA guidelines and regulations.

**Time-Frame: 5 - 10 Years**

6. Identify and preserve abandoned rail and/or utility rights-of-way corridors for future transportation facilities such as bicycle, pedestrian, transit, and/or arterial streets.



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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.1(A): Future Land Use Southern Municipalities

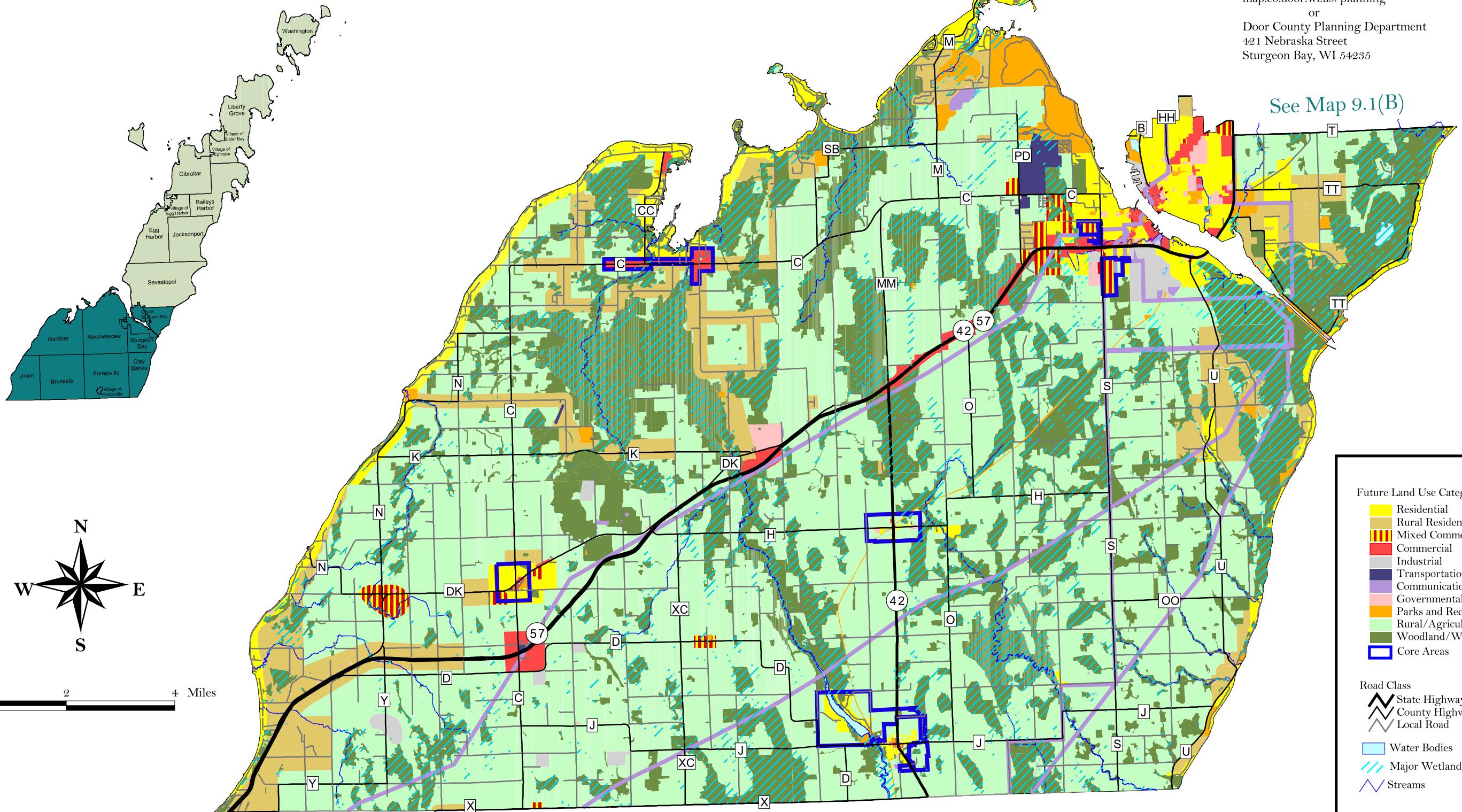
This set of maps is a compilation of data gathered for evaluation purposes only.

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

NOTE: Larger-scale land use maps,  
including wetlands, may be viewed at:

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See Map 9.1(B)



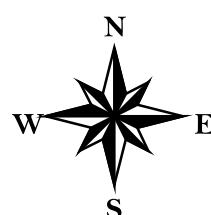
\*Note: In the event land use designations conflict between future land use and farmland preservation maps for the Town of Clay Banks, the farmland preservation map will supersede the future land use map.



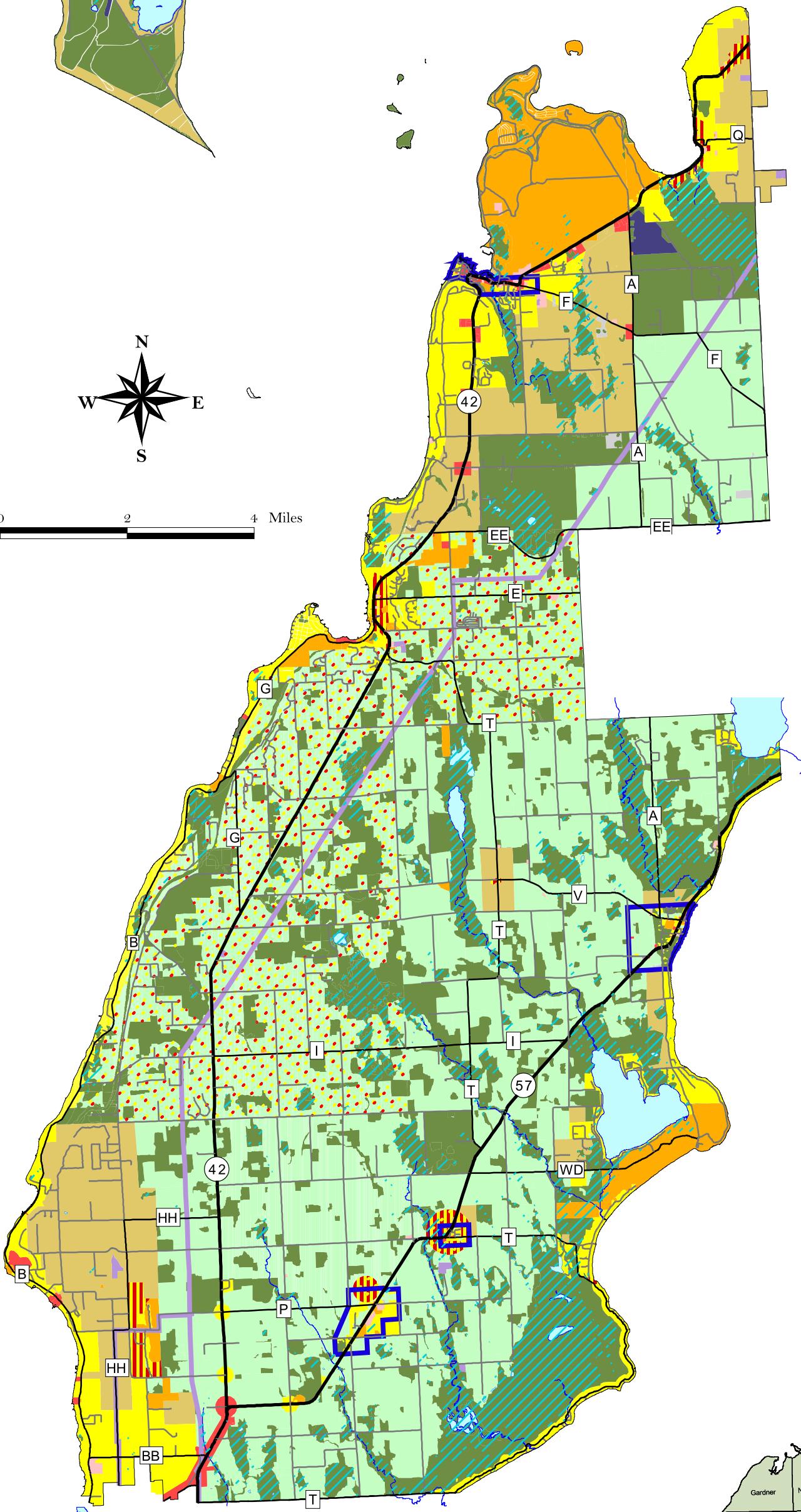
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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.1(B): Future Land Use Central Municipalities



0 2 4 Miles



See Map 9.1(A)

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See Map 9.1(C)

Future Land Use Categories

- Yellow: Residential
- Tan: Rural Residential
- Red: Mixed Commercial/Residential
- Dark Red: Commercial
- Grey: Industrial
- Dark Blue: Transportation
- Purple: Communications/Utilities
- Pink: Governmental/Institutional
- Orange: Parks and Recreation
- Light Green: Rural/Agricultural
- Dark Green: Woodland/Wetland/Natural
- Blue Box: Core Areas

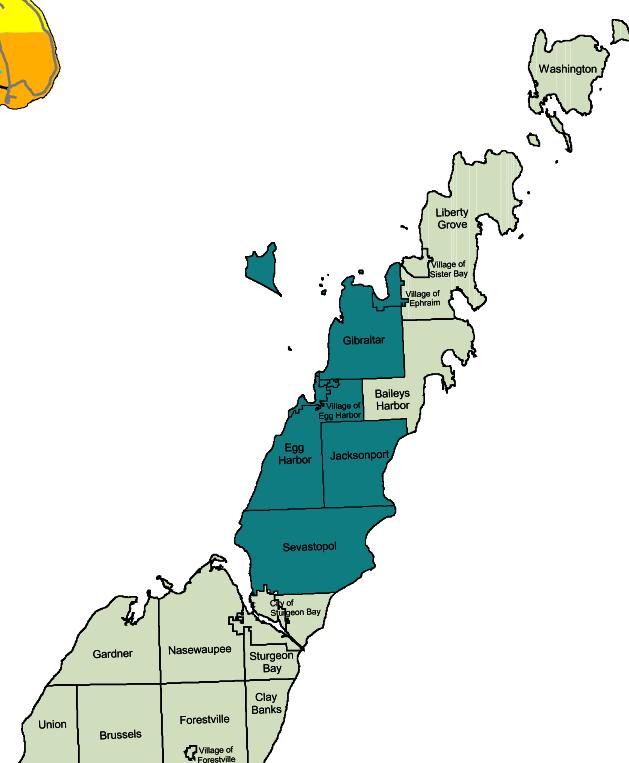
Road Class

- State Highway
- County Highway
- Local Road

Water Bodies

Major Wetland Areas

Streams





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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.1(C): Future Land Use Northern Municipalities

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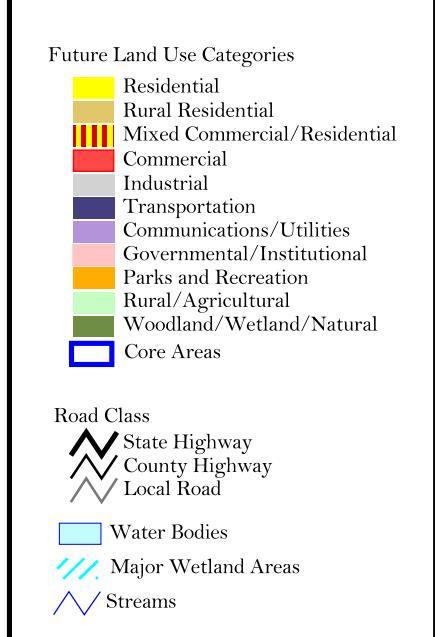
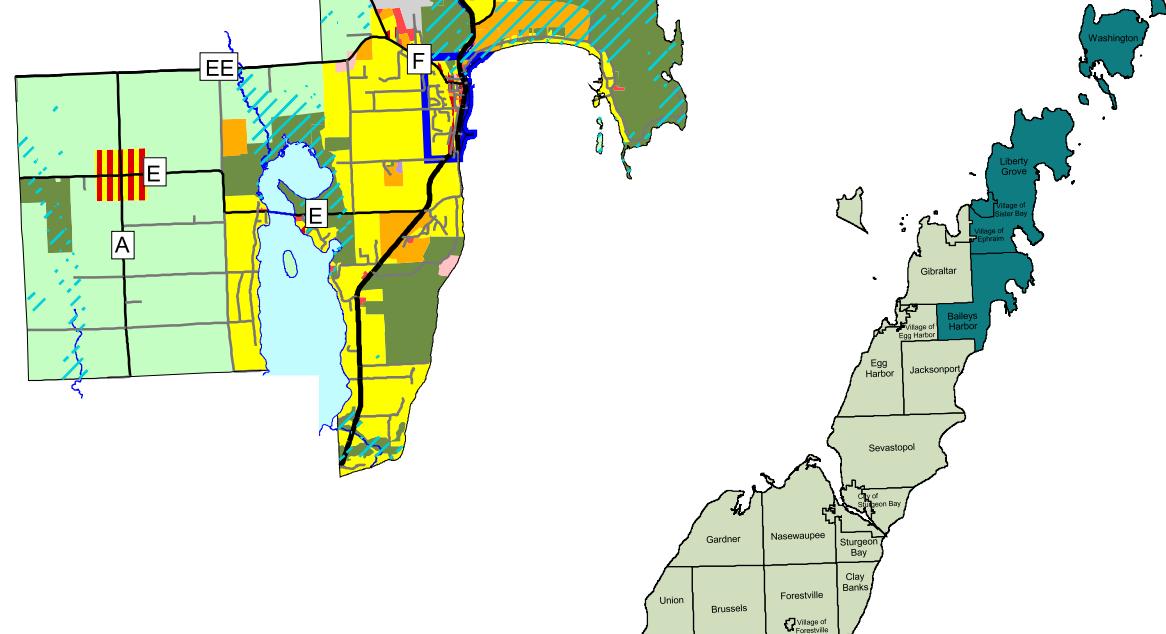
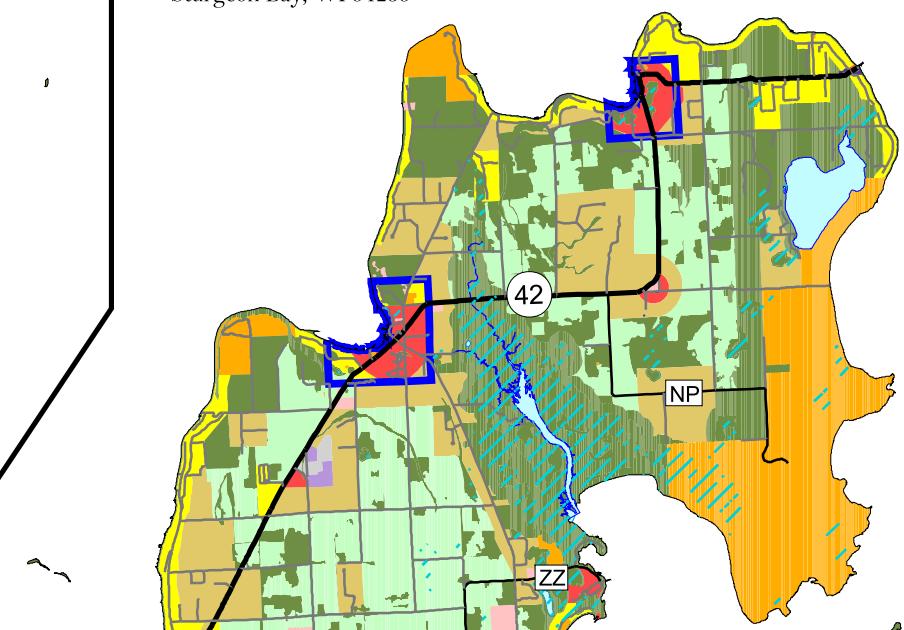
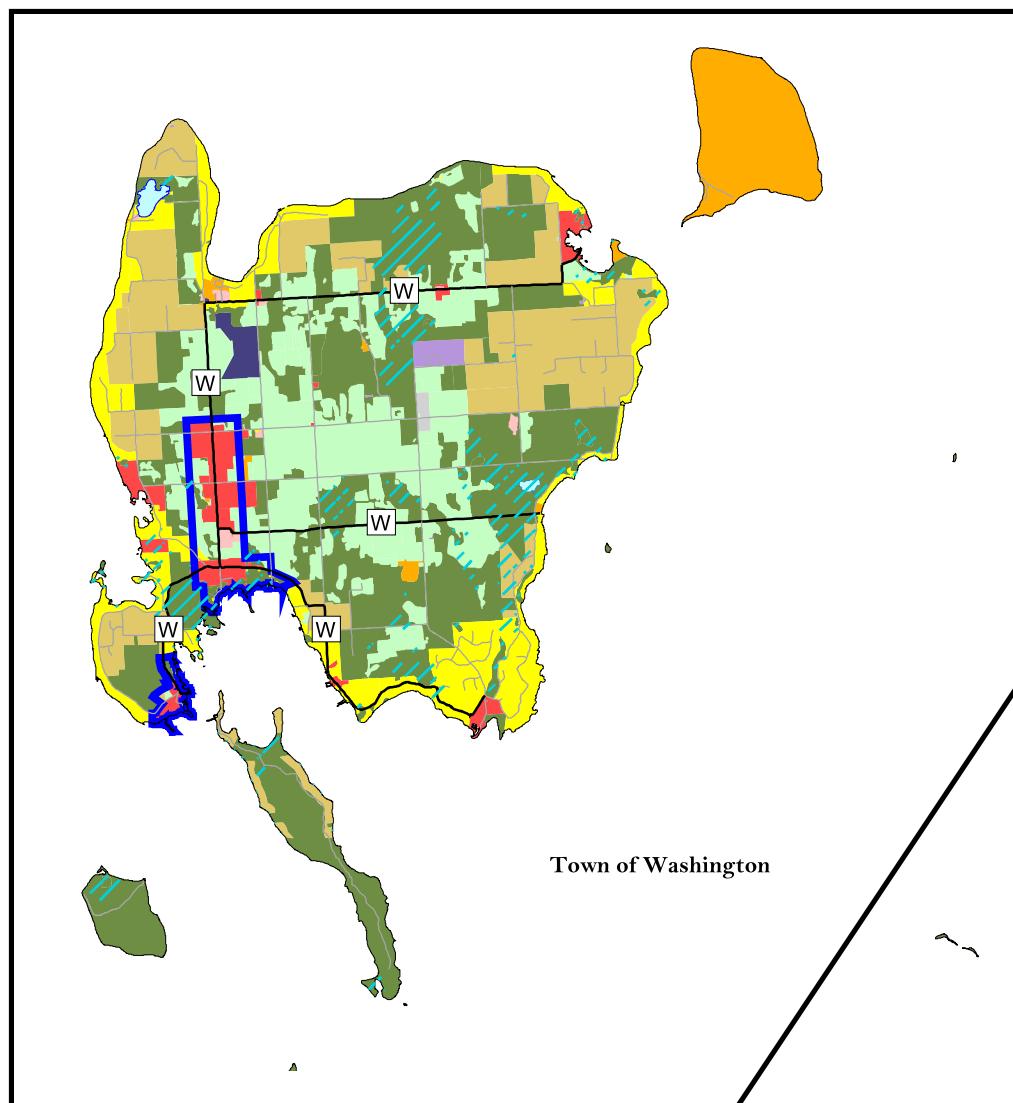
NOTE: Larger-scale land use maps, including wetlands, may be viewed at:

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*See Town of Washington Inset*



0 2 4 Miles



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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.2(A): Farmland Preservation Areas\* Unincorporated Southern Municipalities

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January 1, 2015

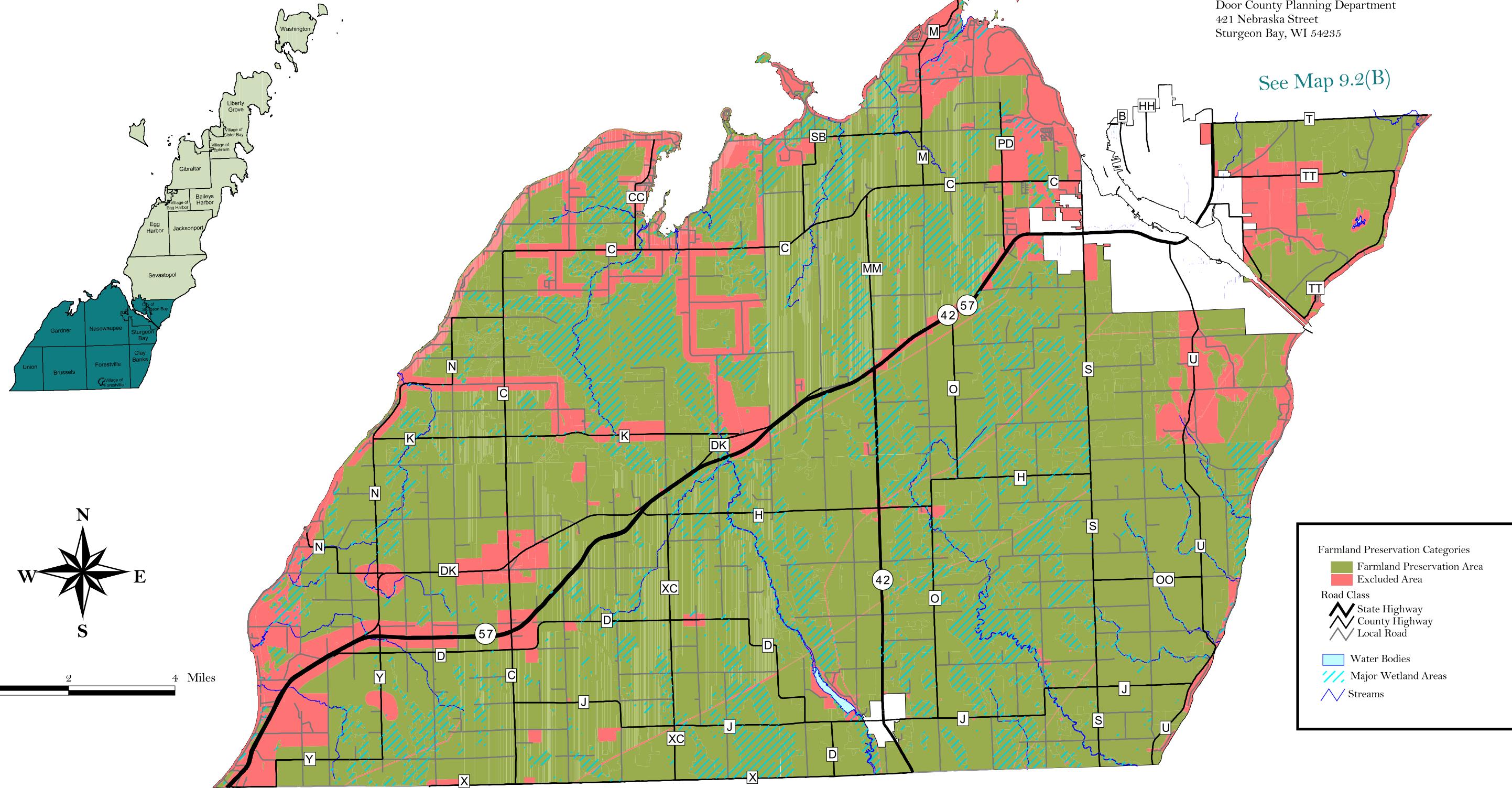
NOTE: Larger-scale land use maps,  
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See Map 9.2(B)



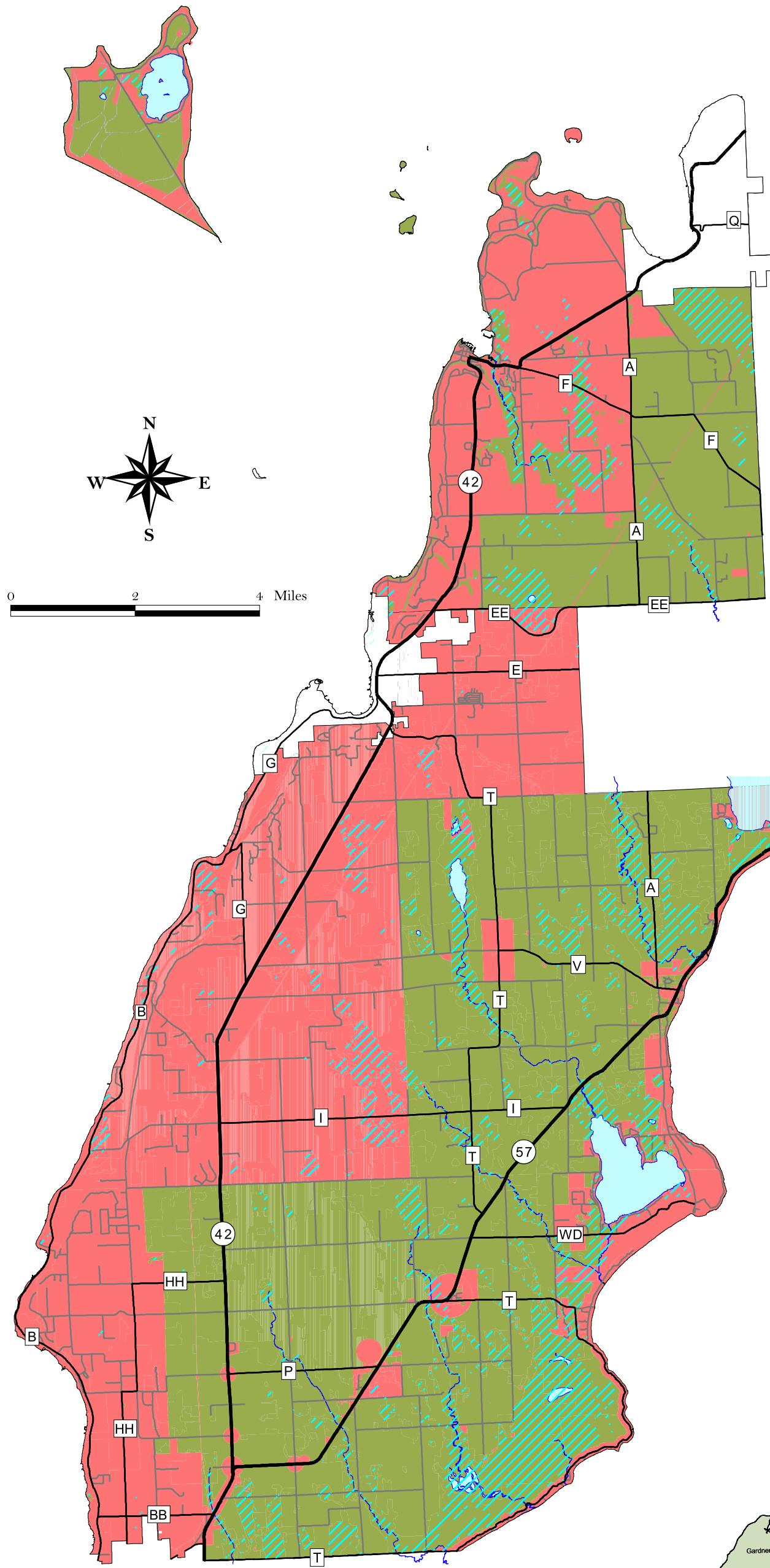
\*Note: In the event land use designations conflict between future land use and farmland preservation maps for the Town of Clay Banks, the farmland preservation map will supersede the future land use map.



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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.2(B): Farmland Preservation Areas Unincorporated Central Municipalities



This set of maps is a compilation of data gathered for evaluation purposes only.

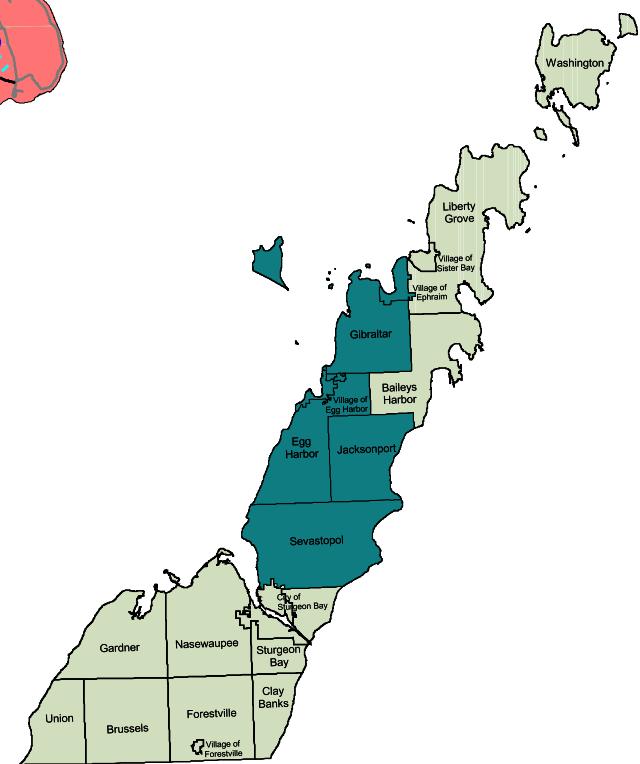
Adopted by the Door County Board of Supervisors, December 16, 2014  
Effective upon distribution per Wisconsin State Statutes, January 1, 2015

NOTE: Larger-scale land use maps, including wetlands, may be viewed at:

[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)  
or  
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See Map 9.2(C)

Farmland Preservation Categories	
Farmland Preservation Area	Excluded Area
Road Class	
State Highway	
County Highway	
Local Road	
Water Bodies	
Major Wetland Areas	
Streams	



See Map 9.2(A)



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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 9.2(C): Farmland Preservation Areas Unincorporated Northern Municipalities

This set of maps is a compilation of data gathered for evaluation purposes only.

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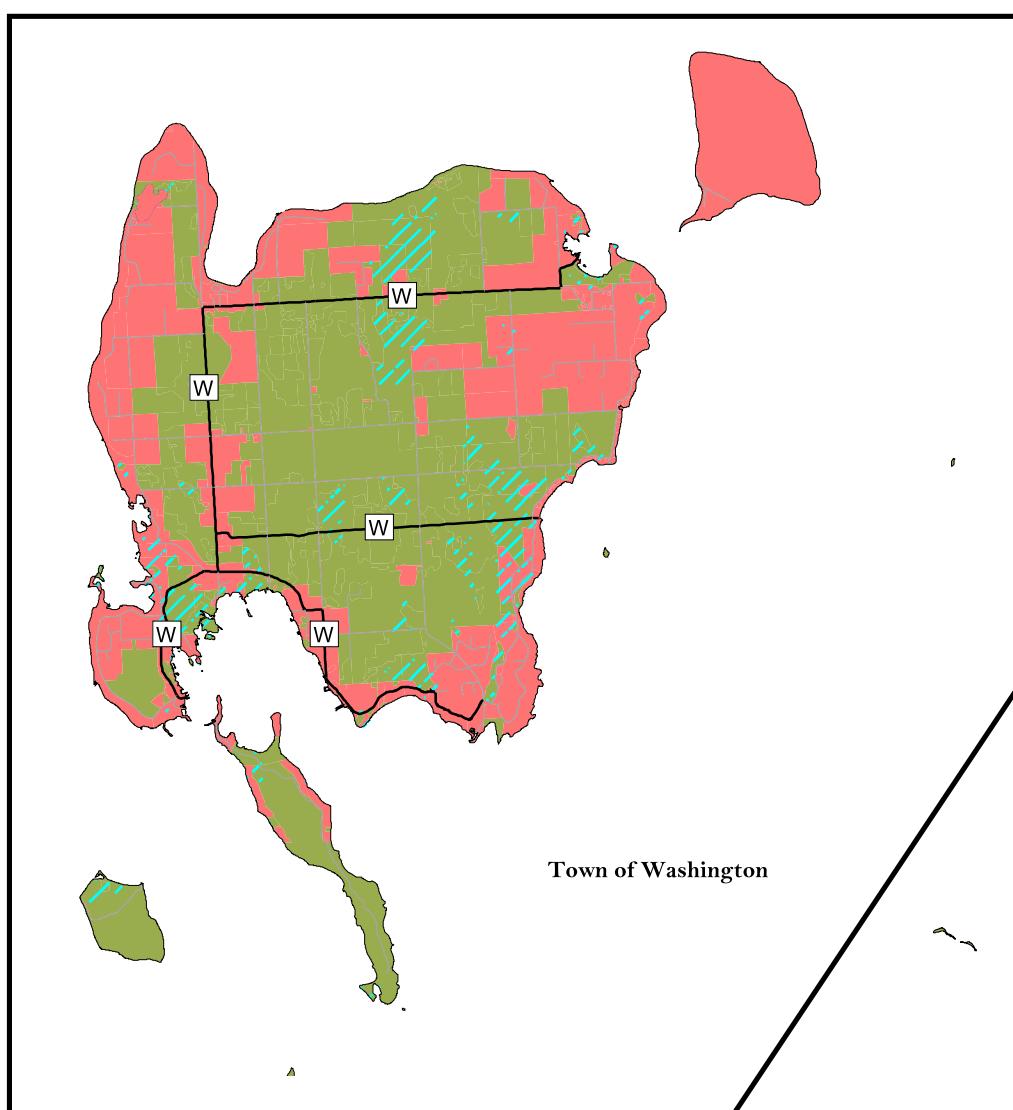
NOTE: Larger-scale land use maps, including wetlands, may be viewed at:

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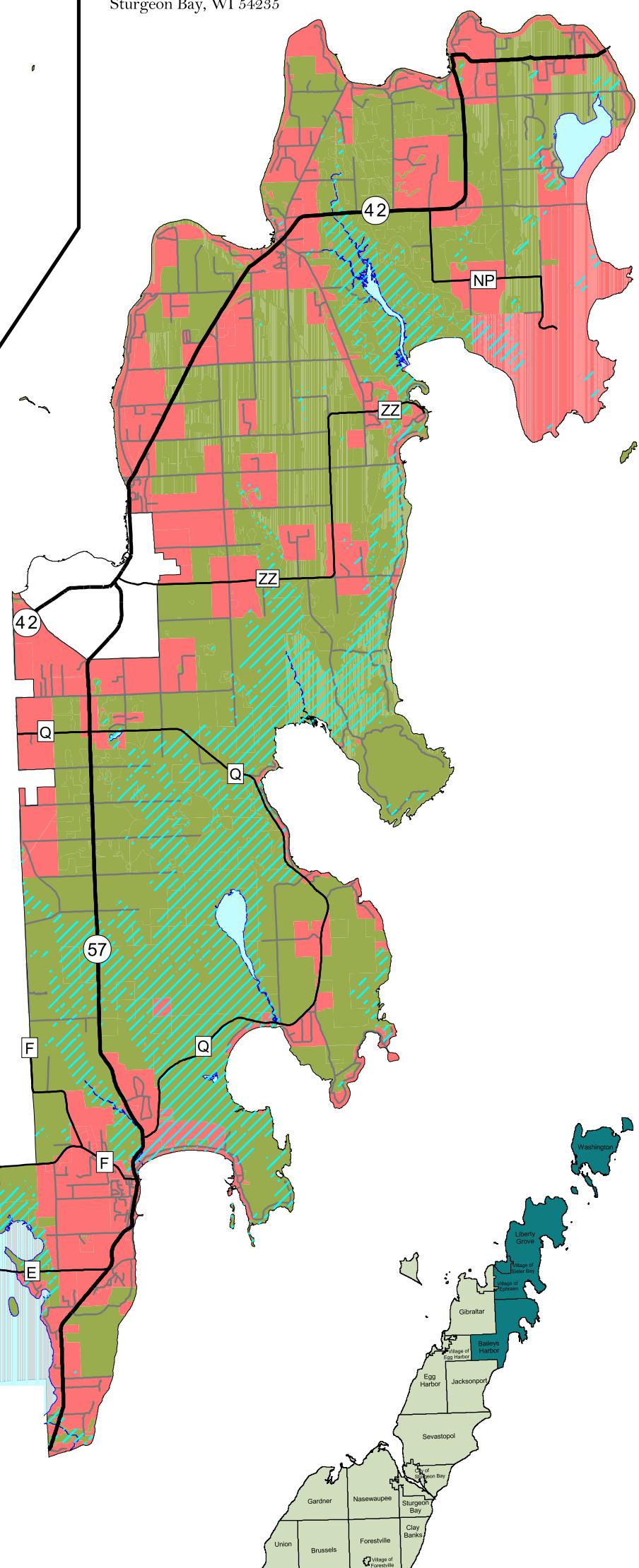
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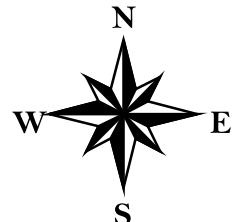
*See Town of Washington Inset*



Town of Washington



*See Map 9.2(B)*



0 2 4 Miles

# DOOR COUNTY COMPREHENSIVE AND FARMLAND PRESERVATION PLAN 2035

## VOLUME II: RESOURCE REPORT

Adopted by the Door County Board of Supervisors on December 16, 2014

Effective January 1, 2015

***Researched and written by:***

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Audrey Forslund, Door County Planning Department

***Editing and research assistance provided by:***

Mariah Goode, Door County Planning Department  
Members of the Door County Resource Planning Committee

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# CHAPTER 1: INTRODUCTION

## INTRODUCTION

This Resource Report is intended to serve two purposes. As Volume II of the Door County Comprehensive and Farmland Preservation Plan 2035, it provides the demographic and other information required by the Wisconsin Statutes for comprehensive and farmland preservation plans. An overview of these laws is provided in Chapter 1, Introduction, Volume I, Vision and Goals. A second function of this Resource Report is to serve as a resource for local municipalities and organizations, assisting in current and future organizational and strategic planning efforts.

Municipalities looking to update or begin planning efforts will be able to use the county-level data herein and conduct further, municipal-level research by seeking out the sources and other resources offered. Likewise, other agencies and organizations, public and private, should be able to use the information and resources provided in this report to guide, augment, or frame organizational planning or other efforts.

This Resource Report is comprised of eleven chapters. Chapter 2, Issues and Opportunities, gives an overview of results from county-level visioning exercises conducted in 2006 and 2007 as part of the development of the previous county comprehensive plan (adopted in 2009). The results from these visioning exercises were reviewed and in some cases slightly modified or updated before inclusion in Chapter 2 of this plan (adopted in 2014) as general issues facing and opportunities available to the county. Chapter 2 also gives population data for the county pertinent to all comprehensive plan topics.

Chapters 3 through 11 cover the topics of Historic and Cultural Resources, Housing, Economic Development, Natural Resources, Agricultural Resources, Transportation, Community Facilities and Utilities, Land Use, and Intergovernmental Cooperation, respectively. Each of these chapters contains data, maps, inventories, or other information relevant to Door County with regard to that topic as well as a final section containing resources for further information.

## GEOGRAPHICAL DESCRIPTION OF THE COUNTY

Door County is part of a narrow peninsula located in northeastern Wisconsin. The county lies between the waters of Green Bay to the west and Lake Michigan to the east and north. Its entire southern border is adjacent to Kewaunee County. Door County is over 68 miles in length from the southwestern point where State Trunk Highway 57 crosses over from Kewaunee into Door County, northeast to the northern tip of Rock Island. The county seat, the City of Sturgeon Bay, is located roughly 10 miles from the southern border of the county, based on the shortest road route. Based on shortest road routes, the City of Sturgeon Bay is 45 miles from the City of Green Bay, 157 miles from Milwaukee, 185 miles from Madison, and 246 miles from Chicago.

Door County encompasses approximately 488 square miles of land and 300 miles of coastal shoreline – one of the highest numbers of miles of coastal shoreline of any county in the United States. The county is comprised of 19 local municipalities as listed below and illustrated on Map 1.1, Door County Geography, located at the end of this document. (Note that the map also depicts the boundaries of the county's five school districts, discussed further in Chapter 9, Community Facilities and Utilities.)

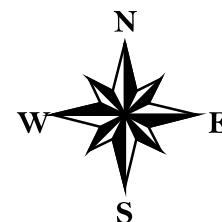
- City of Sturgeon Bay
- Villages: Egg Harbor, Ephraim, Forestville, and Sister Bay
- Towns: Baileys Harbor, Brussels, Clay Banks, Egg Harbor, Forestville, Gardner, Gibraltar, Jacksonport, Liberty Grove, Nasewaupee, Sevastopol, Sturgeon Bay, Union, and Washington



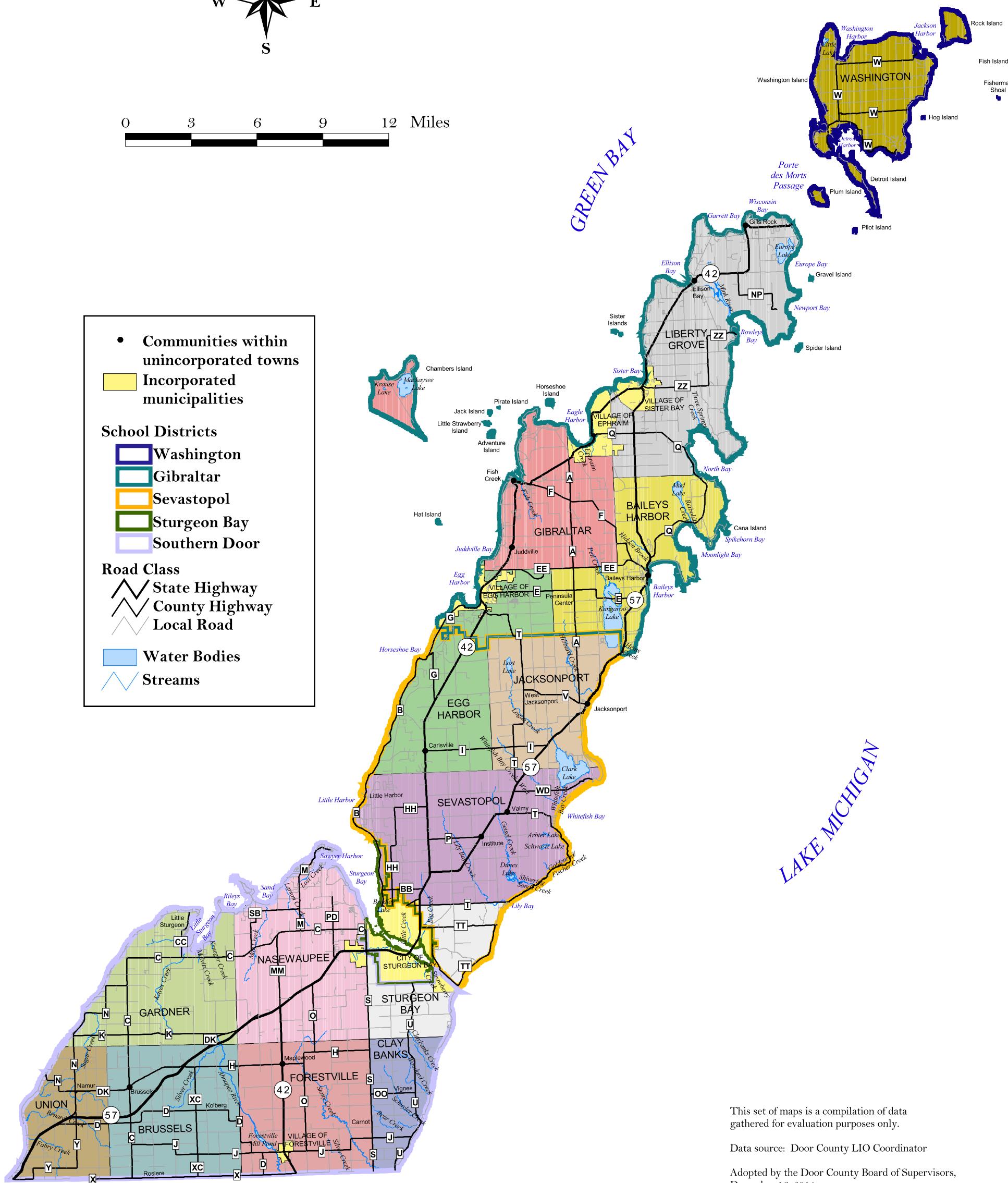
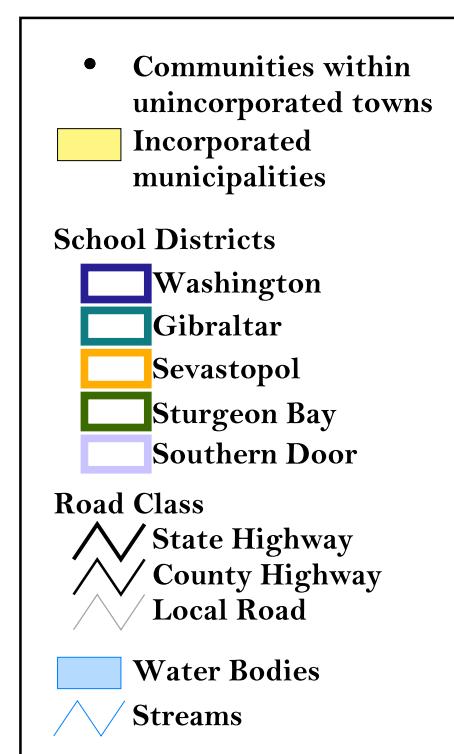
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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 1.1: Door County Geography and School Districts



0 3 6 9 12 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Door County LIO Coordinator

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

## **CHAPTER 2: ISSUES AND OPPORTUNITIES**

## INTRODUCTION

This chapter provides a summary of the results from four county-wide “visioning” meetings held between October 2006 and May 2007 for Door County residents and property owners. It also describes the general issues and opportunities currently facing the county identified in those visioning meetings. Finally, it contains population data required by the comprehensive and farmland preservation planning legislation and relevant to all comprehensive planning topics.

## COUNTY VISIONING RESULTS

At county-wide visioning meetings held between 2006 and 2007, Door County residents and property owners explored two questions: 1) What are the county's greatest assets? and 2) What words or phrases best capture your vision for the county's future?

Participants wrote on note cards as many responses as they liked for each question; cards were collected and responses later transcribed by Door County Planning Department staff members. Participants also verbally shared top response(s) to each question at the meetings; those responses were recorded on flipcharts upon which participants placed six “votes” for their top response choices. Those shared responses and vote tallies were also later transcribed.

Planning staff grouped all of the responses, note card and flipchart, into ten main categories (two of which had subcategories) that generally followed the topical elements described in Wisconsin's comprehensive planning statutes for inclusion in comprehensive plans. Though some responses incorporated multiple themes, each response was placed into only one category.

Based on both the number of responses written on individuals' note cards and the number of votes cast for the shared/flipchart responses given for the question “What are the county's greatest assets?”, residents and property owners value natural resources as the county's greatest assets. Response categories receiving the second and third highest number of responses, respectively, were community character, and utilities and community facilities.

Based on both the number of responses written on individuals' note cards and the number of votes cast for the shared/flipchart responses given to the question “What words or phrases best capture your vision for the county's future?”, residents and property owners value community character as most important to their vision of the county's future. Response categories receiving the second, third, and a close fourth highest number of responses were economic development, utilities and community facilities, and land use, respectively.

The following chart provides further detail on the visioning session results. Complete results from all four planning meetings are posted on the Door County Planning Department Web site, <http://map.co.door.wi.us/planning>.

**County Visioning Results**

Questions: 1) What are the county's greatest assets?; and 2) What words or phrases best capture your vision for the county's future?  
 \* The totals in red are the three highest scores for each question.

	NR	C/H	LU	ED	TP	AG	IC	H	I	E	H	SS	P&R	CFU	Total	P	V	QOL	CC
<b>"Assets" Question - Votes</b>																			
Washington Island	44	12	8	0	1	5	0	0	0	0	0	0	0	9	9	0	2	20	22
Northern Door	47	25	2	4	0	0	0	0	0	0	0	0	0	18	21	14	22	16	52
Sturgeon Bay	23	19	0	2	0	2	0	0	0	0	0	0	0	13	16	21	21	16	58
Southern Door	59	3	3	9	0	42	0	0	0	0	0	0	0	13	6	19	5	9	8
<b>Total</b>	<b>173</b>	<b>59</b>	<b>13</b>	<b>15</b>	<b>1</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>46</b>	<b>65</b>	<b>40</b>	<b>54</b>	<b>60</b>
<b>"Assets" Question - Notecards</b>																			
Washington Island	31	7	3	4	0	5	0	0	0	1	0	0	0	11	12	9	5	24	38
Northern Door	48	23	6	9	1	2	0	0	0	3	0	1	0	23	27	21	15	6	42
Sturgeon Bay	41	16	2	5	3	7	1	0	0	4	0	0	0	10	14	23	5	13	41
Southern Door	51	6	2	11	6	18	0	0	0	2	4	0	0	16	22	9	6	11	26
<b>Total</b>	<b>171</b>	<b>52</b>	<b>13</b>	<b>29</b>	<b>10</b>	<b>32</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>60</b>	<b>75</b>	<b>62</b>	<b>31</b>	<b>54</b>	<b>147</b>
<b>"Vision" Question - Votes</b>																			
Washington Island	3	9	26	30	0	5	0	0	0	0	3	0	0	10	0	13	0	0	15
Northern Door	6	0	24	32	9	5	4	0	0	16	2	9	0	12	39	5	0	26	31
Sturgeon Bay	12	1	9	7	8	7	1	2	9	4	7	2	0	22	0	0	0	38	38
Southern Door	19	0	3	26	1	26	0	13	5	0	0	2	4	11	0	11	46	57	
<b>Total</b>	<b>40</b>	<b>10</b>	<b>62</b>	<b>95</b>	<b>18</b>	<b>43</b>	<b>5</b>	<b>15</b>	<b>30</b>	<b>9</b>	<b>18</b>	<b>12</b>	<b>16</b>	<b>85</b>	<b>5</b>	<b>11</b>	<b>125</b>	<b>141</b>	
<b>"Vision" Question - Notecards</b>																			
Washington Island	3	2	23	11	1	5	1	2	0	1	1	2	3	7	1	1	8	10	
Northern Door	19	9	24	23	7	2	2	6	7	3	2	0	4	16	1	0	27	28	
Sturgeon Bay	16	3	14	13	3	3	2	3	6	3	5	2	3	19	1	0	26	27	
Southern Door	13	0	9	13	4	10	1	2	1	2	0	1	2	6	0	7	24	31	
<b>Total</b>	<b>51</b>	<b>14</b>	<b>70</b>	<b>62</b>	<b>15</b>	<b>20</b>	<b>6</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>4</b>	<b>12</b>	<b>48</b>	<b>3</b>	<b>8</b>	<b>85</b>	<b>96</b>		

NR = Natural Resources

C/H = Cultural &amp; Historical

LU = Land Use

ED = Economic Development

TP = Transportation

AG = Agriculture

IC = Intergovernmental Cooperation

H = Housing

CFU = Community Facilities and Utilities (Infrastructure, Education, Health, Social Services, Parks &amp; Rec.)

CC = Community Character (People, Visual, Quality of Life)

This spreadsheet summarizes all responses given, on note cards and flipcharts, to both questions explored during 2006-2007 visioning meetings. For the note card responses, the number of responses written that related to each topic category were totaled. For the flipchart responses, the number of votes cast for all responses within each category was totaled. For example, for the meeting held on Washington Island, 31 responses relating to Natural Resources appeared on individuals' note cards in response to the question "What are the county's greatest assets?" and 44 votes were cast for Natural Resource-related responses to the same question. Also on Washington Island, 3 responses related to Natural Resources appeared on individuals' note cards in response to the question "What words or phrases best capture your vision for the county's future?" and 3 votes were cast for Natural Resource-related responses to the same question.

Italicized numbers indicate the three categories receiving the highest numbers of responses, totaled overall meetings, for each type of response collection (votes and note cards). (Bold numbers simply indicate total responses in each category, for all meetings, for each type of response collection.) For example, looking at responses from all four meetings to the question "What are the county's greatest assets?", there were 171 responses written on individuals' note cards and 173 votes cast on flipcharts related to Natural Resources.

## GENERAL ISSUES AND OPPORTUNITIES FACING THE COUNTY

The following lists of issues and opportunities are based on input received from Door County residents and property owners during the 2006-2007 county-wide visioning sessions. The lists were reviewed and revised for the 2014 update, this plan.

### **ISSUES**

Issues facing the county were defined as weaknesses internal to the county and/or existing or potential threats due to external factors or trends originating from outside the county.

#### **Sustainability**

- We need to focus on sustaining and balancing the economy, environment, and social systems so that human needs and desires are balanced with the preservation of the natural environment.
- We are nearly completely reliant on non-renewable energy sources and lack the infrastructure to utilize renewable energy resources.
- We need to manage tourism in a sustainable manner, including developing tourism programs that focus on education and appreciation of the county's unique resources.

#### **Natural Resources**

- Future growth needs to be balanced with the preservation of natural resources. We need effective and efficient land management, such as concentrating/clustering growth, which would help retain open space and natural beauty.

#### **Economic Development**

- There is a lack of diversity in our economy. The county has few job opportunities with benefits and loses young people to better job opportunities elsewhere. That, combined with our lack of affordable housing options, will continue to keep young people from living and raising families here.
- The Northern Door economy especially is very dependent on tourism. The Southern Door economy offers somewhat more diverse economic activity, but, such as in the case of agriculture, is also limited or threatened by various forces.
- Limited internet technology in parts of the county may be preventing establishment of various businesses.

#### **Agricultural Resources**

- We are faced with decreasing agricultural diversity and fewer people making a living in agriculture.
- Fewer local and small family farms means less food security and sustainability.

## Community Character

- Growth may jeopardize our rural character, such as our open land, historic/old buildings, scenic vistas, and small-town character.

## Community Facilities and Utilities

- We need more educational opportunities for people of all ages, particularly in the tourism off-season.
- We are faced with an aging population that will greatly increase the demand for senior support and health care services.
- Our trail system outside of our parks is limited and will become increasingly difficult to develop as the cost of land increases.
- We have good school systems, but several are faced with declining enrollment.

**Transportation.** There are a lack of alternative transportation options to-and-from the county.

**Land Use.** New development is often not contiguous with existing development and encroaches on ecologically and aesthetically valuable open space.

**Housing.** The county is increasingly becoming less accessible to people of all incomes and ages. We lack an adequate supply of housing options for people of all income levels, resulting in less economic, social, and cultural diversity.

**Culture/History.** We need more year-round cultural and education activities.

## **OPPORTUNITIES**

Opportunities were defined as strengths or assets internal to the county or opportunities arising due to external forces or trends.

## Sustainability

- We have many socially and environmentally conscientious residents who could promote more sustainable alternatives for the county's economy, environment, and social systems.
- We have unique resources that can be used to shape tourism programs focused on education and appreciation of the county's natural assets.
- We have the capacity to develop some renewable energy resources, which will make us less dependent on outside energy sources and help control costs.

## Natural Resources

- We still have a significant quantity of rural character remaining we can work towards preserving, including agriculture, orchards, scenery, and open space.
- The county has exceptional water resources that we can and should work to protect for its continued usage by humans and wildlife, and for scenic and recreational purposes. Our roughly 300 miles of shoreline plus lakes, streams, and wetlands offer tourists and residents high quality beaches, parks, fishing, and other recreation.

- We have abundant and diverse natural resources that will continue to provide habitat for a variety of wildlife if we protect what remains.
- We have a good base of protected lands to continue to add to through future land protection and acquisition efforts.
- The county is rich in non-metallic mineral resources, which can continue to provide necessary sand and gravel for municipal and construction uses if the extraction process is well-planned and orderly.

## Economic Development

- We have a relatively clean and beautiful environment, offering high quality living, which can aid in attracting clean and green industries.
- The county's unique geology, including the Niagara Escarpment, is a current focal point for some tourism-based activities and can be further promoted as part of an eco-tourism program.
- We have strong cultural assets, including the arts, music, theatre, history, and architecture, which could grow into year-round education and economic development activities.
- The county is an ideal retirement location that will continue to attract retirees. They will in turn require more services, providing potential business opportunities.
- We can work toward keeping the next generation in the county by developing better job and housing opportunities.

## Agricultural Resources

- We still have agriculture left to preserve.
- We have continuing opportunities to support local agriculture and, for the most part, smaller family farms.
- Local programs/incentives could be established to make organic and naturally grown food more accessible to residents.

## Community Character

- We have a relatively clean, safe, and tranquil living environment to preserve.
- If we work to retain them, we can continue to have small-town character and a sense of community with the advantage of big city amenities, convenience, and accessibility.

## Community Facilities and Utilities

- If we maintain and improve our recreational assets, we can help maintain the long-term health of our residents and promote more recreation-based tourism.

- The existing snowmobile trail system has potential to be expanded and developed into a multi-use trail system.
- Our growing senior population could support more specialized health care for seniors.
- There is the potential to establish large medical institutions to serve as both economic development and tourism enhancement.
- Public/private partnership opportunities to offer increased and better services for seniors will arise as the need develops.

**Transportation.** Increased community and government support for transportation initiatives.

**Land Use.** We can plan for development that will be dense and contiguous to existing development.

**Housing.** We can establish public/private initiatives and programs to increase the supply of affordable housing, helping keep and attract young people to the area.

**Culture/History.** We have a variety of cultural and historical resources that can be used, expanded, or improved upon to support eco-tourism programs and educational opportunities for both tourists and residents.

## POPULATION AND DEMOGRAPHICS

An area's population numbers and composition, as well as growth and trends, affects economic development, housing, transportation systems, community facilities, utilities, land use, and more. This section provides population data for Door County in order to guide planning efforts addressing those and other issues.

First discussed in this section are Door County's historical population levels from 1900 to 2010 and estimates for the county's 2013 population level. United States Census Bureau (Census) data from the year 2010 is then more closely analyzed, providing further insight into the county's population characteristics. Finally, information regarding population trends at the national, state, and county levels is presented, along with discussion regarding the county's non-resident population levels and projections as to future population levels for year-round residents.

*Note: Population "estimates" refer to present and previous population levels in years for which there were no official counts, while "projections" refer to anticipated future population levels.*

### **HISTORICAL POPULATION DATA**

According to the Wisconsin Department of Administration (DOA), between 1900 and 1970 Door County's year-round population saw a net increase of only 2,523 people. Then, between the 1970 and 1980 Censuses, the area's year-round population increased by another 4,923 persons, over 24%. (See Table 2.1.) This sudden increase in the county's population has been anecdotally attributed to an increase in local shipyard employment/activity in the 1970s and to a *National Geographic* article published in March 1969 that praised the county's culture and natural beauty, giving the county unprecedented exposure to a large audience; no comparable population growth occurred in that decade at the state or national level (6.5% and 9.8%, respectively).

Although the county's population growth rate has slowed since the 1970s, population overall continued to increase until the 2010 Census showed a population decrease for the first time since the

1970 Census. Between 1970 and 2000, the county's population increased by over 39%, far surpassing the state's increase of over 21% during that same period. Then, between 2000 and 2010, there was a 0.6% population decrease in the county, while the state and surrounding counties experienced population gains. Table 2.1 displays 1900 - 2010 population levels for Door County, as well as neighboring counties Kewaunee and Brown and the state.

**Table 2.1: Historical Population Levels, Door County and Selected Areas**

Year	Door County	Decade % Change	Brown County	Decade % Change	Kewaunee County	Decade % Change	Wisconsin	Decade % Change
1900	17,583	--	46,359	--	17,212	--	2,069,042	--
1910	18,711	6.4	54,098	16.7	16,784	-2.5	2,333,860	12.8
1920	19,073	1.9	61,889	14.4	16,091	-4.1	2,632,067	12.8
1930	18,182	-4.7	70,249	13.5	16,037	-0.3	2,939,006	11.7
1940	19,095	5.0	83,109	18.3	16,680	4.0	3,137,587	6.8
1950	20,870	9.3	98,314	18.3	17,366	4.1	3,434,575	9.5
1960	20,685	-0.9	125,082	27.2	18,282	5.3	3,951,777	15.1
1970	20,106	-2.8	158,244	26.5	18,961	3.7	4,417,731	11.8
1980	25,029	24.5	175,280	10.8	19,539	3.0	4,705,642	6.5
1990	25,690	2.6	194,594	11.0	18,878	-3.4	4,891,769	4.0
2000	27,961	8.8	226,778	16.5	20,187	6.9	5,363,715	9.6
2010	27,785	-0.6	248,007	9.4	20,574	1.9	5,686,986	6.0

Source: U.S. Bureau of the Census, for the years cited.

See <http://www.census.gov/popest/data/historical/index.html> for municipal-level data. (Note: 1990 is the earliest date for which municipal-level information is available.)

## **MEDIAN AGE**

Note: A municipality's median age is that at which one-half of the population is below that age and one-half above.

Door County's median age rose from 33.8 years in 1970 to 49.4 years in 2010, evidence that the population of the county as a whole is aging. In 2010, the county was older than the state, which was in turn older than the nation: the state's median age was 38.5 years and the nation's median age was 37.2 years, the highest median age ever recorded for the nation. In Wisconsin, only Iron and Vilas counties have older median ages than Door (51.0 and 50.7, respectively). Table 2.2 displays the median age of the population for Door County and the state for the decades between 1970 and 2010.

**Table 2.2: Median Age, Door County and Wisconsin**

Geographic Area	1970	1980	1990	2000	2010
Door County	33.8	31.4	36.5	42.9	49.4
State of Wisconsin	27.2	29.4	32.9	36.0	38.5

Source: U.S. Bureau of the Census, *Census of Population, Profile of General Population Characteristics, Wisconsin*, for the years cited. See American Fact Finder Table ID B01002 for recent median age at the municipal-level.

## **POPULATION BY SCHOOL AGE, WORKING AGE, AND RETIREMENT AGE**

Table 2.3 looks at the school age, working age, and retirement age segments of the county's population in the year 2010 and compares percentages with the state. Door County has a lower percentage than the state of school aged children, at just over 18% compared to over 23% for the state, and a much higher percentage of retirement age residents, at over 22% compared to over 13% for the state. The retirement age group in Door County consists of approximately 55% females

and 45% males.

**Table 2.3: Population by Age Groups and Sex, Door County and Wisconsin**

Age Groups	Male	Female	Total	Age Group as % of Total Population	
				Door County	Wisconsin
School Age (<18)	2,583	2,493	5,076	18.3	23.6
Working Age (18-64)	8,277	8,187	16,464	59.3	62.8
Retirement Age (65+)	2,819	3,426	6,245	22.5	13.7
Total Population	13,679	14,106	27,785	--	--

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing.

See American Fact Finder Table ID S0101 for municipal-level information.

## **POPULATION BY RACE**

Table 2.4 shows that while Door County's residents continue to be predominantly white, there were significant increases between 1990 and 2010 in the number of people of color, both single race ("alone") and bi-racial or more, and in the number of persons of Hispanic/Latino ethnicity (who may be of any race) residing in the county. American Indian or Aleut was the only category that lost population, for the same timeframe.

**Table 2.4: Race Composition, Door County**

Race	1990	2000	2010	Change 1990 - 2010	
				#	%
White (alone)	25,387	27,356	26,839	1,452	6%
Black (alone)	29	53	144	115	397%
American Indian or Aleut (alone)	178	183	162	-16	-9%
Asian or Pacific Islander (alone)	47	81	116	69	147%
Hispanic or Latino (of any race)	153	267	671	518	339%
Two or More Races (not Hispanic or Latino)	49	194	227	178	363%

Source: U.S. Bureau of the Census, for the years cited.

See American Fact Finder Table ID QT-P3 for municipal-level data.

## **POPULATION BY HOUSEHOLD COMPOSITION**

While the total number of family households in Door County increased between 1990 and 2012, the total number of natural born or adopted children decreased. (See Table 2.5.) In 1990, there were 7,578 natural-born or adopted children living in family households; this figure dropped to 4,607, or a decrease of 2,971, by 2012. Also, the number of householders living with people they are not related to has grown significantly between 1990 and 2012, increasing from 345 households in 1990 to 1,147 households in 2012.

## **POPULATION ESTIMATES AND PROJECTIONS**

Year-round population projections are calculated by the DOA using birth rates, death rates, and net migration. Typically, natural growth (births minus deaths) outpaces net migration to an area (the difference between residents moving into an area minus those leaving). Door County is atypical in that the county's population growth between 1990 and 2010 came from net migration and not natural growth; during this time, the number of deaths surpassed the number of births. The DOA expects this trend to continue, projecting deaths to outpace births in Door County by 5,719 during the time period between 2010 and 2040. However, the DOA also projects that Door County will grow by 4,554 additional residents because of net migration. It is important to note that predicting net migration is difficult and the DOA warns that it "is the most elusive in sketching the future population scenario." In particular, migration that is not related to job growth is the most difficult to project, and, in recent decades, the in-migration of retirees has been a significant contributor to Door County's

population growth.

**Table 2.5: Household Composition, Door County**

Household Composition	1990	2000	2010*
<b>In family households:</b>			
Householder	7,192	7,997	8,560
Spouse	6,262	6,867	7,455
Child:			
Natural-born or adopted	7,578	6,997	4,607
Step	290	332	126
Grandchild	112	162	114
Other relatives	363	161	21
Nonrelatives	249	373	498
<b>In nonfamily households:</b>			
Householder living alone	2,529	3,640	3,988
Householder not living alone	345	509	1,147
Nonrelatives	425	638	907
<b>In group quarters:</b>			
	345	381	386

Source: U.S. Bureau of the Census, for the years cited.

See American Fact Finder Table ID B09019 for municipal-level information.

\*3-year estimate 2010-2012.

## YEAR-ROUND POPULATION ESTIMATES AND PROJECTIONS

According to the Census, Door County had 27,785 residents in 2010. The DOA estimates Door County's population in 2013 to have been 27,966, an increase of 181 (0.7%) people from 2010. (See Table 2.6.) The county's natural population is estimated to have decreased by 223 residents, but net migration to have increased the total population by 404 (1.5%), with the resultant net growth at 181 (0.7%). During these same years, the state grew an estimated 1.0% via natural increase, but had 0.5% net migration decrease, for an overall increase of 0.5%.

**Table 2.6: Population by Components of Change, State and Door County**

Area	4/1/2010		Estimated # Change						Estimated % Change		
	Census	Estimate	Births	Deaths	Natural		Net		Natural Increase	Net Migration	Total % Change
					Increase	Migration	Total				
State	5,686,986	5,717,110	189,290	132,980	56,310	-26,186	30,124		1.0%	-0.5%	0.5%
Door County	27,785	27,966	627	850	-223	404	181		-0.8%	1.5%	0.7%

Source: Wisconsin Department of Administration, Estimated Components of Population Change for Wisconsin Counties. Population data by components of change not available at the municipal-level.

Table 2.7 shows the DOA population projections, along with natural increase and net migration, for Door County for the 10-year increments between 2010 and 2040. Over this 30-year period, deaths are projected to outpace births by 5,719 and net migration is projected to total 4,554, resulting in a projected net loss of 1,165 residents. This loss in population is projected to take place between 2030 and 2040, when deaths outpace births by 2,603 and net migration is at 858, resulting in a population loss of 1,745 for that decade. There is a slight projected increase in population for the decades between 2010 and 2030.

Note that the DOA projects Door County's population to be 27,755 in the year 2035. This figure is not shown in Table 2.7, though, because they do not project natural increase or net migration in five-year increments. For this reason, the remainder of this volume of the plan will discuss population, household, and land use projections through the year 2040, providing five-year data

only where applicable or required by comprehensive planning legislation.

**Table 2.7: Population Projections, Door County**

Year	Actual/ Projected	Natural Increase	Net Migration	Decadal Growth/Loss
2010	27,785	--	--	--
2020	27,890	-1,282	1,387	105
2030	28,365	-1,834	2,309	475
2040	26,620	-2,603	858	-1,745
<b>Change</b>				
<b>2010 - 2040</b>	<b>-1,165</b>	<b>-5,719</b>	<b>4,554</b>	<b>--</b>

Source: Wisconsin Department of Administration, *Population Projections, Vintage 2013*. For municipal-level population projections in 5-year increments, see <http://www.doa.state.wi.us/divisions/intergovernmental-relations/demographic-services-center/projections#preliminary> and select "MCD and Municipal Population Projections, 2010-2040."

Door County's population is significantly older than that of the state or the nation and is projected to continue to grow older at a faster rate. For 2010, the DOA projected that 23% of the county's population was 65 or older, compared to only 14% for the state for the same year. (See Table 2.8.) By 2040, that same group is projected to comprise 38% of the county's population, compared to only 24% for the state.

At the same time the 65 and older segment of the county's population is increasing as a proportion of the total population, county residents aged 24 and younger are going to comprise a smaller proportion of the population. In 2010, county residents 24 years of age and under were projected to make up 23% of the county's population, compared to 33% for the state; by 2040, these percentages are projected to fall to 21% for the county and 30% for the state.

**Table 2.8: Population Projections by Age Group, State and Door County**

Age Group	Door County		State	
	2010	2040	2010	2040
0 - 24	23%	18%	33%	30%
25 - 64	54%	44%	53%	46%
65+	23%	38%	14%	24%
<b>Total Population</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Wisconsin Department of Administration, *Population Projections, Vintage 2013*.

### SEASONAL POPULATION ESTIMATES

Census data, DOA, and other agency population counts, estimates, and projections only deal with year-round residents. Door County has many seasonal or part-time residents – persons with homes in the county but whose primary residence is outside the county – and hundreds of thousands of tourists throughout the year who visit the county for just the day or stay overnight in hotel units, campsites, condominium unit rentals, house/cottage rentals, etc. The presence of these part-time residents and visitors obviously affects local economic development and housing markets; the use, maintenance, and potential expansion of transportation systems, recreational and other community facilities, and utilities; and land use.

Because of the difficulties in counting, estimating, or projecting seasonal populations, the DOA does not even attempt to do so. Others have used simplistic methods of estimating Door County's

seasonal resident population, such as multiplying the number of housing units counted by the Census as being for “seasonal, recreational, or occasional use” by the average number of persons per household found in the county. Note that there are problems with this method of estimation, including: the assumption that the number of persons per household for a seasonal residence would be equal to that found in a year-round residence; the fact that it excludes all tourists, whether overnight or day-trippers; and the inability to determine when and for how long seasonal units are occupied.

Perhaps the best effort to estimate Door County’s “true” population, year-round residents plus seasonal residents and all visitors, was undertaken in 1999 by University of Wisconsin-Extension, Door County. In making calculations, the study author developed three estimates: 1) economic activity attributable to the seasonal population of the county; 2) geographic distribution of the seasonal population, based on municipal share of seasonal homes, hotel and motel rooms, and campground sites; and 3) time of year the seasonal population is in the county, based on traffic counts. Estimates and methods were meant to include and take into account seasonal residents, overnight tourists, and day-trippers. Note that in developing these figures the author assumed January to be a “baseline” month: traffic levels and economic activity during that month were presumed to be those of year-round residents. The study found that the county’s “true” total population, counted in “whole” persons or full-time equivalency residents, was between 20% and 161% higher, depending on the month, than the number of year-round residents counted in Census data for that same year.

The monthly percentages from this 1999 study are shown in Table 2.9. Also shown in Table 2.9 are the 2010 estimated seasonal population and total “true” population by month for Door County, using the 2010 Census year-round population of 27,785 residents as the base population in January. While keeping in mind that these numbers are rough estimates and that the population counts (both the Census and the “true” estimates) are now outdated, the “percent over Census” calculations can provide at least some guidance in thinking about the county’s “true” population levels when looking at current and projected populations.

**Table 2.9: Estimated Monthly Seasonal and "True" Population, Door County**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Percent over Census	0%	20%	24%	43%	82%	111%	161%	147%	116%	95%	37%	25%
People in addition to												
2010 Census (27,785)	0	5,634	6,805	11,890	22,943	30,944	44,886	40,999	32,296	26,582	10,243	6,930
<b>"True" Population</b>	<b>27,785</b>	<b>33,419</b>	<b>34,590</b>	<b>39,675</b>	<b>50,728</b>	<b>58,729</b>	<b>72,671</b>	<b>68,784</b>	<b>60,081</b>	<b>54,367</b>	<b>38,028</b>	<b>34,715</b>

Source: University of Wisconsin-Extension Door County Study: “Estimating the Seasonal Population of Door County,” 1999.

## RESOURCES AND FURTHER INFORMATION

### **Bay-Lake Regional Planning Commission (<http://www.baylakerpc.org/>)**

The Bay-Lake Regional Planning Commission was created in 1972 by Governor Lucey under s. 66.945, Wis. Stats., as the official area-wide planning agency for northeastern Wisconsin. It currently encompasses eight counties: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan. Bay-Lake provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region.

### **Door County Economic Development Corporation (<http://www.doorcountybusiness.com/>)**

The DCEDC is a public/private partnership dedicated to improving the economic vitality of the county and its residents. Founded in 1989, DCEDC has a variety of programs and initiatives working to attract new businesses to the area and helping existing businesses create and retain jobs.

### **Door County Planning Department (<http://map.co.door.wi.us/planning/>)**

The Planning Department's primary functions are administration and enforcement of the county's zoning, land division, and other land use management ordinances; preparation and implementation of the county comprehensive and farmland preservation plans; acting as a resource for local public officials and residents on a variety of community development plans and projects; and administering the county addressing program.

### **Door County Visitor Bureau (<http://www.doorcounty.com>)**

The Door County Visitor Bureau is the county's official tourism marketing organization with the mission to generate incremental economic impact for the Door County Peninsula and Washington Island by attracting visitors using sustainable tourism marketing strategies and management principles.

### **University of Wisconsin-Extension, Door County (<http://www.uwex.edu/ces/cty/door/>)**

The Door County UW-Extension Office works to bring the knowledge of the University to Door County citizens and to help people apply this information. Contact the Door County Planning Department (listed above) for a copy of the study "*Estimating the Seasonal Population of Door County*" by Greg Lamb, University of Wisconsin Extension-Door County, 1999.

### **Wisconsin Department of Administration – Demographic Services (<http://www.doa.state.wi.us/>)**

The Demographic Services Center's primary responsibility is to develop annual total population estimates for all Wisconsin towns, villages, and cities. In addition, the Center develops population and household estimates and projections for all municipalities and population projections by age and sex for counties.

### **U.S. Bureau of the Census (<http://www.census.gov>)**

The Census Bureau serves as the leading source of quality data about the nation's people and economy with the goal to provide the best mix of timeliness, relevancy, quality, and cost for the data collected and services provided. The Census Bureau conducts the following censuses and surveys:

- Population and Housing Census - every 10 years
- Economic Census - every 5 years
- Census of Governments - every 5 years
- American Community Survey - annually
- Demographic & Economic surveys
- Economic Indicators

# **CHAPTER 3: HISTORICAL AND CULTURAL RESOURCES**

## INTRODUCTION

This chapter begins by briefly discussing Door County's "community character," which is intertwined with many of the county's historical and cultural resources. It then provides a brief history of the county's residents and its development, followed by an inventory of the historical resources in Door County. Included are discussion of the county's historical associations; the area's maritime history and maritime museums, lighthouses, and shipwrecks; general museums; archaeological sites; sites on the state and/or federal historic registries; and cemeteries. Finally, this chapter provides an inventory of cultural resources, such as cultural organizations, educational and cultural opportunities, visual and performing arts groups and venues, and festivals.

### **COMMUNITY CHARACTER**

Community character is defined by a variety of sometimes intangible factors, including the people living in the area, the visual character of the area, and the quality of life and experiences offered to residents and visitors. Door County's community character was ranked as either the county's highest or second-highest asset during the public input exercises conducted at the county-wide visioning sessions held between 2006 and 2007. As is evidenced by the lists below of responses from residents at those visioning meetings, all aspects of community character – the people, the visual attributes, and the general quality of life as well as the county's specific historical and cultural resources – define or exemplify life in Door County.

#### Character of the People:

- Volunteerism – caring community
- Social conscience – caring about each other, sense of community
- Diversity of skills and interests
- Stable religious community
- Community pride
- Work ethic
- Good base of retirees to help with cultural and educational activities

#### Visual Character:

- Beautiful scenery, rural setting, natural/pastoral areas
- Rural farmland and buildings
- Scenic vistas
- Rural scenic beauty
- Character of the original town centers
- Quaintness and uniqueness of villages

#### Quality of Life:

- Small-town character – peaceful lifestyle (as opposed to hectic urban lifestyle)
- Fellowship of community – people are supportive and close-knit
- Sense of peace
- Safe, healthy, tight-knit community
- Low crime rate/safety
- Low population density
- Slow population growth
- Diverse communities; diversity between rural and tourist areas/community centers
- Cities and villages
- Big-city amenities in a small-town setting
- Clean environment
- Good human service agencies
- Small government footprint

- Large tax base

#### Historical and Cultural Resources:

- Agricultural heritage and setting
- Arts, music, theatre, galleries, authors, museums
- Arts and cultural resources – talented mix of people as well as places/organizations
- History and architecture
  - Maritime history and museums, shipwrecks, lighthouses
  - Influence of Belgian and other ethnic groups
  - Michigan Street Bridge
  - Historic buildings throughout the county

## HISTORICAL RESOURCES

### **BRIEF HISTORY OF DOOR COUNTY**

Humans have inhabited the Door Peninsula for approximately 11,500 years. The area now known as Door County was first visited or settled by numerous Indian tribes, including the Menominee, Winnebago, Outagamie, Iroquois, Sauk, Ottawa, Illinois, Chippewa, and Pottawatomie. These Native American peoples lived in the area, fished the waters, and hunted in the woodlands for centuries before European settlers visited or migrated into the Great Lakes region. Door County's name is derived from Native Americans' description of the dangerous six-mile-wide passage between Lake Michigan and Green Bay. The French translated the Native American phrase for the passage to "La Porte des Morts"; literally, in English, "The Door of Death" (now most often called Death's Door).

The earliest recorded history for the area begins with French explorer Jean Nicolet landing on Door County islands in 1634, with the first permanent white settlers arriving in the 1830s. Between 1860 and 1870, the population of the county increased from 2,948 to 4,919 people. Lumbering, fishing, and shipbuilding were the predominant businesses during the last half of the 19<sup>th</sup> century. Due to its rocky soil, the county's land was generally not suitable for farming crops, but it was good for growing fruit trees, such as apple and cherry. Tourism also became an important economic activity, with early tourists arriving primarily by steamboat and motorized vehicles. Door County has remained an attractive tourist destination, with tourism comprising a significant portion of the county's economic activity today.

Table 3.1 provides a timeline of some events of historical importance to the county's culture and economy.

**Table 3.1: Timeline of Historic Events in Door County**

Year	Event
1634	Jean Nicolet lands on Door County islands.
1665	Radisson and Grosseliers winter here with Pottawatomis; establish fur trading business.
1669	Father Claude Allouez winters with Pottawatomis. First to write of "La Portage des Eturgeons," the area now known as Sturgeon Bay.
1673	Father James Marquette, missionary and explorer, and Louis Joliet stop in county for 3 months.
1679	Robert La Salle visits on ship "Griffin."
circa 1690	Nicholas Perrot visits Pottawatomies on Washington Island.
1720	Father Pierre de Charlevoix, Jesuit, visits and writes of area.
1816	American troops from Mackinac visit and name Washington Harbor for their flagship.
1817	Stone quarry operating at Bowyer Bluff on Washington Island.
1835	First white settlers to the county, Increase and Mary Ann Clafflin, build a cabin at Little Sturgeon (located in what is now Town of Gardner).
1836	First lighthouse in county, Pottawatomi, built on Rock Island. First commercial fishing in the county established by Rock and Washington Island settlers.
1846	Asa Thorp arrives in Fish Creek. In 1855, he builds the first commercial pier in the county there.
circa 1850	Commercial stone quarry operations established around the county, many around Sturgeon Bay.
1850s	First house built in Sturgeon Bay, by Robert Graham. Commercial lumbering of pine and cedar begins, continuing for approximately 40 years. Norwegian Moravians settle Ephraim and Sturgeon Bay. Belgians settle in southern Door County, primarily in what are now the Towns of Union, Brussels, and Forestville. Sawmill established by Freeland B. Gardner at Little Sturgeon.
1851	Door County created as a separate governmental entity by act of the legislature (previously part of Brown County), with Baileys Harbor as county seat.
1856	First school in the county recognized by the state, in Sturgeon Bay (the few previous schools were private and informal in structure and schedule).
1857	First church in the county – Ephraim Moravian Church – constructed.
1860	First ferry begins providing service across Sturgeon Bay.
1862	First orchard (apples) set out in the county, by Swiss immigrant Joseph Zettel, in the Town of Sevastopol on land currently the site of THE Farm. First newspaper – <i>Door County Advocate</i> – established by Joseph Harris, Sr., with 104 subscribers.
circa 1870	Germans settle in what are now Towns of Baileys Harbor, Forestville, Liberty Grove, and Nasewaupee. Icelanders join Scandinavians on Washington Island.
1871	Fire destroys lives (128) and property in southern Door County within hours of Chicago Fire.
circa 1872	Lime kiln established at Little Sturgeon. Telegraph line installed between Two Rivers and Sturgeon Bay.
mid-1870s	Ice harvesting business and storage house established, at Little Sturgeon.
1878	First unit of the Door County Court House built, in Sturgeon Bay, at a cost of \$12,500. (Previous court house, dedicated in 1860, was a converted hotel in Sturgeon Bay.) It was subsequently torn down in 1991.
1879	Sturgeon Bay to Lake Michigan canal opens for sizable vessels (work began 1872).
1880s	First banks established in the county.
1881	Thomas Smith and John Leathem form schooner and barge repair business.
1890s	First tourist steamboats arrive in Northern Door. First canning company, "Reynolds Preserving," established in the county, in Sturgeon Bay.
1894	Railroad lines completed – "Ahnapee and Western" – connecting Sturgeon Bay to Green Bay. The line includes a bridge across Sturgeon Bay.
1898	First "true" shipyard – one focused on building ships to sell to others – established in the county, by August Riebolt and Joseph Wolter, located in Sturgeon Bay.

**Table 3.1: Timeline of Historic Events in Door County (continued)**

<b>Year</b>	<b>Event</b>
early 1900s	Highway improvements – surfacing with crushed stone and grading – encourage increased tourism via motor vehicles.
1909	First state park – Peninsula State Park – established in the county.
circa 1917	First milk processing (condensing and canning) plant established, in Sturgeon Bay. First cherry canning operations established, by Reynolds Preserving, in Sturgeon Bay.
1922	Summer art classes taught by Chicago Art Institute staff held in Baileys Harbor. Summer music classes taught by Lawrence Conservatory of Music staff in Idlewild.
1931	Dedication of the first highway bridge across Sturgeon Bay (downtown, Michigan Street Bridge). Previous crossings were via railroad bridge or boat.
1935	Founding of The Clearing and Peninsula Players.
1941-1945	Sturgeon Bay shipyards boom during World War II.
1946	Peak year of cherry production in Door County with 43 million pounds of cherries produced.
1949	Lake-to-Lake Milk Cooperative starts collecting milk in Door County, providing a Grade A milk market for dairy farmers.
1950s	Some zoning in place at county level, administered by county clerk.
1960	A Swedish freighter hits the bridge in Sturgeon Bay, knocking it out of commission for 18 days and spurring demand for a second bridge.
1965	Founding of Peninsula Art School (now Peninsula School of Art).
1968	Railroad discontinues service to Door County. County of Door enacts comprehensive zoning, including shoreland zoning per state statute.
1969	National Geographic prints article on Door County titled “A Kingdom So Delicious.”
early 1970s	First multi-family developments with condominium-style ownership established in the county.
1971	Manitowoc Company buys shipyard from Christy Corporation and greatly increases production, including the construction of 1000-foot ore carriers.
1978	Bayview Bridge dedicated.
1983	Sherwood Point Lighthouse, the last manned lighthouse on the Great Lakes, is automated.
1995	Peterson Builders, Inc., long-standing local shipyard business, launches its last boat, a crane barge. Two shipbuilders remain (Palmer Johnson and Bay Shipbuilding).

Source: George Evenson, *Door County Historian*.

## **HISTORICAL ASSOCIATIONS AND ARCHIVES**

Door County has many associations dedicated to the preservation of the county's historic sites and artifacts, including:

- Baileys Harbor Historical Society
- Citizens for Our Bridge, Inc.
- Door County Historical Society
- Door County Maritime Museum & Lighthouse Preservation Society
- Egg Harbor Historical Society, Inc.
- Ephraim Historical Foundation, Inc.
- Friends of Plum and Pilot Islands
- Friends of Rock Island
- Gibraltar Historical Association
- Jacksonport Historical Society
- Liberty Grove Historical Society
- Peninsula Belgian American Club
- Sister Bay Historical Society, Inc.

Door County also has three archival resources housing a variety of information about the history of the county and its residents.

- Door County Archives: Located at the Door County Maritime Museum in Sturgeon Bay, the purpose of the Door County Archives is to secure, maintain, and make accessible to scholars and other interested persons the official records of county organizations and agencies, and other records and photos of historical value relating to life in Door County.
- Door County Library Laurie History Room: The Laurie History Room of the Door County Library Sturgeon Bay branch offers an extensive genealogy and local history collection. Resources available include: local newspapers on microfilm dating back to 1862 (also available on-line); obituary, cemetery, and marriage indexes; historical books and materials, including biographies; city directories; high school and college yearbooks; a census database, as well as federal and state censuses on microfilm; plat maps; and works by local authors.
- Washington Island Archives: Located in the Washington Island Community Center, the Washington Island Archives is a repository for Town of Washington records, including tax records; school records; Census, cemetery, and genealogical records; publications produced on the island as well as island articles submitted to the *Door County Advocate*; and pictures, maps, audio tapes, and video tapes.

## MARITIME HISTORY

Humans have used for centuries the waters of Lake Michigan, Green Bay, and Sturgeon Bay Canal surrounding the Door Peninsula as a source of food and as routes for transportation and trade. Native Americans originally fished and hunted these waters for beaver, whitefish, and trout, and later established a water route for fur trade with people living in what is now Canada. French explorers and fur traders eventually moved to the area, opening more trade routes between Door County and Canada and replacing small canoes with large ships. In the 1850s, the shipping industry in the county thrived due to demand from the outside world for pine logs, lime, cedar, cord wood, telephone poles, railroad ties, hemlock bark, and, later, stone and potatoes. Door County's commercial fishing and shipbuilding industries were also established in the 1850s; by 1882, there were roughly sixty shipping piers located around the county.

Although the bays and lakes are no longer the main travel route to and from Door County, the waters surrounding the peninsula continue to fuel the economy through shipbuilding, commercial fishing, and water-based recreational opportunities. Today, sport and commercial fishermen travel the waters in search of a variety of catch. Shipbuilders have grown from small shipyards into large, thriving industries, while other marine-related companies derive their livelihood directly from the water or indirectly from the marine industry. The lighthouses, shipwrecks, and maritime museums that illustrate the county's rich maritime history help fuel the county's tourism industry.

## Wisconsin's Maritime Trails Program

Wisconsin's Maritime Trails program, a collaborative effort between the Wisconsin Historical Society and the University of Wisconsin Sea Grant Institute, works to document, preserve, and protect the state's submerged archaeological sites. The program uses Web sites, interpretive signage, public presentations, and shipwreck moorings to encourage divers, snorkelers, boaters, maritime enthusiasts, and tourists to visit and enjoy the state's diverse collection of maritime resources. More information about the following Door County museums, lighthouses, and shipwrecks may be found on the Maritime Trails Web site, listed in the Resources and Further Information section at the end of this chapter.

## Maritime Museums

The Door County Maritime Museum was founded in 1969 by a group of commercial fishermen in Gills Rock. That museum opened its doors to the public in 1975, followed the next year by a small maritime museum in Sturgeon Bay. In 1997, a 20,000 square foot facility was constructed to replace the original Sturgeon Bay museum.

The organization overseeing operation of the museums expanded its name in the summer of 2002 to The Door County Maritime Museum & Lighthouse Preservation Society, Inc. in order to clarify and solidify its role in preserving the lighthouses of Door County. The museum has also operated the Cana Island Lighthouse since 1975.

In addition to the displays and exhibits at each museum location, the organization conducts educational outreach, such as the Door County Lighthouse Walk, held each year in May or June, and the Classic and Wooden Boat Show, in August.

## Lighthouses

Door County has ten lighthouse locations, listed in Table 3.2. Note that the Cana Island, Chambers Island, and Pilot Island lighthouses are all on the State and National Registers of Historic Places.

**Table 3.2: Door County Lighthouses**

Name	Location City/Village/Town
Baileys Harbor Range Lights (2 lights)	T. Baileys Harbor
Cana Island Lighthouse	T. Baileys Harbor
Chambers Island Lighthouse	T. Gibraltar
Eagle Bluff Lighthouse	T. Gibraltar
Old Baileys Harbor Light (Birdcage)	T. Baileys Harbor
Pilot Island	T. Washington
Plum Island Range Lights	T. Washington
Pottawatomie Lighthouse (on Rock Island)	T. Washington
Sherwood Point	C. Sturgeon Bay
Sturgeon Bay Canal Station (2 lights)	C. Sturgeon Bay

*Source: Source: Door County Maritime Museum and Door County Historical Museum.*

## SHIPWRECKS

There are 211 shipwrecks in the waters around Door County, according to the Wisconsin Historical Society (WHS) Shipwreck Database. Nine shipwrecks are listed on the state and national registers of historic places and have historic markers (signs posted on land near the wreck site). (See Table 3.4.) Eight shipwrecks are marked with WHS mooring buoys, which make the sites more accessible and safer for divers. The moorings also help prevent anchor damage to fragile shipwreck structures.

## **MUSEUMS**

Table 3.3 lists Door County's museums and other historic sites that are open to the public for the viewing of historic buildings, artifacts, and/or artwork.

**Table 3.3: Door County Museums and Other Historic Sites**

Name	Location
Bjorklunden Stavkirke (Chapel)	Town of Baileys Harbor
Cana Island Lighthouse	Town of Baileys Harbor
The Clearing	Town of Liberty Grove
Corner of the Past/Old Anderson House Museum	Village of Sister Bay
Door County Historical Museum	City of Sturgeon Bay
Door County Maritime Museum, Gills Rock	Town of Liberty Grove
Door County Maritime Museum, Sturgeon Bay	City of Sturgeon Bay
Eagle Bluff Lighthouse	Peninsula State Park
Ephraim Foundation Museums	Village of Ephraim
· Anderson Barn Museum	
· Anderson Store Museum	
· Thomas Goodletson Cabin	
· Historic Iverson House	
· Pioneer Schoolhouse	
· The Svalhus	
Erskine Root Cellar	Town of Jacksonport
Gibraltar Town Hall	Town of Gibraltar
Gus Klenke Garage	Town of Liberty Grove
The Hardy Gallery (houses the Francis Hardy Center for the Arts)	Village of Ephraim
Historic Village at the Crossroads at Big Creek	City of Sturgeon Bay
Jackson Harbor Maritime Museum	Town of Washington
Jacobsen Museum	Town of Washington
Liberty Grove Historical Society Museum	Town of Liberty Grove
Miller Art Museum	City of Sturgeon Bay
The Historic Noble House	Town of Gibraltar
Pottawatomie Lighthouse	Rock Island State Park
Thordarson Estate	Rock Island State Park
Washington Island Farm Museum	Town of Washington

Source: *Door County Historical Museum.*

## **ARCHEOLOGICAL AND HISTORIC SITES**

### **ARCHEOLOGICAL SITES**

The WHS has designated 15 archeological sites in Door County, 11 of which are maritime related. Of the four archaeological sites on land, two are restricted to discourage trespassing and looting, and to show respect for sites that may be sacred to others. The other two are found in state parks: the Rock Island Historic District and the Bay View Site at Whitefish Dunes. More information about Door County's archeological sites may be found on the Wisconsin Historical Society's Web site, listed in the Resources and Further Information section at the end of this chapter.

### **NATIONAL AND STATE REGISTERS OF HISTORIC PLACES**

Both the National and State Registers of Historic Places include sites, buildings, structures, objects, and districts that are significant in national, state, or local history, architecture, archaeology, engineering, and culture. Properties are usually nominated for potential inclusion on the State Register and the National Register at the same time. The process of getting a site approved for listing on the registries

can take up to 18 months.

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is the official list maintained by the National Park Service in the U.S. Department of the Interior of historic properties in the United States deemed worthy of preservation. There are 66 places in Door County listed on the National Register. (See Table 3.4.)

Founded in 1846, two years before Wisconsin became the 30<sup>th</sup> state, WHS is tasked with maintaining the State Register, Wisconsin's official listing of state properties determined to be significant to Wisconsin's heritage. There are 65 places in Door County on the state register. (See Table 3.4.)

Owners of private property listed in the State and National Registers are not restricted in what they can do with the property, although certain activities such as demolition or historically inappropriate renovations would prompt removal of the property from registry lists. Benefits to a property owner of having a site listed on the registers include:

- eligibility for state and federal income tax credits for rehabilitating historic properties (up to 25% of total project cost);
- 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; and
- eligibility for official State Register of Historic Places plaques.

### **WISCONSIN'S ARCHITECTURE AND HISTORY INVENTORY**

As required by state law, WHS maintains a permanent record of historical and architectural information called the Architecture and History Inventory (AHI). WHS uses the AHI to identify properties that may qualify for the national and state historical registers and which may serve educational and tourism purposes. This database, which can change frequently, contains data on buildings, structures, and objects that illustrate Wisconsin's unique history. It documents a wide range of historic properties such as barns, log houses, metal truss bridges, and small town commercial buildings that create Wisconsin's distinct cultural landscape.

The AHI lists 1,578 sites in Door County. The creation of that list began in the mid-1970s when graduate school students did informal surveys by riding around in the county on bicycles, taking photos of places that looked historic. Since then, WHS has distributed grants to agencies such as Bay-Lake Regional Planning Commission and the Gibraltar Historical Society to conduct more systematic surveys of selected areas within the county. Other properties have been added to the list through federally funded projects that require notification of historical properties, such as the Highway 57 expansion, United States Department of Housing and Urban Development projects in the City of Sturgeon Bay, and the United States Coast Guard's involvement with maritime structures. Between 2004 and 2007, additional research was conducted in the Towns of Nasewaupee and Gardner by a local resident, resulting in the addition of 14 more sites to the AHI. For information on how to obtain copies of these studies, see the WHS information in the Resources and Further Information section at the end of this chapter.

**Table 3.4: National and State Registers of Historic Places, Door County**

Name	Location City/Village/Town	Type*
Anderson Dock Historic District	V. Ephraim	District
Baileys Harbor Range Lights	T. Baileys Harbor	District
Baileys Harbor Town Hall - McArdle Library	T. Baileys Harbor	Building
Bohjanen's Door Bluff Pictographs	T. Liberty Grove	Site
Bouche, J.B., House	T. Brussels	Building
Bullhead Point Historical and Archeological District	C. Sturgeon Bay	District
Cana Island Lighthouse	T. Baileys Harbor	Building
Cardy Site	C. Sturgeon Bay	Site
Carnegie Free Library (Sturgeon Bay Old Library)	C. Sturgeon Bay	Building
Chambers Island Lighthouse	T. Gibraltar	Building
Christina Nilsson (shipwreck)	T. Baileys Harbor	Site
Church of the Atonement	T. Gibraltar	Building
Claflin Point Site	T. Gardner	Site
Clearing, The	T. Liberty Grove	Site
Cupola House	V. Egg Harbor	Building
Draize, August, Farmstead	T. Union	Building
Eagle Bluff Lighthouse	T. Gibraltar	Building
Englebert, Frank and Clara, House	T. Brussels	Building
Ephraim Moravian Church	V. Ephraim	Building
Ephraim Village Hall	V. Ephraim	Building
Falque, Joachine J., House	T. Brussels	Building
Fleetwing (shipwreck)	T. Liberty Grove	Site
Frank O'Connor (bulk carrier/shipwreck)	T. Baileys Harbor	Site
Free Evangelical Lutheran Church - Bethania Scandinavian Evangelical Lutheran Congregation	V. Ephraim	Building
Gibraltar District School No. 2	V. Ephraim	Building
Globe Hotel	T. Baileys Harbor	Building
Green Bay Sloop Shipwreck	T. Sevastopol	Site
Hillside Hotel	V. Ephraim	Building
Iverson, Andreas, House and First Public School	V. Ephraim	Building
Iris (shipwreck)	T. Washington	Site
Jischke's Meat Market	V. Sister Bay	Building
Joint Brussels and Gardner District School Number One	T. Brussels	Building
Joys (shipwreck)	T. Washington	Site
Larson, L. A., & Co. Store	C. Sturgeon Bay	Building
Little Lake Archeological District	T. Washington	District
Louisiana (shipwreck)	T. Washington	Site
Louisiana Street/Seventh Avenue Historic District	C. Sturgeon Bay	District
Meridian (schooner) Shipwreck Site	T. Liberty Grove	Site
Monfils, Joseph, Farmstead	T. Brussels	Building
Murphy Farms Number 1	T. Egg Harbor	Building
Namur Belgian-American District	T. Union	District
Noble, Alexander, House	T. Gibraltar	Building
Ocean Wave (shipwreck)	T. Sevastopol	Site
Peterson, Peter, House	V. Ephraim	Building
Pilot Island Light	T. Washington	Building
Pilot Island NW Site	T. Liberty Grove	Site
Plum Island Range Rear Light	T. Washington	Structure

**Table 3.4: National and State Registers of Historic Places, Door County (continued)**

Name	Location City/Village/Town	Type*
Porte des Morts Site	T. Liberty Grove	Site
Pottawatomie Lighthouse	T. Washington	Building
Rock Island Historic District	T. Washington	Site
Sherwood Point Light Station	T. Nasewaupee	Building
Sturgeon Bay Bridge	C. Sturgeon Bay	Structure
Sturgeon Bay Canal Lighthouse	C. Sturgeon Bay	Structure
Sturgeon Bay Post Office	C. Sturgeon Bay	Building
Third Avenue Historic District	C. Sturgeon Bay	District
Thordarson Estate Historic District	T. Washington	District
Thorp, Freeman and Jesse, House and Cottages	T. Gibraltar	Building
Vangindertahlen, Louis, House	T. Brussels	Building
Vorous General Store	T. Gibraltar	Building
Water Tower	T. Washington	Building
Welcker's Resort Historic District	T. Gibraltar	District
Whitefish Dunes - Bay View Site	T. Sevastopol	District
Zachow, William, Farmstead	T. Liberty Grove	Building
Zahn, Albert, House/Bird's Park	T. Baileys Harbor	Building
Zahn, August, Blacksmith Shop and House	T. Baileys Harbor	Building
<b>National Register Only</b>		
Plum Island Life-Saving and Light Station	T. Washington	District

Source: Wisconsin Historical Society, 2013.

\*Types of Places:

- A building is constructed to shelter human activity. Examples include houses, barns, and commercial buildings.
- A site is the location of a significant event or a place of occupation or activity. It has historic value regardless of existing structures or buildings. Examples include shipwrecks, archaeological sites, and parks.
- A structure is made for purposes other than shelter. Examples include bridges, boats and ships, and grain elevators.
- A district is a group of historically-related properties, like a neighborhood or a downtown.

## CEMETERIES

The third edition of *Cemeteries of Wisconsin* lists local cemeteries by geographic township and range. It ignores incorporated community boundaries, so cemeteries located in the villages and the City of Sturgeon Bay are included in the towns' totals. Table 3.5 lists all Door County cemeteries identified in *Cemeteries of Wisconsin*, plus others identified in county records. Other burial sites present in the county may not be listed here, particularly smaller, family cemeteries or unnamed cemeteries. Note that the Sturgeon Bay Library Laurie History Room has a list of all known persons buried in Door County.

**Table 3.5: Cemeteries, Door County**

<b>Name</b>	<b>Location</b>	<b>Name</b>	<b>Location</b>
Baileys Harbor	T. Baileys Harbor	Stevenson Family	T. Gibraltar
St. Mary of the Lake Catholic	T. Baileys Harbor	St. Paul's Lutheran	T. Gibraltar
Brussels Town Cemetery	T. Brussels	Zion	T. Gibraltar
Emanuel's Lutheran Cemetery	T. Brussels	Holy Nativity/Christ the King	
St. Francis Xavier Catholic Cemetery	T. Brussels	(Episcopalian)	T. Jacksonport
St. Michael's Catholic Church	T. Brussels	Jacksonport Lakeview	T. Jacksonport
St. Hubert Catholic	T. Brussels	St. Michael's Catholic	T. Jacksonport
White Star Church Cemetery	T. Brussels	Zion Lutheran	T. Jacksonport
Clay Banks Town Cemetery	T. Clay Banks	Ellison Bay	T. Liberty Grove
Tanum Lutheran Cemetery	T. Clay Banks	Liberty Grove	T. Liberty Grove
Egg Harbor	T. Egg Harbor	Little Sister	T. Liberty Grove
St. John the Baptist Catholic	T. Egg Harbor	Rowleys Bay	T. Liberty Grove
St. John the Baptist Catholic	T. Egg Harbor	St. Rosalia's Catholic	T. Liberty Grove
Brockhausen Cemetery	T. Forestville	Sister Bay Moravian	T. Liberty Grove
Brown Church Cemetery	T. Forestville	Trinity Lutheran	T. Liberty Grove
Emanuel Lutheran	T. Forestville	Elton J. Schulties Memorial	T. Nasewaupee
Forest Lutheran Cemetery	T. Forestville	Hainesville Cemetery	T. Nasewaupee
Forestville	T. Forestville	Pilgrim's Rest	T. Nasewaupee
Holy Name of Mary Catholic	T. Forestville	St. Salan	T. Nasewaupee
Maplewood	T. Forestville	Salem	T. Nasewaupee
St. Mary's Cemetery (Old) Cemetery	T. Forestville	Salem Luther Cemetery	T. Nasewaupee
St. Mary's, Holy Name of Mary	T. Forestville	Schumacher - Nasewaupee	T. Nasewaupee
St. Michael	T. Forestville	Weckler - Pilgrims Rest	T. Nasewaupee
St. Peter's Lutheran Cemetery	T. Forestville	Bayside	T. Sevastopol
Woller	T. Forestville	Family Cemetery (abandoned)	T. Sevastopol
Geise Family	T. Gardner	Mausoleum - Catholic	T. Sevastopol
Precious Blood Episcopal Cemetery	T. Gardner	St. John's Evangelical Lutheran	T. Sevastopol
St. John the Baptist Spiritualist	T. Gardner	St. Joseph's Catholic	T. Sevastopol
St. Joseph Catholic Cemetery	T. Gardner	SS. Peter & Paul Catholic	T. Sevastopol
Stevenson Pier Cemetery	T. Gardner	Whitefish Bay	T. Sevastopol
Tornado Park	T. Gardner	Mt. Olive	T. Sturgeon Bay
White Star Spiritualist Cemetery	T. Gardner	Shiloh	T. Sturgeon Bay
Blossomburg	T. Gibraltar	Sturgeon Bay/Samuelson Family	
Bethany Lutheran	T. Gibraltar	South Side/Circle Ridge	T. Sturgeon Bay
Claflin/Thorp	T. Gibraltar	St. Francis Depaul	T. Union
Eagle Island	T. Gibraltar	St. Mary of The Snow Catholic	
Ephraim Moravian	T. Gibraltar	(New)	T. Union
Evangelical United Brethren	T. Gibraltar	Lighthouse	T. Washington
Goodletson Family	T. Gibraltar	Rock Island Cemeteries	T. Washington
Horseshoe Island (abandoned)	T. Gibraltar	Sand Beach	T. Washington
Juddville	T. Gibraltar	Washington Island Township	T. Washington

Source: Cemetery Locations in Wisconsin 3rd Edition, 2005; Door County Land Information Office, 2007.

## CULTURAL RESOURCES

Participants at the county-wide visioning sessions held between 2006 and 2007 highly valued the county's cultural resources, ranking them among Door County's greatest assets and as major contributors to the county's quality of life.

Cultural resources in the county include a wide array of associations and schools, galleries and studios, theatre groups, performing arts centers, and festivals. A diversity of galleries, studios, museums, and performance spaces offer the opportunity to see original works by local painters, potters, sculptors, craftsmen, weavers, and performers, many of whom draw inspiration from the natural beauty of the area. Education centers offer opportunities for people of all ages to learn about the natural environment, art, folk art, dance, drama, history, horticulture, literature, and many other topics.

As part of a larger national study, the Wisconsin Arts Board (WAB) released in 2002 the results of a study of the economic impact of the non-profit arts industry in Wisconsin. This study, the most recent one done by the WAB, included detailed economic data from approximately 300 arts organizations in Wisconsin, including many in Door County. Door County also commissioned its own local study and found that Door County arts organizations and their audiences:

- supported the full-time equivalent of 427 jobs;
- paid \$6.5 million in household income to local residents;
- generated \$614,000 in revenue for local governments; and
- generated \$813,000 in revenue for the state government.

### ASSOCIATIONS

Door County has a variety of associations dedicated to cultural education, appreciation, awareness, outreach, events, and exhibits.

- **Door County Art League.** The Door County Art League was established in 1986 for the purpose of developing active community interest in the field of creative arts. Membership is open to artists and all other persons interested in and supportive of the visual arts in Door County.
- **Peninsula Arts Association.** Established in 1937, the Peninsula Arts Association is Door County's oldest non-profit. Historically, the organization has re-granted funds provided by the Wisconsin Arts Boards, matched locally on a dollar-for-dollar basis, to local artists and arts organizations. Currently, the Association is not receiving funds from the Wisconsin Arts Board and is revamping their funding process.
- **Potter's Guild.** The Door County Potters' Guild is a community of professional, resident craftspeople making functional and decorative work in clay. Established in 1976, the Guild encourages support and camaraderie between its half-dozen or more members, and is dedicated to the creation of high quality ceramics.
- **Washington Island Art Association.** Washington Island Art Association is a non-profit organization dedicated to providing high quality workshops to its artist members on Washington Island. Membership in the Association is open to professional and amateur artists and is also a requirement in order to teach or participate in a sponsored workshop.

## **CULTURAL AND ENVIRONMENTAL EDUCATIONAL OPPORTUNITIES**

Door County has a variety of cultural and educational opportunities for all ages of visitors and residents including the study of music, art, nature, and theatre. Note that museums, which offer an array of cultural and environmental educational opportunities, are listed in the historical resources section earlier in this chapter and are therefore not listed again here.

- **The Art and Nature Center.** Located in an old schoolhouse on Washington Island, the Art and Nature Center features an art gallery and a nature room. The Nature Room features live exhibits including a 180-gallon fish tank with lake fish, an observation beehive, an exhibit of local snakes, toads, and frogs, and hands-on exhibits such as microscopes and an extensive fossil collection. A naturalist is on staff to talk with visitors and lead hikes and classes. A variety of children's art classes are offered during July and August.
- **Birch Creek.** Founded in 1976, Birch Creek is located in the Town of Egg Harbor and offers a unique summer music school for students and nightly concerts for visitors and residents. Students, typically ages 14 to 19, are offered advanced training as well as the opportunity to perform publicly alongside nationally and internationally-renowned music professionals.
- **Björkunden (Björklunden vid Sjön).** Björklunden is a 425-acre estate on Lake Michigan in the Town of Baileys Harbor and serves as Lawrence University's northern campus, hosting retreats and seminars for Lawrence students throughout the academic year and adult continuing education seminars during the summer. The Björklunden lodge hosts many musical events that are open to the public and the facilities, including lodging, are available for use by private, public, and corporate groups for conferences, meetings, and special events.
- **The Clearing.** The Clearing is a "folk school" for adults, providing diverse educational experiences in a setting of quiet forests, meadows, and water. Located in Ellison Bay, The Clearing was established in 1935 by renowned landscape architect and conservationist Jens Jensen, and is listed on the State and National Registers of Historic Places.
- **Crossroads at Big Creek.** Located just east of the City of Sturgeon Bay, this 125-acre preserve includes several educational resource centers and an extensive all-season trail system that connects to evergreen and hardwood forests, streams, seasonal ponds, wetlands, and upland meadows. Crossroads offers experiential life-long learning focused on science, history, and the environment.
- **Doorways Theatre.** Sponsored by Door Shakespeare, Doorways is a summer theatre workshop offering classes at Björklunden, located in the Town of Baileys Harbor. Classes teach children communication, creative writing, and group social skills through the process of creating original theatre.
- **Francis Hardy Center for the Arts.** The Francis Hardy Center for the Arts is a non-profit organization with a gallery located in the heart of Ephraim's historic district on Anderson Dock. The mission of the Francis Hardy Center for the Arts is to promote awareness and appreciation of the arts through education and outreach programs, events, and exhibits. The Hardy Gallery showcases various educational exhibitions seasonally from May to October.
- **The Miller Art Museum.** The Miller Art Museum was established in 1975 by a gift from Ruth and Gerhard Miller to foster and inspire community creativity through its permanent collection and changing exhibitions, and to be a catalyst for enrichment through cultural, art appreciation, and educational programming for people of all ages. It is housed in a wing of the Sturgeon Bay Library.

- **Music and Arts School.** Located in Sturgeon Bay, the Music and Arts School offers year-round classes and summer camps in art, theatre, music, and dance for children ages 3 to 18.
- **Peninsula School of Art.** Founded in 1965, the Peninsula School of Art is located in Fish Creek (Town of Gibraltar). It offers a variety of year-round exhibitions, educational programs, and interdisciplinary exhibits combining art, theatre, music, and dance. In addition to exhibitions, the Guenzel Gallery hosts meet-the-artist events, lectures, live theatre, poetry readings, concerts, and other special events.
- **The Ridges Sanctuary.** The Ridges Sanctuary, formed in 1937, is the oldest non-profit nature preserve in the state. Comprised of more than 1,500 acres of pristine natural areas located in the Town of Baileys Harbor, the sanctuary has been designated as a State Natural Area, an Important Bird Area, and a National Natural Landmark. Environmental education programs are offered year-round as well as naturalist-led hikes. During the summer, day camp programs for children in preschool through fifth grade, family workshops, and a weekly lecture series are offered.
- **Sievers School of Fiber Arts.** Founded in 1979, Sievers School of Fiber Arts is a three-season visual arts and crafts school located on Washington Island. The school offers weeklong and weekend classes for students of all skill levels.
- **Third Avenue Playhouse.** The Third Avenue Playhouse (TAP) was founded in 1999 to provide high-quality, year-round community performing arts and educational opportunities in Door County. TAP seeks to inspire cultural awareness through classes and workshops, including a writer's workshop and classes in short and long fiction, poetry, and playwriting. TAP also offers theatre classes and summer camps for children and teens.

## **CULINARY ARTS, WINERIES, AND BREWERIES**

Door County has a variety of cooking schools, wineries, and breweries. The cooking schools offer instruction from professional chefs, with events and classes often focusing on local foods. The wineries offer a variety of award-winning locally produced wines along with tours, wine tasting facilities, and on-site sales.

### **COOKING SCHOOLS**

- **Savory Spoon Cooking School.** The Savory Spoon Cooking School, a member of the International Association of Culinary Professionals, is a seasonal school open from June to October.
- **Northeastern Wisconsin Technical College (NWTC).** Located in the City of Sturgeon Bay, NWTC offers a variety of cooking and food preservation classes, including a local foods cooking class.

### **WINERIES/BREWERIES**

- **Door County Brewing Company.** Located in the Town of Baileys Harbor, the Door County Brewing Company makes small batches of its specialty beers at this location.
- **Door Peninsula Winery.** Located in Carlsville (Town of Egg Harbor), the Door Peninsula Winery offers a production facility and a tasting room with over 50 samples.
- **Island Orchard Cider.** Located in Ellison Bay (Town of Liberty Grove), Island Orchard produces hard cider from apples grown on Washington Island. They specialize in traditional French cider, which has a lighter texture and is more wine-like.

- **Lo Artisan Distillery.** Lo Artisan Distillery, LLC is a family-run artisan rice whiskey distillery, located in the Town of Brussels.
- **Orchard Country Winery.** Founded in 1985, Orchard Country Winery is a small, family-owned winery housed in a historic dairy barn built in the early 1900s, located in Fish Creek (Town of Gibraltar). Over 100 acres of fruit-bearing trees and grape vines used in the wine making process are also located on-site.
- **Red Oak Vineyard.** Located in the City of Sturgeon Bay, Red Oak is a family-owned and operated winery and vineyard that produces traditional wines.
- **Shipwrecked Brewery.** Shipwrecked is a micro-brewery located in the Village of Egg Harbor, producing beer made with Door County cherry juice.
- **Simon Creek Vineyard & Winery.** Located in the Town of Jacksonport, Simon Creek offers wine tasting and tours of the vineyard and processing facility.
- **Stone's Throw Winery.** Located at Peninsula Center in the Town of Baileys Harbor, Stone's Throw Winery offers traditional wines made from California and Door County grapes.

## **VISUAL ARTS: GALLERIES AND STUDIOS**

Door County has a long-standing tradition of attracting artists to the area, with a variety of galleries and studios up and down the peninsula displaying artwork by local, regional, state, and national artists. Artists also display their works at local shops, restaurants, and events. The types of arts found in the county include:

- Painting (oil, pastel, watercolor, etc.)
- Photography
- Sculpture (metal, wood, glass, pottery, etc.)
- Weavings
- Crafts (furniture, leather, etc.)

## **PERFORMING ARTS GROUPS AND VENUES**

Door County has a variety of performing arts groups providing entertainment for residents and visitors.

- **Northern Sky Theatre.** The Northern Sky Theatre (NST), the 2014 renamed American Folklore Theatre, produces original musical shows in repertory under an outdoor amphitheater in Peninsula State Park from June to August every year. NST also offers off-season shows at the Door Community Auditorium and the Historic Ephraim Village Hall. The mission of NST is to create, develop, and present professional musical and dramatic productions that will further the knowledge and appreciation of the culture and heritage of the United States.
- **Birch Creek Music Performance Center.** In addition to music education for young people, Birch Creek offers residents and visitors nightly concerts by students and music professionals during summer months. Birch Creek is located in the Town of Egg Harbor.
- **Door Community Auditorium.** A 750-seat venue, Door County Auditorium features excellent acoustics and an intimate setting for professional and community performances. Year-round programming includes the Fireside Coffeehouse Concert Series, Peninsula Music Festival, St. Norbert Lecture Series, local and professional theatre, dance, and music. The Door Community Auditorium seeks to serve as an arts, cultural, and educational center for the entire region.

- **Door Shakespeare.** Door Shakespeare is a non-profit professional theatre troupe that performs Shakespeare and other classical theatre during the summer in an outdoor garden setting located at Björklunden in the Town of Baileys Harbor.
- **Isadoora Theatre Company.** Isadoora is a semi-professional non-profit community theatre organization with a 3-show season running October through May at various venues in Door County. The mission of Isadoora Theatre Company is to celebrate theatre through its basic elements of movement, music, story, and thought.
- **Island Players.** Since 1984, Island Players has served Washington Island as a non-profit community theatre. Players produce full-length plays and musical productions, sponsor workshops and informal play readings, and provide programs in the public school and a summer acting camp for children.
- **Midsummer's Music Festival.** Started in 1991 as a festival of chamber ensemble music held over several weeks in the summer, Midsummer's Music Festival now offers numerous professional concert programs throughout the year in churches, private homes, art galleries, and retreat centers throughout the county.
- **Peninsula Music Festival.** The Peninsula Music Festival offers nine professional symphonic concerts over the course of three weeks each August at the Door Community Auditorium in Fish Creek (Town of Gibraltar). Professional orchestral musicians come from all over the world to be part of this annual Music Festival.
- **Peninsula Players.** Founded in 1935, Peninsula Players is America's oldest professional resident summer theatre. Peninsula Players offers five shows each season, varying from comedies to drama, with nightly performances in an open-air theatre. It is located along the shoreline of Green Bay, between the Village of Egg Harbor and Fish Creek (Town of Gibraltar).
- **Paul Sills' Wisconsin Theater Game Center.** The Sills' center, located in the Town of Liberty Grove, offers one-week improvisational theatre intensives for students, actors, directors, and teachers.
- **Holiday Music Motel/Steel Bridge Songfest.** Located in the City of Sturgeon Bay, the Holiday Music Motel is a fully operational motel featuring live music events, collaborative songwriting retreats and a radio station that exclusively broadcasts the music created within the motel. The Steel Bridge Songfest (SBSF) was established in 2005 by Citizens for Our Bridge, Inc. as a music festival promoting the preservation of the Michigan Street Bridge and the Third Avenue Historic District. The songwriting retreat for this songfest takes place at the motel.
- **Third Avenue Playhouse.** In addition to its educational programming, each year Third Avenue Playhouse (TAP) sponsors numerous local theatre productions at its location in the City of Sturgeon Bay. TAP offers performance space to other theatre as well as music ensembles.
- **Trueblood Performing Arts Center.** The mission of the Trueblood Performing Arts Center is to provide and maintain a public facility in which creativity may flourish and to encourage public participation in education and entertainment for the residents and visitors to Washington Island.
- **Washington Island Music Festival.** Washington Island hosts a music festival each August. The festival is a series of concerts performed by world class musicians who donate their talents and spend two weeks living and performing on the island.

Other performing arts venues in the county include coffee shops, galleries, taverns, restaurants, and open-air performance spaces. Listed below are municipal outdoor venues with regularly scheduled music performances during the summer months.

- **City of Sturgeon Bay.** Between mid-June and late August, Martin Park hosts the weekly Harmony by the Bay concerts.
- **Village of Egg Harbor**
  - Peg Egan Performing Arts Center. The Peg Egan Performing Arts Center is an outdoor amphitheater in the Village of Egg Harbor that hosts a variety of musical performances throughout the summer months.
  - Eames Cherry View Park. This band shelter hosts a free sunset concert series during the summer months.
- **Village of Ephraim.** Local music is offered weekly during the summer months at the Harborside Park gazebo. In the event of rain, concerts take place at the historic village hall.
- **Village of Sister Bay.** From mid-June to mid-August, the Village of Sister Bay's "Concerts in the Park" performances take place in the Waterfront Park gazebo.
- **Town of Baileys Harbor.** Between June and August, weekly concerts are offered on the lawn of the Town Hall.

## **FESTIVALS**

Door County has many festivals and complimentary events throughout the year, providing social, celebratory, cultural, and educational opportunities for visitors and residents alike. Listed in this section are the standing festivals. Detailed information is available through the Door County Visitor Bureau or the local business/civic associations listed immediately below. (See the Resources and Further Information section for Visitor Bureau contact information.)

## **BUSINESS/CIVIC ASSOCIATIONS**

- Door County Visitor Bureau
- Baileys Harbor Community Association
- Carlsville Business Association
- Door County North Business Association
- Egg Harbor Business Association
- Ephraim Business Council
- Fish Creek Civic Association
- Jacksonport Area Business Association
- Sister Bay Advancement Association
- Sturgeon Bay Visitor & Convention Bureau
- Washington Island Chamber of Commerce

## FESTIVALS AND EVENTS

### May

- Season of Blossoms. County-wide celebration of spring with events in numerous communities.
- Door County Half Marathon (Peninsula State Park)

### June

- Steel Bridge Songfest (City of Sturgeon Bay)
- Door County Ride for Nature
- Door County Beer Festival (Town of Baileys Harbor)
- Ephraim Fyr Bal Festival
- Little Sturgeon Days (Town of Gardner)
- Olde Ellison Bay Days (Town of Liberty Grove)

### July

- Fourth of July: Day-long festivals in the Town of Baileys Harbor and the Village of Egg Harbor; fireworks in Fish Creek (Town of Gibraltar), Gills Rock (Town of Liberty Grove), and the City of Sturgeon Bay.
- Annual Jefferson Street Festival (City of Sturgeon Bay)
- Belgian Days (Town of Brussels)
- Summer Cherry Harvest Fest at the Orchard Country Winery and Market (Highway 42 between Egg Harbor and Fish Creek)
- Carlsville Days (Town of Egg Harbor)
- Washington Island Fly-In/Fish Boil
- Door County Triathlon

### August

- Washington Island Scandinavian Festival
- Jacksonport's Annual Cherry Fest
- Door County Fair (City of Sturgeon Bay)
- Hardy Gallery Festival of the Arts (Village of Ephraim)
- Thresheree and Antique Machinery Show (Town of Sevastopol, south of Valmy)
- Washington Island Fair and Parade
- Sons of Norway Norskfest (Bay View Lutheran Church, Sturgeon Bay)
- Kermis (traditional Belgian harvest celebration; held throughout Southern Door towns starting late August through September)

### September

- Sister Bay's Labor Day Weekend Marina Fest
- Jazz on Jefferson (City of Sturgeon Bay)
- Annual Corn Fest (Schopf's Hilltop Dairy, Town of Egg Harbor)
- Old World Craft Fair (Jefferson Street, City of Sturgeon Bay)
- Ephraim's Saturday Stroll
- Harvest Festival and Harvest Moon Celebration (City of Sturgeon Bay)
- Baileys Harbor Autumnfest
- Fall Harvest Fest (Orchard Country Winery and Market; Highway 42 between Egg Harbor and Fish Creek)
- Door County Century Ride
- Peninsula Century Ride

## October

- Harvest Festival (City of Sturgeon Bay)
- Pumpkin Patch Festival (Village of Egg Harbor)
- Townline Art Fair (Ephraim)
- Washington Island Cider Pressing Party and Fall Festival
- Sister Bay Fall Festival
- Fall 50 (running event)

## November

- Christmas by the Bay (City of Sturgeon Bay)
- Capture the Spirit (Villages of Ephraim and Sister Bay)

# RESOURCES AND FURTHER INFORMATION

## LOCAL ORGANIZATIONS AND INITIATIVES

**American Folklore Theatre** (<http://www.folkloretheatre.com>)

**The Art and Nature Center** (<http://www.wianc.org>)

**Birch Creek** (<http://www.birchcreek.org>)

**Björklunden** (<http://www.lawrence.edu/dept/bjork>)

**The Clearing** (<http://www.theclearing.org>)

**Crossroads at Big Creek** (<http://www.crossroadsatbigcreek.org>)

**Door County Archives** (no Web site)

434 and 442 Michigan Street (next to the Door County Historical Museum)

Sturgeon Bay, WI 54235

Phone: (920) 743-2563

The Door County Archives secures, maintains, and makes accessible official records of county organizations and agencies, and other records and photos of historical value relating to life in Door County.

**Door County Art League** (<http://www.doorcountyartleague.org>)

**Door Community Auditorium** (<http://www.dcauditorium.org>)

**Door County Library - Laurie History Room** (<http://www.dcl.lib.wi.us>)

Located within the Sturgeon Bay Library, the Laurie History Room houses a collection of books and information on Door County and Wisconsin history. Also available are decades of the local newspaper on microfilm for reading and printing, plat books going back to 1899, and a list of everyone buried in Door County cemeteries.

**Door County Maritime Museum** (<http://www.dcmm.org>)

- **Sturgeon Bay Museum**  
120 North Madison Avenue  
Sturgeon Bay, WI 54235  
Phone: (920) 743-5958

- **Gills Rock Museum**  
12724 Wisconsin Bay Road  
Ellison Bay, WI 54210  
Phone: (920) 854-1844

**Door County Visitor Bureau (DCVB)** (<http://www.doorcounty.com>)

Door County Event Calendar ([www.doorcounty.com/web/dcevent calendar.asp](http://www.doorcounty.com/web/dceventcalendar.asp))

Business associations' Web site addresses: For a list of Door County business associations and their contact information, go to the DCVB Web site and select "Plan Your Trip" to get to the "Door County Service Directory," then select the "Visitor Information" link.

**Door Shakespeare** (<http://www.doorshakespeare.com>)

**Francis Hardy Center for the Arts** (<http://www.thehardy.org>)

**Gibraltar Historical Society** (<http://www.gibraltar150.com>)

**Isadoora Theatre Company** (<http://www.isadoora.com>)

**Island Players** (<http://www.washingtonislandchamber.com/arts>)

**Lo Artisan Distillery** (<http://www.loartisandistillery.com>)

**Midsummer Music Festival** (<http://www.midsummersmusic.com>)

**The Miller Art Museum** (<http://www.millerartmuseum.org>)

**Paul Sills' Wisconsin Theater Game Center** (<http://www.paulsills.com>)

**Peninsula Arts Association** (<http://www.peninsulaartsassociation.com>)

**Peninsula Arts and Humanities Alliance** (<http://www.doorcountyarts.com>)

**Peninsula Music Festival** (<http://www.musicfestival.com>)

**Peninsula Players** (<http://www.peninsulaplayers.com>)

**Peninsula School of Art** (<http://www.peninsulaartschool.com>)

**The Ridges Sanctuary** (<http://www.ridgesanctuary.org>)

**Sievers School of Fiber Arts** (<http://www.sieversschool.com>)

**Steel Bridge Songfest** (<http://www.steelbridgesongfest.org>)

**Third Avenue Playhouse** (<http://www.ThirdAvenuePlayhouse.com>)

**Washington Island Art Association** (<http://www.washingtonislandchamber.com/arts>)

**Washington Island Music Festival** (<http://www.washingtonislandmusicfestival.com>)

**Trueblood Performing Arts Center (PAC)** (<http://www.truebloodpac.com>)

**Washington Island Archives** (no Web site)

Washington Island Community Center

910 Main Road

Washington Island, WI 54246

Phone: (920) 847-3072

E-mail: washisldarchives@gmail.com

Located in the Washington Island Community Center, the Washington Island Archives is a repository for Town of Washington records, including tax, school, Census, cemetery, and genealogical records; publications produced on the island as well as island articles submitted to the *Door County Advocate*; and pictures, maps, audio tapes, and video tapes.

**COOKING SCHOOLS, WINERIES, DISTILLERIES, AND BREWERIES**

**Door County Brewing Company** (<http://www.doorcountybrewingco.com>)

**Door Peninsula Winery** (<http://www.dcwine.com>)

**Island Orchard Cider** (<http://www.islandorchardcider.com>)

**Orchard Country Winery** (<http://www.orchardcountry.com>)

**Red Oak Vineyard** (<http://www.redoakvineyard.com>)

**Savory Spoon Cooking School** (<http://www.savoryspoon.com>)

**Shipwrecked Brewery** (<http://www.shipwreckedmicrobrew.com>)

**Simon Creek Vineyard & Winery** (<http://www.simoncreekvineyard.com>)

**Stone's Throw Winery** (<http://www.stonesthrowwinery.com>)

**REGIONAL, STATE, AND FEDERAL ORGANIZATIONS AND INITIATIVES**

**Bay-Lake Regional Planning Commission** (<http://www.baylakerpc.org>)

Through a grant from the Wisconsin Historical Society, Bay-Lake Regional Planning Commission commissioned a survey in 1998 to provide information regarding Door County's historical and architectural resources in eleven unincorporated communities, including: Carnot, Maplewood, Valmy, Jacksonport, Baileys Harbor, Peninsula Center, Rowleys Bay, Ellison Bay, Gills Rock, and Washington and Detroit Harbors. This report may be useful in the development of local preservation plans; to identify buildings, structures, sites, and historic districts that meet the criteria for listing on the National Register of Historic Places; and to increase public and private sector awareness of the county's historical and architectural heritage.

**National Trust for Historic Preservation** (<http://www.PreservationNation.org>)

The National Trust for Historic Preservation provides leadership, education, advocacy, and resources to save America's diverse historic places and revitalize communities.

**Wisconsin Arts Board** (<http://www.artsboard.wisconsin.gov>)

The Wisconsin Arts Board is a state agency that nurtures creativity, cultivates expression, promotes the arts, supports the arts in education, stimulates community and economic development, and serves as a resource for people of every culture and heritage. The Americans for the Arts - Door County Study may be found at [www.arts.state.wi.us/static/study/doorcounty.xls](http://www.arts.state.wi.us/static/study/doorcounty.xls).

**Wisconsin Historical Society (<http://www.wisconsinhistory.org>)**

The society was founded in 1846, two years before Wisconsin became the 30<sup>th</sup> state, and it ranks as one of the largest, most active, and most diversified state historical societies in the nation. The society maintains the Wisconsin Historic Preservation Database which contains the Archaeological Sites Inventory (ASI), Architectural History Inventory (AHI), and the Bibliography of Archaeological Reports (BAR).

Note that on file with the Towns of Nasewaupee and Gardner are studies conducted by a local resident between 2004 and 2007 of historical sites within these towns. This research resulted in the addition of 14 more sites to the AHI. Contact information for the Town of Gardner may be found at <http://www.townofgardner.org>. There is no town telephone number or Web site for the Town of Nasewaupee. Contact the Door County Planning Department at (920) 746-2323 for local official contact information.

Listed below are several programs the Wisconsin Historical Society has initiated to help individuals and municipalities preserve the history and culture of Wisconsin.

- Wisconsin Barn Preservation Program – A collaborative between the University of Wisconsin-Extension, the Wisconsin Trust for Historic Preservation, and the Wisconsin State Historical Society aimed at both addressing public concerns and drawing attention to the importance of preserving the elements of Wisconsin's rural countryside.
- Wisconsin Main Street Program – A comprehensive program designed to revitalize downtowns and give new life to historic business districts, Main Street Wisconsin is based on the National Trust for Historic Preservation's Main Street Program. It was co-sponsored by the Wisconsin Trust, the State Historical Society, and the former Wisconsin Department of Development (now Department of Commerce). In Door County, the City of Sturgeon Bay is the only municipality participating in this program.
- Heritage Tourism Initiative – The Heritage Tourism Initiative has helped develop grassroots heritage tourism organizations by encouraging Wisconsin communities to use their unique features to tap into the growing heritage tourism market while protecting that heritage at the same time. This program was co-sponsored by the Wisconsin Trust, the Wisconsin Historical Society, and the former Wisconsin Department of Development, Division of Tourism (now the Department of Tourism).
- Agriculture Building Preservation – Inspired by the National Trust's popular Barn Again! Program, this initiative provides information and forums to help owners of historic agricultural buildings determine how to maintain and reuse their buildings. It is co-sponsored by the Wisconsin Trust, the Wisconsin Historical Society, and the University of Wisconsin-Extension Program.

## CHAPTER 4: HOUSING

## INTRODUCTION

This chapter provides housing information for Door County, including historical housing unit levels; the existing housing stock's age, structural, and occupancy characteristics; potential future housing demand, based on demographic projections; and current housing costs. Since housing issues are integrated with population, economic development, and land use issues, readers may also want to review Chapter 2, Issues and Opportunities, Chapter 5, Economic Development, and Chapter 10, Land Use of this Resource Report, which contain information related or relevant to the housing information found in this chapter. Also note that housing data is collected by multiple agencies at different times and using different methods, so figures in these chapters serve only as guides, pointing out trends or issues, rather than as definitive counts or statistics.

U.S. Census Bureau (Census) data provided in this chapter is given at both the county and sub-county levels, with the municipalities grouped into three sub-county areas. As described in more detail in Chapter 5, Economic Development, Door County's economy has traditionally depended on the agricultural, manufacturing, and tourism industries, which are largely split into three general geographic areas: manufacturing in the city, agriculture in the south, and tourism in the north. It is useful to look at housing in the context of where and what type of employment exists, because healthy communities have income-appropriate housing close to employment. For the purpose of this chapter and Chapter 10, Land Use, individual municipalities within Door County are grouped together into Northern Door, Southern Door, and the City of Sturgeon Bay (City) categories. The Northern Door area consists of the Towns of Baileys Harbor, Egg Harbor, Gibraltar, Jacksonport, Liberty Grove, Sevastopol, and Washington; and the Villages of Egg Harbor, Ephraim, and Sister Bay. The Southern Door area consists of the Towns of Brussels, Clay Banks, Forestville, Gardner, Nasewaupee, Sturgeon Bay, and Union; and the Village of Forestville. The City is its own area. Although the Town of Sturgeon Bay lies both north and south of the City, it is categorized under Southern Door, because it is primarily agricultural in character.

*Note: General definitions for housing terms are given throughout this chapter; detailed definitions can be found at the Census website listed in the Resources and Further Information section at the end of this chapter.*

## HOUSING CHARACTERISTICS

### **TOTAL HOUSING UNIT LEVELS**

A "housing unit" is defined by the Census as a single-family house, townhouse, mobile home or trailer, apartment, group of rooms, or single room that is occupied as separate living quarters or, if vacant, is intended for occupancy as separate living quarters. Per Census counts, between 1970 and 2010, the total number of housing units within Door County increased by 13,187 units, or approximately 122%. (See Table 4.1.) Comparatively, the county's year-round population increased by only 7,679 people, or 38%, for the same timeframe. This much lower population growth rate, as compared to the housing unit growth rate, highlights the prevalence of the seasonal housing market in Door County. The county's 122% growth rate far exceeded the state's housing growth rate of 78% for the same timeframe.

The largest decadal growth in population happened between 1970 and 1980 when there was an increase of 4,923 people, but even this big bump in year-round population (25%) did not keep pace with the housing unit growth rate. For the same decade, 4,545 housing units were added, an increase of approximately 42%. While housing growth slowed to 18% between 1980 and 1990, and 9% growth between 1990 and 2000, it again picked up between 2000 and 2010 when the number of housing units in the county grew by 4,379, or 22%. Between 2000 and 2010, the county's population actually decreased by just over one-half percent, a fact that underscores the strength of the

seasonal housing market even as year-round population becomes smaller. In comparison, between 2000 and 2010, the state's population grew by 6% and the number of housing units grew by 13%. Wisconsin, similar to Door County, is a popular seasonal home destination, thus its housing unit growth rate is also quite a bit higher than its population growth rate.

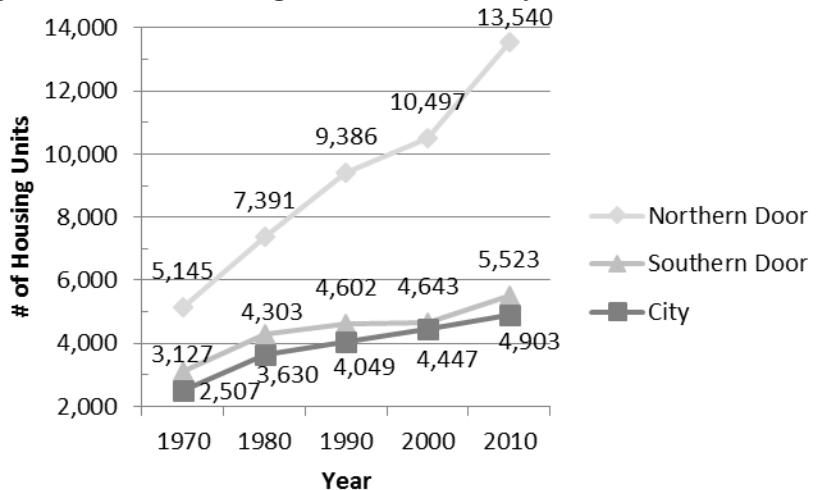
**Table 4.1: Total Housing Units, Door County**

Year	Door County	% Change	Wisconsin	% Change
1970	10,779	--	1,472,466	--
1980	15,324	42%	1,863,897	27%
1990	18,037	18%	2,055,774	10%
2000	19,587	9%	2,321,144	13%
2010	23,966	22%	2,624,358	13%
<b>1970-2010</b>	<b>13,187</b>	<b>122%</b>	<b>1,151,892</b>	<b>78%</b>

Source: U.S. Bureau of the Census, 1970 Census of Population and Housing, Series 100, Table 2; 1980 Census of Population and Housing, Table 45; 1990 Census of Population and Housing, STF 1A; 2000 SF1 100% Data, Table ID QT-H1; and 2010 SF1 100% Data, Table ID QT-H1. See American Fact Finder Table ID QT-H1 (2000 and 2010 only) for municipal-level data.

Comparing sub-county areas, Northern Door has long been more developed and grown at a faster rate than the other areas. (See Figure 4.1 and Table 4.2.) Starting with 5,145 housing units in 1970, Northern Door grew over 163% to 13,540 housing units in 2010. For the same timeframe, the City started with 2,507 units and grew over 95% to 4,903 units, while Southern Door started with 3,127 units and grew 76% to 5,523 units.

**Figure 4.1: Total Housing Units, Door County Areas**



Source: U.S. Bureau of the Census, 1970 Census of Population and Housing, Series 100, Table 2; 1980 Census of Population and Housing, Table 45; 1990 Census of Population and Housing, STF 1A; 2000 SF1 100% Data, Table ID QT-H1; and 2010 SF1 100% Data, Table ID QT-H1. See American Fact Finder Table ID QT-H1 (2000 & 2010 only) for municipal-level data.

All areas of the county experienced high growth in housing units from 1970 to 1980, increasing between 37% and 45%. Through the 1980s, strong growth continued for Northern Door, increasing by 27%, while the City and Southern Door both slowed to below 12%. Growth for all sub-county areas was less than 12% through the 1990s, but then picked up again for both Northern and Southern Door starting in 2000. Between 2000 and 2010, both the Northern Door and Southern Door areas experienced significant increases, with Northern Door growing by 29%

and Southern Door growing by 19%. The City has had the steadiest growth, ranging from between 9% and 12% per decade, between 1980 and 2010.

**Table 4.2: Change in Total Housing Units, Door County Areas**

Area	1970	2000	2010	1970 - 2010		2000 - 2010	
				# Change	% Change	# Change	% Change
Wisconsin	1,472,466	2,321,144	2,624,358	1,151,892	78%	303,214	13%
Door County	10,779	19,587	23,966	13,187	122%	4,379	22%
Northern Door	5,145	10,497	13,540	8,395	163%	3,043	29%
Southern Door	3,127	4,643	5,523	2,396	77%	880	19%
City of Sturgeon Bay	2,507	4,447	4,903	2,396	96%	456	10%

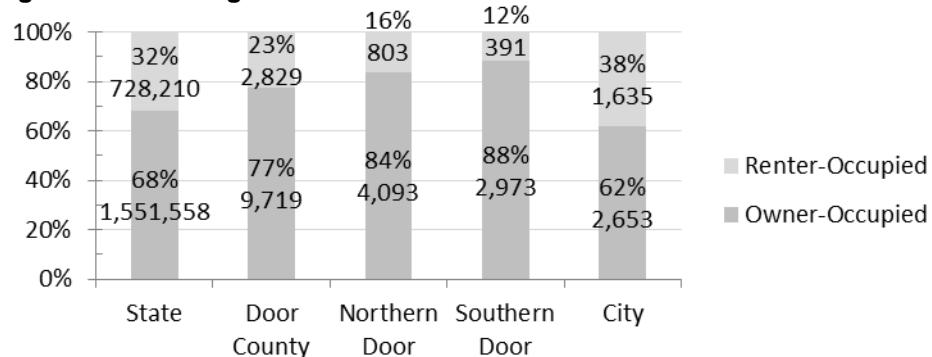
*Source: U.S. Bureau of the Census, 1970, Series 100, Table 2; 1980 Census of Population and Housing, STF 1A, Table 4; 1990 Census of Population and Housing, STF 1A; 2000 SF1 100% Data, Table ID QT-H1; and 2010 SF1 100% Data, Table ID QT-H1. See American Fact Finder Table ID DP-1 (2000 & 2010) for municipal-level data.*

The economic recession that began in December 2007 continues to impact development, greatly affecting the number of new homes built in the county. According to the Census data, the average number of homes built in the county on an annual basis between 1970 and 2010 was 330 units per year. The Wisconsin Department of Administration - Demographic Services Center estimates for Door County that only 116 new homes per year were built between April 2010 and April 2013.

## **HOUSING TENURE**

Housing tenure statistics are for occupied housing units only and refer to whether the occupant owns the unit or is renting the unit. Of the 12,548 occupied units in Door County in 2010, 9,719 (77%) were owner-occupied while 2,829 (23%) were renter-occupied. (See Figure 4.2.) Owner-occupancy rates for Wisconsin and the United States are considerably lower; in 2010, 68% of the state's housing units were owner-occupied and 65% of the nation's housing units were owner-occupied. Looking at sub-county areas, Southern Door has the highest owner-occupancy rate at 88%, followed by Northern Door at 84%, and the City at 62%.

**Figure 4.2: Housing Tenure**



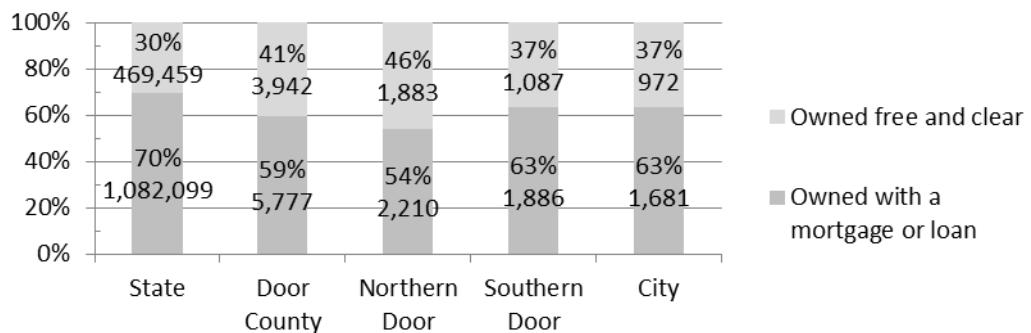
*Source: U.S. Bureau of the Census, 2010 SF1 (100% Data), Table ID QT-H1. See American Fact Finder Table ID QT-H1 for municipal-level data.*

Except for the City of Sturgeon Bay, Door County is considered a rural area by the Census. According to the Housing Assistance Council, a non-profit located in Washington, D.C., homeownership rates are generally higher in rural areas and small communities because greater numbers of older people live in rural areas than in urban areas. Also, older people, overall, are wealthier than younger people and more often can afford to buy a home rather than renting a home. In 2010, 72% of homes in rural and small communities at the national-level were owned and

75% of homes in rural and small communities at the state-level were owned. Both Door County and Wisconsin are higher than the national rate, likely at least in part because the county and the state are older on average than the nation.

Within the “owner-occupied” category, there are two sub-categories of homeownership: households that have a mortgage or loan and households that have no mortgage or loan and own their home “free and clear.” The latter is often referred to as the “true” homeownership rate. Figure 4.3 shows homeownership status for the state, Door County, and sub-county areas. Door County has a much higher true homeownership rate, at 41% of all owner-occupied housing units, compared to the state at 30%. Within Door County, Northern Door has the highest true homeownership rate at 46%, followed by Southern Door and the City, both at 37%.

**Figure 4.3: Homeownership Status**

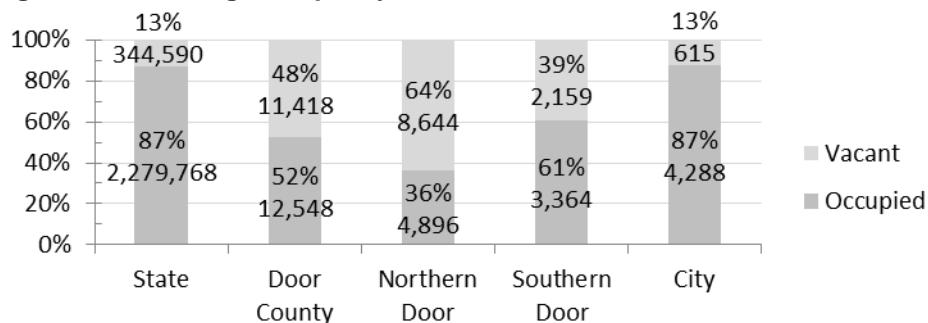


Source: U.S. Bureau of the Census, 2010 SF1 100% Data, Table ID QT-H1.  
See American Fact Finder Table ID QT-H1 for municipal-level data.

## **HOUSING OCCUPANCY**

“Housing occupancy” refers to whether a housing unit is occupied or vacant. As defined by the Census, a housing unit is *occupied* if it is the usual place of residence of the person or group of people living in it at the time of enumeration or if the occupants are only temporarily absent. A housing unit is *vacant* if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by people who have a usual residence elsewhere are classified as vacant. Vacancy status includes units for rent; for sale only; rented or sold, not occupied; for migrant workers; and for seasonal, recreational, or occasional use. Note that housing occupancy status can easily change from seasonal to year-round residence (or vice-versa) due to factors such as retirement of the homeowners or a change in ownership.

According to the 2010 Census, Door County had 23,966 housing units, with 12,548 (52%) of those classified as occupied. In comparison, the state had an 85% occupancy rate in 2010. The remaining units in the county consisted of 11,418 (48%) vacant units, including those used for seasonal, recreational, or occasional purposes. Housing occupancy figures for the state, Door County, and sub-county areas for the year 2010 are shown in Figure 4.4 below. Northern Door has the lowest occupancy rate, at 36%, followed by Southern Door, 61%, and the City, 87%.

**Figure 4.4: Housing Occupancy**

Source: U.S. Bureau of the Census, 2010 SF1 100% Data, Table ID QT-H1.  
See American Fact Finder Table ID QT-H1 for municipal-level data.

Table 4.3 below shows occupied and vacant housing units by county and sub-county area for 2000 and 2010. Comparing the growth rate of year-round units versus seasonal units, the number of year-round units in Door County grew over 6%, while the number of vacant/seasonal units grew over 47%. Southern Door had the highest growth rate of year-round units at almost 8%, followed by Northern Door at over 6%, and the City at 5%. Northern Door had the highest growth rate of seasonal units, at 56%, followed by the City, at over 54%, and Southern Door, at over 42%.

**Table 4.3: Change in Housing Occupancy, Door County Areas**

Area	Occupied				Vacant			
	2000	2010	# Change	% Change	2000	2010	# Change	% Change
Door County	11,828	12,548	720	6.1%	7,759	11,418	3,659	47.2%
Northern Door	2,870	3,054	184	6.4%	3,789	5,911	2,122	56.0%
Southern Door	4,171	4,502	331	7.9%	2,026	2,880	854	42.2%
City of Sturgeon Bay	4,084	4,288	204	5.0%	399	615	216	54.1%

Source: U.S. Bureau of the Census, ACS, 2007 - 2011, 5-Year Estimates, Table ID QT-H1.

### **HOUSING TYPE - UNITS IN STRUCTURE**

According to the 2010 Census, one-unit, detached structures – i.e., single-family residences – made up nearly 78% of the total housing units in Door County. (See Table 4.4.) The second largest housing type found in the county was mobile homes, comprising about 7% of the total housing stock. Over 13% of the housing units in the county are in buildings configured with two or more units.

**Table 4.4: Units in Structure, Door County**

Units	Door County	
	Number	Percent
1 unit, detached	10,528	77.6%
1 unit, attached	312	2.3%
2 units	543	4.0%
3 or 4 units	421	3.1%
5 to 9 units	421	3.1%
10 to 19 units	434	3.2%
Mobile home	909	6.7%
<b>Total</b>	<b>13,567</b>	<b>100.0%</b>

Source: U.S. Bureau of the Census, ACS, 2008 - 2010, Three-Year Estimates, Table ID S2504.

See American Fact Finder Table ID B25024  
(5-year est.) for municipal-level data.

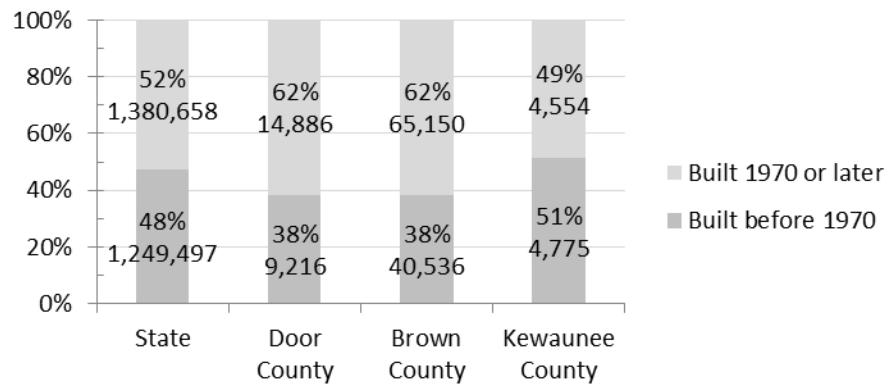
*Note: “1 unit, detached” dwelling units can be either typical single-family homes with open space on all sides or dwelling units attached to a non-residential use, but where the entire building has open space on all sides. “1 unit, attached” dwelling units are those that have one or more walls extending from the ground to the roof separating it from adjoining, attached structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is counted as an individual, attached structure if the dividing or common wall goes from ground to roof.*

### **AGE OF HOUSING**

The age of an area’s housing stock is an indicator of the type and quality of homes. While well-maintained older homes can be an important part of local history and often help preserve historic character, older homes also tend to have more problems such as asbestos and lead-based paint. The age of housing stock also represents new construction and growth in a community, or a lack thereof.

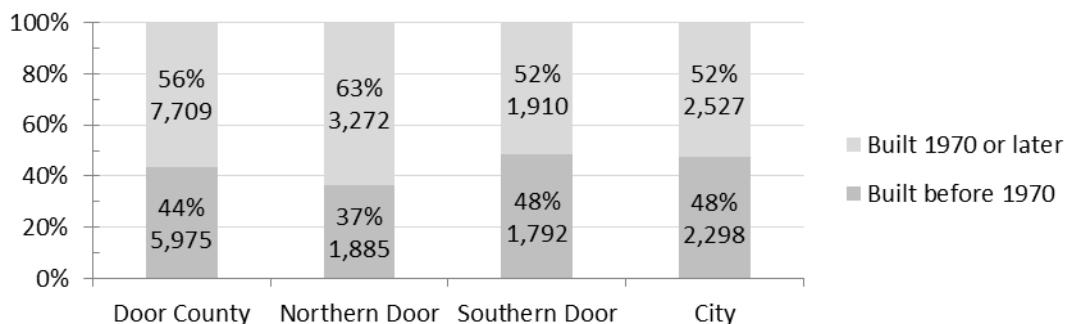
Compared to Kewaunee County and the state, Door County has a newer housing stock; Brown and Door counties have equally new housing stocks. (See Figure 4.5.) Approximately 62% of all the housing units in Brown and Door counties were built in 1970 or later, compared to 49% for Kewaunee County and 52% for the state.

**Figure 4.5: Housing Units by Year Structure Built, Door County & Selected Areas**



Source: U.S. Bureau of the Census, 2011 - 2013, ACS, 3-Year Estimates, Table ID B25034. See American Fact Finder Table ID B25034 (5-Year Estimates), for municipal-level data.

Figure 4.6 below shows the age of occupied housing units. Out of Door County’s 13,684 occupied housing units, 7,709 (56%) of those were built in 1970 or later. Northern Door has the newest housing stock, at 63% of its occupied units built in 1970 or later. Southern Door and the City have an older housing stock, at 52% of each area’s occupied units built in 1970 or later.

**Figure 4.6: Occupied Housing Units by Year Structure Built, Door County Areas**

Source: U.S. Bureau of the Census, ACS, 2006-2010, 5-Year Estimates, Table ID B25126.

See American Fact Finder Table ID B25034 (5-year est.) for municipal-level data.

### **SUBSTANDARD HOUSING**

A substandard housing unit is defined by the Census as a housing unit lacking a complete kitchen or bathroom facility. According to the 2010 - 2012 Census 3-year estimate, Door County had a total of 171 substandard housing units. Of the 171 units, 51 units were lacking complete plumbing facilities and 120 units were lacking complete kitchen facilities.

Note that according to the Wisconsin Department of Commerce, a substandard housing unit is one in need of major repair or replacement in three or more of the following areas: roof, electrical, heating, plumbing, foundation/structure (including interior walls/floors/ceilings), siding, doors/windows, and well/septic or water/sewer laterals. Housing units that require only cosmetic work, correction of minor livability problems, or maintenance work do not fit into the substandard housing category. If the Wisconsin Department of Commerce's definition were applied to the county's housing stock, it is likely that many more units than those reported by the Census would qualify as "substandard."

### **CENSUS HOUSING VALUES**

*Note: All dollar values are inflation-adjusted to 2011.*

Door County's estimated median housing value for all owner-occupied housing units in 2011 was \$190,000 compared to \$169,000 for the state, \$158,500 for Brown County, and \$151,700 for Kewaunee County. (See Table 4.5.) Note that these housing values are based on what the homeowner perceives the housing unit to be worth, which may or may not be close to the actual assessed value. Between 2000 and 2011, Door County had the highest dollar amount increase in median value, at \$29,460 (18%), and Brown County had the lowest increase, at \$6,843 (5%).

**Table 4.5: Median Value of Owner-Occupied Housing Units, Door County and Selected Areas**

Area	Median Value		Change	
	2000*	2011	\$	%
State	\$143,558	\$169,000	\$25,442	18%
Door County	\$160,540	\$190,000	\$29,460	18%
Brown County	\$151,657	\$158,500	\$6,843	5%
Kewaunee County	\$123,050	\$151,700	\$28,650	23%

Source: U.S. Bureau of the Census: Census 2000, SF3, Table ID H085; ACS, 2009 - 2011, 3-Year Estimates, Table ID B25077.

See American Fact Finder Table IDs H085 and B25077 for municipal-level data.

\*Inflation-adjusted to 2011.

Table 4.6 below shows Census median values of owner-occupied housing units for Door County and its sub-areas between 2000 and 2011. Southern Door had the highest increase in median home value, at \$32,680 (22%), followed by the City, \$29,345 (26%), and Northern Door, \$20,200 (8%).

**Table 4.6: Median Value of Owner-Occupied Housing Units, Door County Areas**

Area	Median Value		Change	
	2000*	2011	\$	%
Door County	\$160,540	\$189,400	\$28,860	18%
Northern Door**	\$246,100	\$266,300	\$20,200	8%
Southern Door**	\$146,857	\$179,537	\$32,680	22%
City	\$111,555	\$140,900	\$29,345	26%

Source: U.S. Bureau of the Census: Census 2000, SF3, Table ID H085; ACS, 2007 - 2011, 5-Year Estimates, Table ID B25077.

See American Fact Finder Table IDs H085 and B25077 for municipal-level data.

\*Inflation-adjusted to 2011.

\*\* Average of municipal median values for Northern and Southern Door areas.

The values of all owner-occupied housing units for the county and sub-county areas are displayed in Table 4.7 below. The largest number and percentage of units in Northern Door are valued at over \$300,000, while the largest number and percentage of Southern Door's and the City's housing units are valued in the \$100,000 - \$199,999 range. Only 28% of Northern Door's units are in this range, compared to 45% for Southern Door and 56% for the City. The \$100,000 - \$199,999 range is important because people earning median salaries are more likely to be able to afford homes in this range, as discussed later.

**Table 4.7: Value of Owner-Occupied Housing Units, Door County Areas**

Unit Value (\$)	Door County	% of Total	Northern Door	% of Total	Southern Door	% of Total	City	% of Total
0 - 99,999	1,298	13%	309	7%	438	14%	551	20%
100,000 - 199,999	4,170	41%	1,215	28%	1,442	45%	1,513	56%
200,000 - 300,000	1,826	18%	966	22%	644	20%	216	8%
300,000+	2,970	29%	1,891	43%	655	21%	424	16%
Total	10,264	100%	4,381	100%	3,179	100%	2,704	100%

Source: U.S. Bureau of the Census, ACS, 2007 - 2011, 5-Year Estimates, Table ID B25075. See American Fact Finder Table ID B25075 for municipal-level data.

### **MULTIPLE LISTING SERVICE HOUSING MARKET VALUES**

The REALTORS® Association of Northeast Wisconsin administers the Northeast Wisconsin Multiple Listing Service (MLS), the largest database listing of properties for sale and sold in northeast Wisconsin, including Door County. While the Census figures represent homeowners' perceptions as to what their homes are worth, the Door County MLS numbers in Table 4.8 below summarize prices at which homes actually sold in 2011.

Another reason the Census figures and MLS figures are not directly comparable is because the Census collects data on owner-occupied homes only, whereas the MLS is for occupied and vacant units. Lastly, the Census figures are an estimate for the five-year period between 2007 and 2011 and the MLS figures are for 2011 only.

Table 4.8 displays MLS home sales records by four market categories: 1) all housing units; 2) inland homes, no water view or waterfront; 3) inland single-family homes, no water view or waterfront, no condominiums, no mobile homes, no businesses, and on less than 10 acres; and 4) manufactured and modular homes. In 2011, northern Door County had the highest median sales price for inland homes (no waterfront or water view) at \$210,000, and the highest number of inland homes sold, at 145. For the same year, the median price of inland homes was \$121,750 in Southern Door and \$115,000 in the City.

**Table 4.8: Housing Sales Statistics, Door County Areas**

Market Category	Number of Sales	Average Price	Median Price	Price Range
<b>All housing units</b>				
Door County	368	\$270,382	\$193,500	\$9,900 - 3,500,000
Northern Door County	216	\$344,500	\$252,000	\$44,900 - 3,500,000
Sturgeon Bay	104	\$152,562	\$124,950	\$7,200 - 850,000
Southern Door	48	\$192,124	\$158,000	\$25,300 - 1,100,000
<b>Inland housing units, no waterview, no waterfront</b>				
Door County	273	\$181,768	\$164,000	\$7,200 - 620,000
Northern Door County	145	\$224,985	\$210,000	\$44,900 - 620,000
Sturgeon Bay	92	\$125,827	\$115,000	\$7,200 - 420,000
Southern Door	36	\$142,263	\$121,750	\$25,350 - 410,000
<b>Inland single family housing units, no waterview, no waterfront, no condos, no mobile homes, no business, less than 10 acres</b>				
Door County	187	\$168,450	\$152,000	\$7,200 - 565,000
Northern Door County	76	\$229,604	\$195,950	\$65,200 - 565,000
Sturgeon Bay	83	\$128,159	\$115,000	\$7,200 - 420,000
Southern Door	28	\$121,895	\$108,825	\$25,350 - 350,000
<b>Manufactured and modular homes</b>				
Door County	29	\$132,833	\$117,500	\$53,000 - 324,000
Northern Door County	16	\$149,649	\$149,050	\$53,000 - 324,000
Sturgeon Bay	6	\$103,810	\$103,000	\$72,400 - 136,250
Southern Door	8	\$117,250	\$107,000	\$68,000 - 185,000

Source: Door County MLS, 2011.

## **HOUSING COSTS - RENTS AND MORTGAGE**

### **RENTAL AFFORDABILITY**

The National Low Income Housing Coalition assesses rental housing affordability in all counties of the United States. The Coalition defines housing affordability based on the generally accepted standard of paying no more than 30% of gross income on gross housing costs. Housing in a community is considered affordable if people of median income can rent or purchase a home for no more than 30 percent of gross household income, exclusive of other debt such as student loans, car payments, child support, credit cards, etc. In order to assess housing affordability, the Coalition compares county wage income against Fair Market Rent (FMR), as estimated by the Department of Housing and Urban Development (HUD). Fair market rent is the cost to rent a unit, plus the cost of all utilities, heat, etc., except for telephones, for a "modest apartment in the conventional marketplace."

The Department of Housing and Urban Development estimated the 2012 FMR for a two-bedroom apartment in Door County to be \$647. In order to afford this level of rent and utilities, without paying more than 30% of gross income on housing, a household must earn \$25,880 annually, or \$12.44 per hour, assuming a 40-hour work week, 52 weeks per year. Again, this assumes no other debt such as student loans, car payments, etc. In 2012, the Coalition estimated an average wage for renters in Door County to be \$8.25 an hour. In order to afford the FMR of \$647 for a two-bedroom

apartment at \$8.25 an hour, a renter must work 60 hours per week, 52 weeks per year. Or, working 40 hours per week year-round, a household must include 1.5 worker(s) earning the average renter wage in order to make the two-bedroom FMR affordable.

At the state level, HUD estimated the 2012 FMR for a two-bedroom apartment to be \$740. Without paying more than 30% of gross income on housing, a household must earn \$29,603 annually, or \$14.23 per hour. The Coalition estimated the 2012 average wage for renters in the state to be \$11.05 an hour. In order to afford the state FMR of \$740 for a two-bedroom apartment at \$11.05 an hour, a renter must work 52 hours per week. Or, working 40 hours per week, a household must include 1.3 worker(s) earning the mean renter wage in order to make the two-bedroom state FMR affordable. Table 4.9 shows the rental affordability figures side-by-side for Door County and Wisconsin.

**Table 4.9: Rental Affordability, Door County**

	<b>Door County</b>	<b>Wisconsin</b>
2-BDR FMR	\$647	\$740
Annual income needed to afford 2-BDR @ FMR	\$25,880	\$29,603
Hourly wage needed to afford 2-BDR @ FMR	\$12.44	\$14.23
Estimated renter ave. hourly wage	\$8.25	\$11.05
Work hours/week to afford 2-BDR @ FMR	60	52
Full-time job equivalent	1.5	1.3

*Source: National Low-Income Housing Coalition, 2012.*

A look at Census Bureau data regarding income and percent of income spent on housing indicates how many renter-occupied households earning \$25,880 or less in Door County are spending more than 30% of their income on housing. Between 2009 and 2011, the Census Bureau estimates there were 716 renter-occupied households earning less than \$20,000 and 345 renter-occupied households earning \$20,000 - \$34,999 spending 30% or more of income on housing expenses. Extrapolating to the annual income of \$25,880 needed to afford a two-bedroom FMR apartment in Door County, there are roughly 851 households living in unaffordable units. This figure is just a rough estimate because of the extrapolation and the fact that there may be households in need of only a one-bedroom unit, as well as households in need of a three-bedroom or more unit.

### **HOMEOWNER COSTS AND MEDIAN HOUSEHOLD INCOME COMPARISON**

The Census Bureau estimated a median household income of \$48,680 for Door County between 2009 and 2011. Household income measures the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. The median household income is the income of the household located exactly in the middle of an ordered list of all household incomes, so that there are two equal segments with the first half of households earning less than the median household income and the other half earning more. If there is an even number of households, then the median is an average of the two household incomes in the middle.

Census Bureau data regarding income and percent of income spent on housing again gives an indication of how many owner-occupied households earning \$48,680 or less are spending more than 30% of their income on housing. Between 2009 and 2011, the Census Bureau estimated there were 1,125 owner-occupied households with an income up to \$34,999 and 716 owner-occupied households earning between \$35,000 and \$49,999. Extrapolating to the county median household income of \$48,680, there are roughly 1,778 households living in unaffordable units.

Table 4.10 below shows estimates of the percentage of income that a household making the median household income would be required to spend on a median-priced home in Door County

and by sub-county areas. Annual and monthly median household income estimates for 2007 - 2011 are shown for Door County and the sub-county areas, followed by the value of a median-priced home, and the mortgage principal, interest, taxes, and (homeowners') insurance (PITI). The PITI figures assume a 30-year conventional loan at a 4.25% fixed interest rate, a 20% down payment, \$3,000 in property taxes, \$1,500 in homeowner's insurance, and that the household has no other debt. An average of \$.14 per square foot in utilities and maintenance costs applied to an 1,800 square foot home are also factored in to come up with the total monthly housing costs.

**Table 4.10: Housing Affordability, Door County Areas**

Home Location	Annual Median Household Income			Median Sales Price, 2011 (inland homes)		Estimated Utilities & Maint.***	Total Monthly Housing Costs	% of 2011 Monthly MHI***
	Household Income	Monthly MHI	Price, 2011 (inland homes)	Monthly PITI**	Total Monthly Housing Costs			
Door County	\$48,680	\$4,057	\$164,000	\$1,020	\$250	\$1,270	31%	
Northern Door*	\$51,498	\$4,292	\$210,000	\$1,201	\$250	\$1,451	34%	
City of Sturgeon Bay	\$43,112	\$3,593	\$115,000	\$828	\$250	\$1,078	30%	
Southern Door*	\$56,598	\$4,717	\$121,750	\$854	\$250	\$1,104	23%	

Source: U.S. Census Bureau, ACS, 2007-2011, 5-Year Estimates, Table ID B19013; Door County Multiple Listing Service, 2011; Mortgage calculator, <http://www.mlcalc.com> (30 year loan, 20% down payment, 4.25% interest rate, \$3,000 taxes, \$1,500 insurance).

\* Annual Median Household Income is an average of municipal median values located within this area.

\*\* Principal, Interest, Taxes, and Insurance

\*\*\*Estimated at \$.14 per square foot applied to an average home size of 1,800 sq. ft.

Per the standard definition of affordable housing as that costing no more than 30% of household income, Northern Door is the only area of the county considered unaffordable, at 34% of median income spent on housing costs. A median-priced home in the City would consume 30% of monthly median household income and a median-priced home in Southern Door would consume 23% of monthly median household income.

### **LOW-INCOME, SUBSIDIZED, AND SPECIAL NEEDS HOUSING**

There are a variety of agencies working within Door County that help locate, finance, develop, and provide housing assistance for all persons, including senior citizens, low-income residents, and persons with various physical and mental disabilities or other special needs. The Door County Housing Authority (DCHA), funded by HUD, provides both rental and homeownership assistance to families, senior citizens, the disabled, and individuals who qualify based on household income. Another agency that provides assistance to all special housing is the Door County Weatherization Program, which helps reduce energy cost by making homes more energy-efficient.

Below are general descriptions of the types of special needs housing available in Door County. Please see the Resources and Further Information section at the end of this chapter for more information on specific agencies mentioned in this section.

### **HOUSING FOR SENIOR CITIZENS AND THOSE WITH PHYSICAL DISABILITIES AND MENTAL/EMOTIONAL DISABILITIES**

Subsidized housing for senior citizens is available through both the DCHA Section 8 Rental Voucher Program (see description below) and through apartments that have their own subsidy programs. Other types of housing for senior citizens, the physically disabled, and mentally/emotionally disabled include assisted living apartments, Community-Based Residential Facilities (CBRF), nursing homes, and Residential Care Apartment Complexes (RCAC). See Chapter 9, Community Facilities and Utilities, for more information on these types of housing.

## **INCOME-BASED HOUSING**

The DCHA administers the Section 8 Rental Voucher Program housing program for Door County, which promotes affordable housing choices for very low-income households by allowing families to choose privately-owned rental housing. The DCHA generally pays the landlord the difference between 30% of household income and the DCHA-determined payment standard (about 80 to 100 percent of the FMR). For an apartment to "qualify" for the program it has to pass housing quality standards inspection, the landlord has to be willing to participate in the program, and it has to be affordable based on the family's income. An apartment is considered unaffordable if rent is over 40% of household income. The maximum number of units DCHA can assist in any month is 255, or not more than their HUD funding; in 2011, up to 248 families were assisted due to limited funding from HUD. As of January 2012, the wait time for assistance was 12 months.

## **HOMEOWNERSHIP ASSISTANCE**

There are a variety of resources available to help people become homeowners and to maintain their homes. Agencies that provide homeownership assistance in Door County are listed below.

- Door County Housing Authority
- Downpayment Plus®
- Door County Habitat for Humanity
- FISC Consumer Credit Counseling (<http://www.fisc-cccs.org/index.htm>)
- Lakeshore-CAP (<http://www.lakeshorecap.org/>)
- Wisconsin Housing and Economic Development Authority (WHEDA)
- USDA Rural Development

These agencies provide a variety of homeownership services and funding, including:

- down payment, closing cost, and mortgage assistance
- credit counseling and homebuyer education
- grants and direct loans
- savings programs
- assistance with home repair, weatherization, and removal of health hazards
- development of homes at a lower cost than conventional homes

More detailed information regarding specific programs and contact information can be found in the Resources and Further Information section at the end of this chapter.

## **PROJECTED HOUSEHOLDS AND HOUSING UNITS**

This section attempts to quantify the potential number of new housing units likely to be built in Door County between 2013 and 2040. Although the DOA does projections for population and number of year-round households, they do not do projections for other types of housing uses. In terms of the Census, from which the DOA bases its projections, a housing unit may be used as a year-round residence (a "household"), as a seasonal residence, or it may be left vacant. Since seasonal and vacancy uses are exceptionally difficult to predict, no state or regional agency projects number of seasonal housing units, nor, as discussed previously in Chapter 2, do any project seasonal population. Thus, as is typical of any projection, the figures in this section provide only a very rough idea of what the future household and housing unit inventory might look like.

## **YEAR-ROUND HOUSEHOLD PROJECTION**

After each decadal Census, the DOA publishes projections for household population, average household size, and number of households at the state, county, and town-levels. Table 4.11 below shows the actual household population, average household size, and number of households for Door County in 2010. Below that are DOA's projections for household population, average size, and number, based on 2010 Census data, for five-year increments between 2015 and 2040.

**Table 4.11: Projected Households, Door County**

<b>Year</b>	<b>Actual/Proj. HH Pop.</b>	<b>Actual/Proj. Ave. HH Size</b>	<b>Actual/Proj. # HH</b>
2010	27,437	2.19	12,528
2015	27,430	2.13	12,900
2020	27,517	2.09	13,175
2025	27,896	2.06	13,536
2030	27,888	2.04	13,656
2035	27,207	2.02	13,444
2040	26,028	2.01	12,948
<b>Change</b>			
<b>2010 - 2040</b>	<b>-1,409</b>	<b>-0.18</b>	<b>420</b>

Source: Wisconsin Department of Administration, Population Projections (Vintage 2013) and Average Household Size Projections (Vintage 2008); U.S. Census Bureau, 2010.

For municipal-level 2010 Census population and DOA population projections, see <http://www.doa.state.wi.us/divisions/intergovernmental-relations/demographic-services-center/projections#preliminary> for municipal-level population projections and click on the “MCD and Municipal Population Projections, 2010-2040” spreadsheet link; for municipal-level average household size, click on the “Household Projections for Wisconsin Municipalities: 2010-2040” spreadsheet link.

Table 4.11 shows that Door County will have a projected population loss of 1,409 people and an average household size decrease of 0.18 between 2010 and 2040. Between 2010 and 2030, the number of households in the county is projected to grow by 1,128 and hit its peak at 13,656 total households in 2030; by 2040, the number of households is projected to drop by 708 to 12,948. The net household increase between 2010 and 2040 is projected to be 420.

### SEASONAL HOUSING UNIT PROJECTION

One method for projecting the total number of seasonal housing units for Door County through the end of the planning period is to look at historical vacant/seasonal housing growth and apply that same trend to the future. Between 1990 and 2010, the number of vacant/seasonal housing units in the county grew by 3,447 (43%), from 7,791 units to 11,418 units, or an average of 172 units per year. (See Table 4.12.) Applying this annual number to the 2013 - 2040 planning period, there could potentially be 4,644 new seasonal housing units built in the county through the year 2040.

**Table 4.12: Historical Vacant/Seasonal Housing Units, Door County**

<b>Year</b>	<b>Vacant/ Seasonal</b>
1990	7,971
2000	7,759
2010	11,418
<b># Change</b>	<b>3,447</b>
<b>Units/Year (1990 - 2010)</b>	<b>172</b>
<b>% Change</b>	<b>43%</b>

Source: U.S. Bureau of the Census, for the years cited. See American Fact Finder Table ID QT-H1 for municipal-level data (2000 and 2010, only).

## TOTAL HOUSING UNIT PROJECTION

*Note: For assistance in developing municipal-level projections, please call the Door County Planning Department.*

### Year-Round Housing Units

As discussed previously and shown in Table 4.11, the number of households in Door County is expected to peak in 2030, growing by 1,128 households between 2010 and 2030. These new households will be established through some unknown combination of new construction and conversion of seasonal units into year-round units. Since it would be extremely difficult to predict what this combination will be, the assumption is made for the purpose of this plan that all 1,128 new households will require a new housing unit. Prorating these 1,128 new year-round units to the year 2013, there will be 959 new year-round units constructed between 2013 and 2030. (See Table 4.13.) After 2030, as discussed previously, there is a projected loss of 420 households through the year 2040, so no new housing units will be constructed for year-round purposes after 2030.

### Seasonal Housing Units

Applying the historical trend of 172 new seasonal units built annually between 1990 and 2010 (see Table 4.12) to the 2013 - 2030 time frame, there is a projected need for 2,924 new seasonal units (172 units per year multiplied by 17 years). Between 2030 and 2040, there is a projected need for 1,720 new units (172 units multiplied by 10 years), however, there will be the surplus of 420 year-round units, as described above. It is reasonable to assume that most of these units will be converted into seasonal use, rather than torn down or converted to some other use. Assuming that all of these units will be converted to seasonal use, 420 fewer new seasonal units will be needed for the 2030-2040 time frame. So, there will be a demand that decade for 1,720 seasonal units, but a total of only 1,300 new seasonal units [(172 units multiplied by 10 years) - 420 units] will need to be constructed. In total, between 2010 and 2040, 4,224 (2,924 + 1,300) new seasonal units are projected to be constructed. (See Table 4.13.)

**Table 4.13: Projected Year-Round and Seasonal Housing Units, Door County**

Type	2013 - 2030	2030 - 2040	2013 - 2040
Year-Round Units	959	0	<b>959</b>
Seasonal Units	2,924	1,300	<b>4,224</b>
<b>Total # (new units)</b>	<b>3,883</b>	<b>1,300</b>	<b>5,183</b>
<b>Ave. # Per Year*</b>	<b>228</b>	<b>130</b>	<b>192</b>

*Projections (Vintage 2013).*

\*Numbers are rounded; totals shown in Table 4.14 use the unrounded average number per year.

### Total Housing Units

As shown in Table 4.13, between 2013 and 2030, a total of 3,883 (959 year-round units + 2,924 seasonal units) are projected, for an average of 228 new units per year. Between 2030 and 2040, a total of 1,300 (0 year-round units + 1,300 seasonal units) are projected, for an average of 130 new units per year. In total, between 2013 and 2040, there is a projected 5,183 (3,883 + 1,300) new housing units, averaging 192 new units per year.

Table 4.14 shows the projected number of housing units between 2013 and 2040, by decade, based on the “Ave. # Per Year” projections shown in Table 4.13. In 2040, the county is projected to have a total of 29,497 housing units.

**Table 4.14: Projected Total Housing Units,  
Door County**

<b>Year(s)</b>	<b>Projected Total Housing Units</b>	
	<b>New</b>	<b>Total</b>
2013	--	24,314
2020	1,599	25,913
2030	2,284	28,197
2040	1,300	29,497
<b>Total 2013 - 2040*</b>	<b>5,183</b>	<b>5,183</b>

*Source: Wisconsin Department of Administration  
and U.S. Census Bureau.*

*\*2030 - 2035 estimate of 650 new units, for a total  
of 28,847 units in 2035.*

### **ACCOMMODATION OF PROJECTED HOUSING UNITS**

According to Door County's Real Property Listing Department database, the county has roughly 7,420 vacant properties (parcels and condominium "envelopes") where the entire property, or portions of the property, are assessed as residential for tax purposes. Vacant properties are herein defined as those assessed as having less than \$5,000 in improvement values (meaning that the properties nearly certainly do not contain a residential housing unit of any kind). Approximately 74% of these roughly 7,420 vacant residential properties are in Northern Door, 18% in the City and Town of Sturgeon Bay, and 18% in Southern Door.

Conceivably, the 5,183 projected new housing units anticipated by 2040 could be built on the 7,420 available properties described above, supplying at least on a county level more than sufficient parcels to accommodate the projected increase in housing units over the planning period. Furthermore, the total acreage of these vacant or minimally developed residentially assessed properties is approximately 30,591 acres, allowing for an average of 5.9 acres per housing unit, if all 5,183 projected housing units are built; this significantly exceeds the current estimated housing density of approximately 3.4 acres for every housing unit. (See "Note" below.) Hence, by both a vacant property count and by an average acres of land "designated" per housing unit count, the county has more than sufficient land already assessed for residential purposes to accommodate its projected growth in housing units over the planning period.

Note, however, that it is probable a certain number of these vacant parcels will not or cannot be developed, for regulatory reasons – zoning or otherwise – or for reasons of personal preference or circumstance, such as owners who simply will not develop the lots during the planning period, or who may have purchased lots specifically to prevent their development (such as people who bought lots as a buffer to their home/lot). It is also possible that the demand for housing unit development may not exactly match the geographic distribution of currently available properties. However, considering the fact that 64% of the growth in total number of housing units in the county between 1970 and 2010 happened in Northern Door (see Table 4.1), this imbalance of available land is not likely to be a major problem.

Ultimately, though, it is certain that there are or will be enough properties in the county that can be developed in order to accommodate projected increases in the number of housing units, given:

- the large number of currently residentially assessed vacant properties over and above the projected number of new housing units;
- the many thousands more currently vacant properties assessed in other land use categories, many of which could accommodate at least duplex construction if not larger multi-family buildings; and

- new lots created in the county every year that allow and are intended for residential development.

Further analysis of supply and demand for residential land is provided in Chapter 10, Land Use, of this volume. That analysis looks at the supply of available land within the context of the future land use map and its associated land use categories.

*Note: Since the WDOA does not estimate the amount of land associated with its estimated number of housing units, the Door County Real Property Listing database was used to estimate the current housing density of approximately 3.4 acres per housing unit. This was done by querying the number of residentially assessed properties that have an improved value greater than or equal to \$5,000, and which also have a fire number. The query result was 20,257 properties, totaling 68,829 acres in parcel size; dividing the 68,829 acres by the 20,257 properties results in the 3.4 acres per housing unit density.*

*Note that the 20,257 properties is only a rough estimate, however, as some properties included will meet all query criteria, but may have no housing unit, and some multi-family rental properties do not meet the query criteria, thus do not get included. Multi-family rental properties that have less than four units are included because they are typically assessed residentially, but properties with four or more rental units are typically assessed commercially; there is no way to distinguish within the database the commercially-assessed residential properties from other types of commercial uses.*

*The difference between the WDOA estimate of 24,314 housing units currently and the county data query of 20,257 properties is 4,057. This is largely due to the fact that the WDOA estimate includes all residential units, even in buildings assessed commercially. See Chapter 10, Land Use, for more discussion on how property is assessed and a more in-depth analysis of residential land use projections.*

## RESOURCES AND FURTHER INFORMATION

### LOCAL, REGIONAL, AND STATE HOUSING-RELATED AGENCIES

#### **Bay-Lake Regional Planning Commission (<http://www.baylakerpc.org>)**

The Bay-Lake Regional Planning Commission (BLRPC) was created in 1972 by Governor Lucey under s. 66.945, Wis. Stats., as the official area-wide planning agency for northeastern Wisconsin. It currently encompasses eight counties: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan. BLRPC provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region.

#### **Door County Board of REALTORS® (DCBR) (<http://www.dcbr.org>)**

The DCBR is the local professional association for real estate agents working in Door and Kewaunee Counties. The DCBR collects a variety of information related to housing sales and listings.

#### **Door County Economic Development Corporation (<http://www.doorcountybusiness.com>)**

The Door County Economic Development Corporation (DCEDC) is a public/private partnership dedicated to improving the economic vitality of the county and its residents. Founded in 1989, DCEDC has a variety of programs and initiatives working to attract new businesses to the area and helping existing businesses create and retain jobs. The Door County Economic Development Corporation heads an Attainable Housing Committee comprised of local agency and business representatives to address issues related to affordable housing in Door County.

#### **Door County Land Information Office (LIO) (<http://www.maps.co.door.wi.us>)**

The LIO office manages and coordinates Door County's Geographic Information System (GIS), which includes parcel mapping for the entire county.

#### **Door County Real Property Listing Department (<http://www.co.door.wi.gov>)**

Real Property Listing processes all information recorded in the Register of Deeds Office, pertinent to the transfer of land, including property owners, parcel numbers, addresses, acres, fire numbers, and assessed and equalized values on all parcels of land in the county.

#### **Northeast Wisconsin Multiple Listing Service (<http://www.ranw.org>)**

The Northeast Wisconsin MLS serves over 2,100 real estate agents in a jurisdictional area which includes the counties of Adams, Brown, Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Lincoln, Manitowoc, Marathon, Marinette, Marquette, Menominee, Oconto, Outagamie, Portage, Shawano, Sheboygan, Waupaca, Waushara, Winnebago, and Wood.

#### **Wisconsin Department of Commerce - Division of Housing and Community Development (DHCD) (<http://www.commerce.wi.gov>)**

The DHCD helps expand local affordable housing and support services to people without housing. DHCD works closely with local governments and non-profit housing organizations to deliver financial and technical housing assistance and to strengthen the capabilities of housing organizations.

### FEDERAL HOUSING-RELATED AGENCIES

#### **Bureau of Labor Statistics - Office of Economic Analysis and Information**

(<http://www.bls.gov>) The Bureau of Labor Statistics is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics.

**National Low Income Housing Coalition (<http://www.nlihc.org>)**

The National Low Income Housing Coalition was established in 1974 and is dedicated solely to ending America's affordable housing crisis. Advocacy is focused on the lowest-income households.

**U.S. Bureau of the Census (<http://www.census.gov>)**

The Census Bureau serves as the leading source of quality data about the nation's people and economy. The Census Bureau is the largest statistical agency of the federal government. While best known for the decennial census, it conducts numerous surveys and censuses that measure changing individual and household demographics and the economic condition of the nation.

**U.S. Department of Housing and Urban Development (<http://www.hud.gov>)**

HUD's mission is to increase homeownership, support community development, and increase access to affordable housing free from discrimination.

**USDA Wisconsin Rural Development Programs (<http://www.rurdev.usda.gov/wi>)**

Programs for qualifying applicants include guaranteed or direct home purchase loans with no down payment or private mortgage insurance, long-term fixed-rate mortgages with payment subsidies based on income level, and low interest loans or grants for home repair or improvements.

**HOME OWNERSHIP AND RENTAL ASSISTANCE AGENCIES**

**Door County Habitat for Humanity (<http://www.doorhabitat.org>)**

Door County Habitat for Humanity (DCHFH) is a Christian organization that builds homes for partners who otherwise could not obtain a mortgage or acquire a home of their own and who meet criteria of need, income, and credit history. DCHFH extends a no-interest mortgage and forgives, over time, the value of the labor that volunteers have provided. Partners also help with the building of their homes, providing "sweat equity."

**Door County Housing Authority**

Phone: (920) 743-2545

The Door County Housing Authority administers the Section 8 Homeownership Program. Monies that had been paid by the Housing Authority for rent can be applied toward a mortgage payment.

**Downpayment Plus® (<http://www.wphd-dpp.org>)**

The Downpayment Plus® program is a down payment and closing cost assistance program for low and moderate income homebuyers, funded as a set-aside through the Affordable Housing Program of the Federal Home Loan Bank of Chicago. Income-qualified homebuyers can receive grants of up to \$4,000 towards a down payment, closing costs, reserves, homeownership counseling, or other expenses related to home purchase. The Wisconsin Partnership for Housing Development is the state-wide administrator for this program.

**FISC Consumer Credit Counseling (<http://www.fisc-cccs.org>)** FISC provides the following services for potential homeowners:

- Homeownership budget, credit counseling, and education for applicants to the Lakeshore CAP Homebuyer Program;
- Counseling for the Downpayment Plus® program;
- Consumer credit counseling service; and
- Comprehensive, individualized, confidential, and self-determined spending plan and system of money management for homeownership, debt repayment, and other financial challenges and changes.

**Lakeshore-CAP (<http://www.lakeshorecap.org>)**

Lakeshore-CAP is a non-profit organization that serves Door County, Kewaunee County, Manitowoc County, and Sheboygan County. Lakeshore-CAP has a homebuyer program that allows qualifying persons to obtain low- or no-interest loans for down payment, closing costs, acquisition, rehabilitation, weatherization, and new construction, as well as a two-year, matched savings program designed to help income-eligible households accumulate funds toward home purchase.

**USDA Rural Development (<http://www.rurdev.usda.gov/wi>)**

Rural Development helps very low- to moderate-income customers purchase homes through guaranteed or direct home loans. Through the Guaranteed Rural Housing Program, buyers do not need a down payment or private mortgage insurance, creating more affordable monthly payments. Rural Development also provides 33 - 38 year fixed rate mortgages with payment subsidies based on income level; 504 Home Repair loans to very low-income customers to improve or modernize their home, make it safer or more sanitary, or to remove health hazards; and grants for elderly households who are unable to repay a loan to remove health hazards.

**Wisconsin Housing and Economic Development Authority (WHEDA®) (<http://www.wheda.com>)**

WHEDA serves Wisconsin residents and communities by partnering to provide creative financing resources and information to stimulate and preserve affordable housing, small business, and agribusiness. The WHEDA Foundation, Inc. is responsible for receiving and administering housing grant funds. Qualifying applicants can get grants or low-interest loans for home purchase, down payment or closing costs, home repairs and improvements, and more. Most banks in Door County offer WHEDA® Home Mortgage Program, which includes services such as:

- 30-year fixed-rate mortgage at below market interest rate for eligible borrowers.
- Down payment as low as 3%.
- Low closing costs.
- Option to finance home improvements up to \$10,000 at time of purchase.
- \$4,000 Easy Close Loan for down payment and closing costs.
- \$5,000 FHLB Grant available for down payment and closing costs for households under 80% median income.
- Fast loan application review – answer within 24 hours.

## CHAPTER 5: ECONOMIC DEVELOPMENT

## INTRODUCTION

As of the writing of this chapter, the “Great Recession” ended more than three years ago: the National Bureau of Economic Research, the organization that defines U.S. recessions, declared that the Great Recession began in December 2007 and ended in June 2009. Despite the recession having officially ended, recovery has been lethargic, according to the Wisconsin Department of Workforce Development Office of Economic Advisors. The primary inhibitors have been housing markets, deleveraging, and high unemployment. In this uncertain economic environment, companies are reluctant to hire, relatively few new homes are being built, and consumers, companies, banks, and governments are all deleveraging, paying down debt and recalibrating cash flows.

Not surprisingly, participants in the 2009 and 2014 planning processes viewed economic development as a priority for the county’s future. During the visioning sessions conducted for the 2009 planning process, participants described a county economy that is woven into other important aspects of the county’s future, such as environmental and social opportunities. Their comments emphasized the importance of economic development in attracting and keeping youth and young families, its relationship to housing costs, and the need to balance economic development with other county resources such as the environment and rural character. Tourism was also viewed as an important economic activity for the county, but one that would ideally become more year-round and better balanced by more industries that are less seasonal in nature. These themes were reviewed and validated as part of the 2014 planning process as having remained relevant.

This chapter provides state, regional, and county economic characteristics and trends. State and regional background information is presented first, followed by county information regarding major industries, occupations, and employers; personal income and earnings; labor force characteristics, including educational attainment, labor force participation and unemployment rates, and commuting patterns; and business and industry (re)development initiatives. Lastly, information is provided regarding environmentally contaminated sites tracked by the Wisconsin Department of Natural Resources (DNR), in order to evaluate and promote the use of environmentally contaminated sites for commercial or industrial uses.

Since economic development issues are substantially intertwined with population, housing, and land use issues, readers may also want to review Resource Report Chapters 2, 4, and 10 (this report), which contain information relevant to the economic development information described in this chapter. Also, as stated in the housing chapter, there are different agencies that use different methods to collect data at different times, so figures in these chapters often can serve only as guides to trends or issues.

## STATE AND REGIONAL BACKGROUND INFORMATION

### STATE BACKGROUND INFORMATION

#### **GENERAL INFORMATION**

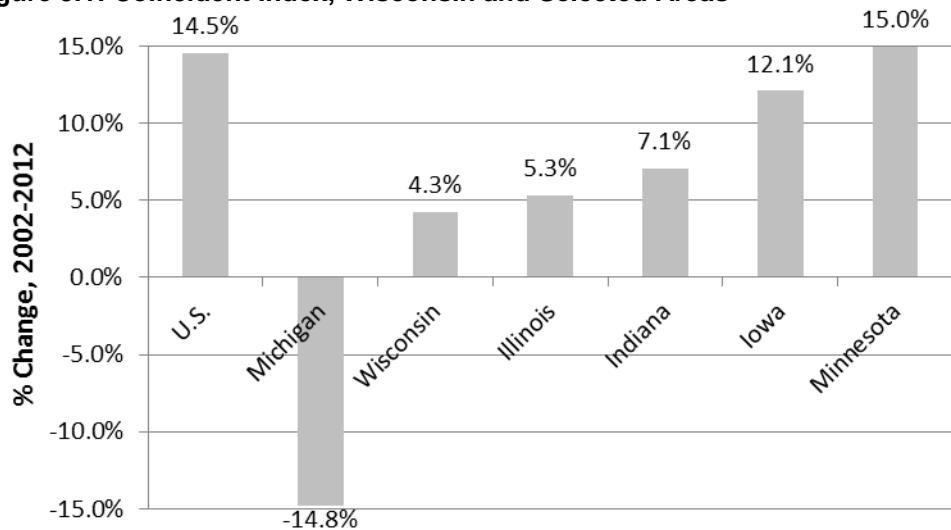
Per Capita Income (PCI), or income per person, is the mean income within an economic aggregate, such as a county or city, and is calculated by taking a measure of all sources of income in the aggregate and dividing it by the total population. In economic evaluation, PCI is used as a measure of the wealth of an area and often compared to neighboring areas or same type jurisdictions. In 2011, Wisconsin’s PCI of \$39,575 was 96% of the nation’s PCI of \$41,560, ranking the state 27th in the nation; higher than Indiana and Michigan, but less than Illinois, Iowa, and Minnesota.

Another way to compare economic health between states is to look at the coincident index, which

summarizes economic conditions in a single statistic. The Federal Reserve Bank of Philadelphia produces a monthly coincident index for each of the 50 states by combining four common state-level indicators: nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements deflated by the consumer price index. Each state's index trend is set to the trend of its gross domestic product (GDP), so long-term growth in the state's index also matches long-term growth in its GDP. These index numbers are released monthly, a few days after the Bureau of Labor Statistics (BLS) releases state employment data. More information regarding the coincident index methodology can be found at the Federal Reserve Bank of Philadelphia's website listed in the Resources and Further Information section at the end of this chapter.

Figure 5.1 below shows the change in coincident indexes for Wisconsin and surrounding states, and for the United States. Over the ten-year period between December 2002 and December 2012, Wisconsin's index increased by 4.3%, compared to 14.5% for the United States overall. For the same timeframe, Wisconsin's index lagged behind Illinois, Indiana, Iowa, and Minnesota; Michigan fared the worst, with a 14.8% decrease.

**Figure 5.1: Coincident Index, Wisconsin and Selected Areas**



Source: Philadelphia Reserve Bank, State Coincident Index, 2013.

## WISCONSIN ECONOMIC DEVELOPMENT CORPORATION

In January of 2011, under the governorship of Scott Walker, the Wisconsin Legislature via Act 7 created the Wisconsin Economic Development Corporation (WEDC), a public-private authority that replaced the Wisconsin Department of Commerce. As stated by the Walker administration, WEDC's role is to "operate with greater flexibility in order to more effectively and efficiently assist Wisconsin's businesses." Under Act 7, Commerce's economic and community development functions were transferred to WEDC and contracts from other departments, primarily related to community and economic development, were also transferred to WEDC. The regulatory functions of Commerce, along with the Department of Regulation and Licensing, were merged into a new state agency called the Department of Safety and Professional Services (DSPS). Now the lead economic development organization in the state, WEDC is charged with:

- developing and implementing economic programs to provide business support, expertise, and financial assistance to companies that are investing and creating jobs in Wisconsin;
- supporting new business start-ups and business expansion and growth in Wisconsin; and
- developing and implementing any other programs related to economic development in

Wisconsin.

## **WISCONSIN DEPARTMENT OF WORKFORCE DEVELOPMENT**

The Department of Workforce Development (DWD) supports the WEDC with its mission to advance Wisconsin's economy and business climate by empowering and supporting the workforce. The DWD conducts research and data analysis in order to identify issues and trends that influence the state's employment picture. In addition, its Office of Economic Advisors produces reports on the state's workforce outlook, such as regional employment projections, discussed in the next section. The DWD also provides training and employment assistance to people looking for work, while working with employers on finding the necessary workers to fill current job openings.

## **REGIONAL BACKGROUND INFORMATION**

This section discusses DWD industry employment projections for the Bay Area, regional plans and strategies for northeast Wisconsin and the lakeshore area, and regional economic development and adult education partnerships.

## **INDUSTRY EMPLOYMENT PROJECTIONS**

The DWD developed projections through the year 2018 for the Bay Area, a ten-county region in northeast Wisconsin, including Door County. (See Table 5.1.) These projections are categorized by industry, a group of establishments that produce similar products or provide similar services. The North American Industry Classification System (NAICS) groups similar establishments into industries. For example, all establishments that manufacture automobiles are in the same industry. An establishment is generally a single physical location where services are provided or goods are produced. Examples of establishments include a factory, mine, store, or office. Table 5.1 displays information compiled by the DWD based on the NAICS codes and customized for the Bay Area region. Other tables in this chapter that give industry information specific to Door County will list either supersectors, the largest categorization of industries, or two-digit sectors, the second largest categorization, per the standard NAICS classification system.

**Table 5.1: Bay Area Workforce Development Area Industry Employment Projections**

Industry	2008 Estimate	2018 Projection	# Change	% Change
<b>Total, All Nonfarm Industries</b>	<b>313,780</b>	<b>320,280</b>	<b>6,500</b>	<b>2.1%</b>
Construction/Mining/Natural Resources	13,480	14,140	650	4.8%
Manufacturing	75,220	67,030	- 8,190	- 10.9%
Fabricated Metal Product Manufacturing	15,570	14,020	- 1,550	- 10.0%
Food Manufacturing	11,160	11,170	10	0.1%
Machinery Manufacturing	7,190	6,900	- 290	- 4.0%
Trade	43,530	43,400	- 130	- 0.3%
General Merchandise Stores	7,770	8,110	340	4.4%
Transportation and Utilities (Including US Postal)	16,740	17,130	390	2.3%
Financial Activities	17,020	17,370	350	2.1%
Education and Health Services (Including State and Local Government)	56,050	63,650	7,600	13.6%
Educational Services (Including State and Local Government)	20,130	20,400	270	1.3%
Hospitals (Including State and Local Government)	11,990	13,510	1,520	12.6%
Leisure and Hospitality	29,710	31,460	1,750	5.9%
Information/Prof. Services/Other Services	43,300	46,780	3,480	8.0%
Government (Excluding US Postal, State and Local Education and Hospitals)	18,730	19,330	600	3.2%

*Source: Office of Economic Advisors, Wisconsin Department of Workforce Development, April 2011.*

Within the Bay Area region, the largest increase in number of jobs is expected to be in Education and Health Services, with a projected increase of 7,600 jobs, or a 13.6% growth rate. The next largest job increase is expected to be in Information/Professional Services/Other Services, with an additional 3,480 jobs, or a 12.6% growth rate. The largest decrease in number of jobs is expected to take place in the Manufacturing sector, with a loss of 8,190 jobs, or a decrease of 10.9%.

## REGIONAL ECONOMIC DEVELOPMENT PLANS AND STRATEGIES

### Northeast Wisconsin Economic Opportunity Study

In order to develop policies and strategies to halt deteriorating employment trends in their service areas, a partnership of regional workforce development boards commissioned an economic opportunity study for northeast Wisconsin. Completed in November of 2004, the Northeast Wisconsin (NEW) Economic Opportunity Study covers 18 counties in northeastern Wisconsin and is the first comprehensive regional economic study for this area. Listed below are the five regional strategies outlined in the plan, which Bay-Lake Regional Planning Commission (BLRPC), the regional planning commission encompassing Door and seven other northeast Wisconsin counties, is charged with implementing.

1. Move to a “New Economy” model of economic development. (The New Economy is based on knowledge and abundance theory, the concept that collaboration will “grow the pie” sufficiently large enough to serve an ample piece to everyone. A skilled workforce is imperative in this economic model. Creativity and innovation coupled with entrepreneurship and risk capital generate high value added products. These products yield higher margins, better pay, and more community wealth.)
2. Move to a collaborative (regional) model of economic development.
3. Change the social and cultural mindset on risk and collaboration.
4. Change the regional image.
5. Promote industry cluster development in the following clusters:
  - Biorefining/paper products
  - Printing and publishing
  - Insurance products
  - Nutraceuticals (natural, bioactive chemical compounds that have health promoting, disease preventing, or other medicinal properties)
  - Machine tool design
  - Healthcare
  - Biomass/agriculture/food processing
  - Maritime vessels and equipment
  - Tourism
  - Specialty crops
  - Automated manufacturing technology
  - Education and workforce training services

The NEW plan predicts that health care will be a major growth industry for northeast Wisconsin and for Door County. Not only will there be increased jobs in health care, but wages will be commensurate to manufacturing wages for appropriately trained workers. See the Resources and Further Information section for more information regarding the NEW study.

## Bay-Lake Regional Planning Commission - Comprehensive Economic Development Strategy

Funded by the federal Economic Development Administration (EDA), BLRPC updates its Comprehensive Economic Development Strategy (CEDS) for its Economic Development District (the eight-county Bay-Lake region) every three years. The plan is intended to bring together public and private sectors to strengthen the regional economy and to qualify the region for additional EDA assistance. The CEDS analyzes the local and regional economy and identifies investment priorities and possible funding sources. A series of goals, objectives, and strategies are also outlined in the plan. The 2012 plan does not list any projects for Door County.

## REGIONAL PARTNERSHIPS

There are eight partnerships working to promote economic development and adult education for the northeast Wisconsin area and a new lakeshore industry cluster area.

- *NEW North, Inc.* New North consists of an 18-county region in northeast Wisconsin, including Door County. This consortium of business, economic development, chambers of commerce, workforce development, civic, non-profit, and education leaders is working to make northeast Wisconsin a more competitive region for job growth, while still maintaining a superior quality of life.
- *Northeast Wisconsin Regional Economic Partnership (NEWREP)*. NEWREP provides hands-on support and programming for existing and prospective businesses in the northeast Wisconsin area. NEWREP membership offers: community-specific economic development programs; access to workforce and training programs; information about local buildings, sites, industrial/commercial parks; financing program support and technical direction; technical support for business development projects; local advocacy and liaison for resident and new business investment; and community and state program liaison.
- *Bay-Lake Regional Planning Commission*. The BLRPC region was designated by the U.S. Department of Commerce, Economic Development Administration as an Economic Development District in 1979. An EDA invests in public works, and provides economic adjustment assistance, technical assistance, and short-term planning. EDA investments are intended to enhance regional competitiveness and support long-term diversification and development of the regional economy. Eligible EDA applicants are states, city and local governments, Indian Tribes, colleges and universities, nonprofit organizations, and economic development districts.
- *Northeast Wisconsin Consortium of Adult Education (NEWCAE)*. Established in 2002, NEWCAE is an association of area public and private colleges and universities. In collaboration with business, industry, and other local community organizations, the association offers services that encourage, promote, and provide higher and continuing education opportunities for adult learners.
- *Northeast Wisconsin Educational Resource Alliance (NEW ERA)*. NEW ERA fosters regional partnerships among the public colleges and universities in the northeast Wisconsin area to better serve the educational needs of the 1.2 million people living in this area.
- *Northeast Wisconsin (NEW) Manufacturing Alliance*. The NEW Manufacturing Alliance is a group of manufacturers working with educational institutions, workforce development boards, chambers of commerce, and state organizations to promote manufacturing in the northeast Wisconsin area. Its vision is to unite manufacturers area and strengthen the area's position as a world-leading region of advanced manufacturing opportunities. The Alliance's four objectives are to:

- create a positive view of manufacturing careers in the area;
  - grow partnerships with K-16, media, and other manufacturers;
  - promote workforce development; and
  - advance collaboration efforts that promote the health of manufacturing.
- *Bay Area Workforce Development Board, Inc.* The Bay Area Workforce Development Board consists of 10 counties, including Door County, and works to meet employers' needs by increasing job skills and educational levels. The Workforce Development Board consists of 41 members, including business, education, labor, and economic development partners.
  - *Lakeshore Industry Cluster Initiative.* The most recent of the previously described initiatives, the Lakeshore Industry Cluster includes Manitowoc, Door, Calumet, Kewaunee, and Sheboygan counties. Its purpose is to create regional industry cluster networks that engage businesses in analyzing and leveraging their assets and opportunities in order to create additional business growth and development. The Initiative focuses on identifying and targeting regional assets and resources to improve the competitiveness of the manufacturing, food processing/agriculture, energy, and tourism industries. The Initiative also evaluates how the Lakeshore region ranks against other communities.

## COUNTY-LEVEL INDUSTRIES, OCCUPATIONS, AND EMPLOYERS

### GENERAL ECONOMIC INFORMATION

*Note: all dollar values given are inflation-adjusted to 2011.*

Door County's economy has traditionally depended on the agriculture, manufacturing, and tourism industries. Largely, those industries are split into three general geographic areas within the county: manufacturing in the city, agriculture in the south, and tourism in the north. Manufacturing has always been concentrated in the City of Sturgeon Bay, with very little in the southern and northern areas. Agriculture, especially dairy production, had been widespread throughout the county, though more recently it has declined drastically in Northern Door and somewhat in Central Door, but remains predominant in Southern Door. Northern Door County is much more tourism oriented than the rest of the county, with agriculture continuing to decline and very little manufacturing present. The next section, Industry Sectors, discusses specific employment information for the manufacturing and tourism industries; agricultural employment information is not discussed because the industry agricultural data for Door County is suppressed.

### **MANUFACTURING/SHIPBUILDING**

Door County has a substantial manufacturing base that exports products, including water vessels, wire products, specialty machines, and marine service equipment. Shipbuilding has historically been the top revenue-producing manufacturing industry in the county and remains on top, despite somewhat recent decline in demand for luxury and custom-built yachts. Both Bay Shipbuilding Company (owned by an Italian parent company) and Palmer Johnson are well established shipbuilding businesses employing a skilled labor force and form the center of a shipbuilding "cluster." A "cluster" is defined as a geographically neighboring group of organizations in a particular field linked by what they have in common and the ways in which they complement one another. Bay Shipbuilding and Palmer Johnson form the center of this cluster, with other companies in the area defining its extent. This cluster also includes the U.S. Coast Guard, marinas, boat and ship maintenance and repair services, marine towing and salvage, marine design and engineering, and boat brokerage/sales.

Bay Shipbuilding is the largest employer in the county, employing about 662 people. Originally, the company built only freshwater vessels, but now builds a variety of ocean-going vessels, up to 1,000 feet in length, used along U.S. coastlines. The company repairs a significant portion of the Great Lakes working vessel fleet, as well as Coast Guard vessels. In 2008, an Italian company, Fincantieri, purchased Manitowoc Marine Group, which includes Bay Shipbuilding Company. Shortly after, the Sturgeon Bay City Council approved a development agreement with Fincantieri Marine Group/Bay Shipbuilding Company that released \$6 million in State Harbor Assistance grant funds for construction of a new floating dry dock. In addition, the company constructed a new 3,500 square foot welding training center and a 17,000 square foot pipe shop in the shipyard. The company has also been approved to receive a \$2.8 million federal economic stimulus grant to fund new manufacturing equipment, for which they provide a 25% match.

Palmer Johnson has evolved over the past 90+ years from building wooden boats to large custom motor yachts. Starting in 2004, the company rebounded from a slump and began to thrive under a new owner and business model, supported by introduction of a new sport yacht design. Upon receiving a \$2 million state Community Development Block Grant, Palmer Johnson completed an addition to their current building, as well as adding a new painting and production facility. In early 2008, the company employed about 408 people, however, the Great Recession forced the company to reduce employment to approximately 133 people.

## TOURISM

Tourism is a vital component of Door County's economy; according to the Door County Visitor Bureau (DCVB), 2.2 million visitors a year come to the county. Tourists visit Door County to take advantage of walking and biking trails, state and local parks and other natural areas, golf courses, historic sites, approximately 300 miles of coastal shoreline, commercial districts, and the arts community. Many businesses cater to tourism, such as resorts, motels, campgrounds, bed and breakfasts, and retail stores, and are continually expanding their services to meet the diverse interests of people who come to the county.

The Wisconsin Department of Tourism's Economic Impact Fact Sheet for Door County reported for 2011 that:

- Door County ranked 8<sup>th</sup> of all counties in the state for traveler spending, at an estimated \$271.2 million, representing an increase of 1.6% from 2010 and 5.5% from 2009.
- Visitors to Door County supported 2,921 jobs, generating total personal income of \$62.3 million for these jobs.
- Visitors to Door County generated \$30.7 million in state and local taxes and \$19.9 million in federal taxes.

Note that the Department of Tourism reported traveler spending in Door County at \$421 million in 2006, as documented in the previous version of this Plan. If the current and historic figures are comparable, this would mean there was a decrease of 36% in visitor spending in Door County between 2006 and 2011. Although the Department does not make historical data available on its Web site, this drop in tourism spending could be attributable to the Great Recession, which officially started in December 2007. Between 2006 and 2008, the DCVB reported a large drop in average daily traffic counts. In 2006, there were an average of 11,972 vehicles per day coming into the county, which fell by 1,305 (11%) to an average of 10,667 vehicles per day in 2008.

### Tourism Marketing and the Door County Visitor Bureau

A room tax is the top funding mechanism for tourism promotion and marketing across the country. In states that have adopted enabling legislation, municipalities have the authority to apply a room tax on the renting of sleeping rooms at hotels, motels, resorts, inns, bed and breakfasts, and other

lodging facilities in the local area, if state regulations are followed. In Wisconsin, municipalities can set the tax rate from 0 – 8%, with limited exceptions. A single municipality may adopt the tax or multiple municipalities can band together to create a tourism “zone.” A tourism zone must be overseen by a “tourism commission,” governed by representatives from the participating municipalities.

All of Door County’s 19 municipalities have partnered to operate as a tourism zone, governed by the Door County Tourism Zone Commission (TZC), and charge a 5.5% room tax. Created in 2007 by an intergovernmental agreement, the TZC is responsible for issuing the lodging permits, collecting the room tax, preparing and delivering all required reports, contracting with a marketing entity (DCVB), approving marketing plans, and reviewing performance measurements. All lodging establishments in Door County with rentals less than 30 days are required to charge the room tax, which periodically gets paid to the TZC.

State law requires that at least 70% of room tax money is spent on tourism promotion and development, with the remaining revenue going to participating municipalities to spend however they wish. Door County’s intergovernmental agreement splits the total tax into 30% and 70% shares, with 30% going to the member municipalities and 70% going to the TZC for tourism marketing and operations.

The TZC can keep up to 4% for operating expenses, but at least 66% must go to the DCVB for their marketing and operating expenses. In 2011, the Commission collected over \$3.2 million in room tax. Other figures and statistics for 2011, as published by the TZC, are listed below.

- Approximately 48% of the total room tax collected was earned in the months of July and August.
- The month of August had the highest number of rooms available for rent, at 136,180 units, and 91,508 of those units were filled for an occupancy rate of 67.2%.
- The month of July had the highest occupancy rate, at 71.6%, with 136,048 units available and 97,354 units filled.
- The highest average nightly rate for a room was \$154 in July.

As the county’s official tourism marketing organization, the DCVB’s mission is to “generate incremental economic impact for the community by attracting visitors with strategies that ensure sustainable tourism.” In 2008, the DCVB published the results of a brand development study that attempted to define the county’s unique and distinctive attributes and their emotional and functional benefits to visitors. The report outlined specific action steps to develop the Door County “brand” as follows:

- Align the Door County/community brand between all communities.
- Enhance partnership formations between DCVB, local government, and non-profit agency leaders.
- Coordinate a county-wide community visitor information services network.
- Develop a “brand service excellence” training program for employees.
- Integrate a gateway and directional signage system throughout the county.
- Institute “shoulder season” destination brand marketing research and planning.
- Formulate a cultural tourism strategy.
- Formulate an ecotourism strategy.

More information on the brand development study can be found in the Resources and Further Information section at the end of this chapter.

## AGRICULTURE

Discussed in further detail in Chapter 7, Agricultural Resources, Door County has a long history in agriculture, most notably in dairy and orchard crops. Dairy production is in decline, though it continues to contribute the most to the county's agricultural economy (see below). Cherry production also continues to decline, but the county is experiencing some renewed growth in apple production, as well as advancing in other specialty crops such as cold-climate wine grapes. Some wineries are starting to use local grapes for wine-making, but the growing of grapes in the county is still in an experimental stage. Cherries and other fruit are now more frequently used in the production of locally grown and produced wines. Lastly, the county is experiencing economic success with organic, naturally grown, and greenhouse foods.

### Economic Impact

Agriculture is an important economic activity in Door County, with hundreds of family-owned farms and agriculture-related businesses and industries providing equipment, services, and other products farmers need to process, market, and deliver food to consumers. Approximately 88% of farms in Door County are owned by individuals or families (an additional 7% are owned by family partnerships, and another 4% are owned by family-owned corporations). The production, sales, and processing of Door County's farm products generate employment, economic activity, income, and tax revenue.

According to the UW-Extension, agriculture in Door County accounted for the following sales, employment, and tax figures in 2011 (see also Table 5.2):

- \$288.4 million (14%) of the county's total business sales. Of this \$288.4 million:
  - \$220.4 million was from the sale of all farm and value-added products. The top five commodities contributing to farm product sales in 2007 were (in millions):
    - milk, \$27.7
    - grains, \$8.7
    - cattle and calves, \$7.6
    - vegetables, \$5.3
    - fruits and berries, \$5.0
  - \$68 million was from indirect sales. UW-Extension estimates that one dollar of sales from agricultural products generates an additional \$0.31 of business sales from other parts of the county's economy.
    - \$48.3 million from agriculture-related business-to-business sales (the purchase of agricultural and food-processing services, inputs, and equipment); and
    - \$19.7 million from local spending of earnings by employees of agriculture related businesses.
- 2,098 jobs for county residents, or approximately 11% of the county's entire workforce.
- \$89.8 million (9%) of the county's total income (wages, salaries, benefits, and profits of farmers and workers in agriculture-related businesses).
- Nearly \$8.9 million paid in taxes, not including property taxes paid to local schools.

**Table 5.2: Economic Impact of Agriculture, Door County**

<b>Agriculture</b>	<b>2000*</b>	<b>2011 (in millions)</b>	<b>% Change</b>
Direct Sales	186.8	220.4	18%
Business-to-Business Sales	52.0	48.3	-7%
Spending of Earnings	7.7	19.7	156%
<b>Total Economic Activity</b>	<b>246.5</b>	<b>288.4</b>	<b>17%</b>
Agricultural Income	42.1	89.8	113%
Taxes	6.0	9.0	50%
Number of Jobs	2,199	2,098	-5%

Source: UW-Extension - Door County, 2000 & 2011.

\*Inflation-adjusted to 2011.

Dairy is the largest part of Door County's agricultural activity, contributing \$89.8 million (31%) to the county's economy in 2011. (See Table 5.3.) However, this figure is down \$66.0 million (42%) from its 2000 contribution of \$155.8 million. In 2011, on-farm production and sale of milk accounted for \$39 million and processing accounted for the remaining \$50.8 million.

**Table 5.3: Economic Impact of Dairy, Door County**

<b>Dairy</b>	<b>2000*</b>	<b>2011</b>	<b>% Change</b>
On-Farm Production & Sale	91.7	39.0	-57%
Processing	64.1	50.8	-21%
<b>Total Economic Impact of Dairy</b>	<b>155.8</b>	<b>89.8</b>	<b>-42%</b>
Number of Processing Plants	5	6	20%

Source: UW-Extension - Door County, 2000 & 2011.

\*Inflation-adjusted to 2011.

After dairy, the top commodities contributing to farm product sales are, respectively, grains, cattle and calves, vegetables, and fruits and berries. Also, according to UW-Extension, Door County, the production of landscape trees and plants, as well as landscape and grounds maintenance, are rapidly growing segments of Door County's agricultural industry.

Agricultural land also contributes to the bottom line for municipalities. *The Cost of Community Services Study in the Towns of Gibraltar and Nasewaupee*, commissioned in 2004 by the Door County Environmental Council and the Door County Land Trust and conducted by a professor in Urban and Regional Planning at the University of Wisconsin-Madison, concluded that undeveloped land contributes more in taxes than it costs in municipal expenditures. The study found that "farmlands, forests, wetlands and other open spaces provide more revenue to a community than they require in expenditures, resulting in a net fiscal benefit to that community," while residential development typically costs a community more than it pays in taxes because of the services required to support the development. Agricultural lands are therefore providing cost-savings benefits to the municipalities within which they are located.

## **INDUSTRY SECTOR INFORMATION**

Table 5.4 provides an overview of the number of establishments, number of paid employees, average annual wage, and total annual payroll for each two-digit industry sector in Door County for 2011, as estimated by the Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW). The data consists of employment and wages reported to federal unemployment insurance programs and represents about 99.7% of all wage and salary civilian employment in the county. Only filled jobs, whether full- or part-time, temporary or permanent, are counted. People working in Door County excluded from QCEW reporting requirements are self-employed workers, most agricultural workers on small farms, and members of the U.S. Coast Guard.

**Table 5.4: Industry Sectors, Door County**

<b>Industry Sector</b>	<b># Estab. (Ann. Ave.)</b>	<b># Emplys. (Mnthsly Ave.)</b>	<b>Wage (Ann. Ave.)</b>
Agricultur, Forestry, Fishing, and Hunting	S	S	S
Mining, Quarrying, and Oil and Gas Extraction	S	S	S
Utilities	6	56	\$66,450
Construction	126	579	\$36,404
Manufacturing	66	1,742	\$42,010
Wholesale Trade	35	143	\$39,720
Retail Trade	232	1,693	\$20,984
Transportation and Warehousing	42	201	\$31,922
Information	S	S	S
Finance and Insurance	54	341	\$42,552
Real Estate, Rental, and Leasing	39	169	\$19,675
Professional and Technical Services	78	213	\$35,295
Management of Companies and Enterprises	2	4	\$59,201
Administrative and Waste Services	66	338	\$23,437
Education Services	15	723	\$36,404
Health Care and Social Assistance	63	1,433	\$39,969
Arts, Entertainment, and Recreation	42	355	\$21,219
Accommodation and Food Services	234	2,463	\$14,718
Other Services Except Public Administration	102	684	\$15,845
Public Administration	36	919	\$28,238
Unclassified	S	S	S

Source: WI Department of Workforce Development, Quarterly Census of Employment and Wages, 2011.

S = Suppressed

### Manufacturing Employment

During the 1980s, manufacturing accounted for over 30% of the jobs in the county, mostly due to shipbuilding. Shipbuilding experienced an economic downturn in the 1990s, drastically reducing the number of manufacturing jobs in Door County. Although still ranking at the top for the largest percentage of jobs in the county, that figure continues to trend downward. At the end of 2000, manufacturing jobs made up 17% of the total number of jobs in the county; that figure dropped to 14.4% by the end of 2011. For total number of jobs, manufacturing ranks second at 1,742, surpassed only by "Accommodation and Food Services," at 2,921 jobs.

Manufacturing continues to rank highest in terms of total payroll: approximately 21.3% percent of the total payroll for the county in 2011 was paid to manufacturing industry jobs. The 2011 average annual wage in manufacturing was \$42,010, the highest average annual wage in Door County. Although these jobs are the highest paying in Door County, the county's manufacturing wages are only 85.6% of the state's average annual wage for manufacturing.

### Tourism Employment

While there is no "tourism" industry sector, the two sub-sectors most closely connected to tourism are "Arts, Entertainment, and Recreation" and "Accommodation and Food Services." These two sectors lumped together are called the "Leisure and Hospitality" supersector. In Door County, leisure and hospitality jobs rank first in total number of jobs, but employees earn far less than workers in other industries. In 2011, 23.4% percent of the total jobs in Door County were in leisure and hospitality, but employees earned only 12.8% of the total payroll for the county. The average annual wage for leisure and hospitality jobs in 2011 was \$14,951 for Door County, 2.4% higher than the state average of \$14,597 for the same year.

Many jobs in this occupation are entry level, part-time, and seasonally based. Employers in this industry tend to be small: in Door County in 2006, there were an average of 12 workers per establishment. Thus, no leisure and hospitality business appears on the list of top fifteen employers, discussed in a later section.

The “Retail Trade” industry sector is also closely connected to tourism and ranks third highest for total number of jobs in Door County. In 2011, there were 1,693 retail trade jobs, making up 14.0% of total number of jobs, but only 10.3% of total wages. Employees in retail trade earned an average wage of \$20,984 for the same year.

### Five-Year Employment Trends

Door County industry information for 2006 and 2011 is provided in Table 5.5, below. Since 2006, the reported number of total establishments is down by 59 (4.5%) and the reported number of total jobs is down by 978 (7.5%). Adjusted for inflation, reported total wages are down \$344.7 million (9.1%), from \$377.8 million in 2006 to \$343.3 million in 2011.

**Table 5.5: Five-Year Change in Industry Sectors, Door County**

Industry Sector*	# Estab. (Annual Ave.)			# Employees (Monthly Ave.)			Total Wages		
	% Change			% Change			%		
	2006	2011	Change	2006	2011	Change	2006**	2011	Change
Utilities	4	6	50.0%	30	56	86.7%	\$1,643,087	\$3,721,226	126.5%
Construction	158	126	-20.3%	935	579	-38.1%	\$37,640,742	\$21,077,939	-44.0%
Manufacturing	73	66	-9.6%	2,190	1,742	-20.5%	\$88,820,122	\$73,182,221	-17.6%
Wholesale Trade	47	35	-25.5%	202	143	-29.2%	\$7,501,118	\$5,679,893	-24.3%
Retail Trade	244	232	-4.9%	1,817	1,693	-6.8%	\$40,455,528	\$35,525,714	-12.2%
Transportation & Warehousing	36	42	16.7%	210	201	-4.3%	\$6,952,625	\$6,416,245	-7.7%
Finance & Insurance	53	54	1.9%	351	341	-2.8%	\$14,723,278	\$14,510,106	-1.4%
Real Estate, Rental, Leasing	47	39	-17.0%	222	169	-23.9%	\$4,553,101	\$3,325,159	-27.0%
Professional & Technical Services	84	78	-7.1%	250	213	-14.8%	\$10,737,972	\$7,517,931	-30.0%
Mngmnt of Companies & Enterprises	3	2	-33.3%	13	4	-69.2%	\$1,346,367	\$236,805	-82.4%
Administration & Waste Services	58	66	13.8%	366	338	-7.7%	\$9,086,865	\$7,921,545	-12.8%
Education Services	17	15	-11.8%	750	723	-3.6%	\$27,247,243	\$26,320,374	-3.4%
Health Care & Social Assistance	54	63	16.7%	1,237	1,433	15.8%	\$46,076,937	\$57,275,339	24.3%
Arts, Entertainment, Recreation	39	42	7.7%	369	355	-3.8%	\$8,013,345	\$7,532,587	-6.0%
Accommodation & Food Services	244	234	-4.1%	2,597	2,463	-5.2%	\$36,663,538	\$36,249,948	-1.1%
Other Services Exc. Public Admin.	101	102	1.0%	667	684	2.5%	\$11,579,689	\$10,838,122	-6.4%
Public Administration	35	36	2.9%	828	919	11.0%	\$24,710,947	\$25,950,297	5.0%
<b>Totals</b>	<b>1,297</b>	<b>1,238</b>	<b>-4.5%</b>	<b>13,034</b>	<b>12,056</b>	<b>-7.5%</b>	<b>\$377,752,504</b>	<b>\$343,281,451</b>	<b>-9.1%</b>

Source: WI Department of Workforce Development, Quarterly Census of Employment and Wages, 2011.

\* Industries not reported (data is suppressed): Ag, Forestry, Fishing, and Hunting; Mining, Quarrying, and Oil and Gas Extraction; Information; Unclassified.

\*\*Inflation-adjusted to 2011.

Between 2006 and 2011, the construction industry lost the most in total wages, decreasing by over \$16.6 million (44.0%). For the same timeframe, the manufacturing industry had the second biggest loss in total wages, decreasing by over \$15.6 million (17.6%), and retail trade had the third biggest loss in total wages, decreasing by over \$4.9 million (12.2%). Manufacturing and construction also lost the most employees, with manufacturing losing 448 employees and construction losing 356 employees.

The health care and social assistance industry grew by far the most of any industry between 2006 and 2011, increasing by over \$11.2 million (24.3%). For the same timeframe, the utilities industry grew second most, increasing by over \$2.0 million (12.5%), followed by the public administration industry, increasing by over \$1.2 million (5.0%). The health care and social assistance industry

added the most employees, at 196, followed by public administration, 91, and utilities, 26.

### AVERAGE ANNUAL WAGES

Average annual wages are estimated by calculating the sum of wages of all the employees in a given industry or occupation and then dividing the total wages by the number of employees. In 2011, the average annual wage was \$28,416 for Door County and \$41,012 for the state. Some of this gap can be attributed to the seasonality of much of the county's economy, which requires fewer year-round, permanent positions and more temporary and contract labor than is typical for less seasonal areas.

Table 5.6 compares the 2011 average annual wage for supersectors by industry division between Door County, neighboring counties, and the state. Door County averages were less than state averages in all categories except for Leisure and Hospitality.

**Table 5.6: Average Annual Wage by Industry Division, Door County and Selected Areas**

Industry	State	Door Co.	Brown Co.	Kewaunee Co.	Door County % of State
All Industries	\$41,012	\$28,416	\$42,051	\$38,620	69%
Natural Resources	\$31,708	\$25,396	\$29,024	\$26,479	80%
Construction	\$50,183	\$36,404	\$48,600	\$40,236	73%
Manufacturing	\$51,421	\$42,010	\$48,464	\$38,385	82%
Trade, Transportation, and Utilities	\$35,021	\$24,543	\$35,189	\$66,259	70%
Information	\$53,571	S	S	\$15,837	not avail.
Financial Activities	\$55,651	\$34,971	\$49,947	\$38,094	63%
Professional and Business Services	\$47,841	\$28,246	\$49,739	\$57,260	59%
Education and Health	\$43,178	\$38,774	\$45,327	\$28,578	90%
Leisure and Hospitality	\$14,974	\$15,537	\$27,197	\$7,524	104%
Other Services	\$23,117	\$15,845	\$19,407	\$27,972	69%
Public Administration	\$42,553	\$28,238	\$44,076	\$26,598	66%
Unclassified	44,708	S	S	S	not avail.

Source: WI Department of Workforce Development, Quarterly Census of Employment and Wages, 2011.

Table 5.7 compares average annual wages in Door County for 2007 and 2011. Overall, the average annual wage for all industries increased by 1.3% between 2007 and 2011. Average annual wages increased for all industry divisions except "professional and business services," "construction," "other services," and "public administration," which decreased by 13.7%, 7.0%, 6.1%, and 2.7%, respectively. Average annual wage increased the most for "natural resources," at 20.3%, followed by an 8.1% increase for "education and health."

**Table 5.7: Average Annual Wage by Industry Division, Door County**

Industry	2007*	2011	% Change
All Industries	\$28,051	\$28,416	1.3%
Natural Resources	\$21,119	\$25,396	20.3%
Construction	\$39,142	\$36,404	-7.0%
Manufacturing	\$39,434	\$42,010	6.5%
Trade, Transportation, and Utilities	\$24,330	\$24,543	0.9%
Information	S	S	--
Financial Activities	\$32,710	\$34,971	6.9%
Professional and Business Services	\$32,726	\$28,246	-13.7%
Education and Health	\$35,880	\$38,774	8.1%
Leisure and Hospitality	\$14,646	\$15,537	6.1%
Other Services	\$16,881	\$15,845	-6.1%
Public Administration	\$29,018	\$28,238	-2.7%
Unclassified	S	S	--

Source: WI Department of Workforce Development, Quarterly Census of Employment and Wages, 2007 & 2011.

\*Inflation-adjusted to 2011.

## OCCUPATIONS

An occupation is a set of activities or tasks that employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they are in the same industry. A given industry, or even a particular establishment in that industry, might have employees in dozens of occupations.

Some occupations are concentrated in a few particular industries, while other occupations are found in the majority of industries. Note that since the DWD does not provide occupation information for Door County, the data provided in this section is from the U.S. Census Bureau. Due to different definitions and methods of collecting data, the total for “employed persons” provided below cannot be compared to the total “number of employees” provided in the previous section.

Table 5.8 compares employed persons by occupation divisions for Door County for the years 2000 and 2011. According to the U.S. Census Bureau, total employed persons in Door County grew by 553 (4%), with growth occurring in the “management, professional, and related” division and the “service” division. Between 2000 and 2011, the “service” division grew the most, at 38%, followed by the “management, professional, and related” division, at 16%. All other occupation divisions declined for the same timeframe, with the greatest decline occurring in the “production, transportation, and material moving” division, at 18%.

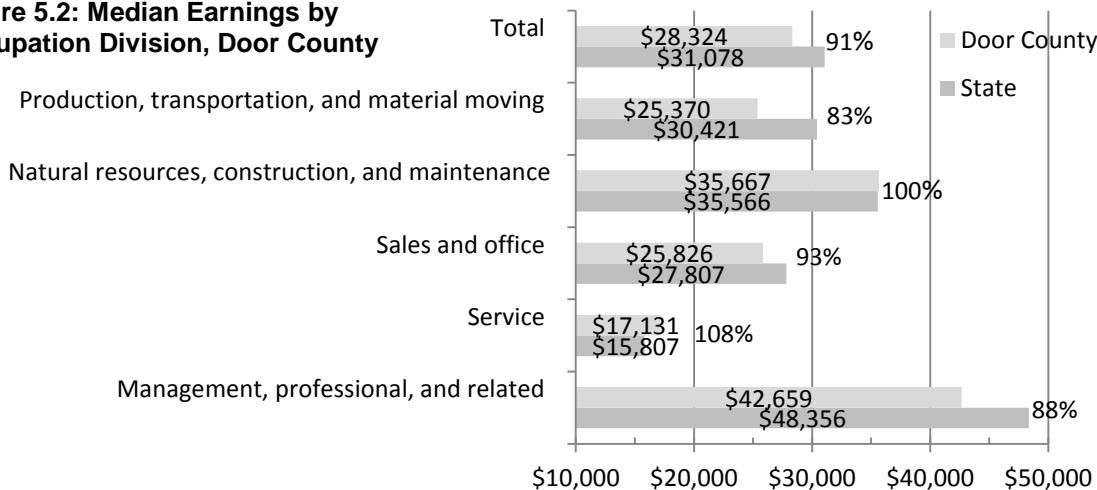
**Table 5.8: Employed Persons by Occupation Division, Door County**

	Number		2000 - 2011	
	2000	2011	# Change	% Change
Management, professional, and related	3,828	4,425	597	16%
Service	2,172	2,996	824	38%
Sales and office	3,285	3,131	-154	-5%
Natural resources, construction, and maintenance	2,114	1,840	-274	-13%
Production, transportation, and material moving	2,502	2,062	-440	-18%
<b>Total</b>	<b>13,901</b>	<b>14,454</b>	<b>553</b>	<b>4%</b>

Source: U.S. Bureau of the Census: 2000, SF3 Sample Data, DP-3; 2009 - 2011 ACS 3-year estimates, Table ID S2406 (same for municipal-level data).

Median wages in Door County fall below the state's median wages for all occupation divisions except the "service" division and the "natural resources, construction, and maintenance" division. (See Figure 5.2.) The fact that Door County pays more than the rest of the state for its "service" occupations coincides with the county's reputation as a premier resort destination. Compared to the state, the lowest-paying occupation divisions in the county are the "production, transportation, and material moving" division, at 83% of the state's median, and the "management, professional, and related" division, at 88% of the state's median.

**Figure 5.2: Median Earnings by Occupation Division, Door County**



Source: U.S. Bureau of the Census: ACS, 2009 - 2011, 3-Year Estimates, Table ID S2401. See Table ID B24011 for municipal-level data.

## **MAJOR EMPLOYERS**

Table 5.9 lists the top 15 employers in Door County in terms of total number of employees, regardless of number of hours worked per week, as reported by the Door County Economic Development Corporation (DCEDC) for the years 2008 and 2012. Public sector employers on the list include the county itself and two of the county's five local public school districts. The private industries on the list are from a number of different sectors, including manufacturing, health care, and banking. Bay Shipbuilding and Door County Memorial Hospital are the largest private employers, employing 662 and 522 people, respectively.

Six of the 15 employers had a reduction in total number of employees between 2008 and 2012, with Palmer Johnson reducing the most, by 275 employees. The second largest loss occurred at Baylake Bank with a reduction of 177 employees. NEW Industries hired the most new employees, at 55, followed by Wire Tech Fabricators, at 13.

*Note: The Department of Workforce Development also reports top employers in the county on its website, however, their figures vary significantly from the DCEDC figures. DCEDC figures are reported here, because they are able to keep their numbers more current. DCEDC has fewer companies to survey and can survey them more frequently. In some cases, as with their revolving loan program recipients (i.e., Palmer Johnson), DCEDC gets employment numbers on at least a semi-annual basis.*

**Table 5.9: Top 15 Employers, Door County**

<b>Largest Employers</b>	<b>Type of Business</b>	<b># of Employees</b>		<b>% Change</b>
		<b>2008</b>	<b>2012</b>	<b>2008 - 2012</b>
Bay Shipbuilding	Ship Repair & Construction	750	662	-11.7%
Door County Memorial Hospital	Health Care	550	522	-5.1%
County of Door	County Government	329	329	0.0%
Hatco Corporation	Commercial Kitchen Equipment	298	304	2.0%
School District of Sturgeon Bay	Elementary & Secondary Schools	213	195	-8.5%
NEW Industries	Custom Machining	130	185	42.3%
Southern Door Public School	Elementary & Secondary Schools	174	179	2.9%
Baylake Bank	Commercial Banking	340	163	-52.1%
Marine Travelift/ExacTech	Boat & Industrial Hoists	237	155	-34.6%
Econo Foods	Grocery	*	150	--
Palmer Johnson	Luxury Yacht Builder	408	133	-67.4%
Therma-Tron-X	Industrial Finishing Systems	123	124	0.8%
Door County YMCA	Civic & Social Organization	115	115	0.0%
WireTech Fabricators	Wire Products	100	113	13.0%
Pick N Save	Grocery	*	85	--

Source: Door County Economic Development Corporation, 2008 & 2012.

\* No data available.

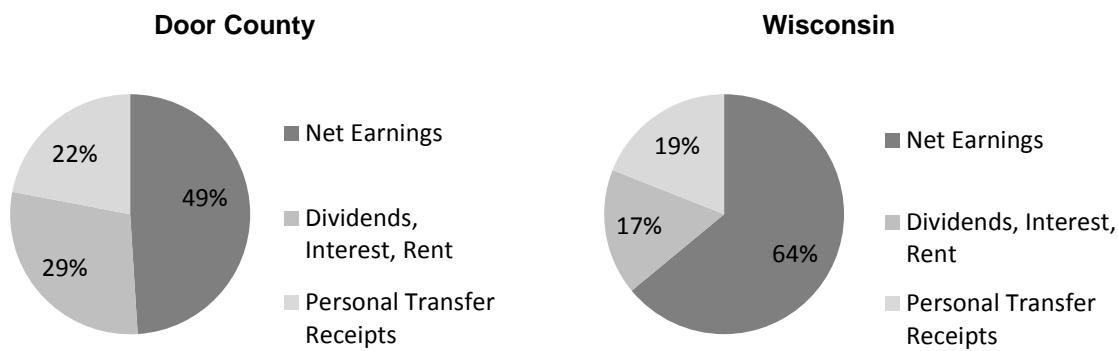
## COUNTY-LEVEL PERSONAL INCOME AND EARNINGS

Note: All dollar values are inflation-adjusted to 2010 or 2011, as noted. Also, for the Median Income and Earnings Income sections, individual municipalities within Door County are grouped together into Northern Door, Southern Door, and the City of Sturgeon Bay (City) categories. The Northern Door area consists of the Towns of Baileys Harbor, Egg Harbor, Gibraltar, Jacksonport, Liberty Grove, Seastopol, and Washington; and the Villages of Egg Harbor, Ephraim, and Sister Bay. The Southern Door area consists of the Towns of Brussels, Clay Banks, Forestville, Gardner, Nasewaupee, Sturgeon Bay, and Union; and the Village of Forestville. The City is its own area. Although the Town of Sturgeon Bay lies both north and south of the City, it is categorized under Southern Door, because it is primarily agricultural in character.

### **TOTAL PERSONAL INCOME**

Total personal income consists of three types of income: net earnings; dividends, interest, and rent; and personal transfer receipts (money received from the government, such as Social Security). According to the DWD, 2011 net earnings accounted for approximately 49% of the total personal income of Door County residents, compared to approximately 64% for the state and 65% for the nation. (Figure 5.3) Door County ranked 68<sup>th</sup> out of 72 counties in Wisconsin for net earnings. Note that the economic recession greatly impacted net earnings: historically, net earnings for the nation and the state had been approximately 68 - 70% of total personal income, while net earnings for Door County had been approximately 54%.

“Dividends, interest, and rents” accounted for about 29% of the county’s total personal income, compared to 17% for the state. Door County’s larger “dividends, interest, and rents” total reflects the greater number of retirees living in the county compared to the rest of the state. The remaining 22% of total personal income for Door County consists of personal transfer receipts.

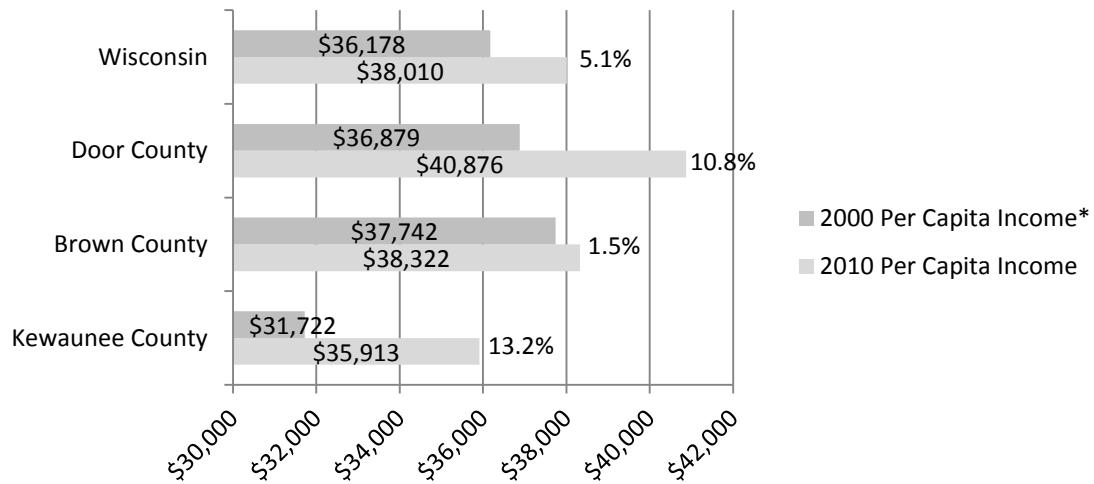
**Figure 5.3: Total Personal Income, Door County & Selected Areas**

*Source: U.S. Bureau of Economic Analysis, for the years cited.*

### **PER CAPITA INCOME**

As explained briefly in the beginning of this chapter, Per Capita Income (PCI) is calculated by adding together all sources of personal income received by all persons in an area, and dividing that number by the number of persons in the county, regardless of age or employment status.

Figure 5.4 displays 2000 and 2010 PCI for Door County, neighboring counties, and the state. In 2000, Brown County had the highest PCI, with Door County and the state at a close second and third, respectively. Throughout the decade, Door County's PCI grew at a faster rate than both Brown County and the state; between 2000 and 2010, the county's PCI growth rate was 10.8%, far exceeding Brown County's rate of 1.5% and the state's rate of 5.1%. In 2011, Door County had the highest PCI at \$40,876, a fact that can be at least partially attributed to the significant number of seasonal homeowners who have retired over the past decade and made Door County their year-round home.

**Figure 5.4: Per Capita Income, Door County & Selected Areas**

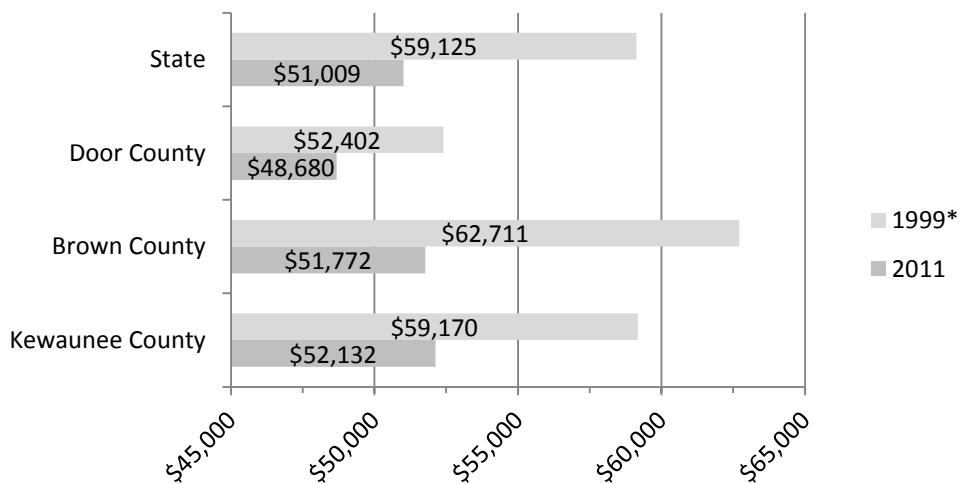
*Source: U.S. Bureau of Economic Analysis, for the years cited. See American Fact Finder Table ID B19301 for municipal-level data.*

\* Inflation-adjusted to 2010.

## **MEDIAN HOUSEHOLD INCOME**

The 2011 median household income (sum of all personal income for household occupants 15 years and older) for Door County was \$48,680, a decrease of \$3,722 (7.1%) from the median of \$52,402 in 1999. (See Figure 5.5.) In both 1999 and 2011, Door County had the lowest median household income when compared to Kewaunee and Brown counties and the state. For this same timeframe, all three counties and the state experienced a drop in median household income, decreasing between approximately 7% and 17%, with Door County decreasing the least, at 7%.

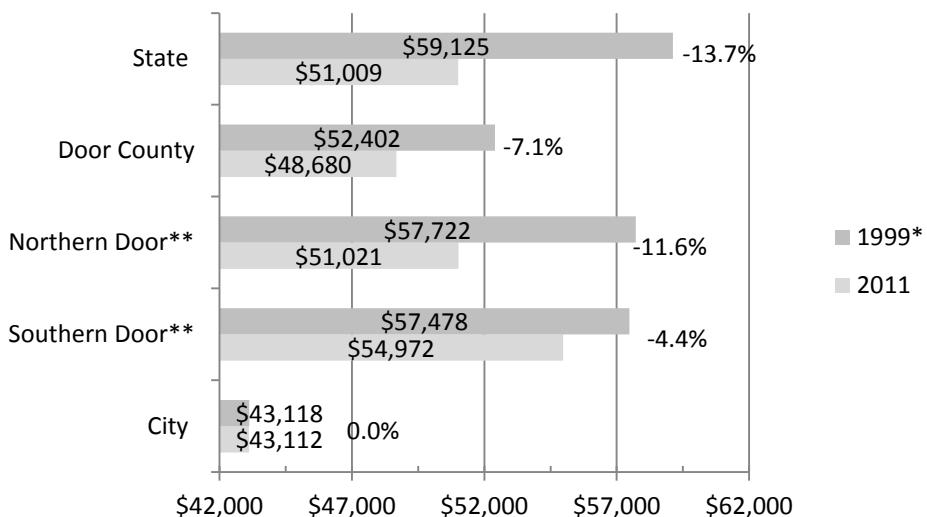
**Figure 5.5: Median Household Income, Door County and Selected Areas**



Source: U.S. Bureau of the Census, 2009 - 2011, ACS, Table ID B19013.

\*Inflation-adjusted to 2011.

Figure 5.6 shows 1999 and 2011 median household incomes for the state, county, and sub-county areas. Between 1999 and 2011, the state's median household income decreased by 13.7%, compared to a decrease of 7.1% for the county. In 2011, Southern Door had the highest median household income, at \$54,972, followed by Northern Door, \$51,021, and the City, \$43,112. Between 1999 and 2011, Northern and Southern Door's median household incomes fell by 11.6% and 4.4%, respectively, while the City's stayed about the same.

**Figure 5.6: Median Household Income, Door County Areas**

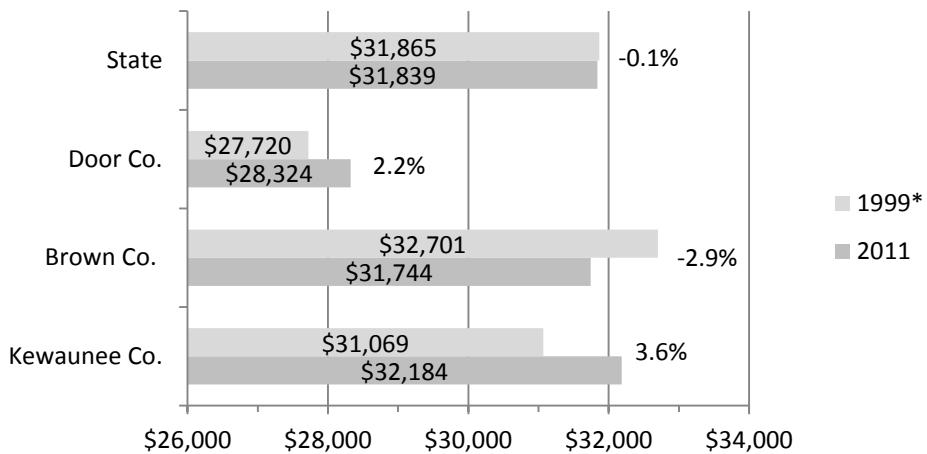
Source: U.S. Bureau of the Census, 2007 - 2011, ACS, 5-Year Estimates, Table ID B19013 (same for municipal-level data).

\*Inflation-adjusted to 2011.

\*\*Median of municipal-level median household incomes used for Northern and Southern Door.

## **EARNINGS INCOME**

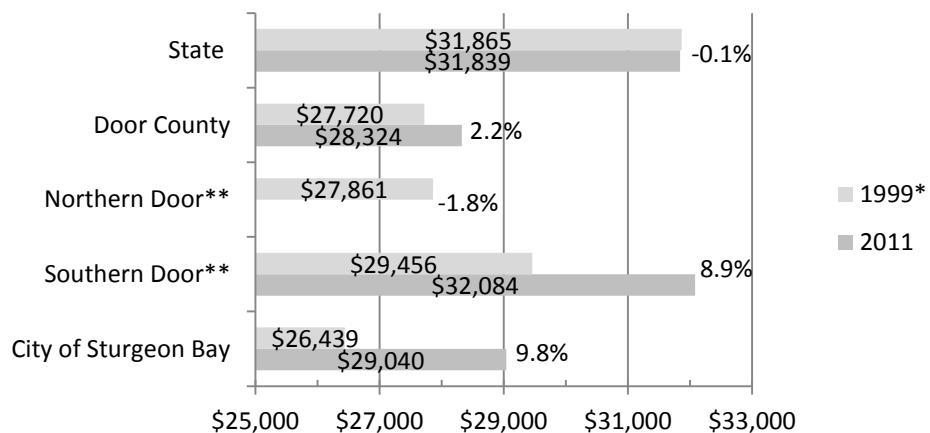
Earnings are defined as the sum of wage or salary income and net income from self-employment. Median earnings for Door County residents age 16 and over were \$28,324 in 2011, significantly less than neighboring counties and the state. (See Figure 5.7.) Between 1999 and 2011, only Door and Kewaunee counties had an increase in median earnings, 2.2% and 3.6%, respectively. Brown County and the state both had a decrease in median earnings, 2.9% and 0.1%, respectively.

**Figure 5.7: Median Earnings, Door County and Selected Areas**

Source: U.S. Bureau of the Census, 2007 - 2011, ACS, 5-Year Estimates, Table ID S2401.

\*Inflation-adjusted to 2011.

Figure 5.8 shows median earnings for the state, county, and sub-county areas in 1999 and 2011. In 2011, Southern Door had the highest median earnings, at \$32,084, followed by the City, \$29,040, and Northern Door, \$24,800. Between 1999 and 2011, only Northern Door had a decrease in median earnings, of \$3,061, while Southern Door and the City both increased by just over \$2,600.

**Figure 5.8: Median Earnings, Door County Areas**

Source: U.S. Bureau of the Census, 2007 - 2011, ACS, 5-Year Estimates, Table ID S2401 (same for municipal-level data).

\*Inflation-adjusted to 2011.

\*\*Median of municipal-level median household incomes for Northern and Southern Door.

## EARNINGS, MEN VERSUS WOMEN

Table 5.10 illustrates the differences in earnings between men and women in 2011. There are more males than females with earnings, with males paid both higher median and mean earnings. In the “population 16 years and over with earnings,” males earn 51% more in median earnings. In the “full-time, year-round workers with earnings,” males earn 37% more in median earnings and 53% more in average earnings.

**Table 5.10: Earnings by Sex, Door County**

	Total	Male	Female
<b>Population 16 years and over with earnings</b>	16,702	8,736	7,966
Median earnings (dollars)	25,526	32,069	21,266
<b>Full-time, year-round workers with earnings</b>	<b>8,884</b>	<b>5,050</b>	<b>3,834</b>
\$1 to \$9,999 or less	4.7%	4.3%	5.3%
\$10,000 to \$14,999	3.5%	1.5%	6.0%
\$15,000 to \$24,999	16.2%	13.1%	20.2%
\$25,000 to \$34,999	17.6%	13.1%	23.6%
\$35,000 to \$49,999	24.0%	23.9%	24.1%
\$50,000 to \$64,999	17.0%	19.5%	13.8%
\$65,000 to \$74,999	3.7%	5.5%	1.3%
\$75,000 to \$99,999	6.8%	9.2%	3.7%
\$100,000 or more	6.5%	9.9%	2.1%
Median earnings (dollars)	(X)	44,197	32,197
Mean earnings (dollars)	47,113	55,353	36,258

Source: U.S. Bureau of the Census, 2009 - 2011, ACS, 3-Year Estimates, Table ID S2001 (same for municipal-level data).

(X) - Estimate is not applicable or not available.

Within the income categories shown in Table 5.10, a higher percentage of women made more “earnings” in all income categories up to \$34,999. An approximately equal percentage of men and women are in the \$35,000 - \$49,999 range, with a slightly higher number of women. From \$50,000 and above, men outnumber women in all income categories.

## LABOR FORCE CHARACTERISTICS

This section provides information on the county's labor force, including labor force participation and unemployment rates, education levels, and commuting patterns.

### **LABOR FORCE PARTICIPATION RATE**

According to the DWD, approximately 66.6% of Door County's population age 16 and older participated in the labor force in 2011, down from 74% in 2000. This percentage is an economic measure referred to as the labor force participation rate (LFPR). The DWD considers the LFPR a better indicator of an area's labor market health than its unemployment rate, partly because it counts individuals not participating in the labor force either due to age or a lack of skills. An unemployment rate counts only those individuals who are in the labor force, either working or looking for work. The LFPR counts individuals who do not have the skills that the job market requires and have taken themselves out of the labor force. These individuals are part of what economists call the "skills gap," a phrase used to describe the shortage of skills available within the labor force that employers are seeking.

Due to the weakening of the economy and the aging of the population, LFPRs across the country are in decline. In 2010, Door County's LFPR was 66.6%, less than the state's LFPR of 69%, but higher than the national LFPR of 64.7%. Like the state and nation, the county's LFPR is projected to decrease over the coming decades due to an aging, and retiring, population. Since Door County already has an older median age – in 2010 it was 49.4 for the county, compared to 38.5 for the state and 37.2 for the nation – it will likely experience a decline in LFPR earlier than the state or the nation as a whole.

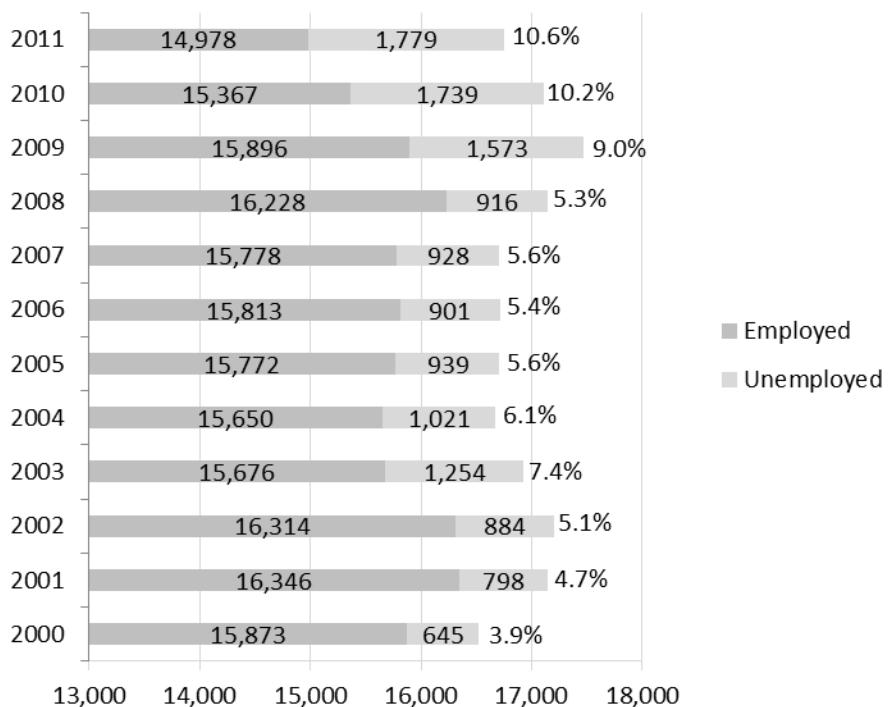
### **UNEMPLOYMENT RATE**

The unemployment rate represents the number of unemployed persons as a percent of the labor force. Unemployment rates are calculated by a variety of agencies in a variety of ways. Figure 5.9 gives the unemployment rates for Door County between 2000 and 2011, as estimated by the Bureau of Labor Statistics – Local Area Unemployment Statistics (LAUS) program and reported by the DWD. To estimate unemployment in Wisconsin, the LAUS program uses models which combine current and historical data from the Current Population Survey, the Current Employment Statistics program, the state Unemployment Insurance system, the Quarterly Census of Employment and Wages program, and the Decennial Census. More information on the LAUS program's methodology for determining unemployment statistics can be found at their website, listed in the Resources and Further Information section at the end of this chapter.

Between 2000 and 2011, the county's total labor force increased by 239 workers, or 1.4%, to a total of 16,757 workers (employed plus unemployed). Between 2000 and 2011, the county's unemployment rate averaged 6.6%, fluctuating between a low of 3.9% in 2000 and a high of 10.6% in 2011. The county hit its peak labor force in 2009, when there were 17,469 workers, but the unemployment rate was also high, at 9.0%. This is around the time when the shipbuilders, and other businesses, were laying off hundreds of employees. The county's labor force was at its lowest in 2000, when there were 16,518 workers.

The state's labor force increased by 2.2% between 2000 and 2011, with an average of 5.6% unemployment. The state's lowest unemployment rate was in 2000, at 3.4%, and its highest unemployment rate was in 2009, at 8.7%.

**Figure 5.9: Labor Force and Unemployment Rate (%),  
Door County**



Source: Wisconsin Department of Workforce Development, Bureau of Workforce Information, 2000 - 2011.

## **EDUCATIONAL ATTAINMENT**

In 2011, almost 36% of the county's residents 25 - 64 years of age had a high school diploma or equivalent, significantly higher than the state, at almost 31%. (See Table 5.11.) Just over 31% of Door County residents had "some college or associate's degree," slightly less than the state. Door County and the state have equivalent percentages of individuals with a college degree or higher, at approximately 28%.

**Table 5.11: Educational Attainment, 25 - 64 Years of Age, Door County and Wisconsin**

<b>Education Level</b>	<b>Door County</b>		<b>Wisconsin</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Less than high school graduate	659	4.4%	235,291	7.8%
High school graduate	5,423	35.9%	931,248	30.8%
Some college or associate's degree	4,731	31.3%	1,004,200	33.2%
Bachelor's degree or higher	4,287	28.4%	852,594	28.2%
<b>Total:</b>	<b>15,100</b>	<b>100.0%</b>	<b>3,023,333</b>	<b>100.0%</b>

Source: U.S. Bureau of the Census, ACS, 2008 - 2011, 3-Year Estimates, Table ID B23006  
(same for municipal-level data).

Looking at educational attainment by employment status, Door County has a higher percentage of individuals than the state with a "high school education" participating in the workforce. (See Table 5.12.) This may be due to the higher number of leisure and hospitality jobs, which generally do not require advanced education. Door County has a lower percentage than the state of individuals between the ages of 25 and 64 participating in the workforce with "some college or associate's degree" and "bachelor's degree or higher." This indicates a possible opportunity loss because there is a pool of working-age individuals with higher education living in the county who are either choosing not to work or who have given up finding employment. Thus, the knowledge typically

associated with higher education that exists in the county may not be benefiting the county's economy.

**Table 5.12: Educational Attainment by Employment Status, 25 - 64 Years of Age, Door County and Wisconsin**

	<b>Door County</b>	<b>Wisconsin</b>	
<b>Less than high school graduate:</b>	<b>659</b>	<b>4.4%</b>	<b>235,291</b>
In labor force:	538	3.6%	151,466
Not in labor force	121	0.8%	83,825
<b>High school graduate:</b>	<b>5,423</b>	<b>35.9%</b>	<b>931,248</b>
In labor force:	4,612	85.0%	746,214
Not in labor force	811	15.0%	185,034
<b>Some college or associate's degree:</b>	<b>4,731</b>	<b>31.3%</b>	<b>1,004,200</b>
In labor force:	3,878	82.0%	849,964
Not in labor force	853	18.0%	154,236
<b>Bachelor's degree or higher:</b>	<b>4,287</b>	<b>28.4%</b>	<b>852,594</b>
In labor force:	3,712	86.6%	750,261
Not in labor force	575	13.4%	102,333
<b>Total:</b>	<b>15,100</b>	<b>100%</b>	<b>3,023,333</b>
			<b>100%</b>

Source: U.S. Bureau of the Census, ACS, 2008 - 2011, 3-Year Estimates, Table ID B23006 (same for municipal-level data).

## **COMMUTING PATTERNS**

In 2010, 8,872 (67%) of the 13,213 employed Door County residents worked within Door County. For the same year, 4,341 employed Door County residents commuted out of the county for work. (See Table 5.13.) Door County's commuting residents primarily traveled to the neighboring counties of Brown and Kewaunee for work, although many traveled to Milwaukee, Outagamie, Dane, Winnebago, Manitowoc, Sheboygan, and Waukesha counties.

**Table 5.13: Commute-To Location of Employed Door Co. Residents**

<b>Location</b>	<b># of Commuters</b>
Brown County, WI	1,310
Kewaunee County, WI	380
Milwaukee County, WI	320
Outagamie County, WI	271
Dane County, WI	192
Winnebago County, WI	187
Manitowoc County, WI	186
Sheboygan County, WI	147
Waukesha County, WI	135
All Other Locations	1,213
<b># of Residents Commuting outside of Door Co.</b>	<b>4,341</b>

Source: U.S. Census Bureau, Center for Economic Studies, 2010 (<http://www.census.gov/population/metro/data/other.html>).

There are 2,436 workers from other counties who travel into Door County to work, primarily coming from Kewaunee and Brown counties. (See Table 5.14.)

**Table 5.14: Commute-From Location of People Working in Door Co.**

<b>Location</b>	<b># of Workers</b>
Kewaunee County, WI	706
Brown County, WI	464
Manitowoc County, WI	136
Milwaukee County, WI	104
Oconto County, WI	91
Outagamie County, WI	74
Marinette County, WI	65
Waukesha County, WI	55
Winnebago County, WI	51
All Other Locations	690
<b># of Non-Resident Workers</b>	<b>2,436</b>

Source: U.S. Census Bureau, Center for Economic Studies, 2010 (<http://www.census.gov/population/metro/data/other.html>).

In 2010, the number of residents leaving Door County for employment was greater than the number of people coming into the county for employment, creating a net worker outflow of 1,905 (4,341 - 2,436).

## BUSINESS AND INDUSTRIAL (RE)DEVELOPMENT INITIATIVES

Economic development activities typically involve at least one of four components: 1) infrastructure improvements; 2) business development; 3) workforce development; and 4) increasing community cash flow. The Door County Economic Development Corporation (DCEDC), established in 1989, is primarily tasked with these activities and any other economic development issues facing the area. In 2005, DCEDC published the Door County Economic Development Adjustment Plan (EDAP), which provides descriptions of potential market opportunities, demographic and economic analysis, and seven strategic recommendations regarding economic development for the county. These strategies are to:

- Create high-paying year-round jobs by retaining and attracting a skilled workforce, ensuring a long-term competitive advantage to businesses in Door County.
- Expand existing businesses and business clusters that have market and growth opportunities.
- Tap into the visitor, seasonal resident, and retiree populations as sources of entrepreneurship and new business formation.
- Establish and implement economic development strategies that will reduce the seasonality of the county's economy, create better balance in the economy, and are consistent with maintaining the quality of life and the natural environment.
- Create economic development and opportunity around future demographic trends for the county.
- Improve the county's basic physical and business infrastructure including bridges, telecommunications, capital formation, the power grid, business networks, and business support systems.

- Attract younger families as permanent residents of Door County to increase the talent pool, create better balance in the future age distribution, and maintain a high level of energy in the county.

The EDAP focuses on the nine market opportunities listed below. It also recommends the intersection of these specific markets with general demographic groups such as seasonal residents, high-end destination tourists, and the aging population.

- Manufacturing/shipbuilding
- Healthcare
- Marine services
- Professional/financial services
- Arts
- Environmental education and services
- Agriculture
- Construction

## **INFRASTRUCTURE DEVELOPMENT**

Community infrastructure is necessary for an effective business support system. Types of community infrastructure include:

- Utilities (e.g., water, sanitary and storm sewer, electric, natural and other gas)
- Transportation services (e.g., roads, parking lots, airports, ports, rail, signage, sidewalks, trails)
- Social infrastructure (e.g., schools, hospitals, government, and other public services)
- Communications infrastructure (e.g., internet, telephone, radio, television, video, satellite, cellular)

Specific types of infrastructure found in Door County, discussed below, are the Sturgeon Bay Industrial Park, incubator space, and high-speed Internet access. More about utilities, communications, and social infrastructure development issues for Door County can be found in Chapter 9, Community Facilities and Utilities; more about transportation issues can be found in Chapter 8, Transportation.

### **STURGEON BAY INDUSTRIAL PARK**

The Sturgeon Bay Industrial Park, located on the west side of the City of Sturgeon Bay, has over 280 acres, with approximately 30 acres still available for development. City-owned industrial property is priced at \$30,000 per acre; incentive credits can be earned during the 3-year finance term if jobs are created or real estate improvements are made. The City offers incentive financing on the purchase of industrial park land with a 0% interest, 3-year loan, and \$10,000 per-acre down payment. Job creation credits of \$4,000 per job are earned for each new full-time equivalent position that pays at least \$15.00 per hour, exclusive of benefits. Real estate investment credits of \$4,000 can be earned for each \$100,000 in real estate improvements. Other incentives available include low-interest Revolving Loan Funds.

### **BUSINESS INCUBATOR**

The Business Development Center is a small business incubator located in the Sturgeon Bay Industrial Park. Tenants pay competitive rents while sharing services and equipment, which allows them to keep overhead costs low. The average stay in the Business Development Center is between three and five years. With 32,000 sq. ft., the Center can accommodate a variety of different businesses. Available equipment and services include:

- Recessed and at-grade truck docks
- Forklift and material handling equipment
- High-speed internet access
- Copier, fax, and mail services
- Private conference room with audiovisual equipment
- Business finance training and consulting

A number of finance and incentive programs are also available, including revolving loan fund programs, development zone tax incentives, and financing eligibility and application assistance.

## **BUSINESS DEVELOPMENT**

Business development refers to business retention, expansion, attraction, and start-up activities. A business retention and expansion program identifies and monitors the existing and changing needs of core employers. It also helps existing businesses remain competitive by appropriately removing or offsetting any obstacles that restrict their growth and through the establishment of workforce development programs, integration of technology, and other initiatives. Business attraction activities are designed to create a competitive and attractive environment for new businesses looking to relocate. Marketing activities promote such attributes as a positive business climate, key quality of life elements, skill level of the workforce, and available services. New business development helps to diversify and stabilize the economic base by creating new jobs. Workforce development programs in Door County are discussed in further detail below.

The DCEDC works with existing businesses on an ongoing basis to determine the health and strength of the local economy. The DCEDC staff and volunteer members serve on a Business Retention committee that works to make local companies stronger by identifying and helping to address their business needs. Staff members also meet with area business owners and leaders to discuss and figure out methods to address a number of business retention topics:

- Issues with government
- Resources that foster business success
- Information for appropriate policy makers
- Trends affecting local business conditions

In addition to its full-time staff, DCEDC partners with a counselor from the Small Business Development Center at the University of Wisconsin-Green Bay who comes to Door County once a month to meet with entrepreneurs and other people wanting to start a business in the county. DCEDC also co-sponsors a multi-week entrepreneurial training course each year, taking students step-by-step through the process of writing a business plan. The Wisconsin Department of Commerce offers two grant opportunities for the creation of business plans for new businesses.

The formation of a Door County “angel” investment group was one of the seven priority action steps identified by the DCEDC staff and Board of Directors from among 75 individual action steps outlined in the EDAP. The specific recommendation calls for the establishment of a local source of equity seed capital to assist in the financing of new and growing businesses in order to encourage entrepreneurs to start or relocate promising businesses to the county. The group will take advantage of several new state-wide resources such as the Wisconsin Angel Network, the Wisconsin Department of Financial Institutions Angel Capital Resource Center, and the Department of Commerce’s Wisconsin Entrepreneurs Network to facilitate deals and locate potential businesses.

DCEDC also administers multiple business financing programs, descriptions of which can be found on their Web site, listed in the Resources and Further Information section at the end of this chapter.

## **WORKFORCE DEVELOPMENT**

Healthy economies need a well-rounded workforce to stay competitive, keep existing businesses strong, retain young people, and raise the area's general standard of living. Generally, workforce development programs are conducted through partnerships with local job centers, local school districts, and institutions of higher education. Occasionally, local employers will provide instructors and equipment for use in these training programs.

Door County's EDAP states that the number one threat to the county's economic future is the projected labor force, which is expected to decline over the next 15 years. The county still has a good base of workers with strong skills, work ethic, and productivity, especially in manufacturing, shipbuilding, and construction. However, employers in both the northeast Wisconsin region and Door County are concerned because a high proportion of their workers are in their 50s and 60s, close to retirement. Their retirement is likely to leave a dearth of experienced and appropriately trained workers.

Multiple efforts to address both the projected labor shortage and gap in job skills have been put into motion by DCEDC in partnership with local business and state, regional, and local agencies. As described earlier in this chapter, the Bay Area Workforce Development Board works in ten counties, including Door County, allocating and coordinating resources to address community workforce needs. DCEDC also oversees a Workforce Taskforce, made up of approximately 30 human resource professionals and business owners from around the county, whose mission is to prioritize and strategize solutions to workforce issues facing local businesses. The Taskforce develops and implements an annual work plan to address current and future workforce needs. Past initiatives have included: sharing regional wage comparison information with local firms, conducting an annual wages and benefits survey of Door and Kewaunee County manufacturing companies, development and delivery of a brochure to entice U.S. Coast Guard personnel to consider making Door County their home after leaving active service, hosting educational sessions on the challenges of a multi-generational workplace, and conducting an employer needs assessment to judge the future workforce needs of local manufacturing companies.

## **WORKFORCE DEVELOPMENT PROGRAMS**

Other workforce development programs in the county are offered through the Door County Job Center and the Sunshine House.

- **Door County Job Center.** The mission of the Door County Job Center is to help county residents achieve and maintain quality employment, and to partner with employers to obtain and maintain a well-trained and qualified workforce. Their goal is to make the recruitment, hiring, and training process easier and more efficient for businesses and job seekers, thereby reducing everyone's costs and time.
- **Sunshine House, Inc.** Since 1971, the Sunshine House Inc. has been providing services to Door County residents with special needs and/or disabilities. Employment services offered include work for pay opportunities that offer a variety of jobs at a pace and skill level adapted to the individual. Much of the work involves mailing services and packaging/assembly. Other activities designed to employ clients in the community include assessments to determine vocational interests and capabilities, job placement, and support in maintaining employment.

## **DOOR/KEWAUNEE BUSINESS AND EDUCATION PARTNERSHIP**

The Door/Kewaunee Business and Education Partnership (DKBEP) promotes business and education connections in Door and Kewaunee counties by providing referral services to match needs and resources. The DKBEP works to help students have the skills and behaviors necessary to succeed in the changing economy, and to ensure that all high school graduates are prepared to enter skilled entry-level employment, technical colleges or training, or post-secondary universities or

colleges. DKBEP programs and projects are:

- Local Advanced Manufacturing Career Promotional Video
- Job Shadow Program
- Career Day (in partnership with Northeastern Wisconsin Technical College)
- Tool Time, Careers on Wheels - career exploration events focused on grades 2-6 in Sturgeon Bay.
- Contact between business and schools - DKBEP can help the schools and students with contacting businesses to help in the exploration of careers, class projects, and guest speakers.
- High School Home Construction Program
- High School Certified Nursing Assistant Program
- Youth Co-op Program
- Career exploration program for high school juniors and seniors
- Advanced Manufacturing Field Study Class
- Business and Technology Education Roundtable (Tech Teachers Council)

## AFFORDABLE HOUSING INITIATIVES

The DCECD has housed an Attainable Housing Committee for nearly fifteen years in order to address issues related to affordable worker housing in Door County. Rising land values and a lack of affordable housing have been identified in multiple plans and visioning sessions as impediments to attracting a skilled workforce to the county. Quality housing stock is important to the economy because owner-occupied housing contributes to a long-term and dependable employee base, while also creating a demand for consumer products and goods.

The Attainable Housing Committee has developed a brochure to consolidate homebuyer assistance information into one source. It has also presented a series of on-site homebuyer awareness programs to employees of local companies. Other projects have included infrastructure improvements for an attainable housing project in the Town of Liberty Grove, and the successful administration of a \$467,500 Community Development Block Grant that funded the Door County Housing Assistance program and zero-percent interest down payment loans for first-time homebuyers in the county.

## COMMUNITY CASH FLOW

Increasing a community's cash flow can positively affect its economic development activities. Individuals moving into an area increases cash flow by bringing in earned income (wage and salary) or transfer income (government payments and investment dividends); or, existing residents may also increase earned or transfer income levels. Organizations or governments can also increase cash flow with new incoming funds, such as increased tourism revenue, increased aid or shared revenues for governmental services, and new contracts, grants, or investments for public and private ventures. Likewise, new business ventures, whether creation of new businesses, jobs, buildings, infrastructure improvements, or other investments, bring new cash flow into a community.

While a variety of bank loans and other debt programs are available to businesses, such programs are often targeted at businesses with existing assets as collateral. The Wisconsin Angel Network strives to increase the number and amount of early stage equity investments in Wisconsin start-ups by offering services to create and strengthen angel networks and to enhance cooperation among early-stage investors. For communities competing for new or relocating/expanding professional firms and high tech businesses that pay high wages – such businesses seen by many as having more potential than traditional manufacturing businesses – the availability of such “high-risk” capital is an important factor. Access to high-risk capital has been identified as a major weakness for Door County, as well as the region, as it seeks to attract new businesses.

A county also has the ability to take on development and infrastructure projects needed to attract new business through debt financing. The ability of a government to finance development and infrastructure projects is calculated by general obligation debt capacity. According to Wisconsin state statutes, the aggregate amount of indebtedness, including existing indebtedness of any municipality, shall not exceed 5% of the equalized value of the taxable property located in the municipality. Door County's tax base is growing at a steady rate, while the county maintains a manageable debt; therefore, the county has access to considerable financing for future projects such as emergency, technology, facilities, or other infrastructure improvements.

Door County's debt in 2011 was \$17.7 million, leaving a debt margin of over \$340 million, or 95%. (See Table 5.15.) Historically, the county had little debt up until 2002, when the county borrowed over \$29 million to build the new Justice Center, dropping the county's debt margin to 89%. Since then, the county's debt margin has always been at 90% or higher.

**Table 5.15: Public Indebtedness, Door County**

Year	Full Value	Debt Limit*	Existing Debt	Debt Margin	% of Debt Available
2000	\$4,382,530,100	\$219,126,505	\$2,050,000	\$217,076,505	99%
2001	\$4,916,696,800	\$245,834,840	\$1,585,000	\$244,249,840	99%
2002	\$5,238,984,300	\$261,949,215	\$29,650,000	\$232,299,215	89%
2003	\$5,579,066,200	\$278,953,310	\$28,075,000	\$250,878,310	90%
2004	\$5,888,738,300	\$294,436,915	\$26,435,000	\$268,001,915	91%
2005	\$6,233,636,100	\$311,681,805	\$25,330,000	\$286,351,805	92%
2006	\$6,683,046,000	\$334,152,300	\$24,190,000	\$309,962,300	93%
2007	\$7,095,359,400	\$354,767,970	\$23,553,446	\$331,214,524	93%
2008	\$7,490,345,500	\$374,517,275	\$21,785,000	\$352,732,275	94%
2009	\$7,430,276,900	\$371,513,845	\$20,515,000	\$350,998,845	94%
2010	\$7,243,313,700	\$362,165,685	\$36,905,000	\$325,260,685	90%
2011	\$7,169,424,900	\$358,471,245	\$17,710,000	\$340,761,245	95%

Source: Wisconsin Department of Revenue, Bureau of Local Finance Assistance, Equalized Value and Debt Limit Value, for years cited.

See <http://www.revenue.wi.gov/report/e.html#equal> for municipal-level information.

\*Debt Limit equals five percent of the full value.

## **ENVIRONMENTALLY CONTAMINATED SITES**

Environmentally contaminated sites can present both issues and opportunities for economic development in a community – sites may be more costly to safely (re)develop, but funding opportunities may be available for cleanup and re-use of those sites.

The DNR's Bureau for Remediation and Redevelopment Tracking System (BRRTS) is an on-line data base that provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin. As of November 2013, the BRRTS reports 629 remediation activity cases in Door County, dating back to 1971, with 57 of those classified as "open" (see definition below).

Remediation status categories are as follows:

- Open - Spills, LUST, ERP, VPLE, and Abandoned Container activities in need of cleanup or where cleanup is still underway.
- Closed Status - Activities where investigation and cleanup of the contamination has been completed and the state has approved all cleanup actions.

- Conditionally Closed Status - Activities where cleanup actions were approved, but the site closure will not be approved until receipt of documentation of abandonment of wells or disposal of soil.
- Historic Spill - Spills where cleanups may have been completed prior to 1996; no end date is shown for these cases.

Remediation activity types reported as occurring in Door County are:

- Leaking Underground Storage Tank (LUST) - A LUST site has contaminated soil and/or groundwater with petroleum, which includes toxic and cancer causing substances. The DNR reports 137 LUST sites in Door County, with 6 of those cases classified as "open"; one site is classified as "conditionally closed" and the rest are "closed." Many of these open cases involve gas stations.
- Environmental Repair (ERP) - ERP sites are sites other than LUSTs that have contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that need long-term investigation, buried containers of hazardous substances, and closed landfills that have caused contamination. The DNR reports 104 ERP sites in Door County, with 50 of those cases still "open" and the rest "closed." Most of these open cases involve orchards with arsenic and lead contaminated soils.
- Spills - A discharge of a hazardous substance that may adversely impact, or threaten to impact public health, welfare, or the environment. Spills are usually cleaned up quickly. The DNR reports 385 Spills sites in Door County, with 181 of those cases classified as "historic" and 204 classified as "closed."
- Voluntary Party Liability Exemption (VPLE) - VPLEs are an elective process in which a property owner conducts an environmental investigation and cleanup of an entire property and then receives limits on future liability for that contamination under s. 292.15, Wis. Stats. The DNR reports one open and one closed VPLE site in Door County.

Please refer to the Web site listed in the Resources and Further Information section for further details on these remediation activity types and their status.

## RESOURCES AND FURTHER INFORMATION

### LOCAL AGENCIES

#### **Door County Economic Development Corporation**

(<http://www.doorcountybusiness.com>)

The DCEDC is a public/private partnership dedicated to improving the economic vitality of the county and its residents. Founded in 1989, DCEDC has a variety of programs and initiatives working to attract new businesses to the area and helping existing businesses create and retain jobs. The Door County Economic Development Adjustment Plan (EDAP) can be found at <http://www.doorcountybusiness.com/edap>.

#### **Door County Job Center (<http://www.doorcountyjobcenter.org>)**

The Job Center assists employers with recruitment, retention, and referral services for labor-related information tailored to their individual needs. The Job Center also assists job seekers with job search, work readiness, job skill building, and employment retention.

#### **Door County Visitor Bureau (<http://www.doorcounty.com>)**

The Door County Visitor Bureau is the official tourism marketing organization whose mission is to generate incremental economic impact for the Door County Peninsula and Washington Island by attracting visitors with strategies that ensure sustainable tourism marketing and management principles.

#### **Northeast Wisconsin Technical College (<http://www.nwtc.tec.wi.us>)**

Founded in 1912, NWTC is a nationally-ranked, two-year public college where students prepare for high-tech careers and/or begin their bachelor's degrees. NWTC is one of 16 colleges in the Wisconsin Technical College System. The College has three campuses, in Green Bay, Marinette, and Sturgeon Bay; five regional learning centers, in Crivitz, Luxemburg, Niagara, Oconto Falls, and Shawano; and several additional sites. NWTC has been the recipient of Workforce Advancement training grants totaling \$58,000 to train 245 workers in welding and metal fabrication at Bay Shipbuilding and Palmer Johnson Yachts.

#### **Sunshine House Inc. (<http://www.sunshinehouseinc.org>)**

Since 1971, the Sunshine House Inc. has been providing services to Door County residents with special needs and/or disabilities.

#### **University of Wisconsin - Extension, Door County (<http://www.uwex.edu/ces/cty/door>)**

The Door County UW-Extension Office works to bring knowledge of the University to Door County citizens and to help people apply this information.

### STATE AGENCIES

#### **Wisconsin Angel Network (<http://www.wisconsinangelnetwork.com>)**

The WAN was founded in January 2005 as an umbrella organization providing services and resources to the early-stage investing community. The mission of WAN is to build early-stage capital capacity throughout Wisconsin, increasing the number and amount of equity investments in Wisconsin's entrepreneurs.

**Wisconsin Department of Commerce – Division of Business Development**  
([www.commerce.wi.gov](http://www.commerce.wi.gov))

The mission of DBD is to help Wisconsin businesses prosper in a marketplace that is subject to constant change. DBD utilizes a combination of technical and financial assistance programs, including: business planning, site selection, initial capitalization, permitting, employee training, research and development, and business expansion.

**Wisconsin Department of Natural Resources - Bureau for Remediation and Redevelopment Tracking System** (<http://www.dnr.wi.gov/topic/brownfields>)

The BRRTS on the Web is the DNR's online database that provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin.

**Wisconsin Department of Workforce Development**  
(<http://www.dwd.state.wi.us>)

The DWD is a state agency charged with building and strengthening Wisconsin's workforce. Primary responsibilities include providing job services, training, and employment assistance to people looking for work, and working with employers on finding the necessary workers to fill current job openings.

**Wisconsin Entrepreneurs' Network** (<http://www.wenportal.org>)

The WEN's mission is to provide seamless access to the state-wide network of entrepreneurial resources and expertise to create new ventures, help grow existing business, and move forward high potential entrepreneurs to enable Wisconsin to be competitive in a global economic environment.

**Wisconsin Housing and Economic Development Authority** (<http://www.wheda.com>) The Wisconsin Legislature created WHEDA in 1972 to meet an increasing need for affordable housing financing. The Legislature broadened WHEDA's purpose in 1983 to include financing for the expansion of business and agricultural activity in Wisconsin.

**Wisconsin Technology Council** (<http://www.wisconsintechnologycouncil.com>)

The Tech Council is the science and technology advisory board council to the Governor and the Legislature. Launched in 2001, the Tech Council was created by a bipartisan act of the governor and the Legislature. It is an independent, non-profit, and non-partisan board with members from tech companies, venture capital firms, and all levels of education, research institutions, government, and law.

**FEDERAL AGENCIES**

**Federal Reserve Bank of Philadelphia** (<http://www.philadelphiafed.org/research-and-data/regional-economy/%20indexes/coincident>)

The Federal Reserve Bank of Philadelphia produces a monthly coincident index for each of the 50 states. These indexes are released a few days after the Bureau of Labor Statistics releases its employment data for the states.

**U.S. Bureau of Labor Statistics** (<http://www.bls.gov>)

The BLS is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics.

**U.S. Department of Commerce - Bureau of Economic Analysis (<http://www.bea.gov>)**

The BEA is an agency of the Department of Commerce and is part of the Economics and Statistics Administration, along with the Census Bureau and STAT-USA.

**U.S. Department of Housing and Urban Development (<http://www.hud.gov>)**

The HUD's mission is to increase homeownership, support community development, and increase access to affordable housing free from discrimination.

**USDA Wisconsin Rural Development Programs (<http://www.rurdev.usda.gov/wi>)**

The USDA offers programs for qualifying applicants, including guaranteed or direct home purchase loans with no down payment or private mortgage insurance, long term fixed-rate mortgages with payment subsidies based on income level, and low-interest loans or grants for home repair or improvements.

## CHAPTER 6: NATURAL RESOURCES

## INTRODUCTION

Natural resources are materials that occur in nature such as water, air, forests, soil, minerals, and geologic features, as well as biological communities comprised of plants and animals. According to the United States Forest Service's Wildland Planning Glossary, natural resources may also be defined as:

- a feature of the natural environment that is of value in serving human needs;
- a feature about which choices must be made;
- original, basic, or primary aspects of nature, not a manufactured or processed product;
- commodities such as timber, water, minerals, or amenities such as scenery or scenic viewing points; and/or
- a relative concept depending on the needs and wants of the planning agent, the planning purpose, the technological means of using a feature, and the ability to make use of a feature given social constraints on its use.

This chapter first discusses general natural resource information, including the area's climate, geology, topography, air quality, and soils. Natural features are discussed next, including the Niagara Escarpment, surface waters, groundwater, wetlands, shorelands, floodplains, woodlands, and biological diversity. Following is discussion on threats to the county's natural features, including climate change, and conservation, protection, and preservation programs at the federal, state, and local levels. Lastly, discussion on non-metallic mineral resources is provided.

## GENERAL NATURAL RESOURCE INFORMATION

### **CLIMATE**

Door County's climate is a cool, humid, continental type in which temperature varies greatly from summer to winter. The surrounding Green Bay and Lake Michigan moderate the climate somewhat so that there are fewer days with extremely high and low temperatures than is common for this latitude. Water cooled during the winter delays spring and early summer while water warmed during the summer delays the first freeze in the fall. Mild and pleasant summers are typical.

About two-thirds of the annual precipitation falls during the growing season or the "freeze-free" period. It is normally adequate for crop production, although droughts are occasionally reported. The climate is generally favorable for dairy farming, fruit production (primarily cherries, apples, and berries), and crops such as corn, small grains, hay, and vegetables.

According to data taken from the weather center at the Sturgeon Bay Experimental Farm, between 1971 and 2000 the mean annual temperature was 43.6 degrees Fahrenheit. Mean seasonal temperatures between 1905 and 2001 were 20.3 in the winter, 65.8 in the summer, 48.4 in the fall, and 41.6 in the spring. The freeze-free season, or growing season, is a median of 148 days with a range between 132 and 161 days, which is considered lengthy for this northern latitude (the 45th parallel runs through approximately the middle of the county) and is due primarily to the moderating effect of Lake Michigan and Green Bay. The average date of the last spring freeze is May 12<sup>th</sup> and the average date of the first autumn freeze is October 8<sup>th</sup>.

Average annual precipitation for the county between 1971 and 2000 was 31.5 inches. For the same

timeframe, the mean number of snowfall inches was 47.9 and thunderstorms averaged about 33 per year. Occasional hail, wind, and lightning damage is also reported. The first snowfall of consequence, an inch or more, is usually in late November. Average annual duration of snow cover is approximately 111 days. This snow cover acts as protective insulation for grasses, autumn-seeded grains, alfalfa, and other vegetation.

Historical temperature and precipitation data for Wisconsin have shown that the state has become warmer and wetter since 1950. According to the Wisconsin Initiative on Climate Change Impacts (WICCI), between 1950 and 2006, Wisconsin's average annual temperature has risen by 1.1 degrees Fahrenheit and average annual precipitation has increased by 3.1 inches. WICCI scientists predict that these trends will continue and even occur at a faster rate, perhaps at a rate where plant and animal species will not be able to adapt. Using circulation models, WICCI scientists project that the warming trend will continue and increase, with future precipitation also likely to increase. More precipitation is likely to occur in the form of rain and freezing rain during the winter, as well as increasing in both frequency and intensity during the spring and fall. By 2050, temperatures for the state are predicted to warm between 6° and 7° Fahrenheit.

The combination of warmer temperatures, more precipitation, and more intense precipitation will have a critical impact on the quantity and quality of the state's water resources, natural habitats, agriculture, and the social and built environment. The state's coastal regions will face unique challenges in the form of shoreline erosion and recession and threats to coastal wetlands due to lower water levels, with Lake Michigan's average water level predicted to decrease by about a foot by the end of the century.

## **GEOLOGY AND TOPOGRAPHY**

Door County's geology and topography have been largely defined by its Silurian dolostone (dolomite limestone) bedrock. Laid down as sediment on the bottom of a warm shallow sea over 400 million years ago, the rock has been modified by weathering and erosion over long periods of time and by the action of continental glaciers during the last several million years. These glaciers smoothed hilltops, filled in valleys, and left deposits of glacial drift of various types and amounts. The result is a complex landscape of Silurian dolostone, prominently exposed in some areas and thinly or even deeply buried by glacial deposits in others. Silurian dolostone is the bedrock of most of Door County, except for a narrow area along the Green Bay shore in the southwest corner of the county where shale and carbonate rocks of the older Maquoketa Formation are exposed.

This Silurian bedrock forms the extensive physiographic feature or ledge known as the Niagara Escarpment. The Escarpment forms the “backbone” of the Door Peninsula, arcs through Canada for more than 900 miles, and finally forms Niagara Falls at the east end of Lake Erie. The Escarpment in Door County is most prominent – and in many places exposed – along the western side of the county, including the Brussels Hill and the 60- to 200+ foot cliffs along or near the Green Bay shoreline, such as in Potawatomi and Peninsula State Parks.

Dolostone is a sedimentary rock similar to limestone, but is slightly harder and dissolves more slowly than limestone. Geologists from the Wisconsin Geological and National History Survey and the University of Wisconsin-Green Bay have found a wide variety of karst features such as sinkholes, enlarged joint openings, and cave systems throughout the bedrock in Door County. These features are the result of small pre-existing fractures in the dolomite bedrock that are slowly enlarged over time by the solution action of slightly acidic groundwater; the Niagara dolomite crevices in Door County have been subjected to considerable dissolution from groundwater activity. The resultant well-developed network of horizontal and vertical crevices provides direct pathways for the effective infiltration of surface water and the rapid flow of groundwater, with velocity in karst aquifers that potentially reach those of surface streams. Furthermore, with surface water able to flow freely into the aquifer due to the presence of surface-level karst features, groundwater in the county has a high chance of becoming contaminated.

Glacial deposits over the land surface of Door County consist of both till and glaciofluvial sediment. Till, or unstratified drift, is a mixture deposited directly by the glacier consisting of an unsorted mixture of clay, sand, gravel, pebbles, and boulders. Till is the surface material of most of the fields and wood lots in the county. Particularly interesting examples of landforms composed of till are drumlins, which are streamlined hills with a blunt nose and a gently sloping tail oriented in the direction of the glacier movement.

Glaciofluvial sediment is composed of particles moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. These deposits are stratified and occur in the county primarily in the form of kames and small eskers. Kames are small hills or short ridges consisting of layers of sand and gravel deposited by a meltwater stream at the margin of a melting glacier. Eskers are ridges of sand and gravel deposited from meltwater running in tunnels below or inside the glaciers. Examples of both can be found in the Kangaroo Lake Moraine which extends westward across the county from Kangaroo Lake. These deposits consist of medium- to coarse-grained sand and gravel with numerous cobbles, boulders, and portions of till.

Other significant topographic features in the county include sand dunes, complexes of beach ridges and swales, and inland lakes. Wetlands of various types and sizes are also scattered throughout the county and are discussed in more detail later in this chapter. In Northern Door, these wetlands primarily drain southeastward into Lake Michigan through small streams. In Southern Door, wetland drainage flows into both Green Bay and Lake Michigan.

## **AIR QUALITY**

Air quality is currently monitored by one EPA station in the county, located at Newport State Park in the Town of Liberty Grove. In 2004, Door County was identified by the U.S. Environmental Protection Agency (EPA) as a "non-attainment" zone for their ozone air quality standard. Non-attainment zones are areas that exceed the EPA's 8-hour ozone national air quality standard intended to protect the public from breathing unsafe air. Ozone is unhealthy to breathe, especially for people with respiratory diseases and children; persons active outdoors are also at increased risk. In addition to the general environmental and health concerns high ozone levels pose, designation as a non-attainment zone may mean additional requirements for businesses wishing to move to a non-attainment area.

Since 2004, research conducted by the Wisconsin Department of Natural Resources (DNR) and the Lake Michigan Air Directors Consortium showed that the majority of Door County's ozone and ozone precursors originate from coal-burning power plants, manufacturing plants, and automobiles operating in northwest Indiana, the Chicago area, and southeast Wisconsin. These pollutants are transported to the county and surrounding area by weather patterns, which in turn elevate ozone levels beyond what they would be otherwise. Given that many of the emissions affecting Door County come from outside of the county, implementing any controls locally is not likely to have much of an impact on reducing ozone levels.

Due to these circumstances, the DNR requested in 2009 that the EPA re-designate Door and Manitowoc counties as "rural transport" attainment areas because their ozone problems are the result of pollutants transported from outside. In order for the EPA to assign this re-designation, the DNR had to show that the amount of local emissions contributing to the violation of the 8-hour standard is relatively minor compared to the amount transported into the area and that local emissions do not contribute significantly to ozone levels measured in other areas. Based on data provided by the DNR, the EPA approved the re-designation requests for both Door and Manitowoc counties in 2010.

## **SOILS**

The soils in Door County originate from glaciation, bedrock weathering, and fluvial activity. Due to the calcareous nature of the parent material, Door County soils are characteristically alkaline. The majority of the soils came from glacial till laid over the Silurian dolostone and are characteristically reddish brown, heavy loam subsoil over a light brown, permeable loam or sandy loam substratum. A smaller portion of the county's soils come from outwash sand and gravel or lacustrine sediment.

Many of the soils in Door County are very shallow, especially in the northern two-thirds of the county. Across most of the county, soils are less than five feet in depth to bedrock; 22% of the soil is less than 18 inches in depth and another 17% is between 18 to 36 inches in depth. The soils in the northern two-thirds of the county are rough and/or shallow, with much of the land cover remaining in woodland or wetland. The soils in the southern one-third of the county are deeper, smoother, and predominantly farmed. The largest acreage of the county's wetlands are also found in this region.

## **SOIL DESCRIPTIONS**

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) is responsible for collecting, storing, maintaining, and distributing soil survey information for privately owned lands in the United States. The *Soil Survey of Door County, Wisconsin*, completed in 1978 by the NRCS, provides detailed soil information and maps for the county. Door County has 75 different soil types, grouped into six general soil associations that have similar patterns of relief and drainage. Map 6.1, General Soil Associations, found at the end of this document, depicts these general soil associations, which typically consist of one or more major soils and some minor soils. Note that the *Soil Survey* is a preliminary reference tool for identifying soil conditions in Door County; actual soil conditions should be verified in the field with on-site inspection and soil testing. The six major soil associations in Door County, per the *Soil Survey*, are:

- Summerville-Longrie-Omena association: Occupies approximately 40 percent of the county; found mostly in northern Door County. Shallow to deep, well-drained, nearly level to moderately steep soils that have a sandy loam or loam subsoil over sandy loam, fine sandy loam till, or dolomite bedrock.
- Emmet-Solona-Angelica association: Occupies approximately 23 percent of the county; found mostly in the southeastern portion of the county. Deep, well-drained to poorly-drained, nearly level to sloping soils that have a loamy sand to silt loam subsoil over sandy loam or loam till.
- Rousseau-Kiva-Markey association: Occupies approximately 6 percent of the county; mainly found along the eastern coast and in southern Washington Island. Deep, well-drained and moderately well-drained, and gently sloping and sloping soils that have a fine sand or sandy loam subsoil over sand or sand and gravel outwash; and very poorly drained, nearly level organic soils.
- Kewaunee-Kolberg-Manawa association: Occupies approximately 11 percent of the county; found in Southern Door, primarily in the southwest. Deep and moderately deep, well-drained and somewhat poorly drained, nearly level to moderately steep soils that have a predominantly silty clay subsoil over silty clay till or dolomite bedrock.
- Deford-Yahara Variant-Carbondale association: Occupies approximately 5 percent of the county; found in the Mink River and northern Baileys Harbor areas and the eastern half of the canal. Deep, poorly drained, nearly level soils that are underlain by fine sand outwash or that have a silt loam subsoil over stratified lake sediments; and very poorly drained, nearly level organic soils.

- Carbondale-Cathro association: Occupies approximately 7 percent of the county; scattered across the county. Very poorly drained, nearly level organic soils (poorly drained mucks).

## AGRICULTURAL SOILS

Soils in Door County are predominantly shallow and feature bedrock outcrops that limit production of agricultural crops. Most of the soils used for agriculture were formed from glacial till and are characteristically a reddish-brown heavy loam subsoil over a light brown, permeable loam or sandy loam sub-stratum. Soils generally not suitable for agriculture are formed of silty clay glacial till and are slowly permeable.

The USDA-NRCS classifies soils as to their suitability for agricultural use. Map 6.2, Prime Agricultural Soils, found at the end of this document, depicts soils in Door County that are considered prime farmland, prime farmland if drained, and soils that are not suitable for farming.

## NATURAL FEATURES

Participants at county-wide visioning sessions held between 2006 and 2007 and in the 2014 update process highly value the county's natural resources. Natural resources are valued for their contribution to the county's visual character, ecological systems, and human health as well as to the area's recreation, tourism, and residential development industries. Door County's natural features include the Niagara Escarpment, surface waters, groundwater, wetlands, shoreland, floodplains, woodlands, dunes, ridge and swale complexes, and biological diversity. Threats to these natural features and protection efforts at the federal, state, and local levels are also discussed in this chapter.

### **NIAGARA ESCARPMENT**

Door County is defined in many ways by the Niagara Escarpment, a 650-mile long ridge threading through portions of Wisconsin, Michigan, Ontario (Canada), and New York. (See Figure 6.1.) This ridge is the edge of a thick series of hard dolomite layers that resisted erosion and stand up in relief as a prominent line of bluffs. In geological terms, it is called a cuesta, or a sickle-shaped rock feature with a steep face on one side and a gentle slope on the other. This formation is comprised of layers of shale, limestone, and dolostone rock formed 400 to 500 million years ago, during the Silurian age, under a warm shallow sea. Erosion of adjacent softer rock created the steep bluffs and rock face that is seen along the western side of the Door Peninsula. After the cuesta was formed, parts of the ridge were covered by glacial till, making evidence of the escarpment more difficult to identify. Whereas the western side of Door County portrays the cuesta ridge, the eastern side of the county portrays the cuesta slope, evident in the many wetlands and low-lying lands found on that side of the county. Beyond Door County, the cuesta continues to slope downward, underneath Lake Michigan, and reaches a low point in the middle of lower-Michigan (called the Michigan Basin).

The Niagara Escarpment is ecologically rich with rare species, significant wetland areas, and an abundance of unique eco-systems and natural communities. Cultural resources include archeological sites, pictographs (rock art), mounds, petroglyphs, maritime structures and wrecks, various lime kilns and caves, and historic farmsteads.

**Figure 6.1: Niagara Escarpment**

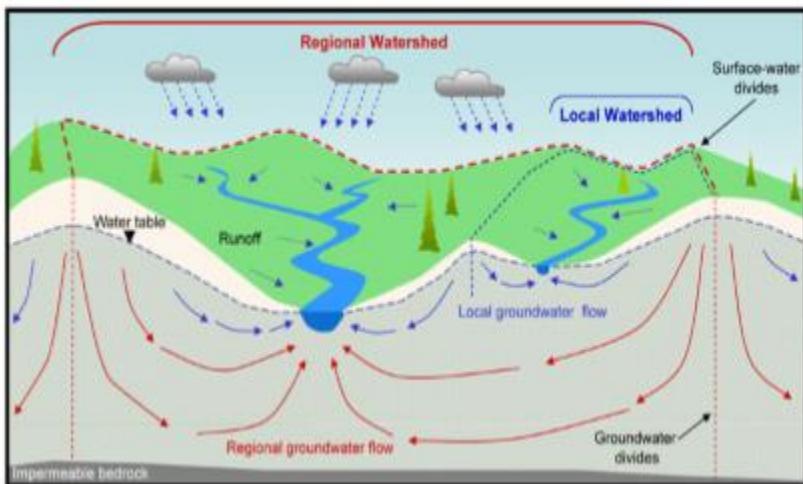
Source: Bay Lake Regional Planning Commission, 2001.

## **SURFACE WATERS**

Door County's four major watersheds flow into Lake Michigan and many inland waterbodies. The county's economy benefits greatly from surface water features, whether it happens directly through commercial or sport fishing and shipping routes, or indirectly through general tourism and recreation.

## **WATERSHEDS**

The DNR applies the watershed approach – the presence, movement, and interaction of water in the landscape – in categorizing drainage patterns within the state. (See Figure 6.2.)

**Figure 6.2: Watersheds and Drainage Patterns**

Source: Central Wisconsin Groundwater Center, Kevin Masarik.

The two main management units used by the DNR are basins that are further subdivided into watersheds. Basins and watersheds are interconnected areas of land draining from surrounding ridge tops to a common point such as a lake or stream to their confluence with a neighboring watershed. All lands and waterways can be found in one basin and watershed or another. These watershed units are used in the DNR Priority Watershed Program, as described later in this chapter.

Wisconsin is divided into three major basins, each identified by the primary waterbody into which the basin drains; they are the Lake Superior, Mississippi River, and Lake Michigan basins. Door County lies entirely within the Lake Michigan Basin, which encompasses a large portion of eastern Wisconsin. Within Door County there are four major watersheds: 1) Upper Door County Watershed; 2) Red River and Sturgeon Bay Watershed; 3) Ahnapee River Watershed; and 4) Stony Creek Watershed. Map 6.3, Watersheds, at the end of this document, displays the location of each. Note that a majority of the county's land area lies in the Upper Door County Watershed.

### **LAKE MICHIGAN AND INLAND WATERBODIES**

The five Great Lakes consist of Lakes Superior, Michigan, Huron, Erie, and Ontario. Combined, the Great Lakes contain approximately 20% of the earth's fresh surface water, 90% of North America's fresh surface water, and support a \$15 billion economy. The Great Lakes Region is comprised of eight states that all border on at least one of the five lakes, including Wisconsin, and one Canadian province.

Lake Michigan is the third largest of the Great Lakes by surface area and the sixth largest fresh waterbody on Earth. Door County, a peninsula surrounded by Lake Michigan and Green Bay, has approximately 300 miles of coastal shoreline, one of the highest amounts of coastal shoreline miles of any county in the United States. The lake is an environmental and ecological resource for humans and natural communities, providing habitat to a wide variety of aquatic as well as terrestrial plants and animals. The lake is a resource for humans living in and visiting Door County specifically with regard to its role in the ground/surface water cycle, as a food source, and for the recreational activities it supports. Lake Michigan is an ecosystem that greatly affects our way of life, as well as all aspects of the natural environment, from weather and climate to wildlife and habitat.

Door County has a total of 25 named inland lakes, ponds, swamps, and marshes and 37 named rivers, creeks, streams, and springs draining into Lake Michigan. Table 6.1 lists the county's named lakes, ponds and marshes; Table 6.2 lists the county's named rivers, creeks, streams, and springs. Map 6.4, Surface Water Features, located at the end of this document, illustrates all the surface water features listed in these tables.

### **GROUNDWATER**

Groundwater is defined as the useable quantity of water in the ground, contained in interconnected pores located below the water table (the underground plane beneath which earth materials, such as soil or rock, are saturated with water). The dominant source of groundwater in Door County is the Silurian dolostone bedrock. The second source of groundwater in Door County is the Ordovician aquifer, which lies beneath the Silurian aquifer in Maquoketa Shale bedrock. Some residents in the southwestern portion of the county draw water from the Ordovician aquifer due to limited access to the Silurian aquifer; such wells are deeper and therefore more expensive than those accessing the Silurian aquifer.

**Table 6.1: Lakes, Ponds, and Marshes, Door County**

Name	Acres	Max. Depth
Arbter Lake	16	2
Gunnerson (Big)		
Marsh	31	2
Bley Pond	5	3
Bradley Lake (Little)	19	7
Butler Pond	3	2
Clark Lake	868	25
Coffee Swamp	2	2
Dunes Lake	80	1
Europe Lake	273	10
Forestville Millpond	65	5
Kangaroo Lake	1,123	12
Krause Lake (Mud)	4	24
Little Lake	24	6
Lost Lake	91	5
Mackaysee Lake	347	27
Mink River Lake	70	13
Mud Lake	155	5
Pinney Lake	2	6
Pluff Pond	1	5
Schwartz Lake	30	4
Thorp Pond	6	3
Upper Lost Lake	5	3
Voecks Marsh	19	2
Wickman (Little)		
Marsh	14	2
Zoo Lake	1	3

Source: *Door County Land and Water Resource Management Plan, 2011 - 2020.*

**Table 6.2: Rivers, Creeks, Streams, and Springs, Door County**

Name	Length in Miles	Width in Feet
Ahnapee River	6.0	2.5
Bear Creek	4.0	---
Big Creek	13.0	4.5
Ephraim Creek	1.5	9
Fabry Creek	1.0	4
Fish Creek	1.0	8
Geisel Creek	3.6	20
Goldenrod/Fischer Creek	1.17	---
Heins Creek	2.9	14
Hibbards Creek	5.4	15
Hidden Spring	1.0	2
Kayes Creek	7.0	4
Krueger Creek	1.0	---
Larson Creek	4.0	---
Lily Bay Creek	3.4	5
Little Creek	---	---
Logan Creek	4.8	---
Lost Creek	2.5	8
Malvitz Creek	1.0	---
May Creek	3.0	---
Mink River	11.1	---
Peil Creek	---	---
Reibold Creek	---	---
Renard Creek	6.0	6
Samuelson Creek	1.3	---
Schuylerville Creek	4.0	27
Shivering Sands Creek	1.1	---
Silver Creek - Brussels	---	---
Silver Creek - Forestville	5.0	---
Silver Creek - Union	---	6
Stony Creek	13.6	6
Strawberry Creek	1.6	12
Sugar Creek	9.0	9
Three Springs Creek	2.3	4
Twin Harbor Creek	1.0	---
Whitefish Bay Creek	1.1	28
Woodard Creek	4.0	---

Source: *Door County Land and Water Resource Management Plan, 2011 - 2020.*

## **WETLANDS**

Wetlands act as natural pollution filters for lakes, streams, and drinking water; act as groundwater recharge and discharge areas; retain floodwaters; provide habitat for many plants and animals; and provide scenic open spaces. Other common names for wetlands are swamps, bogs, and marshes. Wetlands store flood waters and filter water from precipitation before it enters lakes and streams. Some wetlands also recharge local groundwater aquifers. By slowing water movement, wetlands reduce the likelihood that heavy rainfall or spring snowmelt will cause erosion and flooding. Wetlands also retain soil and hold nutrients that would otherwise promote excessive weed growth and algae blooms in lakes and streams. These nutrients, when held in the wetlands, produce a heavy growth of vegetation that provides nesting sites, food, and cover for waterfowl, small mammals, and many other types of wildlife. Wetlands also provide recreational opportunities for humans such as wildlife observation, hiking, hunting, etc.

Wetlands located in Door County are shown in Map 6.5, Wetlands, found at the end of this document.

## **STATE-DESIGNATED SIGNIFICANT COASTAL WETLANDS**

Due to the role wetlands play in improving and maintaining the health of Green Bay, Lake Michigan, and the entire Great Lakes ecosystem, the DNR has identified ecologically Significant Coastal Wetlands along Lake Michigan as a way to inform planning efforts. Wetlands located within close proximity to the coast provide rich habitat for plants and animals and greatly influence the larger processes of the Great Lakes ecosystem. As transition zones between land and water, coastal wetlands are often rich in species diversity and provide critical habitat for migratory and nesting birds, spawning fish, and rare plants.

Door County has a number of extensive coastal wetland complexes, the majority of which are located on the shoreline of Lake Michigan. Those identified as Significant Coastal Wetlands by the DNR are listed in Table 6.8 at the end of this chapter.

## **SHORELANDS**

Shorelands are valuable environmental resources for humans as well as plants and animals, both aquatic and terrestrial. Since 1968, the State of Wisconsin has required counties and incorporated communities to adopt shoreland zoning regulations to help protect shorelands from problems associated with development. For more information on shoreland and floodplain zoning ordinances in effect in Door County, see Chapter 10, Land Use. For the purposes of shoreland and floodplain zoning regulations, shorelands are defined by the state as land areas within a specified distance from the ordinary high water mark of navigable waters as follows:

- 1,000 feet from a lake, pond or flowage; and
- 300 feet from a river or stream or to the landward side of the floodplain, whichever distance is greater.

Door County contains approximately 300 miles of Lake Michigan and Green Bay coastal shoreline, as well as over 300 miles of other shorelines along inland lakes, ponds, and streams. Shoreland areas are illustrated on Map 6.6, Shorelands and Floodplains, found at the end of this document.

## **FLOODPLAINS**

Floodplains are defined by the DNR as the land calculated to be covered by floodwater during the regional so-called 100-year flood. This name is somewhat misleading since the 100-year flood actually has a 1% chance of occurring in any given year. The floodplain includes the floodway and the flood fringe. The floodway is the channel of the river or stream and those portions of the floodplain adjoining the channel required to carry and discharge the flood waters or flood flows associated with the regional flood (NR 116.03, Wis. Admin. Code). The flood fringe are areas inundated by the flood, but which do not experience a strong current.

Floodplains, as identified by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), provide for stormwater retention, groundwater recharge, habitat for various types of waterfowl and wildlife, and recreational uses. Furthermore, floodplains serve to provide flood and erosion control by storing floodwaters, reducing flood velocities, diminishing flood peaks, and reducing sedimentation.

Buildings constructed in the floodplain reduce the floodplain's storage capacity. A reduction in the floodplain's storage capacity can cause future flood events to be of higher intensity, allowing flooding outside of the historic floodplain. As a way to help protect floodplains, s. 87.30(1), Wis. Stats. and NR116, Wis. Admin. Code, adopted in 1986, require counties, cities, and villages to adopt floodplain zoning ordinances that address problems associated with development in floodplain areas.

Map 6.6, Shorelands and Floodplains, illustrates Door County areas mapped by FEMA as being potentially located in the floodplain. For more information on floodplain ordinances in effect in Door County, see Chapter 10, Land Use.

### **WOODLANDS**

Historic woodlands in Door County included maple-basswood-beech forest, hemlock-hardwood forest, northern white cedar swamp, and hardwood-conifer swamp. Subsequent logging, farming, and development have changed the landscape significantly. Door County currently has approximately 113,900 acres of woodland, covering about 37 percent of the landmass. These woodlands consist of predominantly maple-basswood, with smaller amounts of lowland hardwoods, oak, aspen-birch, and lowland conifers. All types of woodlands provide aesthetic views, wildlife habitat, and recreation. Woodlands can also maintain watershed cover, provide shade, serve as a windbreak, help reduce soil erosion, act as a noise barrier, screen development from view, and offset carbon emissions. Map 6.7, Woodlands, found at the end of this document, illustrates the county's woodlands, including naturally grown and planted areas.

Woodlands are managed in Door County through several DNR initiated or administered plans and programs including the Door County Comprehensive Forestry Plan, Managed Forest Law Program, and State Nursery Program. The Door County Planning Department also administers woodland cutting regulations through the Door County Zoning Ordinance.

### **DUNES**

Great Lakes coastal dunes are considered the most extensive freshwater dune assemblage in the world. Continental glaciers covering the Great Lakes basin for more than 1 million years provided the major source of sand for these dunes, most of which were formed over 3,000 years ago. Glacial movement and meltwater transported smaller particles of bedrock from the northernmost regions of North America to the Great Lakes region. Once the glaciers retreated, wind and waves sorted the bedrock particles along the beach, pushing the small-to-medium sized bedrock particles (sand) inland to form the dune systems and leaving the larger cobbles and sand particles near the water.

These dunes are constantly being constructed and reshaped by forces of nature, primarily the wind. There is little to hinder the wind's momentum as it blows across Lake Michigan and hits the shore, picking up and pushing grains of sand inland. This sand is later dropped as the wind moves over land and loses velocity. In time, a pile is formed that gradually grows into a tall sand dune with a gently sloping upwind face and steeply sloping backside. When the wind crests at the top of the dune, it gains momentum again and picks up more grains of sand as it continues blowing further inland. Then, losing speed as it travels over flat land, the wind drops the sand creating smaller dunes behind the foredunes.

There are at least four major zones within a dune complex: beach, foredune, trough/interdunal pond, and backdune. Beaches are areas where water meets land, and the foredune is the first ridge behind the beach. Foredunes are above wave action most of the time, but are still subject to storm waves. Troughs occur behind the foredune, where interdunal wetlands or shallow ponds sometimes form. Backdunes are more stabilized because they are protected from intense wind erosion, allowing vegetation to take hold.

Dune complexes provide for microenvironments that vary in temperature, moisture, and light intensity, creating one of the most diverse ecosystems in the Great Lakes and Door County. Some rare and endangered species, such as the Pitcher's Thistle and Piping plover, rely on the dune environment for their survival. Beach and dune environments are also exceptionally attractive to humans because of their development potential and aesthetics. Dune complexes can be easily damaged and functionally compromised by excessive use, incompatible developments, and the spread of invasive species such as Lyme grass and common reed. Intertidal wetland communities, which support multiple rare species, are fragile and sometimes short-lived because they can easily be damaged by incompatible uses or hydrological disruption.

### **RIDGE AND SWALE COMPLEXES**

Ridge and swale complexes are rare natural features closely associated with Great Lakes shorelines and sometimes associated with dune complexes. They consist of a series of narrow parallel sandy ridges alternating with low swales. Vegetation on the dry ridges varies and can support open herbaceous or shrub communities on the semi-stabilized dunes closest to the shoreline, dry forests dominated by pines and oaks farther inland, and mixed forests of hardwoods farthest away from the shore. Ridge and swale complexes host unique and diverse habitats for a wide variety of plants, amphibians, reptiles, and breeding and migratory birds.

Swales near the shoreline typically have deeper water and are more open, supporting marsh or sedge meadow communities. Only the deepest swales closest to the shore may be in contact with Great Lakes water. Swales further away receive water via small streams or groundwater seepage from areas upslope or support a shrub community. Forested wetlands may be present on swales that are furthest away from the water.

Probably the best known example of a ridge and swale complex in Door County is located at The Ridges Sanctuary, a preserve occupying just over 1,600 acres along the bay of Baileys Harbor, Lake Michigan, in the northern portion of the Town of Baileys Harbor. The ridges run parallel to the shoreline of Baileys Harbor, and extend inland about one mile. Cooling breezes from Lake Michigan help to sustain a boreal forest, a forest type that is more characteristic of most of Canada.

### **DRUMLINS**

Drumlins are landforms created over 15,000 years ago beneath the moving ice of the glacial Green Bay Lobe. Drumlins are composed of glacial till and are generally teardrop-shaped hills with a blunt nose and a gently sloping tail oriented in the direction of the glacier movement. Drumlins can be found south and east of Ellison Bay, along Highway 42 in Ephraim, northwest of Kangaroo Lake, and between the City of Sturgeon Bay and the Ahnapee River.

### **BIOLOGICAL DIVERSITY**

Door County boasts unusual biodiversity, defined by the DNR as the entire spectrum of life forms and the many ecological processes that support them. The DNR Bureau of Endangered Resources maintains Wisconsin's Natural Heritage Inventory (NHI), established in 1985 by the Wisconsin Legislature, a program responsible for maintaining data on the locations and status of rare species, natural communities, and natural features in Wisconsin. A natural community, or wildlife habitat, is an assemblage of different plant and animal species living together in a particular area, at a particular time, in a specific habitat. Species become rare for a variety of reasons, including habitat

loss, habitat degradation, highly specialized habitat needs, sensitivity to disturbance, genetic problems, exploitation, persecution, predation, competition, and parasitism.

## NATURAL COMMUNITIES

The location and abundance of ecological communities in Wisconsin are determined by environmental factors, such as climate, geology, landform, soils, and hydrology, which interact with natural disturbance events, including windstorms, fires, droughts, floods, and insect infestations. The NHI deems natural communities to be important because of their undisturbed condition, size, what occurs around them, or for other reasons. Communities may be named for their dominant plant species (for example, pine barrens, sedge meadows, and oak savannas), a prominent environmental feature (Great Lakes Dune, Dry Cliff), or some combination of these factors. Communities range in size from less than one acre to thousands of acres. Communities are also dynamic and always changing. Of the 108 natural communities identified by the NHI as significant in the state, 32, or 30%, are found in Door County. (See Table 6.7 at the end of this chapter for a list of natural communities located in the county.) The NHI provides lists of natural communities found in each county, and the rare species (discussed below), but it does not identify specific locations in order to protect these rare and sensitive resources.

*Municipal-level data may be found at <http://dnr.wi.gov/topic/NHI/CountyDatahtml>.*

## RARE SPECIES

In addition to the 32 significant natural communities identified in Door County, the NHI also inventoried 145 rare aquatic and terrestrial animals and plants in the county. The NHI list contains species known or suspected to be rare in natural communities native to Wisconsin. It includes species legally designated as endangered or threatened as well as species in the advisory "special concern" category. The list is dynamic and updated as often as new information regarding the biological status of species becomes available. (See Tables 6.6 and 6.7 at the end of this chapter for lists of rare aquatic and terrestrial plants and animals in Door County.)

A DNR analysis of the distribution of state endangered and threatened species indicates that Door County contains the richest rare species composition per square mile. There are two plant species in Door County that are on both the state and federal endangered species lists: the Dwarf Lake Iris and the Pitcher's Thistle (also referred to as dune thistle). The Dwarf Lake Iris is found on partially shaded sandy-gravelly soils along lake shores and the Pitcher's Thistle is found on stabilized dunes and blowout areas along the Lake Michigan shoreline.

One animal species found in Door County, the Hine's emerald dragonfly, is on both the state and federal lists of endangered species. In 2007, the U.S. Fish and Wildlife Service designated critical habitat for the Hine's emerald dragonfly in Wisconsin, Illinois, and Michigan. There are eleven Hine's emerald dragonfly critical habitat units in Wisconsin; ten of them are in Door County, where the county's coastal springs and wetlands provide rich habitat. Groundwater must remain clean and abundant in order to protect the dragonfly's habitat; note that groundwater discharge to a wetland can originate from nearby or from several miles away. The UW-Extension's Wisconsin Geological and Natural History Survey has mapped the groundwater recharge areas that feed the wetlands where the dragonfly larvae live in Wisconsin. Information and maps pertaining to the Hine's emerald dragonfly critical habitat and the groundwater recharge area study can be found at the Web sites listed under U.S. Fish and Wildlife Service and the Door County Soil and Water Conservation Department in the Resources and Further Information at the end of this chapter.

Another animal species found on both the state and federal lists of endangered species is the Piping plover. Piping plovers are tiny shorebirds that inhabit large, isolated beaches with sparse vegetation, preferring the shores of Lakes Michigan and Superior. Plovers have light sandy-gray colored back feathers, white underparts with a white wing stripe, a pale-orange, black-tipped bill,

and pale-orange legs. From the late 1800s to early 1900s, shooting of plovers for sport and the millinery trade contributed to serious population declines throughout North America. Populations began to recover when the Migratory Bird Treaty Act of 1918 made it illegal to hunt them, but humans interfered a second time when increased use of beaches where plovers nest caused populations to decline again. By 1948, only one pair of plovers was known to nest in Wisconsin (in Door County). Since then, Piping plovers have been absent as nesting birds from the Wisconsin shore of Lake Michigan, until 2012 when a pair was discovered nesting in northern Door County.

## THREATS TO NATURAL FEATURES

This section provides an overview of threats to Door County's natural features, with discussion on climate change intertwined. As discussed previously, WICCI reports that Wisconsin's climate has become warmer and wetter since 1950. For the coastal region, including Door County, temperatures are expected to keep rising, resulting in increased evaporation, less ice cover, and greater wind strength. WICCI is less certain about precipitation, but generally states that rain events, especially in spring, have become more frequent and intense and will continue along that trend. Overall, WICCI predicts more precipitation, but that evaporation will outpace the increased precipitation because of warmer temperatures and reduced ice cover.

Discussed in this section are existing and magnified impacts from these changes, such as lower water levels, shoreline recession and damage, flooding and wetland destruction, runoff, groundwater quality and quantity, and reduced biodiversity. This discussion provides only a broad overview of these complicated issues; a more detailed description can be found in the report *"Wisconsin's Changing Climate: Impacts and Adaption,"* for which a link is provided in the Resources and Further Information section.

### **LAKE MICHIGAN WATER LEVELS**

Overall, Great Lakes water levels have been dropping and Lake Michigan has in recent years faced near historic lows, negatively impacting the economy and environment in multiple ways, including increased transportation expenses, reduced wildlife habitat, and the spread of invasive species. In 2013, Lake Michigan's water level dropped to 21 inches below the long-term average, as measured every year in May, from 1918 - 2011, but was still 11 inches above the lowest recorded monthly mean measured in 1964. Decreasing water levels in Lake Michigan have been attributed to climate change, new rainfall patterns, and gravel mining and dredging along the St. Clair River.

On average, water levels in Lakes Michigan and Superior are projected to fall another 0.8 to 1.4 feet by the end of the century, with Lake Michigan falling more than Lake Superior. Although average water levels are expected to be even lower by the end of this century, average water levels are predicted to vary greatly from decade to decade, with both high- and low-water decades.

### **SHORELINE RECESSION AND DAMAGE**

Reduced ice cover combined with an increase in wind strength will expose shorelines to larger waves for longer periods of time, resulting in shoreline erosion. Additionally, predicted immoderate rain events will make shorelines exceedingly vulnerable to erosion as the soil will retain moisture more of the time, making it unstable and inordinately prone to erosion. Shoreline erosion eventually leads to shoreline recession, the change in distance from a shoreline feature's original position to the eroded position, the most visible aspect of erosion. However, recession does not immediately follow erosion and can take years to occur. Shoreline damage can also occur with fluctuating water levels and excessive wave impact. As waves down-cut the lakebed during low-water times, shoreline erosion happens more quickly; then when water levels rise again, waves can reach further inland and lead to shoreline damage.

## **FLOODING AND WETLAND DESTRUCTION**

While it is generally agreed that water levels on Lake Michigan will decline overall by the end of this century, coastal flooding is likely to occur during high-water decades due to a combination of wind, waves, and water levels. Warmer, wetter winters combined with immoderate storm events will generate more runoff in the spring, leading to longer periods of flooding in streams and wetlands. Under normal circumstances, coastal wetlands help prevent floods, protect shorelines, and recharge groundwater supplies, but the effects of climate change are expected to reduce their effectiveness. With falling water levels, stream channels will erode, delivering more sediment downstream that could potentially bury aquatic communities located within wetlands. In high-water decades, rising water levels could either drown or seriously erode coastal wetlands. Further discussion on the ecological impacts of climate change are discussed at the end of this section.

## **NONPOINT SOURCE POLLUTION (RUNOFF)**

The two types of water pollution that contribute to impaired water quality are point source and non-point source. Point source pollution created by municipal and industrial operations discharging wastewater to surface water or groundwater is regulated by the DNR through its Pollutant Discharge Elimination System (WPDES) permit program. Nonpoint source pollution, or runoff, is much more difficult to regulate because the source of pollution is not identifiable.

The DNR describes runoff as water from rainfall or melting snow that flows across the landscape, washing soil particles, bacteria, pesticides, fertilizer, pet waste, oil, and other toxic materials into lakes, streams, and groundwater. This is called "nonpoint source pollution," because the pollution cannot be traced to one definitive point or source. Conversely, point source pollution is that which originates from a definitive point such as pipes, drains, ditches, wells, containers, or other identifiable sources that serve as direct conduits of pollutants into the water. Nonpoint source pollution is the result of a variety of human activities, including the use of fertilizers, pesticides, and herbicides on lawns and farm fields; plowing fields for crops and other agricultural activities; driving and maintaining cars; constructing buildings and roads; mining; and maintaining roads in the winter. Actual pollutants found in runoff from agricultural and developed lands include sediment, phosphorus, nitrogen, bacteria, and pesticides.

According to the DNR, urban and rural nonpoint source pollution is the leading cause of water quality problems in Wisconsin, degrading or threatening an estimated 40 percent of the streams, 90 percent of the inland lakes, many Great Lakes harbors and coastal waters, many wetland areas, and substantial groundwater resources in Wisconsin. To make matters worse, the WICCI predicts an increase in the size and frequency of rainfall, with a shift towards more rainfall in the winter and spring, creating even more runoff.

## **SEDIMENTATION AND PHOSPHORUS**

Two of the greatest problems associated with runoff are increased amounts of sedimentation and phosphorus, a type of nutrient. Sedimentation reduces visibility for the fish and birds that rely on water clarity for hunting. Sedimentation also makes growth difficult for submerged vegetation, resulting in decreased vegetation and degraded habitat for all types of insect and fish species. High phosphorus conditions, identified by WICCI as one of the greatest threats to the Green Bay aquatic system, greatly increases algae growth. In particular, phosphorus generates a type of blue-green algae that outcompetes more desirable algae, contributing to reduced light penetration and lower oxygen concentrations in the water. These conditions disrupt the food chain, sometimes resulting in a less desirable fish community where bottom-feeding fish, such as invasive carp, outcompete native species, such as walleye.

The EPA attributes most of the phosphate load into our waterbodies as coming from nonpoint sources, such as runoff from farmland, lawns, and failing septic systems. Much of it also comes from sewage treatment plants, despite water treatment techniques intended to reduce phosphorus

outflow. Prior to 2010, the main household sources of phosphate were lawn fertilizer and detergents formulated for automatic dish washers (containing up to 8% phosphate). In both applications, the use of phosphate has been in general deemed unnecessary.

In 2010, two Wisconsin laws went into effect that essentially banned phosphorus from lawn fertilizers and automatic-dishwasher detergent, except in limited circumstances. Stores are prohibited from displaying turf fertilizer containing phosphorus, although they may keep some in stock for the few circumstances where fertilizer containing phosphates may be sold. People who have a soil test showing that their soil is deficient in phosphorus and people installing new lawns may buy the fertilizer with phosphorus. The law does not apply to agricultural production, pastures, and home gardens. A second law that went into effect in 2010 limits phosphorus content to no more than 0.5% in automatic-dishwasher detergent sold in Wisconsin, although commercial and industrial detergents are exempt. Many other states also enacted a similar law in 2010, prompting the dishwasher detergent manufacturing industry to place what is essentially a nation-wide voluntary ban on home-use detergent containing phosphates.

While the effect of these laws on the phosphorus content in our waterbodies remains to be seen, agricultural and urban runoff are still a major source of phosphates and other pollutants. Both voluntary and regulatory programs implemented through the DNR's Runoff Management program are in effect. Originally implemented in 2002, the Runoff Management Program writes and revises administrative rules for the prevention and management of polluted runoff from agricultural practices, stormwater drainage, construction sites, developed urban areas, and other nonpoint sources. These rules often reflect the requirements of the federal Clean Water Act. Nearly all municipalities and farmers are affected by the rules in one way or another. As described later in this chapter, the DNR runoff programs are implemented locally by the SWCD.

### **E. COLI CONTAMINATION**

*E. coli* contamination has been found to be another problem associated with runoff. In 2002, the Door County Public Health Department began to monitor *E. coli* in the water at many Door County beaches because of an outbreak of a gastrointestinal illness traced back to Nicolet Beach in Peninsula State Park, one of Door County's most popular beaches. In 2003, the SWCD began an extensive beach contamination source identification effort, collecting data at 31 beaches between 2003 and 2006, and at 34 beaches in 2007. The sampled beaches are located along both sides of the peninsula, on Washington Island, within the Sturgeon Bay Canal, and at three inland lakes. A final report published in 2007 notes that the most contaminated water samples came from shallow waters, indicating onshore sources of contamination. The report goes on to identify stormwater discharge during and after rain events as one of the clear sources of *E. coli* contamination in beach water throughout the county.

### **CLADOPHORA**

Door County has seen increasing amounts of cladophora along its beaches – a filamentous, green, slimy algae that stinks when it starts to rot. Cladophora is a native aquatic plant that has grown naturally in Door County waters for hundreds of years in relative harmony with other plants. More recently, two major human-induced environmental impacts have escalated the amount of cladophora to nuisance levels: the introduction of the non-native zebra mussel and the surge of phosphorus in the waters.

The zebra mussel, introduced to Lake Michigan through the bilge waters of European ships, procreates quickly and eats by filtering particles out of the water, making it distinctly clearer than it would be naturally. Sunlight then penetrates deep into the water, expanding the habitat where cladophora can grow from depths of 10 feet, to depths of up to 45 feet, allowing for massive expansion. In addition to enabling cladophora growth by filtering the water, the zebra mussel carpets sandy lake bottoms, providing additional hard surfaces where cladophora filaments can

attach. Lastly, the zebra mussel filters phosphorus into a form that feeds the cladophora.

### **GREAT LAKES WATER DIVERSION**

A threat to water quantity comes from communities located outside the Great Lakes basin, including other states and countries, looking to divert water to help them with their water shortages. Diverting water outside of the Great Lakes basin is a problem because there is no natural way to return it to the lake and future diversions would only contribute to the dropping water levels. When Great Lakes water is used by communities within the basin, it generally makes its way back to the lake it came from.

States within the Great Lakes region, and Canadian provinces bordering the Great Lakes, have been working together to address and manage potential water diversion. In 1983, governors from the Great Lakes region joined forces to create the Council of Great Lakes Governors, a non-partisan partnership between Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. Subsequently, the Premiers of Ontario and Québec also joined with the governors. In December 2005, following a nearly five-year negotiation, the council reached agreement on the Great Lakes-St. Lawrence River Basin Water Resources Compact. This compact provides a comprehensive management framework for achieving sustainable water use and resource protection. The council also reached a similar, good faith agreement with Ontario and Québec, which the provinces are using to amend their existing water programs for greater regional consistency. During 2007 and 2008, each of the eight state legislatures ratified the compact. Federal legislative approval was completed in 2008 by the U.S. Senate and the U.S. House of Representatives. On October 3, 2008, President George W. Bush signed a joint resolution of Congress giving consent to the Great Lakes-St. Lawrence River Basin Water Resources Compact, which became law on December 8, 2008.

Due to the legal and regulatory barriers, technical difficulties, and prohibitive cost, the likelihood of diverting water out of the Great Lakes region remains low at this time. The greater threat comes from communities bordering the basin that are experiencing water shortages and quality issues. During the 2007-2008 Wisconsin legislation session, there was a push to pass legislation that would provide greater protection than the federal compact, called the Strong Compact for a Strong Wisconsin. This proposed legislation, described below, lost momentum as the Great Recession was emerging at the same time and took priority. The legislation included:

- standards for environmentally responsible return flow;
- mechanisms for managing and regulating in-basin water use;
- requirements for communities seeking a diversion to meet enforceable, demonstrable water conservation standards;
- requirements for communities looking to extend or build new water supply systems as part of a diversion request to comply with current regional water supply and quality plans;
- clarification of the compact's treatment of bottled water withdrawals; and
- provisions for adequate citizen participation in a practical and protective manner.

Currently, the DNR is reviewing its first application, received in May 2010, for water diversion from Lake Michigan to the City of Waukesha, an area that lies outside of the Great Lakes Basin. If Waukesha's request to divert water for public water supply purposes is approved, it will serve the city and potentially serve adjacent communities. Currently, Waukesha obtains its public water supply from an aquifer that contains high levels of radium and where water levels have declined by more than 500 feet and are continuing to decline by an additional five to nine feet annually. Waukesha seeks to divert from Lake Michigan up to an annual average of 10.9 million gallons of water daily, with a maximum daily diversion of 18.5 million gallons. Under the proposed application, a volume of wastewater equal to the volume of water withdrawn from Lake Michigan would be returned to the

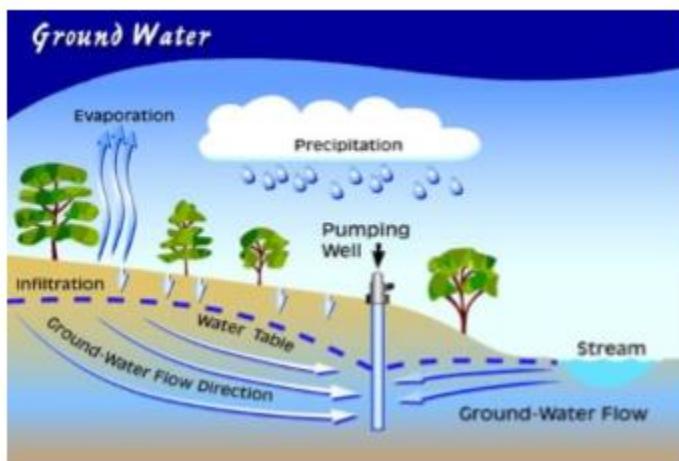
Lake Michigan Basin. The DNR is currently reviewing an updated application received in October of 2013.

## **GROUNDWATER QUALITY AND QUANTITY**

### **CONTAMINATION**

Since the county's groundwater is recharged from water that infiltrates through a land surface consisting of thin soils and bedrock formations, Door County has one of the highest risks of surface water pollution to groundwater of any county in Wisconsin. (Figure 6.3.) The dolostone bedrock contains many karst features that provide for large water-holding capacity and lateral flow, but also allow water and accompanying contaminants to quickly and directly enter the dolostone aquifer.

**Figure 6.3: Groundwater Cycle**



Source: [www.norcalblogs.com/commission/images/groundwater.jpg](http://www.norcalblogs.com/commission/images/groundwater.jpg)

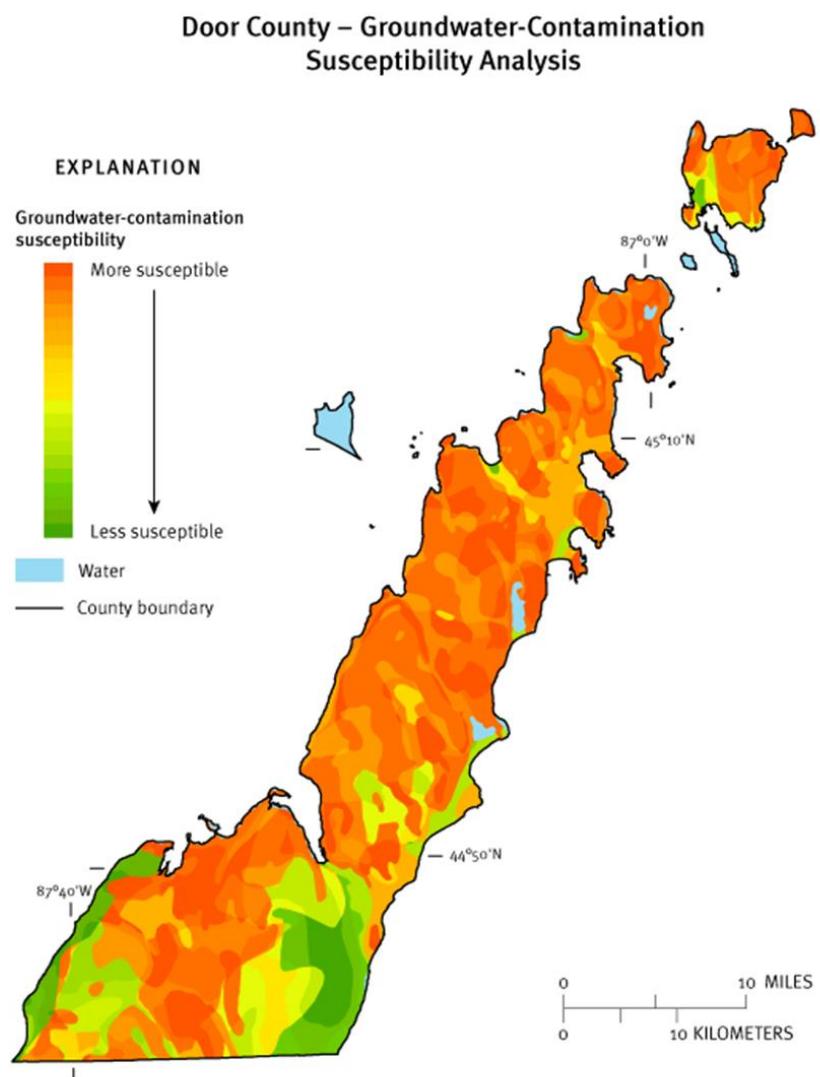
As development in an area increases, so does the impervious surface area, such as roofs, driveways, and parking lots. This affects the amount and quality of water that infiltrates to the groundwater due to the changes to vegetative cover, slope, soil composition, and soil depth. Groundwater may be contaminated by construction and agricultural runoff events, which can lead to contamination of private wells, fish kills, and an influx of nutrients into surface waters, causing algal blooms. Additionally, leaking private septic system tanks, usually made out of steel, or other malfunctioning portions of private septic systems, are primary contributors of bacteria such as fecal coliform and E. coli to groundwater.

Figure 6.4 is a groundwater contamination susceptibility map, created by the DNR in partnership with the United States Geological Survey, University of Wisconsin-Extension, and Wisconsin Geological and Natural History Survey. Five physical resource characteristics were identified as important in determining how easily a contaminant can be carried through overlying materials to the groundwater. These characteristics are depth to bedrock, type of bedrock, soil characteristics, depth to water table, and characteristics of surficial deposits (glacial deposits lying between bedrock and soil).

Municipal wells serve approximately one-third of the county's households, while private wells serve approximately two-thirds of the county's households. Only the City of Sturgeon Bay, the Villages of Forestville and Sister Bay, and Maplewood (Town of Forestville) have municipal water. The Village of Sister Bay also serves some households located in the Town of Liberty Grove. The City of Sturgeon Bay and the Villages of Forestville and Sister Bay have mapped their "zones of contribution," the surface area on the land that contributes rain and snowfall to the groundwater for a particular well site. Subsequent to mapping their zones of contributions, the City of Sturgeon Bay,

Town of Liberty Grove, and the Village of Sister Bay have adopted wellhead protection ordinances. While municipal wells are routinely tested for contaminants, proper monitoring of contaminants in private wells often does not occur. Copper and lead can be present in groundwater, but usually come from plumbing/piping and sometimes from pesticides or herbicides. Lead can also be present in groundwater because of the county's past agricultural practice of using lead arsenic for controlling diseases in orchards. Starting in the early 1900s and continuing through the 1940s - at which time the county contained approximately 10,000 acres of cherry orchards and 2,000 acres of apple orchards - lead arsenic was the primary insecticide used. (Note that it was also used on potato crops on Washington Island.) The lead arsenic was brought to mixing stations in powder form and mixed with water to produce a solution for spray application on the fruit trees in the orchard. Widespread use of lead arsenic ended by 1960, but it was still sporadically applied in parts of the county until the early 1970s.

**Figure 6.4: Groundwater Contamination Susceptibility Analysis, Door County**



This groundwater-contamination susceptibility map is a composite of five resource characteristic maps, each of which was derived from generalized statewide information at small scales, and cannot be used for any site-specific purposes.

Map source: Schmidt, R.R., 1987, Groundwater contamination susceptibility map and evaluation: Wisconsin Department of Natural Resources, Wisconsin's Groundwater Management Plan Report 5, PUBL-WR-177-87, 27 p.

Figure created for the "Protecting Wisconsin's Groundwater Through Comprehensive Planning" web site, 2007, <http://wi.water.usgs.gov/gwcomp/>

Elevated levels of lead arsenic in soils at abandoned mixing sites, orchards, and fruit processing plant wastewater discharge points are still of concern today as it poses a threat to drinking water supplies and to anyone coming into direct contact with it. Lead arsenic levels are highest at mixing sites and processing plant wastewater discharge points due to either spillage or concentrated presence in the water that washed the fruit to which it was applied. Concentrations are lower in former orchards where the pesticide was applied, but the larger area of an orchard, as compared to a processing plant, creates a potentially more widespread contamination problem.

Finally, nitrates can also impact groundwater quality in Door County. Low levels of nitrates do occur naturally in some areas of the county due to geologic formations and direction of groundwater flow. Presently, the primary sources contributing to high levels of nitrates are runoff or seepage from the over-application of fertilizer on agricultural and residential lands, municipal and industrial waste water, refuse dumps, animal feedlots, septic tanks and private sewage disposal systems, urban drainage, and decaying plant debris. High levels of nitrates can affect the ability of blood to carry oxygen, potentially leading to a serious condition in infants and young children known as “blue baby syndrome.”

### POTENTIAL CLIMATE CHANGE EFFECTS ON GROUNDWATER

Geologists and other water experts consider Door County to have an ample supply of groundwater, sufficient to supply the drinking water needs for both municipal and private wells. Scientists predict, however, that climate change will negatively impact groundwater quality and quantity, because of predicted increases in the amount, intensity, and seasonal distribution of rainfalls, as well as increased temperatures, across Wisconsin. Although it is uncertain exactly how, climate change will also affect the recharge rate and amount of groundwater, the quality of groundwater, and the likelihood of groundwater flooding. Some of the potential effects of climate change on groundwater are described below.

#### Groundwater Recharge

- Typically, an increase in precipitation leads to a rise in groundwater, but increased temperatures could also lead to increased evaporation. Groundwater will be lowered if evaporation happens at a faster rate than groundwater. Certain parts of the state are at risk, especially in areas where development patterns are predicted to intensify.
- Increased amounts of rainfall could either increase or decrease groundwater levels in the wintertime, depending on whether or not the ground is frozen. If the ground is frozen, more rainfall will increase runoff and decrease recharge; if the ground is not frozen, more rainfall will allow for more infiltration and increased recharge. The amount of recharge versus runoff will be affected by soil type, soil moisture, vegetation, and frost. During the summer months, as crops absorb more water, warmer summer temperatures and a longer growing season could lead to a decrease in groundwater recharge.
- Since groundwater feeds the lakes, rivers, streams, and wetlands, a slower recharge could result in less flow from springs, lower baseflow in streams, loss of some wetlands, and lower lake levels. Increased recharge could result in more flooding and conversion of some wetlands to lakes.

#### Groundwater Flooding

- More frequent, high-intensity storms could cause groundwater levels to rise above the ground surface in some areas, resulting in flooding.

## Groundwater Quality

- Less groundwater recharge may mean less dilution of contaminants and higher levels of total dissolved solids.
- Increased groundwater levels would reduce the distance between the ground surface and groundwater, making the groundwater more susceptible to contamination.

## BIODIVERSITY

### **INVASIVE NON-INDIGENOUS SPECIES**

Invasive species, along with climate change, negatively affect rare species and are expected to become an even greater threat in the future. The DNR defines an invasive species as one that has been introduced by human action to a location, area, or region where it did not previously occur naturally (i.e., is not native), becomes capable of establishing a breeding population in the new location without further intervention by humans, and spreads widely throughout the new location.

One of the reasons that invasive species are able to succeed is that they often leave their predators and competitors behind in their native ecosystems. Without these natural checks and balances they are able to reproduce rapidly and out-compete native species, altering ecological relationships among native species, ecosystem functions, economic value of ecosystems, and human health. Encroachment and invasion of aggressive and non-indigenous terrestrial and aquatic plant species threaten native species and ecological diversity in a variety of ways:

- Reduction in water and nutrient levels important to the survival and health of native species can result in monotypic vegetation (e.g., purple loosestrife) that lowers the ecological and aesthetic value of coastal areas.
- Invasive aquatic plants modify water chemistry, which in turn damages fish habitat.
- Dense vegetation growth within navigable waterways, typical of aggressive and invasive species, impedes fish migration and recreational opportunities.
- Plant community alterations result in dense vegetation (e.g., buckthorn) that shades out wildflowers.
- Increase in plant-to-plant competition lowers species diversity generally and limits crucial habitat for threatened/endangered species specifically.

The Door County Invasive Species Team (DCIST) - a voluntary alliance of businesses, non-profit groups, public agencies, educational institutions, organizations, private landowners, and other parties interested in controlling invasive species - created the following list (Table 6.3) of species deemed to be the most detrimental biologically and economically to Door County ecosystems.

**Table 6.3: Top Invasive Species, Door County**

<b>Plants</b>	<b>Animals</b>
Autumn Olive	Asian Lady Beetle
Bell's Honeysuckle	Bighead and Silver Carp
Common Reed Grass or Phragmites	Emerald Ash Borer
Common Buckthorn	Gypsy Moth
Common Teasel	Mute Swan
Dames Rocket	Oak Wilt
Garlic Mustard	Quagga Mussels
Glossy Buckthorn	Round Goby
Japanese Barberry	Rusty Crayfish
Japanese Knotweed	Spiny Waterflea and Fishhook Waterflea
Leafy Spurge	White Perch
Purple Loosestrife	Zebra Mussels
Reed Canary Grass	
Tartarian Honeysuckle	
Spotted Knapweed	
Wild Parsnip	

Source: Door County Invasive Species Team, 2012.

### POTENTIAL CLIMATE CHANGE EFFECTS ON BIODIVERSITY

Climate change will affect the composition of all species. Rising temperatures, shifting precipitation patterns, and an increasing number of heavy rainfalls will cause physical changes to natural communities which in turn will trigger long-term biological responses from the species that live there. Some species will fare better than others, although scientists predict the majority of species affected by climate change will fare worse. The WICCI conducted the first preliminary assessment of climate change impacts on our state's habitats and species, some of which are described below.

- *Early onset of spring.* Spring arrives six to 20 days earlier than it used to, extending the growing season by two weeks and affecting the timing of biological events; relationships between plants and animals and migration of animals may be thrown out of sync.
- *Warming water temperatures.* Brook and brown trout are sensitive to changes in water temperature and cannot survive and reproduce above a certain temperature; models predict that rising stream temperatures could eliminate up to 95% of brook trout habitat across the state. Some fish species will benefit from warmer water temperatures, however, the loss of trout habitat will far exceed any gain in other fish habitat. The Hine's emerald dragonfly will also suffer habitat loss as waters warm or increased rainfall prolongs wet conditions.
- *Reduced snow and ice cover.* Reduced snow cover, predicted to drop by 40 percent over the next half century, will affect plants and animals that have adapted to and rely on snow for their survival. Snow provides moisture and warmth for both plants and animals. While the endangered American marten will suffer, white-tailed deer will thrive, as will invasive aquatic plants that benefit from an extended growing season.
- *Reduced soil moisture.* Less soil moisture will make growing conditions for many plants difficult, threaten certain types of forests, and change the composition of plants growing in these forests. Many animals, such as toads and salamanders, rely on the humidity and moisture in soils to maintain water balance in their bodies and will die if they do not get enough, in turn reducing food sources for other animals. Less soil moisture also means less groundwater recharge to streams, resulting in increased stream temperatures.

- *Drought.* Much of the country, including Wisconsin, experienced moderate-to-severe drought conditions in 2012. Although precipitation is likely to increase overall, primarily throughout the winter and spring, summers could experience drought conditions. More frequent or intense drought conditions will impact natural communities and their inhabitants by drying out wetlands where animals like to nest and stay moist. Decreasing water levels will also reduce habitat for many species and increasing stream temperatures will make it difficult for some species to survive. Some species will benefit, such as the rare Fassett's loco-weed, which had been found thriving in drought-ridden areas in northern Wisconsin.
- *Flooding.* With more frequent and intense rainstorm events predicted, more flooding is also likely to occur. More flooding will damage or destroy habitat by creating soil conditions that are too moist for some native species, while enhancing habitat for some invasive and non-native species. Some native plants and animals, such as giant ragweed and trout, will respond well to flooding.

## CONSERVATION, PROTECTION, AND PRESERVATION PROGRAMS

Conservation, protection, and preservation programs that affect Door County are being conducted at the international, national, state, and local levels. This section provides an overview of plans and programs to protect and sustain surface water, groundwater, wetlands, woodlands, ecological areas and corridors, and vulnerable species. Lastly, discussion on preserved lands in the county and non-metallic mineral resources is provided.

### **SURFACE WATER**

#### **WATER LEVELS**

The current approach to managing water levels in the Great Lakes is through regulation of outflows from Lake Superior and Lake Ontario at dams located on the St. Mary's River at Sault Ste. Marie and at Cornwall/Massena on the St. Lawrence River. Outflows are controlled according to regulation plans administered by the International Joint Commission (IJC) which specify how much water can be let out under a range of conditions. Created by the Boundary Waters Treaty of 1909, the IJC is an international organization that acts as an independent and objective advisor to the U.S. and Canada. Canada and the U.S. each appoint three of the six IJC Commissioners, who traditionally work by consensus to find solutions that are in the best interest of both countries. The IJC has more than 20 boards and task forces whose members are expected to work in their professional capacities, not as representatives of an organization or region.

The IJC's ability to alter lake levels through outflow regulation is limited; changes in water supply caused by climatic factors such as precipitation and temperature have a far greater impact. Increases in temperature and changes in precipitation patterns are likely to continue affecting water levels in the Great Lakes-St. Lawrence River system. A mass of scientific evidence supports predictions of extreme water levels outside of historical ranges, both high and low, in the future.

Since the climate is changing and the IJC's ability to alter lake levels through outflow regulation is limited, a broader, more comprehensive approach to managing the impacts of changing lake levels is needed. In 2012, the IJC created the International Great Lakes-St. Lawrence River Adaptive Management Task Team in order to develop a detailed adaptive management plan that addresses future extreme water levels in the Great Lake-St. Lawrence River system. Adaptive management is a structured, iterative process designed to continually improve management policies and practices by learning from the outcomes of previous policies and practices. This process uses the best available information to take action, monitor results through the long term, and evaluate the effectiveness of actions taken. Actions are adjusted based on what is learned as knowledge

improves or as conditions change.

In 2013, the Adaptive Management Task Team released its proposed *Adaptive Management Plan, Building Collaboration Across the Great Lakes-St. Lawrence River System: An Adaptive Management Plan for Addressing Extreme Water Levels*. The Plan proposes to address water level issues by working collaboratively with partners in the Great Lakes-St. Lawrence River system to gather and share critical information over time, assessing the information with state-of-the art tools, developing adaptation strategies, measuring collective success in managing the impacts of extreme water levels, and adapting accordingly. Its goal is to provide a more efficient and cost-effective way of supporting decision-making to reduce impacts associated with future extreme water levels.

This plan recommends engaging agencies, organizations, and institutions from across the Great Lakes-St. Lawrence River system in order to develop the following five areas:

- Hydroclimate monitoring and modeling to improve knowledge on water balance and water supply, the forecasting of net basin supply, lake levels, and climate modeling;
- Performance indicators and risk assessment to assess risks of extreme water levels to shoreline property, commercial navigation, municipal and industrial water uses, recreational boating, ecosystems hydropower, and other interests;
- Maintain, update, and improve tools needed for the evaluation of regulation plans over time and develop new tools to support decision-making regarding extreme water levels;
- Information management and distribution to facilitate sharing of water level-related data and information among the Great Lakes-St. Lawrence River system community; and
- Outreach and engagement to educate and establish two-way communication on water level-related issues throughout the Great Lakes-St. Lawrence River system community.

### **GREAT LAKES RESTORATION INITIATIVE**

In 2009, the EPA began its Great Lakes Restoration Initiative, the largest investment in the Great Lakes in over two decades. A task force of 11 federal agencies developed an action plan intended to address five urgent issues plaguing the Great Lakes:

- cleaning up toxics and areas of concern;
- combating invasive species;
- promoting near-shore health by protecting watersheds from polluted runoff;
- restoring wetlands and other habitats; and
- working with strategic partners and tracking progress.

Door County has benefited primarily from a grant designed to improve beach health, including eliminating *E. coli* contamination, receiving over \$700,000 to implement best management practices at 11 Door County beaches located within nine municipalities. With this grant money, the SWCD designed plans to install green infrastructure to improve water quality at public beaches by reducing, capturing, and treating stormwater runoff. These measures include the reduction of impervious surfaces near beach areas, installation of rain gardens and bio-filters, and reduction of waterfowl landing and congregation at beaches.

Door County is also indirectly benefitting from the EPA Great Lakes Restoration Initiative through a grant awarded to the DNR to conduct a comprehensive examination of the live plant trade by nurseries, water garden, and aquarium retailers. Approximately 100 Wisconsin retailers are estimated to be involved in this business and the grant supports education and outreach to reduce

invasive species introductions.

## **WISCONSIN DEPARTMENT OF NATURAL RESOURCES WATER QUALITY PROGRAMS**

Wisconsin has conducted water quality planning since the mid-1970s, when Clean Water Act authorities were delegated to the DNR. The specific type of planning work has changed over time, but the end goal – restoring, protecting, and maintaining clean water and healthy aquatic ecosystems – has been a constant throughout. The current DNR Bureaus of Water Quality and Watershed Management are tasked with water quality planning and cover a range of areas, including setting water quality standards and implementing a runoff management program.

In response to state-wide runoff issues and to abide by EPA Clean Water Act rules, the DNR has developed multiple programs that are implemented locally through the SWCD. Such programs involve state-classified watersheds and waterbodies identified as particularly threatened or susceptible to primarily nonpoint source pollution. These watersheds and waterbodies are classified under the Priority Watershed Program, and the Outstanding and Exceptional Resource Waters Program. Other waterbodies identified as already impaired – not meeting state water quality standards – require monitoring and protection according to the Impaired Waters (303(d)) program. Other DNR programs implemented locally by SWCD and the Door County Planning Department are designed to protect groundwater quality and wetlands.

### **DNR Water Quality Standards**

Ch. 281, Wis. Stats. authorized the DNR to establish water quality standards that are consistent with the Federal Clean Water Act (Public Law 92-500). These water quality standards are explained in detail in Chapters NR 102, 104 -106, 207, and 217, Wis. Admin. Code. Water quality standards are the foundation of Wisconsin's water quality management programs and rely on three elements to collectively meet the goal of protecting and enhancing the state's surface waters: designated uses, water quality criteria, and protection from pollutants (anti-degradation).

- *Designated Uses.* Designated uses are specified in water quality standards for each waterbody or segment, whether or not they are currently attained. Often, the designated use is based on the attainable use. Attainable uses are the uses that could be attained in a waterbody by implementing appropriate point and/or nonpoint source management actions. These actions can include effluent requirements for point sources and cost-effective and reasonable best management practices for nonpoint source control. As described in Chapter NR 102 and listed below, there are four designated uses:
  - *Recreational Use* – appropriate to protect for recreational use, unless a sanitary survey has been completed to show that humans are unlikely to participate in activities requiring full body immersion.
  - *Public Health and Welfare* – appropriate to protect for incidental contact by humans, with some protected even further since they serve as a drinking water supply to nearby communities.
  - *Wildlife* – appropriate to protect for wildlife that rely directly on the water to exist or to provide food for existence.
  - *Fish and Aquatic Life* – appropriate to protect for fish and other aquatic life. There are also five sub-categories for this designation, due to the various fish and aquatic life communities supported by various factors such as temperature, flow, habitat, and water chemistry.

- *Water Quality Criteria.* Each of the use designations described above have a set of quantitative or qualitative requirements intended to achieve that designated use. These requirements relate to the amount of pollutants, chemical compounds, or bacteria that can exist without causing harm or changing physical measurements such as temperature or pH.
- *Antidegradation.* This policy is intended to maintain and protect existing uses and high quality waters. It also intends to prevent water quality from slipping backwards and becoming poorer without cause, especially when reasonable control measures are available.

### **Impaired Waters**

Impaired waters are those not meeting state water quality standards – both water quality criteria for specific substances or designated uses – as defined by Section 303(d) of the federal Clean Water Act. Every two years, states are required to submit a list of impaired waters to the EPA for approval. States are required to document the methodology used to add or delete waters from the existing “303(d) List.” A waterbody or segment of a waterbody may be added to the list because it is not meeting water quality standards or because water quality is threatened. Waters removed from the list must have data to support the fact that they are now meeting water quality standards. Door County’s 303(d) Impaired Waters are listed in Table 6.4.

**Table 6.4: 303(d) State-Designated Impaired Waterbodies, Door County**

Waterbody	Pollutant	Impairment Indicator	Year Listed
Ahnapee River	polychlorobiphenyls (PCBs)	contaminated fish tissue*	1998
Mackaysee Lake	mercury	contaminated fish tissue*	1998
Stony Creek	sediment/total suspended solids	degraded habitat	1998

Source: Wisconsin Department of Natural Resources, 2013.

\* Note that both the DNR and EPA have a variety of fish consumption advisories. See the Resources and Further Information section at the end of this chapter for their Web sites.

### **Outstanding and Exceptional Resource Waters Program**

NR 102, Wis. Admin. Code was created in 1973, establishing the “Outstanding and Exceptional Resource Waters Program” in order to maintain water quality in Wisconsin’s cleanest surface waters and in accordance with the Federal Clean Water Act. Administered by the DNR, the initial listing of outstanding and exceptional resource water segments was established in 1988, and updates to the list were made in 1989, 1993, 1998, and 2006.

An Outstanding Resource Water is a lake or stream free from point and nonpoint source pollution and has excellent water quality, high recreational and aesthetic value, and high quality fishing. Door County has two Outstanding Resource Waters, Logan Creek and Mink River.

- *Logan Creek* is a 5.4-mile stream that originates at Lost Lake and flows southeast to Clark Lake. Its corridor is largely flanked by wetlands surrounded by land uses that include cropland, stump pasture, pasture, and orchards. Most of the stream rates only as fair in terms of water quality, but .65 miles has high water quality. The entire length of Logan Creek has a high nonpoint source ranking for potential pollution impacts to habitat.
- *Mink River* is a fresh water estuary that drains extensive wetlands and discharges to Rowleys Bay in Lake Michigan. It is thought to be the last pristine estuary on the Upper Great Lakes and one of the few high quality estuaries remaining in the United States. The estuary wetlands provide breeding habitat for the Hine’s emerald dragonfly, an endangered insect.

An Exceptional Resource Water is a lake or stream exhibiting the same high quality resource values

as an Outstanding Resource Water, but may be impacted by point or nonpoint pollution or have the potential for receiving wastewater discharge from a non-sewered community in the future. Door County has two waterbodies designated as Exceptional Resource Waters, Hidden Springs Creek and Kayes Creek.

- *Hidden Springs Creek* is a one-mile long, spring-fed creek that originates in the Ephraim Swamp and discharges into Eagle Harbor (Green Bay) in the Village of Ephraim.
- *Kayes Creek* is a seven-mile long stream that originates in the Gardner Swamp Wildlife Area and discharges into Little Sturgeon Bay (Green Bay).

More Door County waterbodies cannot be designated as outstanding or exceptional resource waters due to contamination by point and nonpoint source pollution.

### **Other Surface Waters**

Many waterbodies fall between the Outstanding and Exceptional Water Resources and the 303(d) Impaired Water categories. Although these waterbodies do not receive any special designation, this does not minimize the importance of their protection. In 2000, the SWCD published *The Surface Water Inventory of Door County*, a report that inventories known surface waters and also addresses their geographical, geological, and ecological components. Overviews of wetlands, ridge and swale complexes, and the geology of the county are also discussed. The report does not attempt to classify waterbodies beyond the formally recognized 303(d) Impaired Waters, but does describe specific negative impacts and threats to water quality.

### **DNR Runoff Management Program**

Wisconsin's Runoff Management Program was created in 1978 by the state legislature as a way to protect watersheds from nonpoint source pollution. Ch. 281 and Ch. 283, Wis. Stats., authorized the DNR to administer the Runoff Management Program, which creates and revises administrative rules to control pollution from agricultural farms and fields, construction sites, and developed urban areas. Many of the water pollution control requirements outlined in the state statutes and administrative rules reflect mandates contained in the federal Clean Water Act. The Runoff Management Program provides financial and technical assistance to landowners and local governments to address land management activities that contribute to runoff. The core activities of these programs – research, monitoring, data assessment and management, regulation and enforcement, financial and technical assistance, education and outreach, and public involvement – work to address current water quality impairments and prevent future threats caused by nonpoint source pollution.

### **Runoff Management Grants - Nonpoint Source Rankings**

Wisconsin initiated a process to rank watersheds for nonpoint source problems back in the mid-to-late 1980s in order to identify high priority areas under the state's Nonpoint Source Pollution Abatement Program. This program, administered through a network of federal, state, and local agencies working in partnership with other organizations and citizens, combines voluntary and regulatory approaches with financial and technical assistance. Abatement activities include agricultural, urban, forestry, wetland, and hydrologic modifications.

Nonpoint source rankings reflect the waterbody's potential to respond to best management practices and are used in the ranking of project proposals for the Targeted Runoff and Stormwater Management Grant Programs administered through the Door County SWCD. Watershed rankings are conducted annually by the DNR and are based on the lakes, streams, and groundwater within a watershed. The DNR gives the watershed an "overall" ranking, as well as individual rankings for the streams, lakes, and groundwater. Groundwater rankings are developed using available data on

presence of contaminants and evaluation of different land uses in relation to the susceptibility of groundwater contamination. The ranking of streams and lakes is based on impacts from nonpoint source pollution and the waterbody's potential response to best management practices.

All watersheds in the state have been or will get an overall rank and categorical ranks for groundwater, streams, and lakes. Eventually, individual streams and lakes in the state will also get ranked. Table 6.5 below describes each type of ranking – high, medium, low, or not ranked. All four watersheds in Door County have been ranked as having “high” overall potential for nonpoint source problems. All four watersheds also have a “high” potential for groundwater contamination and a “high” potential for stream nonpoint source pollution, except for the Red River/Sturgeon Bay Watersheds, which has a “medium” ranking for streams. The lakes category for Door County has not been ranked yet.

**Table 6.5: Nonpoint Source Ranking Criteria**

Ranking	Description
Groundwater - High, Medium, or Low	Presence of contaminants and the evaluation of different land uses and the susceptibility of groundwater contamination associated with those land uses.
High Stream	The stream is likely to respond to BMPs and has one or more of the following a) endangered or threatened species; b) fish population, diversity less than optimal; c) recurring fishkills, d) dissolved oxygen violations, ammonia standard violations, high nitrate levels, toxicity due to pesticides or other NPS toxicants, high levels of suspended solids or an HBI or Family Biotic Index rated poor or very poor. There might be a high rate of streambed sedimentation or accelerated negative physical changes to stream morphology occurring; there is a predominance of undesirable vegetation (algae or macrophytes).
Medium Stream	The stream may respond to nonpoint source controls and is a threatened outstanding or exceptional resource water or is considered threatened based upon data.
Low Stream	The lake is not sensitive to phosphorus or sediment and will not likely benefit from BMP implementation. The stream is not threatened.
High Lake	The lake is sensitive to phosphorus and sediment and is likely to respond to BMPs.
Medium Lake	The lake is moderately sensitive to phosphorus or turbidity but does not have any known sensitive species or is not an ORW/ERW.
Low Lake	A lake receives a low ranking if it is not sensitive to phosphorus and would not benefit from NPS BMPs.
Not Ranked	This waterbody is not yet assessed for nonpoint source ranking.

Source: Wisconsin Department of Natural Resources, 2013.

## DOOR COUNTY RUNOFF MANAGEMENT PROGRAMS

The Door County SWCD administers the DNR's Runoff Management Program locally and is guided by the Door County Land and Water Resource Management Plan (LWRMP) 2011-2020. This plan was developed by the SWCD and approved by the Land Conservation Committee in accordance with requirements set forth in Ch. 92, Wis. Stats. The plan identifies current runoff/stormwater management challenges and establishes goals and strategies to protect the land and water resources of Door County. Federal, state, and local agencies as well as the general public participated in the formation of its runoff management goals, listed below.

- *Groundwater protection and improvement:* Improve and maintain the drinking water supply for Door County to acceptable state standards.
- *Surface water protection:* Protect and improve Door County’s surface water resources from nonpoint source pollution and maintain acceptable state surface water quality standards.

- *Impacts of development on natural resources:* Minimize the adverse effects of fragmentation, urban sprawl, construction site erosion, increased impervious areas, and other development pressures on Door County's land and water resources.
- *Human waste management:* Reduce the risks to water quality through proper repair/replacement of failing septic systems.
- *Animal waste management:* Reduce the risks to water quality through proper storage, handling, and disposal of animal waste.
- *Stormwater management:* Reduce the risk to Door County's water quality and prevent flooding through proper stormwater runoff management.
- *Soil erosion control; agricultural and construction site:*
  - Reduce soil erosion rates on agricultural fields through proper soil conservation practices.
  - Reduce soil erosion from construction sites through proper soil erosion control measures.
- *Non-metallic mine reclamation:* Reduce the impacts to Door County's water quality and other natural resources from nonmetallic mines through proper operation and/or reclamation procedures.
- *Invasive species:* Protect the habitat and biodiversity of Door County's native fauna and flora through the control of aggressive, invasive non-indigenous species.
- *Beach Contamination:* Protect the surface water resources of Door County through identification and abatement of beach contamination sources.
- *Agricultural Land Protection:* Reduce the impacts of sprawl and fragmentation through preservation of farmland and other open spaces.
- *Lack of Education and Awareness of Environmental Issues and Sustainable Farming Practices:* Increase awareness of sensitivity of Door County's resources and promote sound land use decisions.

The LWRMP recommends continuing and furthering the implementation of these goals through a variety of existing and potential programs, categorized here by agricultural implementation, urban and rural non-agricultural implementation, and other SWCD programs. More detailed descriptions of each program can be found in the LWRMP 2011 - 2020.

## **Agricultural Implementation**

- *Upper Door and Red River/Sturgeon Bay Priority Watersheds.* Protect water quality and reduce soil erosion; ensure compliance with agricultural operation and maintenance agreements and encourage proper resource management after agreements have ended.
- *Farmland Preservation Program.* Reduce soil erosion, urban sprawl, and fragmentation through the preservation of farmland; work with the Door County Planning Department to update the Farmland Preservation Plan.
- *Nutrient Management Program.* Protect water resources by reducing nonpoint pollution caused by improper nutrient and pest management; work with landowners to develop and maintain their

own nutrient management plans.

- *Chapter NR 243 Program.* Protect water quality through proper animal waste management; provide technical assistance and secure funding for cost-share assistance to priority farms.
- *Targeted Runoff Management Program.* Protect water quality through implementation of agricultural performance standards and manure management in critical areas; provide technical assistance and secure funding.
- *Agricultural Performance Standards and Prohibitions.* Implement state and local agricultural performance standards and prohibitions, as identified in Chapter 23, Door County Code.

### **Urban and Rural Non-Agricultural Implementation**

- *Adoption of Ordinances.* Develop and revise existing ordinances to address nonpoint source pollution.
- *Stormwater Runoff Management and Construction Site Erosion Control.* Implement more comprehensive stormwater runoff and construction site erosion control programs, including the development of a county-wide stormwater ordinance.
- *Beach Contamination Source Identification Program.* Work with municipalities on developing plans for abatement of runoff sources and educate the public regarding land use and its impact on water quality.
- *Well Abandonment Program.* Increase number of properly abandoned wells through volunteer programs, enforcement referrals to the DNR, and potential well abandonment requirements in the Door County Zoning Ordinance.
- *Wellhead Zone of Contribution Protection Programs (City of Sturgeon Bay and Village of Sister Bay, and Maplewood Sanitary District [Town of Forestville]).*
  - Delineate the zone of contribution and develop a wellhead protection plan for the Maplewood Sanitary District.
  - Address water quality within all zones of contribution through implementation of agricultural performance standards and manure management; provide information and education to landowners within the zones regarding land use and its impact on the drinking water supply.
- *Technical Assistance.* Provide technical and research assistance regarding protection and conservation of Door County's natural resources to landowners/operators, interested groups, and other governmental units.
- *Village of Ephraim Stormwater/Construction Site Erosion Control Ordinance.* Assist the Village of Ephraim with their Stormwater/Construction Site Erosion Control Ordinance by reviewing construction site plans and aiding in updating the ordinance.
- *Nonmetallic Mining Controls and Reclamation.* Work with mine operators on plan approval, modifications, and compliance checks to ensure reclamation activities are carried out as required by Chapter 36, Door County Code.

- *Soil Erosion Control on County Department Projects.* Ensure proper soil erosion control on all county projects.
- *County Water Pollution Abatement Cost-Share Program.* Adopted by Door County in 1980, the Water Pollution Abatement Cost-Sharing Program policy was designed to provide cost-share funding to landowners for installing practices designed to abate water pollution. The SWCD provides technical assistance in developing water pollution abatement plans, advises recipients of all cost-share options available, and inspects the installation of projects to ensure compliance.

### Other SWCD Runoff-Related Programs

- *Tree Sales and Planting.* Meet the demand and provide more options for large- and small-scale tree/shrub plantings.
- *Wildlife Damage and Abatement Claims Program/Nuisance Animal Technical Assistance.* Expand the outreach in assisting landowners with wildlife damage issues.
- *Aggressive Invasive Non-Indigenous Species Control.* Work with the Door County Invasive Species Control Coordinator to remediate areas with established invasive species and to prevent further spread.
- *Lead and Arsenic Contaminated Sites.* Continue site identification of contaminated orchards and seek funding for remediation of historic lead arsenic mixing sites.
- *Land Information Modernization Program.* Continue participation in maintaining and updating Geographic Information System data layers.
- *Information and Education.* Create and renew information and education efforts regarding department conservation programs, as well as current conservation issues in the county, targeted at the general public, schools, and other organizations.

The SWCD also helps to regulate Door County's only Concentrated Animal Feeding Operation (CAFO), S&S AG Enterprises, LLC, located in the Town of Forestville. A CAFO is defined by the DNR as a farm with 1,000 or greater animal units, with one animal unit the equivalent of a 1,000 pound animal. Chickens, turkeys, hogs, beef, or dairy animals, when combined to weigh 1,000 pounds, constitute one animal unit. The SWCD provides assistance to the DNR in regulating this CAFO by providing local knowledge of topography, water quality concerns, farm site needs, and by ensuring compliance with the state's CAFO permit.

CAFOs are required by the DNR to have a manure management system. In 2011, S&S AG completed construction of an anaerobic digester, a concrete vessel that holds the manure where bacteria breaks it down to produce methane. This methane is collected and piped to a generator where electricity is produced and sold to Wisconsin Public Service. Two additional benefits of digesting manure is the reduction of odor from manure that is to be applied to cropland as fertilizer and the sterilization of manure to be used for animal bedding.

## **GROUNDWATER**

Groundwater protection efforts in place in Door County include federal money awards to cleanup leaking underground storage tanks, various DNR regulations, Door County SWCD programs, and Door County Sanitarian Department programs.

## **PETROLEUM ENVIRONMENTAL CLEANUP FUND AWARD**

The Petroleum Environmental Cleanup Fund Award (PECFA) program was created in response to enactment of federal regulations requiring release prevention from underground storage tanks and to cleanup existing contamination from those tanks. PECFA is a reimbursement program returning a portion of incurred remedial cleanup costs to owners of eligible petroleum product systems, including home heating oil systems. Over \$8 million has been spent in Door County to cleanup 92 sites contaminated with petroleum from leaking underground storage tanks.

## **DNR GROUNDWATER PROGRAMS**

The DNR regulates public water systems, approves wellhead protection plans, regulates private wells, and sets standards for compound levels in groundwater.

- *Public Water Systems.* The Federal Safe Drinking Water Act (SDWA) set maximum contaminant level standards for drinking water and requirements for sampling, reporting, and inspection. The DNR Drinking Water Program enforces these requirements, which apply to all public water supplies in the state. Water system sampling and inspection requirements are based on the type of system and population the system serves. The four types of public water systems defined by the SDWA are as follows:
  - 1) Community Systems, Municipal: In Door County, the City of Sturgeon Bay, Village of Sister Bay (including part of the Town of Liberty Grove), and Maplewood Sanitary District #1 (part of the Town of Forestville).
  - 2) Community Systems, Other than Municipal: Trailer parks and non-municipal systems that serve more than 25 year-round residents; e.g., an apartment building with one well serving more than 25 people year-round. (Currently there are none of the latter in Door County.)
  - 3) Non-Transient, Non-Community Systems: Schools, businesses, government buildings that serve 25 or more people more than six months of the year.
  - 4) Transient Non-Community Systems: Restaurants, bakeries, motels, gas stations, churches, parks, campgrounds, buildings that serve 25 or more people for at least 60 days.

Community water systems – both municipal and “other than municipal” – are regulated under chapters NR 809 and NR 811, Wis. Admin. Code. NR 809 includes water monitoring, system reporting, and inspection requirements and NR 811 includes construction, treatment, operation and maintenance requirements for water supply sources, storage, and distribution systems.

- *Wellhead Protection Plans and Ordinances.* The DNR approves municipal wellhead protection plans, which are required for the construction of new wells serving municipal water supplies. Wellhead protection plans are designed to protect public water supply wells from contamination by managing the land that contributes water to the wells. The basic requirements for these plans are established as goals in the Wisconsin statutes. Although adoption of an ordinance referencing the WHPP is not required, communities are encouraged to adopt one prior to putting the well on-line. The DNR also strongly encourages but does not require the development of WHPPs for older wells.

Note that the City of Sturgeon Bay and the Village of Sister Bay have adopted wellhead protection plans and ordinances. As of 2014, the Maplewood Sanitary District (Town of Forestville) was working with the SWCD to develop a wellhead protection plan.

- *Private Wells.* The DNR administers NR 812, Wis. Admin. Code, which applies to private wells and includes smaller non-community (less than 25 people) public water systems. NR 812 specifies well construction, pump installation, well water quality, treatment, and well sealing/filling standards. DNR staff review reports of these activities and may inspect wells, pump installations, and conduct surveillance of well drilling/pump installing activities to determine compliance.
- *Compound Health Standards.* The DNR enforces NR 140, Wis. Admin. Code, which specifies health standards for compound levels at which the compound in groundwater is considered a health risk. The health standard contaminant concentrations are usually the same as in NR 809, which outlines the sampling requirements for public drinking water systems, however, NR 140 may include additional compounds that are known to be health concerns. NR 140 standards are referenced in treatment and sealing/filling regulations in NR 812 to provide additional protection standards for non-community water systems and private well owners.

The NR 140 standards are also used by the DNR to implement programs that regulate different land uses and to determine if remediation actions are needed to protect the groundwater. These programs specify what land uses are to be regulated and monitored by DNR staff members. The following DNR programs use the NR 140 standards:

- Landfill/Solid Waste
- Hazardous Waste
- Agricultural Runoff
- Wastewater
- Remediation and Redevelopment

## STATE-LEVEL GROUNDWATER STUDIES AND PROJECTS

In 2012, two grants to study and improve groundwater usage in Door County were awarded by the Wisconsin Department of Administration's Wisconsin Coastal Management Program. One study, called the *Development of a Groundwater Flow Model for the Mink River Estuary*, was awarded to the University of Wisconsin-Extension under the Wetland Protection category. This project will create a groundwater monitoring network around the Mink River Estuary, located in northern Door County, and provide an analysis of groundwater inputs into the Estuary. An endangered species, the Hines emerald dragonfly, thrives in the Mink River Estuary area because of its clean groundwater, as described previously in this chapter.

Another grant was awarded to the Wisconsin Department of Natural Resources under the Land Use and Community Planning category, called "Water Use Audit and Retrofit - Peninsula State Park." Peninsula State Park receives more than 1 million visitors annually, the second-highest visitor rate of all Wisconsin State Parks. Through this project, the DNR will find out where and how water is used at Peninsula State Park, identify options for reducing water use or improving water efficiency, and fix leaks and retrofit water infrastructure such as toilets, showerheads, and faucet aerators to high-efficiency models. The project will also create a template for conducting water audits at other state parks. The water audit will be conducted in Spring 2013, followed by repair and replacement of water infrastructure in the early part of 2014, with a second audit to be conducted in the spring of 2014 to verify the water savings from the retrofit.

## DOOR COUNTY SOIL AND WATER CONSERVATION DEPARTMENT GROUNDWATER PROGRAMS

The SWCD implements a variety of runoff management programs, as described previously, that also help protect groundwater: Agricultural Nonpoint Performance Standards and Prohibitions, Animal Waste Storage Ordinance, Nonmetallic Mine Reclamation Ordinance, Nutrient Management Program, and the Targeted Runoff Management Program.

In addition, in the late 1980s and early 1990s, the SWCD engaged in a cooperative effort with the state to remediate some of the more significant abandoned contaminated lead and arsenic mixing sites. Relative to the total number of contaminated sites, the areas remediated by this effort were only a small percentage. The current role of the SWCD is to advise property sellers and buyers, real estate agents, and financial institutions on the location of contaminated sites and provide technical assistance with respect to remediation and potential health concerns. The state generally does not provide funds for the clean-up of historic spills, but recently the Department of Agriculture and Trade Consumer Protection has indicated some willingness to consider the use of funds for eligible lead and arsenic remediation projects.

More recently, the SWCD participated in a task force consisting of the UW-Extension and county conservationists in Brown, Calumet, Kewaunee, and Manitowoc Counties to study existing data and make recommendations on how to address the problem of polluted runoff entering the groundwater through karst features. Task force members agreed that the protection of groundwater should be based on the fractured carbonate bedrock, rather than focusing solely on identifying and protecting karst features. The members also unanimously concluded that a uniform approach to regulation and enforcement across the entire carbonate bedrock region of northeastern Wisconsin is critical to the development of a stable and effective framework for environmental protection.

## DOOR COUNTY SANITARIAN GROUNDWATER PROGRAMS

The Door County Sanitarian Department addresses groundwater issues by requiring inspections of certain private septic systems and tanks. The department is also in the process of conducting a county-wide comprehensive sanitary survey.

- *County Sanitarian Transfer of Property Ownership.* The Door County Sanitarian Department has a “Time of Sale” ordinance that requires private on-site wastewater treatment systems (POWTS) one year or older to be tested at least 15 days prior to real estate transfer closings. Systems deemed to be in non-compliance (“failing”) must be replaced generally within one year. All evaluations are conducted by a private contractor and verified by the county. In addition to the sale of a property, other conveyances or transfers of any interest in real property or improvements may also require an inspection.
- *County Sanitarian POWTS Inspection Requirement.* All POWTS septic tanks must be inspected at least once every three years and pumped if more than 1/3 full of solids. The owner of a POWTS must certify to the county Sanitarian, through hiring a private inspector, that their septic tank has either been pumped or is less than 1/3 full of solids.
- *Door County Comprehensive Sanitary Survey.* The Sanitarian Department is in the process of evaluating every POWTS in the county in order to assess the condition of each system, including the septic tank, pump tank, and drainfield. This survey was initiated in 2002 and will take approximately 15 years to complete. More about the survey can be found in Chapter 9, Community Facilities and Utilities.

## **VOLUNTARY DRINKING WATER TESTING PROGRAMS**

Drinking water can be tested through private laboratories or through the Water and Environmental Analysis Laboratory (WEAL), housed at the University of Wisconsin-Stevens Point, Groundwater Center. Individuals may have their drinking water tested through the WEAL lab at any time or communities may also organize a Community Drinking Water Testing and Educational Program. The WEAL lab can conduct testing of up to 150 samples within a two-week timeframe. Participants in the program volunteer to have their drinking water tested for specific contaminants at a competitive price. Typically, between 7% and 20% of a community's households will volunteer to participate.

Approximately one month after the samples are submitted to the lab, specialists from the Groundwater Center hold an educational program to discuss groundwater concepts and test results. Topics covered include groundwater basics, hydrogeology of the test area, test results and interpretation, water quality trends, county groundwater activities, and groundwater protection strategies. Lastly, the Groundwater Center specialist gives the local coordinating agent a packet of material containing maps for each contaminant tested for and a statistical summary of the results.

Municipalities from Door County that have conducted a Community Drinking Water Testing and Educational Program are the Towns of Baileys Harbor, Egg Harbor, Gardner, Jacksonport, Liberty Grove, and Sevastopol, and the Villages of Egg Harbor and Ephraim. Results from these programs are available online, at the Web site address listed at the end of this chapter in the Resources and Further Information section. Users are not able to identify specific wells, but can see aggregate data for areas where a minimum number of samples was collected.

## **WETLAND PROGRAMS**

Wetlands provide many benefits to the environment, thus there are regulations to protect them at the federal, state, and municipal levels. The three main levels of jurisdiction concerning wetlands in Door County are the United States Army Corps of Engineers (federal), the DNR (state), and the Door County municipal zoning agencies. All of these agencies are involved with wetland regulation and management, with often overlapping jurisdiction. The basic concept behind all levels of wetland regulations is that these areas can only be disturbed for limited reasons and only after issuance of a permit.

Each agency uses slightly different definitions, but all agree there are three basic factors in determining whether or not a property is a wetland: the presence of water at, near, or above the surface (hydrology); sustained aquatic plant life (hydrophytic vegetation); and soils indicative of wet conditions (hydric soils). The presence of standing water may or may not indicate the presence of a wetland; a property could have standing water for a portion of the year and still not be a wetland due to lack of hydrophytic vegetation or hydric soils. It is also possible that a true wetland, with all three of the above characteristics, may never have standing water present.

## **UNITED STATES ARMY CORPS OF ENGINEERS WETLAND REGULATIONS**

The federal Clean Water Act regulates the discharge of dredge and fill material into "waters of the United States," including wetlands adjacent to, or with a hydrologic connection to, "navigable waters." In the most general of terms, federal law requires permits for construction activities in wetlands associated with lakes, rivers, and streams that have enough flowing water to float a canoe. Discharges of dredged and fill material into isolated wetlands are not regulated under the Clean Water Act because these types of wetlands fall outside of the definition of "waters of the United States." (The State of Wisconsin does, however, regulate construction activities in isolated wetlands.)

The St. Paul District of the U.S. Army Corps of Engineers administers the federal wetland regulatory permit program in Wisconsin, with oversight by the Region 5 of the U.S. Environmental Protection

Agency. Army Corp district engineers handle the review and approval of wetland development proposals in federally regulated wetlands.

### **WISCONSIN DEPARTMENT OF NATURAL RESOURCES WETLAND REGULATIONS**

The DNR regulates construction activities in all wetlands, regardless of wetland type, size, or location. State law requires review of all wetland development proposals to ensure the proposed activity complies with state water quality standards for wetlands. Wetland development activities authorized by federal permits must also acquire state approval. Regional Water Management Specialists at the DNR review permit applications on behalf of the state, monitor approved projects for compliance with permit conditions, and assist with investigations and enforcement proceedings for unauthorized wetland fill.

Map 6.5, located at the end of this document, depicts wetlands of two acres or more in size as mapped by the DNR through interpretation of soil maps and aerial photography. Note that these boundaries should be considered approximate guidelines and also that there are many wetlands less than two acres in size not shown on this map.

### **DOOR COUNTY PLANNING DEPARTMENT WETLAND REGULATIONS**

The Door County Planning Department has jurisdiction over wetlands in the areas where it has zoning jurisdiction: the nine towns under county comprehensive zoning and the shoreland areas of the other five towns. The nine towns under comprehensive zoning are Baileys Harbor, Clay Banks, Forestville, Gibraltar, Jacksonport, Liberty Grove, Sevastopol, Sturgeon Bay, and Washington. The five towns under shoreland zoning only are Brussels, Egg Harbor, Gardner, Nasewaupee, and Union. County regulations are not in effect in any incorporated municipalities; wetlands within city or village boundaries are subject to the appropriate municipality's zoning or other regulations, in addition to applicable federal and state regulations.

The Door County wetland zoning district map is based on the Wisconsin Wetland Inventory that was completed by the DNR in 2009. Some wetlands do not appear on the map because they were too small to be identified by the WWI; per the language of the county zoning ordinance, however, the county still has jurisdiction over many activities occurring in or near these wetlands. Note that both the Wisconsin Wetland Inventory and the Door County zoning maps are to be used as guidelines regarding wetland location, not maps that precisely locate wetland boundaries.

*Note: Explanations of comprehensive and shoreland zoning may be found in Chapter 10, Land Use.*

## **WOODLANDS**

### **DOOR COUNTY COMPREHENSIVE FOREST PLAN**

A comprehensive forest plan is a guide to the ecology, management, and conservation of forests. The *Door County Comprehensive Forest Plan* (2006) was developed as one of two pilot projects in the state as part of a program sponsored by the DNR. This plan provides a broad overview of the county's history and the landscape and ecology of the area, as well as detail on forestry topics and issues relevant to the county. The plan also provides background information on forest descriptions and management recommendations, with the goal of providing an understanding of sustainable forestry and helping landowners meet their land stewardship goals.

According to DNR foresters, increasing land values and property taxes have persuaded many landowners in Door County to divide and sell off blocks of their woodlands. Still others are increasing timber harvesting in order to offset rising taxes, often without addressing long-term sustainable forestry practices and other related environmental issues. Private property owners with forested areas should seek professional forestry advice in order to practice sustainable forestry and preserve the health of the county's remaining woodlands. The Door County Comprehensive

Forest Plan may be found at the DNR link provided in the Resources and Further Information section at the end of this chapter.

### **MANAGED FOREST LAW PROGRAM**

Administered by the DNR, the Managed Forest Law is a landowner incentive program that encourages sustainable forestry on private in woodlands in Wisconsin. Working with landowner objectives, the law incorporates timber harvesting, wildlife management, water quality, and recreation to maintain a healthy and productive forest. Conditions that must be met for a property to be enrolled in the Managed Forest Law program include:

- at least 10 acres of contiguous forest land;
- at least 80 percent of the land must have a minimum productive capacity of 20 cubic feet of timber per acre in a year;
- a minimum forest cover of 80 percent; and
- a minimum average lot width of 120 feet.

Of the approximately 116,400 acres of woodland in Door County, 23,102 acres (20%) was enrolled in the MFL program as of May, 2014. Of that, 4,733 acres are open to the public for hunting, fishing, hiking, and cross-country skiing. There is also an additional 240 acres in the Forest Crop Law program, the precursor to the Managed Forest Law program; its acreage is shrinking each year as contracts expire. This land is also open to the public for the same activities.

Additional information about the Managed Forest Law program as well as a link to its “open” lands in Door County can be found at the DNR Web site listed in the Resources and Further Information section at the end of this chapter.

### **STATE NURSERY PROGRAM**

Under the direction of the DNR, the mission of the State Nursery Program is to ensure “a consistent supply of high quality seedlings, of desirable forest species, at an economical price, to encourage reforestation in Wisconsin.” Each spring, this program makes seedlings available at discounted prices through the SWCD; since 1937, over 16 million trees have been planted in the county. Average years see between 200,000 and 300,000 seedlings ordered by private landowners, school districts, and non-profit organizations. With the assistance of DNR foresters, landowners can have reforestation plans prepared for their property, as well as determine eligibility – and potentially secure cost-sharing dollars – for reforestation project costs. Landowners planting more than 2,000 seedlings in a given year are eligible to rent one of five tree-planting machines owned by the SWCD.

### **ECOLOGICAL AREAS AND CORRIDORS**

Door County has many natural areas already protected by federal, state, and local agencies, while many other ecologically important areas have been identified as being in need of protection. At the federal level, Two National Wildlife Refuges exist in the county, maintained by the U.S. Fish & Wildlife Service. At the state level, there are a number of areas in the county designated by the DNR as significant natural areas; those designations include State Natural Areas, State Wildlife and Fishery Areas, Significant Coastal Wetlands (discussed previously), Land Legacy Places, and Wisconsin Coastal and Estuarine Land Conservation Plan (WCELCP) Areas. At the regional level, Bay-Lake Regional Planning Commission (BLRPC) has identified environmental corridors throughout the county based on a variety of scientific data layers analyzed within a Geographic Information System (GIS). At the local level, a study conducted by local natural resource experts identified significant wildlife habitat and natural areas.

## U.S. FISH & WILDLIFE SERVICE

### Wildlife Action Plan

In 2001, Congress authorized the U.S. Fish & Wildlife Service to implement and fund a program to help states proactively address the needs of declining wildlife species before they require official listing as "endangered" or "threatened." The State Wildlife Grants program provides federal funding to every state and territory to conserve its wildlife resources of greatest conservation need. Each state is required to prepare a Wildlife Action Plan (WAP) to remain eligible for funding and the WAP must focus on "Species of Greatest Conservation Need." Wisconsin's *Strategy for Wildlife Species of Greatest Conservation Need* was approved by both the DNR and U.S. Fish & Wildlife Service in 2005. This plan identifies low and/or declining populations that are in need of conservation action, including various birds, fish, mammals, reptiles, amphibians, and invertebrates (e.g. dragonflies, butterflies, and freshwater mussels). The plan also addresses the following:

- which native wildlife species with low or declining populations are most at risk of no longer being a viable part of Wisconsin's fauna;
- what habitats they are associated with;
- where they occur across the state; and
- a menu of conservation actions to be developed into specific on-the-ground projects to "get them off and keep them off" any endangered or threatened lists in the future.

Wisconsin's WAP identifies 16 Ecological Landscapes, which are areas of Wisconsin that differ from each other in ecological attributes and management opportunities. They have unique combinations of physical and biological characteristics that make up the ecosystem, such as climate, geology, soils, water, or vegetation. They differ in levels of biological productivity, habitat suitability for wildlife, presence of rare species and natural communities, and in many other ways that affect how they are managed.

Door County lies mostly in the Northern Lake Michigan Coastal Landscape. A small portion of southwest Door County lies in the Central Lake Michigan Coastal Landscape. Some of the WAP's management opportunities specific to Door County include protection and management of: key stretches of the Niagara Escarpment; coastal ridge and swale forest, and the beaches, dunes, and boreal forest; alkaline rock shores, coastal estuaries, boreal forests, and alvar, beach, and dune communities; and significant spawning areas. More information about the WAP and Door County's ecological landscapes may be found at the DNR Web site listed in the Resources and Further Information section at the end of this chapter.

### National Wildlife Refuge System

The U.S. Fish & Wildlife Service administers the National Wildlife Refuge System, which is a network of wildlife habitats, most of which are open to the public. Door County has two National Wildlife Refuges located off the tip of the peninsula, near Washington Island: the Green Bay and Gravel Island refuges.

The Green Bay National Wildlife Refuge consists of Hog Island (2 acres), Plum Island (325 acres), and Pilot Island (3.7 acres). Hog Island was set aside by Executive Order in 1913 as a preserve and breeding ground for native birds. Portions of Plum and Pilot Islands were developed to serve as lighthouse facilities or life-saving stations during the late 19th century. These islands were transferred from the U.S. Coast Guard to the Fish and Wildlife Service in 2007. All public use is prohibited on Hog and Pilot Islands due to ground nesting by migratory

birds and the limited and treacherous access. Plum Island essentially functions as a small ecosystem and retains natural qualities absent on the nearby mainland. Public use opportunities may be offered in the future provided they are compatible with the refuge's purpose and mission. Working in partnership with the National Wildlife Refuge, the local organization Friends of Plum and Pilot Islands have been working to restore the lighthouse facilities and other buildings found on these islands.

The Gravel Island National Wildlife Refuge consists of Gravel (4 acres) and Spider (23 acres) Islands. These islands are located in Lake Michigan, approximately one mile east of the northern tip of Door County, and were set aside by Executive Order in 1915 as a preserve and breeding ground for native birds. Public use is not allowed due to ground nesting by migratory birds. Together, Gravel and Spider Islands support large colonies of herring gulls and double-crested cormorants. Spider Island had a birch-cedar-tamarack forest until the 1970s, but it has since been destroyed due to the activities of thousands of cormorants that breed there. All of the trees have now fallen over or been washed away. Waterfowl use is limited since there is sparse vegetation, but the fallen trees provide some cover for scattered nesting of species like mallards, black ducks, and Canada geese. Gravel Island has no permanent vegetation due to periodic over-washing by waves and ice during high-water years.

## **WISCONSIN DEPARTMENT OF NATURAL RESOURCES**

### **Knowles-Nelson Stewardship Program**

The Wisconsin Legislature created the Knowles-Nelson Stewardship Program (Stewardship) in 1989 to preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation. Conservation and recreation program goals are achieved through acquisition of land and easements, development of recreational facilities, and restoration of wildlife habitat. Cooperation and partnership between the DNR, local governments, and private non-profit organizations are important components of this program. To foster partnership, the program provides 50% match grants to local governments and non-profit organizations for eligible projects. More than 7,000 acres have been purchased in Door County through this program, in partnership with non-profit organizations and local government.

### **State Natural Areas**

The Wisconsin State Natural Areas program was established by the state legislature in 1951 to protect outstanding examples of Wisconsin's native landscape of natural communities, significant geologic formations, and archeological sites. Wisconsin's 560 State Natural Areas, encompassing 323,000 acres, are valuable for research and educational use and the preservation of genetic and biological diversity. They also provide some of the last refuges for rare plants and animals, protecting more than 90% of the plants and 75% of the animals on Wisconsin's list of endangered and threatened species.

State Natural Areas are protected by several means, including land acquisition from willing sellers, donations, conservation easements, and cooperative agreements. Areas owned by other government agencies, educational institutions, and private conservation organizations are also brought into the natural area system by formal agreements between the DNR and the landowner. Natural areas are not appropriate for intensive recreation, but do accommodate low-impact activities such as hiking, bird watching, and nature study.

Door County has 28 State Natural Areas, as listed in Table 6.8 at the end of this chapter.

## State Wildlife and Fishery Areas

State Wildlife and Fishery Areas are lands that have been acquired by the DNR in order to preserve land and game for outdoor enthusiasts by protecting important habitats for wildlife and keeping them open for public use. Door County has three state wildlife and fishery areas, as listed below and identified in Table 6.8 at the end of this chapter.

All Wildlife Areas are open to a full range of traditional outdoor recreational uses. These include hunting, fishing, trapping, hiking, nature study, and berry-picking.

- *Gardner Swamp Wildlife Area* - Gardner Swamp Wildlife Area is 1,112 acres in size, and consists of marsh, forested lowland, and Keyes Creek. Principal wildlife includes deer, waterfowl, ruffed grouse, rabbits, and raccoons.
- *Mud Lake Wildlife Area* - Mud Lake Wildlife Area, located in the Towns of Baileys Harbor and Liberty Grove, is 1,941 acres in size and consists of a lake, marshland, and farmland. Principal wildlife includes deer, waterfowl, ruffed grouse, rabbits, squirrels, black bear, and raccoons. Part of a county snowmobile trail also runs through this area.
- *Reibolts Creek Public Access* - Reibolts Creek Public Access, located in the Town of Baileys Harbor, is 121 acres and contains the outlet for Mud Lake. Its primary focus is stream access for fishing.

## Land Legacy Places

The DNR has identified “Land Legacy Places” that will likely play a critical role in meeting Wisconsin’s conservation and outdoor recreation needs over the next 50 years. Over a three-year period, from 1999 to 2002, the DNR hosted numerous public and staff meetings to gather information, local knowledge, and opinions about Wisconsin’s land and water to develop criteria regarding the types or characteristics of places believed to be most important. These criteria were then used in conjunction with data on the distribution of various ecological attributes, human population trends, geographical features and other factors, as well as professional judgment by DNR staff members and local citizen knowledge, to identify the “Land Legacy Places.”

By designating an area as a “Land Legacy Place,” the DNR intends to guide future land use decisions about the area, but it is not a legal designation and does not supersede any existing state or local regulations. The report is not a list of places the DNR wants to buy nor does it identify how or when these places should be protected or who should help protect them. Many partners and stakeholders will need to be involved in evaluating more precisely where protection efforts may best be focused and which protection strategies are most appropriate.

There are 12 identified Land Legacy Places within Door County, including Chambers Island, the Niagara Escarpment, the Mink River Estuary, and the Grand Traverse Islands, which include Plum, Detroit, Rock, and Washington Islands (the remaining Grand Traverse Islands are part of Delta County, Michigan). See Table 6.8 at the end of this chapter for a complete list.

## Coastal and Estuarine Land Conservation Plan Areas

In November 2011, a Coastal and Estuarine Land Conservation (CELC) Plan for Wisconsin was approved by the U.S. Department of Commerce and the National Oceanic and Atmospheric Administration (NOAA). The plan, written by the Wisconsin Department of Administration - Coastal Management Program in partnership with the DNR, enables Wisconsin to participate in a land acquisition grant program administered by the NOAA. The CELC Plan provides an assessment of priority land conservation needs and guidance for selecting projects to compete nationally for CELC grants.

The purpose of the CELC Plan is to protect important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or that are threatened by conversion from their natural or recreational state to other uses. The plan gives priority to lands which can be effectively managed and protected over the long-term (e.g., minimal invasive species impact and surrounding land uses are compatible with long-term conservation of the area). Plans or data sources used in the development of the CELC Plan project areas for Door County are listed below:

- Wildlife Action Plan: Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need (U.S. Fish & Wildlife Service & DNR)
- Wisconsin Land Legacy report: An inventory of places to meet Wisconsin's future conservation and recreation needs (DNR)
- A Data Compilation and Assessment of Coastal Wetlands of Wisconsin's Great Lakes (DNR)
- Lake Michigan Integrated Fisheries Management Plan - 2003-2013 (DNR)
- Wisconsin Coastal Management Program: A Strategic Vision for the Great Lakes (Wisconsin Department of Administration)
- Wisconsin Historic Preservation Database, State and National Register of Historic Places (Wisconsin Historical Society)

Project areas within the CELC plan consist of:

- *Conservation Opportunity Areas (COAs).* Natural communities from the Wildlife Action Plan (highest priority).
- *Land Legacy Areas.* Land Legacy Areas that address primary conservation needs (all of the Land Legacy places listed in Table 6.8, except for Door Peninsula Hardwood Swamps, Kangaroo Lake, and Niagara Escarpment).
- *Important Bird Areas (IBA).* An IBA is a site that provides critical habitat to one or more species of breeding or non-breeding birds, as identified by the Wisconsin Bird Conservation Initiative.
- *Tributary corridors, coastal wetlands and near-shore/tributary fish spawning habitat.* This category captures important coastal and estuarine areas not identified by the Wildlife Action Plan, Land Legacy Report, and Important Bird Areas.
- *Migratory bird stopover habitat.* Although not used to define project sites, the DNR has identified migratory stopover sites, both documented sites and modeled as likely bird stopover habitat sites. These sites will be used in the evaluation of CELC project proposals.

Note that the CELC Plan project areas are also encompassed by the Significant Wildlife Habitat and Natural Areas of Door County, as described below.

## BAY-LAKE REGIONAL PLANNING COMMISSION - ENVIRONMENTAL CORRIDORS

Habitat connectivity – consisting of natural landscape features such as stream corridors – is essential for the survival of numerous wildlife species. In addition to wildlife population survival, countless ecological processes, such as maintenance of water quality, will not function if natural connections are severed.

Identification of environmental corridors – areas containing and connecting natural areas, green space, and other natural resources – is an advisory process utilized in various community planning efforts as a way to promote preservation of areas with environmental significance. Environmental corridors may also contain scenic, historic, scientific, recreational, and cultural resources. They often lie along waterways and other natural features, serving many purposes, such as: protecting water quality; acting as buffers between different land uses; controlling, moderating, and storing floodwaters; providing nutrient and sediment filtration; providing fish and wildlife habitat; and providing recreational opportunities.

In 2005, Bay-Lake Regional Planning Commission (BLRPC) published the “Door Peninsula Environmental Corridors – A Coastal Resource Identification Project,” after identifying a need to define environmental corridors in a consistent manner using digital data and geographic information system (GIS) software. Environmental corridors for Door County were defined using the following data layers:

- Navigable waters with a 75' setback
- DNR wetlands of two acres or greater, with a 75' setback
- Floodplains
- Steep slopes
- Public parks and recreation sites
- Historical/archaeological sites
- State Natural Areas
- State Wildlife Areas
- DNR Natural Areas Inventory sites
- DNR Land Legacy Places
- Significant coastal wetlands
- Significant Wildlife Habitat and Natural Areas
- Niagara Escarpment
- Other features of significance

A copy of the Environmental Corridor document, which includes a map of the environmental corridors in Door County, may be found by visiting BLRPC’s Web site, listed in the Resources and Further Information section at the end of this chapter.

## LOCAL IDENTIFICATION OF ECOLOGICAL AREAS

### Significant Wildlife Habitat and Natural Areas of Door County

A group of local natural resource protection experts and individuals interested in helping to preserve Door County’s plants and animals and their habitats published in 2002 “A Guide to Significant Wildlife Habitat and Natural Areas of Door County, Wisconsin.” Eighteen areas – most of which qualify as “corridors” per the above discussion – were identified as the most critical in maintaining the ecological integrity and diversity of the county. Each area contains significant value for recreation, aesthetics, clean air and water, and biodiversity. The guide, containing both maps and text describing these eighteen areas, was designed for use by all levels of local government, natural resource professionals, and interested citizens. Its purpose is to provide practical information that might assist people in supporting natural area preservation and in implementing protection activities in and around their communities. Information on how to obtain a copy of the guide may be found under the SWCD listing in the Resources and Further Information section at the end of this chapter.

## **VULNERABLE SPECIES**

### **RARE SPECIES PROTECTION**

Both the U.S. Fish and Wildlife Service and the DNR manage and regulate activities pertaining to federally- and state-listed threatened and endangered species. Under the Federal Endangered Species Act, all federally-listed animals (including insects) are protected from direct killing, taking, or other activities that may be detrimental to the species on any land, public or private. Federally listed plants have similar protection, but the direct killing or taking prohibitions are limited to federal lands. Under Wisconsin's endangered species law, it is illegal to take (which includes killing), transport, possess, process, or sell any animal (including insects) that are on Wisconsin's endangered and threatened species list on any land, public or private, without a valid threatened or endangered species permit. State-listed plants have similar protection, but the direct killing or taking prohibitions are limited to any public lands or land that is not owned privately. No one may process or sell any wild plant on any land public or private that is a listed species without a valid endangered or threatened species permit. A federal and/or state permit may be needed when conducting activities on any lands that may affect threatened and endangered species. See the Resources and Further Information section for DNR and U.S. Fish & Wildlife Service contact information.

### **DOOR COUNTY INVASIVE SPECIES TEAM**

Controlling invasive species is especially important due to the numerous endangered, threatened, and special concern plant species in the county. The DCIST, overseen and partially funded by SWCD, is a voluntary alliance of businesses, non-profit groups, public agencies, educational institutions, organizations, private landowners, and other interested parties working towards controlling invasive species. DCIST's activities include the following:

- identifying non-native, aggressive plant species in Door County
- controlling the spread of and/or eradicating when possible the identified plant species
- offering public assistance and acting as an information and education resource in the above

### **WISCONSIN'S CAVE BATS**

For now, Wisconsin's bat population is stable, but a deadly fungus is devastating cave-dwelling bat populations in eastern states. First discovered in 2006, White-nose syndrome is a disease affecting many species of North American bats, resulting in large-scale population declines. White-nose syndrome is caused by a fungus that is only grows at cool temperatures, thus it can only thrive on bats when they are hibernating and have a depressed body temperature. Recently discovered in southwestern Wisconsin, White-nose syndrome poses a potentially severe threat to Wisconsin's four cave-bat species. In order to help prevent the occurrence of this syndrome in Door County, the DNR received a grant from the Wisconsin Coastal Management Program to develop a cave inventory and management plan for the Horseshoe Bay cave hibernaculum. In the meantime, the U.S. Fish and Wildlife Service is currently assessing the status of bat species affected by the syndrome as potential candidates for listing under the Endangered Species Act.

### **PRESERVED LANDS**

In 2014, roughly 27,894 acres, or about 9% of the county's total land area of 308,427 acres, was considered permanently protected for conservation or recreation purposes. Permanently protected areas include federal, state, county, and municipal parks, natural areas, and wildlife refuges; non-governmental preserves; school-owned lands; and privately-owned lands bound by conservation easements.

Conservation easements are contracts property owners volunteer to enter into with private land trusts or public agencies that limit, or in some cases prohibit, the future development of designated properties. With the establishment of a conservation easement, the property owner sells or makes a tax-deductible donation of the development rights for the property to the land trust but retains ownership of the property. The owner is not prohibited from selling the property or leaving it to

heirs, but future owners must also abide by the terms of the conservation easement. The designated land trust is permanently responsible for monitoring and enforcing the easement, through legal action if necessary. A conservation easement never requires, although may allow if the owner wishes, public access to the property.

Individual property owners also employ a wide variety of land protection measures in addition to conservation easements. Many Door County property owners have added restrictions on the deeds to their property that limit future development. (Note that if a specific group or agency, such as a land trust, is not designated to permanently enforce the deed restriction, the restrictions may later be ignored.) Property owners have enrolled in managed forest programs, as well as programs available to help (re)establish wildlife habitats, wetlands, ponds, and other natural areas. Agricultural landowners also have the option of entering into a variety of temporary agreements regarding farmland preservation or operational practices.

Map 6.8, Preserved Lands, found at the end of this document, depicts those lands in the county considered permanently protected. Properties included in each map legend category are as follows:

- *Federal Preserve.* These lands are owned and designated by the federal government as nature or wildlife preserves. There are approximately 322 acres in Door County considered federal preserves.
- *State Preserve.* These lands are owned and designated by the State of Wisconsin as state nature or wildlife preserves. There are roughly 5,261 acres of state preserve in the county.
- *Non-Government Preserve.* These lands are owned for conservation and/or recreation purposes by private non-profits such as The Nature Conservancy, the Door County Land Trust, The Ridges Sanctuary, Crossroads at Big Creek, Boy and Girl Scouts, the YMCA, The Clearing, etc. There are approximately 9,385 acres of non-governmental preserves in the county.
- *Owners in Common.* These are privately owned properties held for conservation and/or recreation purposes by homeowner, neighborhood, or condominium associations. There are at least 882 acres of such lands in the county.
- *State Park.* These lands are owned and operated by the State of Wisconsin as public parks. There are roughly 8,863 acres within the five state parks in Door County.
- *County Park.* These properties are owned and operated by the County of Door as public parks, although some allow limited access and use. County parks comprise a total of approximately 1,080 acres in the county.
- *Municipal Park.* These properties are owned and designated as public parks by municipalities within Door County (the city, the four villages, or one of the 14 towns). Acreage of municipal parks in Door County totals roughly 699 acres.
- *School-Owned.* These lands are owned for conservation, recreation, or education purposes by schools, including University of Wisconsin branches, Lawrence University, and local K-12 districts. School-owned lands total approximately 1,645 acres in the county.

- *Conservation Easement – DNR.* These properties are privately owned but subject to a conservation easement with the Wisconsin Department of Natural Resources. There are approximately 597 such acres in the county.
- *Conservation Easement – Non-Government.* These properties are privately owned but subject to a conservation easement with either the Door County Land Trust or the Door County Chapter of The Nature Conservancy. Such lands comprise approximately 2,752 acres.

While Map 6.8, Preserved Lands, depicts the location of state, county, and local parks, note that Chapter 9, Community Facilities and Utilities, provides a detailed description of the state and county parks.

*For preserved lands acreage at the municipal-level, contact the Door County Planning Department.*

## NON-METALLIC MINERAL RESOURCES

### **NON-METALLIC MINERAL RESOURCES**

Door County's nonmetallic mines provide topsoil, clay, sand, gravel, and aggregate for concrete, asphalt, construction, and road building. They also provide dimensional stone for shoreland protection, landscaping, building, and decorative use. The county has significant quantities of sand, gravel, and crushed stone that are used for constructing the sub-base layer for roads and are also the primary components in concrete used in building foundations, basement walls, and sidewalks.

Door County has active and inactive nonmetallic mines scattered around the county. Prior to laws and zoning implementing requirements for mining operations – location and reclamation plans to prevent surface and groundwater contamination and to ensure proper reclamation – mines were developed without regard to their potential adverse impacts and restoration of the site after mining stopped. Abandoned rock, gravel, and sand quarries were left without reclamation and void of topsoil and vegetation.

Ch. 295, Wis. Stats. enabled the DNR to establish rules – NR 135, Wis. Admin. Code – to implement a nonmetallic mining reclamation program. The overall goal of NR 135 is to provide a framework for state-wide regulation of nonmetallic mining reclamation. The rule does this by establishing uniform reclamation standards and setting up a locally administered reclamation permit program. Reclamation standards address environmental protection measures including topsoil salvage and storage, surface and groundwater protection, and contemporaneous reclamation to minimize acreage exposed to wind and water erosion.

Any new nonmetallic mines need to obtain a permit from the DNR and are subject to the requirements of NR 135, including measures for surface water and wetland protection, groundwater protection, final grading and slopes, topsoil redistribution, and re-vegetation and site stabilization.

Depleted mining sites may be reclaimed as parkland, wildlife habitat, recreational land, or other uses. NR 135 also allows landowners to register marketable nonmetallic mineral deposits as a way to prevent future on-site development that would interfere with the extraction of those deposits; registered sites are protected from local zoning or other decisions that permanently interfere with mining on the site for at least 20 years after the date of registration with the DNR.

For unincorporated areas under county zoning (see Chapter 10, Land Use), the establishment of new non-metallic mine sites must be approved by the county. For reclamation only (not active mining operations or site approval), the Door County SWCD administers a Nonmetallic Mine

Reclamation Ordinance, in effect in all incorporated and unincorporated areas of the county. The Towns of Brussels, Nasewaupee, and Union all have their own non-metallic mining ordinances that also regulate mining (operations only, not reclamation).

Door County currently has approximately 50 active mines regulated by the county, which are inspected annually by SWCD staff. The DNR regulates several additional mines located in shoreland areas.

*For municipal-level data regarding active mines, contact the Door County Soil and Water Conservation Department.*

# **CHAPTER 6: NATURAL RESOURCES ADDITIONAL TABLES**

**Table 6.6: Rare Plants, Door County**

Rare Plants			
Common Name	Status	Common Name	Status
American Sea-rocket	SC	Maidenhair Spleenwort	SC
Beautiful Sedge	THR	Marsh Horsetail	SC
Bird's-eye Primrose	SC	Marsh Ragwort	SC
Broad-leaf Sedge	SC	Mingan's Moonwort	SC
Brown Beakrush	SC	Moonwort Grape-fern	END
Canada Gooseberry	THR	Northern Comandra	END
Chilean Sweet Cicely	SC	One-flowered Broomrape	SC
Christmas Fern	SC	Prairie Dunewort	END
Climbing Fumitory	SC	Purple False Oats	END
Coast Sedge	THR	Putty Root	SC
Cooper's Milkvetch	END	Ram's-head Lady's-slipper	THR
Downy Willow-herb	SC	Rock Whitlow-grass	SC
Drooping Sedge	THR	Rocky Mountain Sedge	SC
Dune Goldenrod	THR	Round-leaved Orchis	THR
Dune Thistle	THR	Rugulose Grape-fern	SC
Dwarf Lake Iris	THR	Sand Reedgrass	THR
Elk Sedge	THR	Seaside Spurge	SC
Fairy Slipper	THR	Slender Bog Arrow-grass	SC
Few-flower Spikerush	SC	Slenderleaf Sundew	THR
Giant Pinedrops	END	Slim-stem Small-reedgrass	SC
Green Spleenwort	END	Small Yellow Water Crowfoot	END
Hair-like Sedge	SC	Small-flowered Grass-of-parnassus	END
Handsome Sedge	THR	Spoon-leaf Moonwort	SC
Heart-leaved Foam-flower	END	Spreading Woodfern	SC
Hooker's Orchid	SC	Sticky False-asphodel	THR
Lake Huron Tansy	END	Striped Maple	SC
Lanceolate Whitlow-cress	END	Thickspike	THR
Large-flowered Ground-cherry	SC	Tufted Bulrush	THR
Limestone Oak Fern	SC	Tufted Hairgrass	SC
Livid Sedge	SC	Western Fescue	THR
Long-spurred Violet	SC	White Camas	SC
Low Calamint	SC	White Mandarin	SC
Low Spike-moss	END		

Source: Wisconsin Department of Natural Resources, 2012.

**State Status:**

END = Endangered

THR = Threatened

SC = Special Concern

**Table 6.7: Rare Animals and Natural Communities, Door County**

Rare Animals		
Common Name	Status	Natural Communities
American Bittern	SC/M	Alder Thicket
Appalachian Pillar	SC/N	Alvar
Bald Eagle	SC/P	Boreal Forest
Bat Hibernaculum	SC	Boreal Rich Fen
Beach-dune Tiger Beetle	SC/N	Dry Cliff
Black-crowned Night-Heron	SC/M	Emergent Marsh
Black Striate	SC/N	Forested Seep
Blanding's Turtle	THR	Great Lakes Alkaline Rockshore
Boreal Top	SC/N	Great Lakes Barrens
Bright Glyph	SC/N	Great Lakes Beach
Brilliant Granule	SC/N	Great Lakes Dune
Cherrystone Drop	THR	Great Lakes Ridge and Swale
Clear-winged Grasshopper	SC/N	Hardwood Swamp
Common Goldeneye	SC/M	Interdunal Wetland
Deep-throated Vertigo	SC/N	Lake--Shallow, Hard, Drainage
Dentate Supercoil	SC/N	Lake--Shallow, Hard, Seepage
Eastern Ribbon Snake	END	Lake--Shallow, Very Hard, Drainage (Marl)
Forcipate Emerald	SC/N	Moist Cliff
Henslow's Sparrow	THR	Northern Dry Forest
Hine's emerald dragonfly	END	Northern Dry-mesic Forest
Hooded Warbler	THR	Northern Mesic Forest
Lake Huron Locust	END	Northern Sedge Meadow
Lake Sturgeon	SC/H	Northern Wet Forest
Le Conte's Sparrow	SC/M	Northern Wet-Mesic Forest
Least Bittern	SC/M	Open Bog
Loggerhead Shrike	END	Shore Fen
A Long-horned Casemaker Caddisfly	SC/N	Shrub-carr
Midwest Pleistocene Vertigo	END	Southern Hardwood Swamp
Migratory Bird Concentration Site	SC	Southern Mesic Forest
A Minute Moss Beetle	SC/N	Southern Sedge Meadow
Mottled Darner	SC/N	Springs and Spring Runs, Hard
Mystery Vertigo	SC/N	Talus Forest
Northern Cricket Frog	END	
Northern Goshawk	SC/M	
Phyllira Tiger Moth	SC/N	
Piping Plover	END	
A Predaceous Diving Beetle	SC/N	
Red-shouldered Hawk	THR	
Sculpted Glyph	SC/N	
Semirelict Underwing Moth	SC/N	<b>State Status:</b>
Six-whorl Vertigo	SC/N	END = Endangered
Striped Shiner	END	THR = Threatened
Swamp Darner	SC/N	SC = Special Concern
Tapered Vertigo	SC/N	SC/H = Regulated by Open/Closed Seasons
Transparent Vitrine Snail	SC/N	SC/M = Protected by Migratory Bird Act
Upland Sandpiper	SC/M	SC/N = No Protection
Western Meadowlark	SC/M	SC/P = Fully Protected
Yellow Rail	THR	

Source: Wisconsin Department of Natural Resources, 2012.

**Table 6.8: State-Designated Natural Areas, Door County**

<b>Significant Natural Area</b>	<b>State Natural Area</b>	<b>State Wildlife &amp; Fishery Area</b>	<b>Significant Coastal Wetland</b>	<b>Land Legacy Place</b>
Baileys Harbor Boreal Forest and Wetlands	X			
Bayshore Blufflands	X			
Big and Little Marsh	X			
Black Ash Swamp Area				
Chambers Island				X
Cave Point - Clay Banks	X			
Coffey Swamp	X			
Colonial Waterbird Nesting Islands				X
Detroit Harbor	X			
Door Peninsula Hardwood Swamps				X
Duvall Swamp			X	
Eagle Harbor to Toft Point Corridor				X
Ellison Bluff County Park	X			
Europe Bay Woods	X			
Gardner Swamp (Au Grande Maret)		X		
Grand Traverse Islands				X
Jackson Harbor Ridges	X			
Kangaroo Lake	X			X
Little Lake	X			
Logan Creek	X			
Marshall's Point (Pine Ledges)	X			
Meridian County Park	X			
Mink River Estuary	X			X
Moon Light Bay Bedrock Beach	X			
Mud Lake	X			
Mud Lake Wildlife Area & Reibolts Creek		X		
Newport Conifer - Hardwoods	X			
Niagara Escarpment				X
North Bay	X			X
Northeast Coast Door Peninsula			X	
Peninsula Park Beech Forest	X			
Peninsula Park White Cedar Forest	X			
Peninsula State Park				X
Peninsula State Park to Jacksonport Corridor				X
Renard Swamp Area			X	
Rock Island Woods	X			
Shivering Sands			X	X
Sister Islands	X			
The Ridges Sanctuary	X			
Thorp Pond	X			
Toft Point	X			
Upper Door County Area			X	
Washington Island Wetlands			X	
White Cliff Fen and Forest	X			
Whitefish Dunes	X			

Source: Wisconsin Department of Natural Resources.

## RESOURCES AND FURTHER INFORMATION

### LOCAL ORGANIZATIONS AND INITIATIVES

#### **Crossroads at Big Creek (<http://www.crossroadsatbigcreek.org>)**

Crossroads at Big Creek is a private non-profit organization that has to date preserved over 115 acres of land for experiential life-long learning focusing on science, history, and the environment. Crossroads offers environmental education, history, astronomy, and recreational activities.

#### **Door County Environmental Council (<http://www.dcec-wi.org>)**

Door County Environmental Council seeks to protect Door County's natural areas through effective land use measures, including zoning, other regulations, and private stewardship.

#### **Door County Green Fund (<http://www.greenvfund.com>)**

A component fund of the Door County Community Foundation, the Green Fund awards grants to local non-profits and municipalities for a variety of conservation efforts.

#### **Door County Greenprint ([http://tplgis.org/DoorCounty\\_Greenprint](http://tplgis.org/DoorCounty_Greenprint))**

The Door County Greenprint, developed with the Trust for Public Land, can be used to analyze individual properties in relation to natural resource protection goals. Its interactive maps and customizable reports are intended to assist local elected officials, conservation organizations, property owners, and businesses make land use planning decisions.

#### **Door County Land Trust (<http://www.doorcountylandtrust.org>)**

The Door County Land Trust is a private non-profit organization established in 1986 to protect lands that contribute significantly to the scenic beauty, open space, and ecological integrity of Door County. The Land Trust protects land by working with private landowners who donate some or all of their development rights through conservation easement agreements, by accepting donations of land, and through selectively purchasing properties.

#### **Door County Parks Department (<http://map.co.door.wi.us/parks>)**

The Door County Parks Department oversees the development and operation of 19 county parks, including the Door County Fair Park.

#### **Door County Planning Department (<http://map.co.door.wi.us/planning>)**

The department's primary functions are administration and enforcement of the county's zoning, land division, and other land use management ordinances; preparation and implementation of the county comprehensive and farmland preservation plans; acting as a resource for local public officials and residents on a variety of community development plans or projects; and administering the county addressing program. See Chapter 10, Land Use, for a complete description of all plans and ordinances.

#### **Door County Real Property Listing Department (<http://www.co.door.wi.gov>)**

Real Property Listing processes all information recorded in the Register of Deeds Office pertinent to the transfer of land. Real Property assimilates information received from local assessors, clerks, treasurers, Department of Revenue, Department of Transportation, Department of Natural Resources, and various other sources.

#### **Door County Sanitarian Department (<http://www.co.door.wi.gov/county>)**

The Door County Sanitarian Department was created in the mid-1960s by the Door County Board of Supervisors in order to address concern over failing private sewage disposal systems within the county. The department administers the following programs:

- Time of Sale Ordinance
- POWTS Inspection Requirement
- Door County Comprehensive Sanitary Survey

### **Door County Soil and Water Conservation Department (<http://map.co.door.wi.us/swcd>)**

The SWCD was created under the authority of Ch. 92, Wis. Stats., which was enacted to halt and reverse depletion of the state's soil resources and pollution of its waters. Per Ch. 92, the SWCD has the responsibility for the administration of the county soil and water conservation program and the authority to exercise the powers granted to the county's Land Conservation Committee, the county board oversight committee for the department. "A Guide to Significant Wildlife Habitat and Natural Areas of Door County, Wisconsin," discussed in the text of this chapter can be found at <http://map.co.door.wi.us/swcd>. The SWCD's programs and services include the following:

- Aggressive Invasive Non-Indigenous Species Initiative
- Agricultural Performance Standards And Prohibitions
- Animal Waste Storage Facility Ordinance
- Assistance to Municipalities
- Beach Contamination Source Identification Program
- Conservation Reserve Enhancement Program
- County Buffer Program
- County Water Pollution Abatement Cost-Share Program
- Farmland Preservation Program
- General Resource Management Assistance to the Public
- Gypsy Moth Suppression Program
- Information and Education
- Invasive Species Team
- Nonmetallic Mining Controls and Reclamation
- Nutrient Management Program
- Research Assistance to Universities and Other Agencies Pertaining to Door County's Resources
- Stormwater Runoff Management and Construction Site Erosion Control
- Targeted Runoff Management Program
- Tree Planting
- Village Of Ephraim Stormwater/Construction Site Erosion Control Ordinance
- Water Pollution Abatement Cost-Share Program
- Well Abandonment Program
- Wellhead Zone of Contribution Protection Programs

### **Door Property Owners (<http://doorpropertyowners.net>)**

Door Property Owners' mission is to provide a forum for the discussion of land use issues and to support the conservation of Door County's natural, scenic, cultural, and aesthetic resources and to advocate for reasoned development that respects and enhances these irreplaceable resources.

### **Friends of Plum and Pilot Islands (<http://www.plumandpilot.org>)**

The Friends of Plum and Pilot Islands are working to restore the historic 19th-century maritime structures found on these remote outposts.

### **Lakeshore Natural Resource Partnership, Inc. (<http://www.lnrp.org>)**

The Lakeshore Natural Resource Partnership, Inc. (LNRP) works within northeast Wisconsin in the geographic area described as the Lakeshore Basin, comprised of Manitowoc, Kewaunee, Door, and portions of Brown and Calumet counties. LNRPs main goal is to promote community solutions to problems that affect the overall health and welfare of the Lakeshore Basin ecosystem.

### **The Nature Conservancy (<http://www.tnc.org/wisconsin>)**

The Nature Conservancy is an international non-profit conservation organization dedicated to preserving the plants, animals, and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. The Nature Conservancy has been working to protect wild places and wildlife on the Door Peninsula since 1962.

### **The Ridges Sanctuary (<http://www.ridgessanctuary.org>)**

The Ridges Sanctuary, Inc. is a non-profit organization formed in 1937 and originally encompassing a 40-acre parcel of land in the Town of Baileys Harbor. The sanctuary has since grown to encompass over 1,600 acres of forests, wetlands, and the unique wildlife and plants within.

## **REGIONAL AND STATE ORGANIZATIONS AND INITIATIVES**

### **Bay-Lake Regional Planning Commission (<http://www.baylakerpc.org>)**

The BLRPC was created in 1972 by Governor Lucey under s. 66.945, Wis. Stats. as the official area-wide planning agency for northeastern Wisconsin. It currently encompasses eight counties: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan. BLRPC provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region.

### **University of Wisconsin - Green Bay, Cofrin Center for Biodiversity**

(<http://www.uwgb.edu/biodiversity>)

The primary purpose of the Cofrin Center for Biodiversity is to promote education, research, and community services that contribute to conservation of the western Great Lakes fauna and flora. The Cofrin Center for Biodiversity manages five natural areas in Wisconsin, including Toft Point and Peninsula Center, both located in the Town of Baileys Harbor.

### **Wisconsin Department of Natural Resources (<http://www.dnr.wi.gov>)**

The DNR is dedicated to the preservation, protection, effective management, and maintenance of Wisconsin's natural resources. It 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 our state. For the Comprehensive Forest Plan go to:

[http://www.forestguild.org/ecological\\_forestry/Door\\_County\\_Comprehensive\\_Forestry\\_Plan.pdf](http://www.forestguild.org/ecological_forestry/Door_County_Comprehensive_Forestry_Plan.pdf).

### **Wisconsin Initiative on Climate Change Impacts (<http://www.wicci.wisc.edu>)**

The WICCI project is bringing together scientists from various disciplines to assess potential climate change impacts and help Wisconsin adapt.

## **FEDERAL ORGANIZATIONS AND INITIATIVES**

### **Environmental Protection Agency (EPA) (<http://www.epa.gov>)**

Since 1970, the EPA has been working for a cleaner, healthier environment for the American people and leads the nation's environmental science, research, education, and assessment efforts. Its mission is to protect human health and the environment.

### **The Trust for Public Land (<http://www.tpl.org>)**

The Trust for Public Land (TPL) is a national, non-profit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come.

**United States Army Corp of Engineers (<http://www.usace.army.mil>)**

Section 404 of the Clean Water Act requires that the depositing, dredging, or filling of material into "waters of the United States, *including wetlands*," must receive authorization for such activities. The Corps has been assigned responsibility for administering the Section 404 permitting process. Activities in wetlands for which permits may be required include, but are not limited to:

- placement of fill material
- ditching activities when the excavated material is "sidecast"
- levee and dike construction
- mechanized land clearing
- land leveling
- most road construction
- dam construction

**United States Fish & Wildlife Service (<http://www.fws.gov/midwest>)**

- Green Bay Ecological Services and Law Enforcement Offices (<http://www.fws.gov/midwest/GreenBay>)
- National Wildlife Refuge System (<http://www.fws.gov/refuges>)

The U.S. Fish & Wildlife Service is a bureau within the Department of the Interior. Their mission is to preserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

- Information on federally-listed species: (<http://www.fws.gov/midwest/Endangered>)
- Maps and information on the Hine's emerald dragonfly groundwater recharge areas that feed the wetlands where the larvae live and critical habitat areas can be found at the Web sites listed below:
  - o U.S. Fish & Wildlife Service (<http://www.fws.gov/midwest/Endangered/insects/hed/index.html>)
  - o SWCD (<http://map.co.door.wi.us/swcd/HED-fly/Hines-Emerald-Dragonfly.htm>)

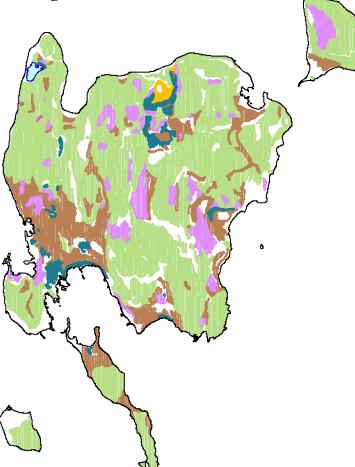


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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.1: General Soil Associations

Town of Washington



See Town of Washington Inset

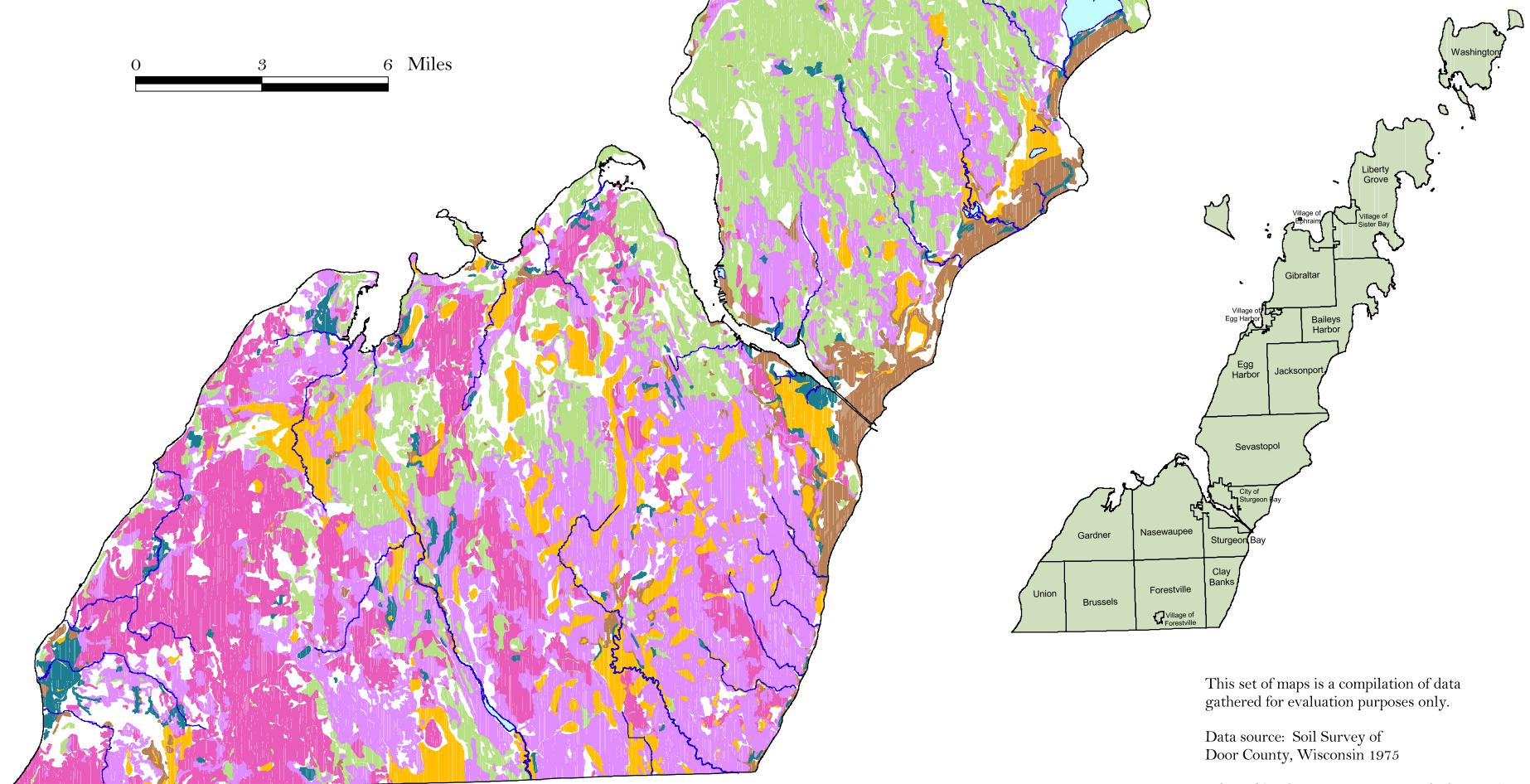
### Soil Associations

- Summerville-Longrie-Omena
- Emmet-Solona-Angelica
- Rousseau-Kiva-Markey
- Kewaunee-Kolberg-Manawa
- Deford-Yahara Variant-Carbondale
- Carbondale-Cathro
- Minor soil types not included in the above associations

Water Bodies

Streams

0 3 6 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Soil Survey of Door County, Wisconsin 1975

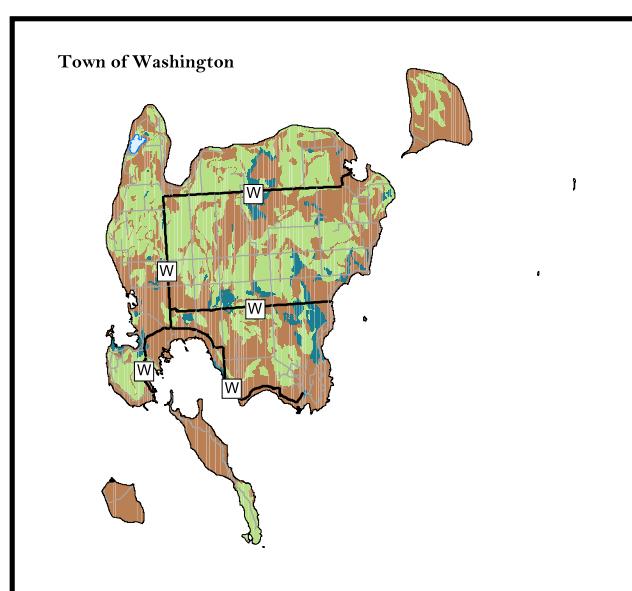
Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015



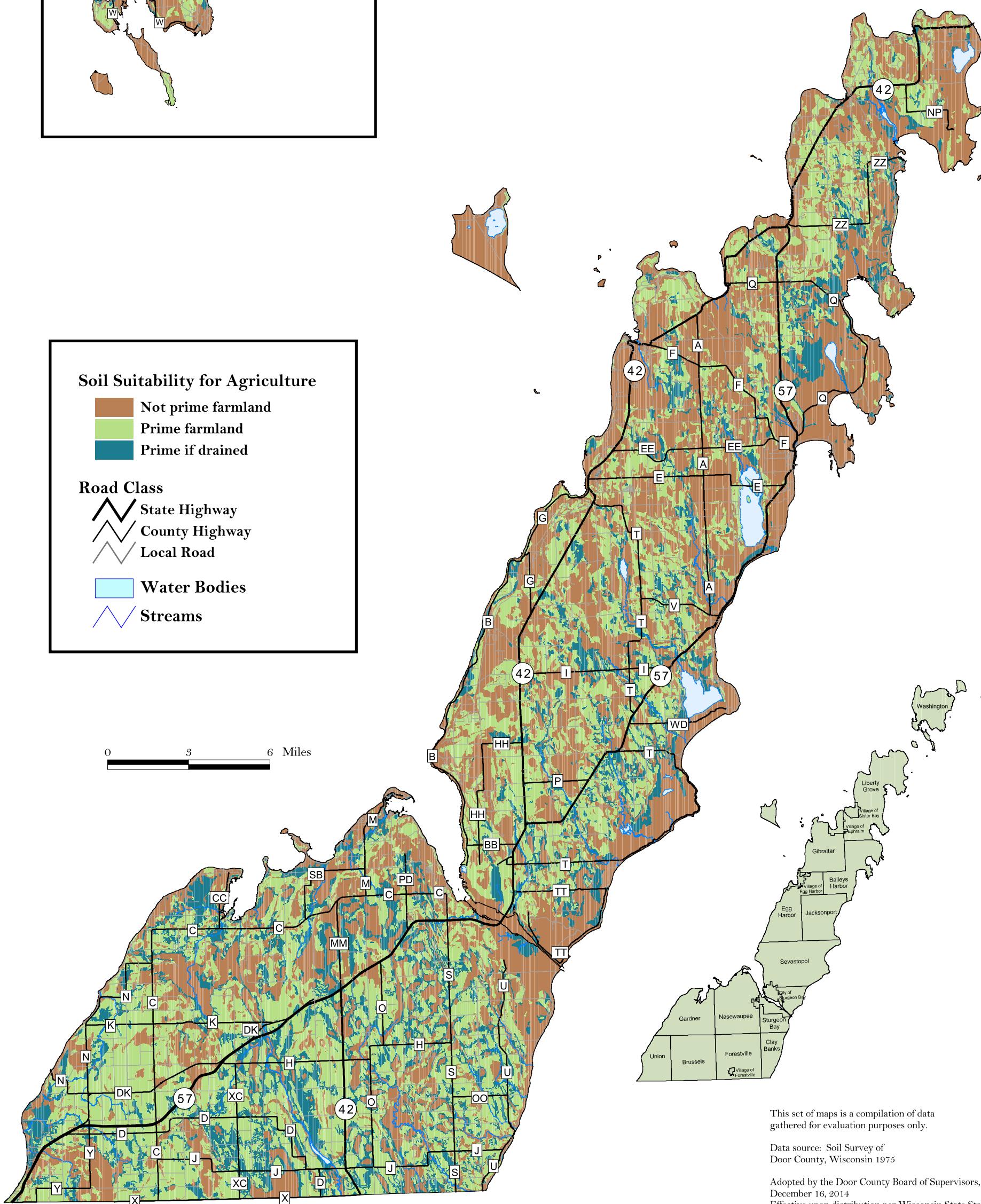
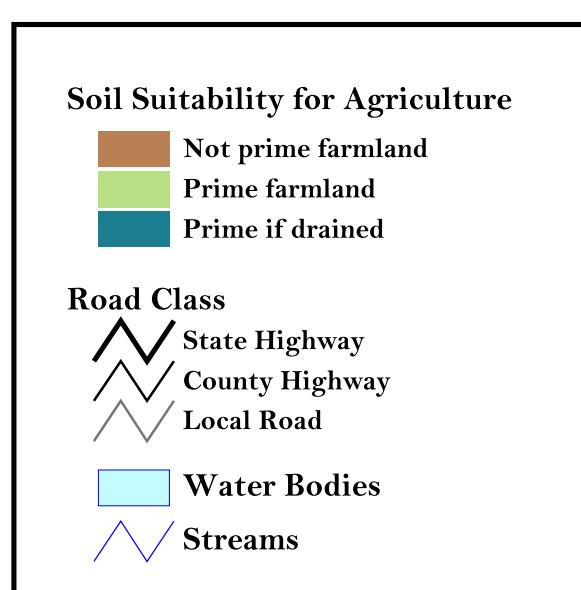
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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.2: Prime Agricultural Soils



*See Town of Washington Inset*



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Soil Survey of  
Door County, Wisconsin 1975

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

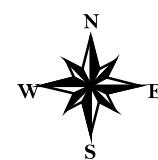
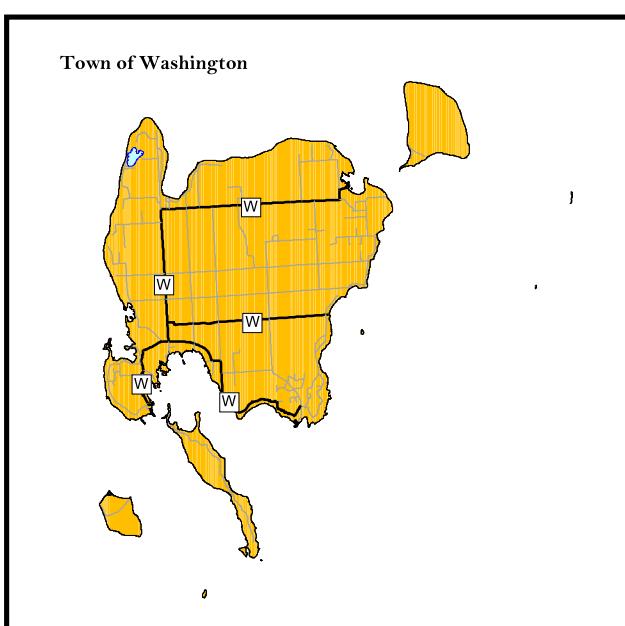


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[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

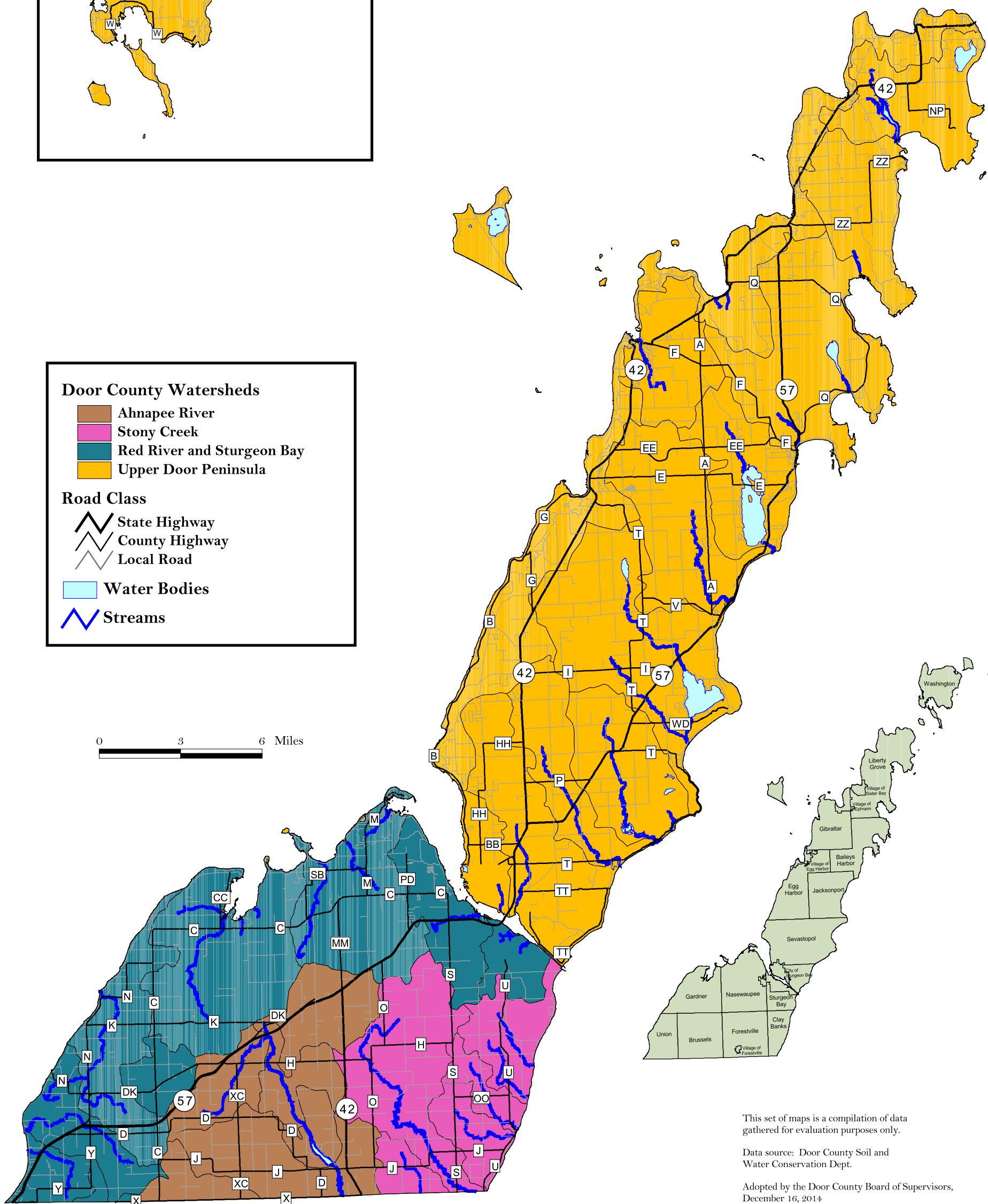
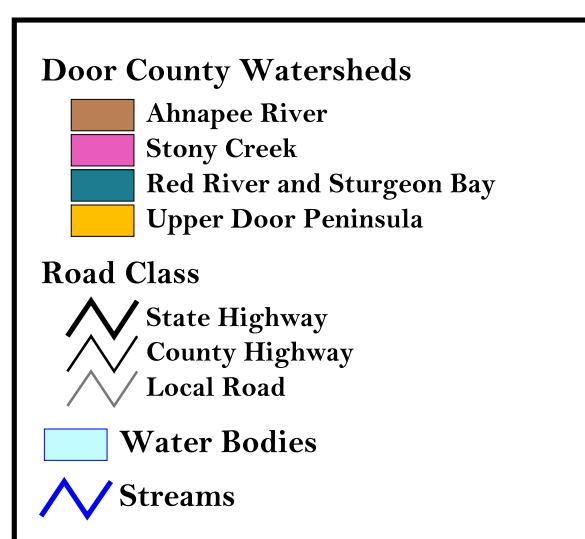
# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.3: Watersheds

Town of Washington



See Town of Washington Inset



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Door County Soil and Water Conservation Dept.

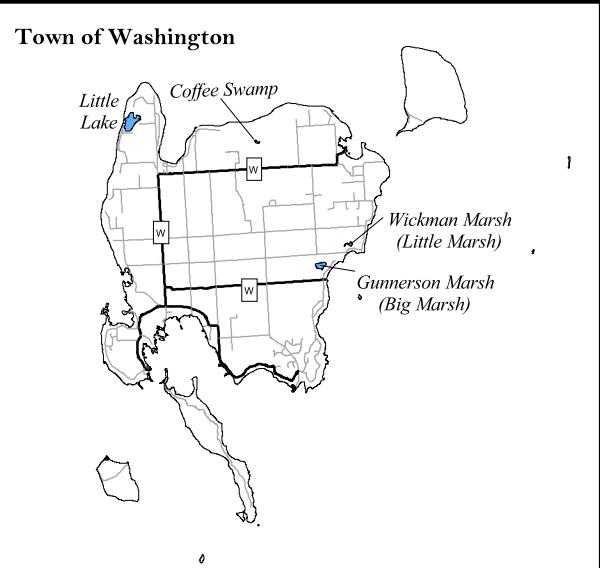
Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015



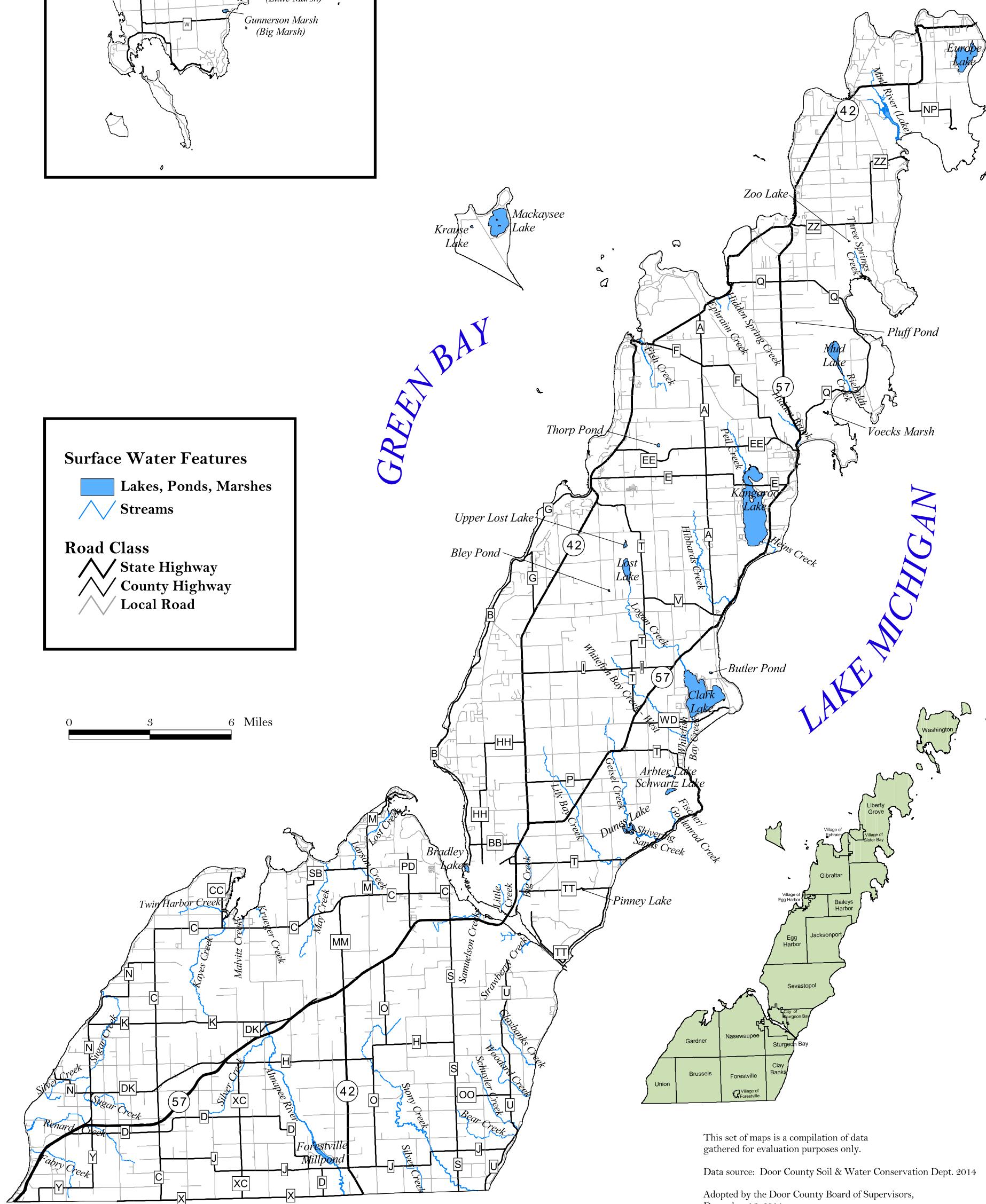
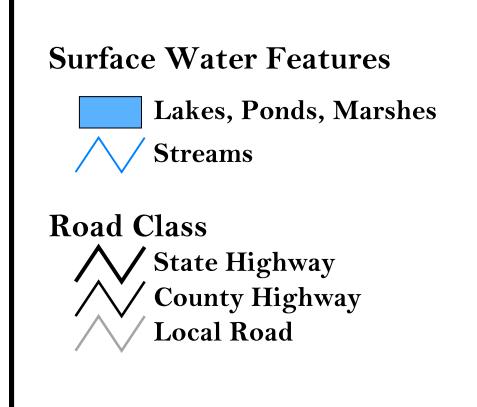
Door County Planning Dept.  
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[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.4: Surface Water Features



See Town of Washington Inset



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Door County Soil & Water Conservation Dept. 2014

Adopted by the Door County Board of Supervisors,

December 16, 2014

Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

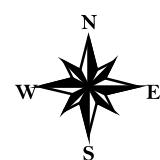
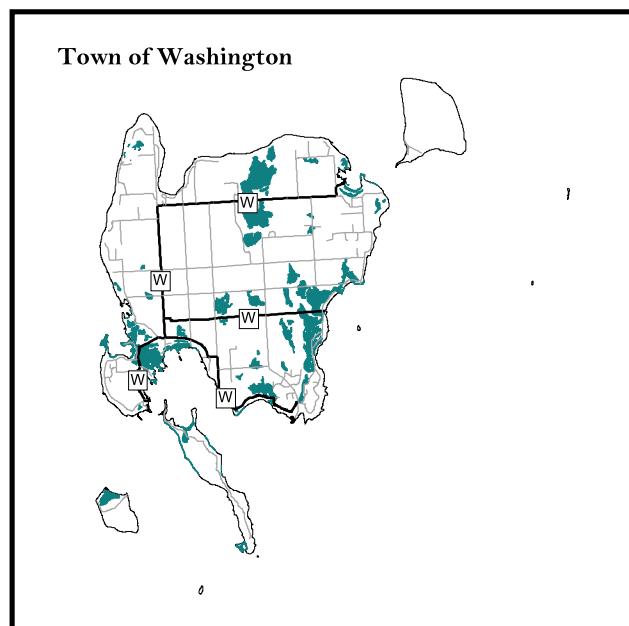


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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.5: Major Wetland Areas

Town of Washington



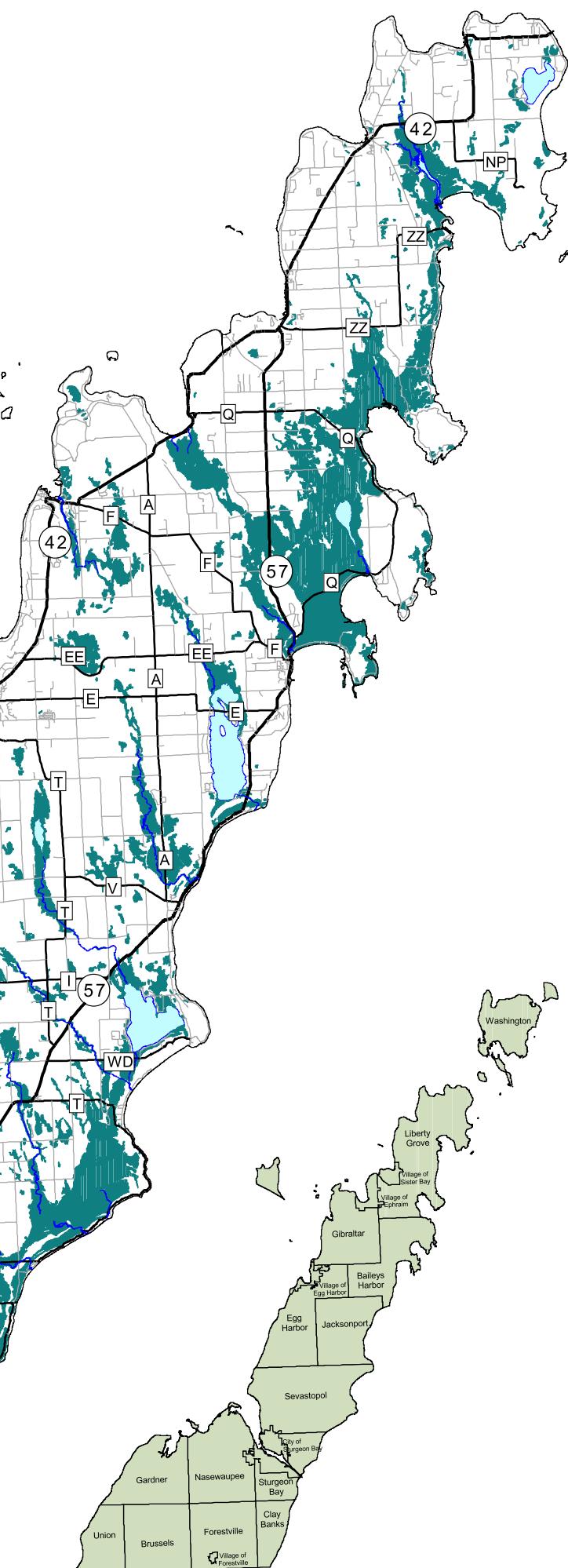
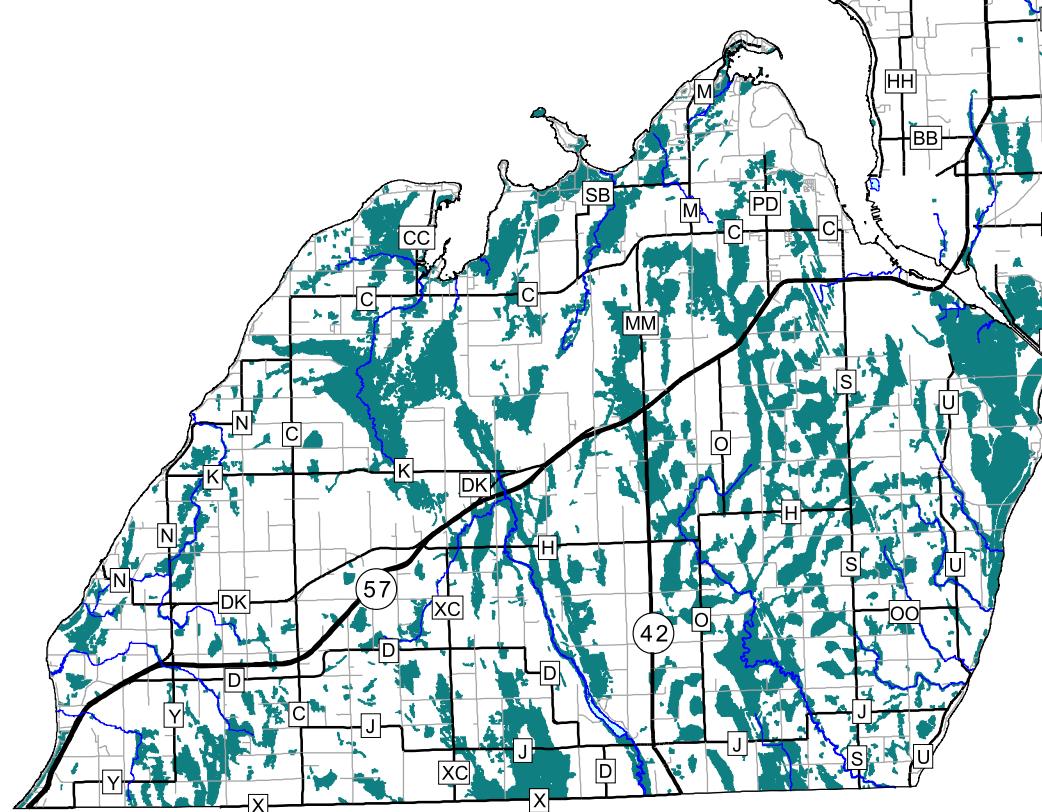
See Town of Washington Inset

### Major Wetland Areas

Road Class  
State Highway  
County Highway  
Local Road

Water Bodies  
Streams

0 3 6 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: DNR 2009  
Door County Planning Dept. 2013

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Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

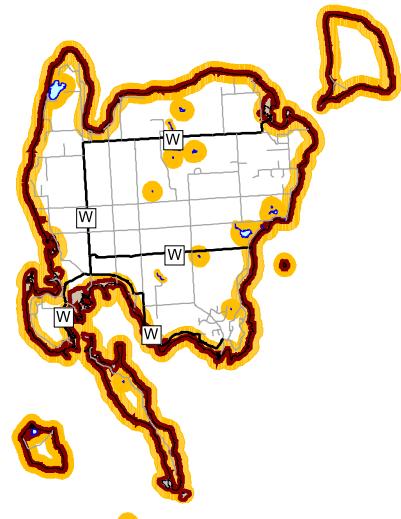


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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.6: Shorelands and Floodplains

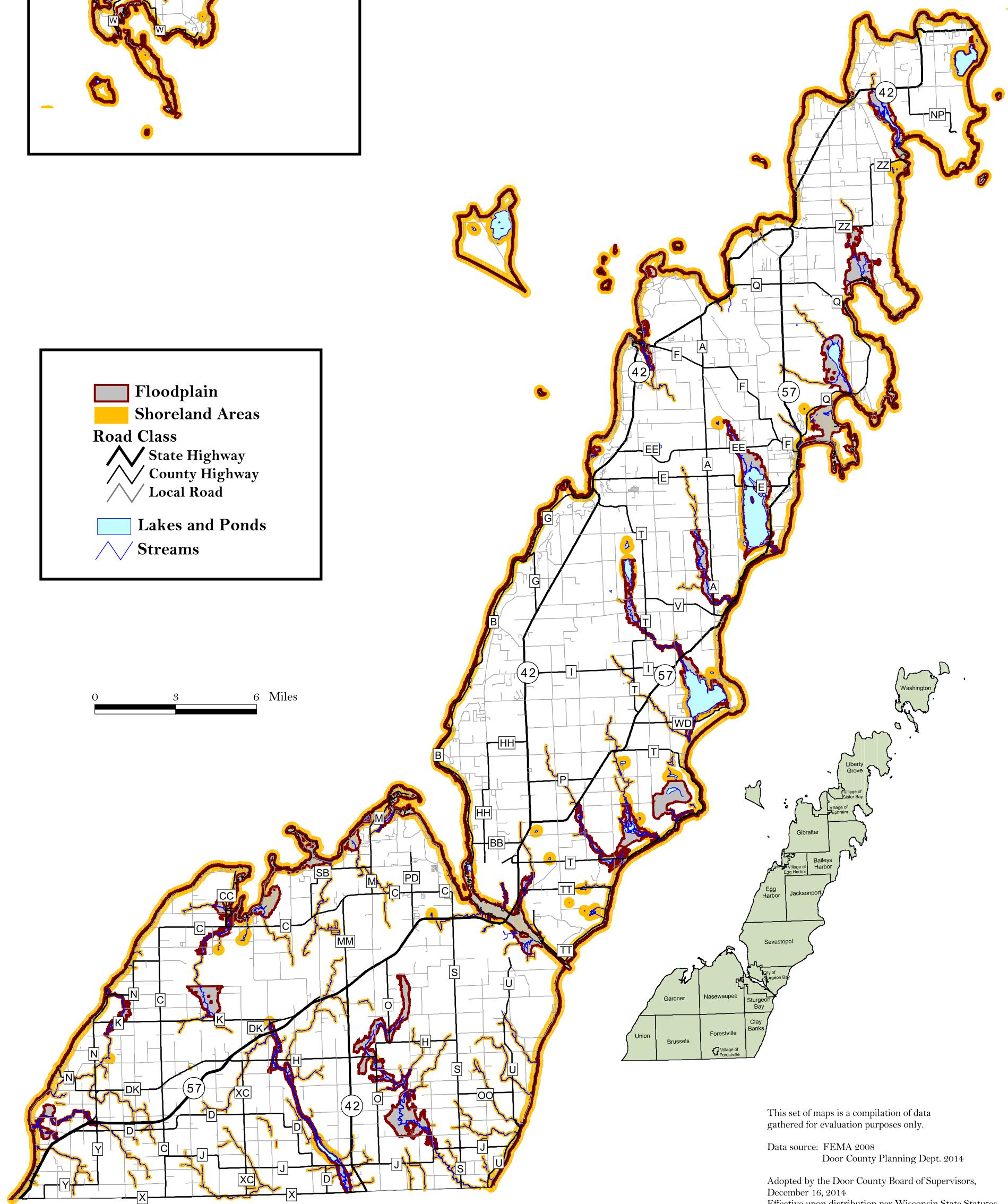
Town of Washington



See Town of Washington Inset

- Floodplain
- Shoreland Areas
- Road Class**
- \ / State Highway
- \ / County Highway
- \ / Local Road
- Lakes and Ponds
- △ Streams

0 3 6 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: FEMA 2008  
Door County Planning Dept. 2014

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

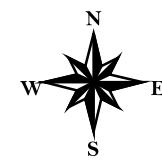
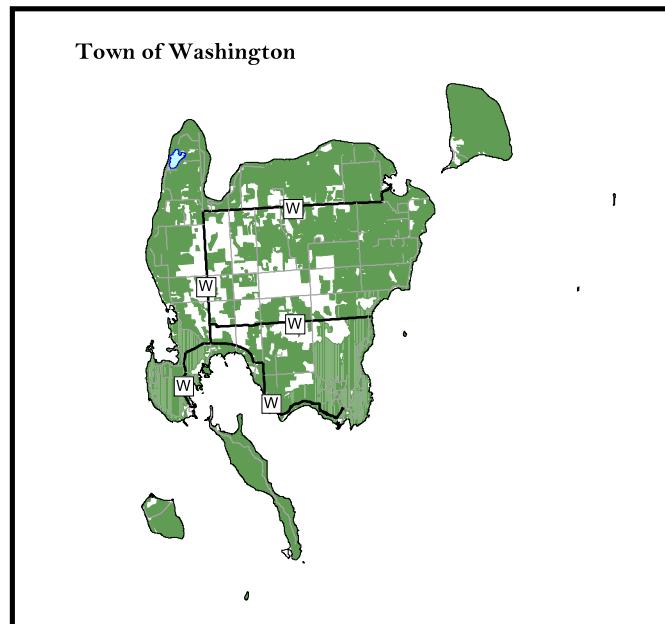


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[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

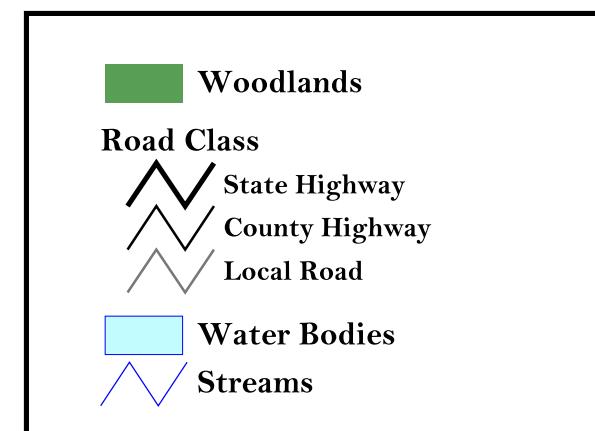
# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 6.7: Woodlands

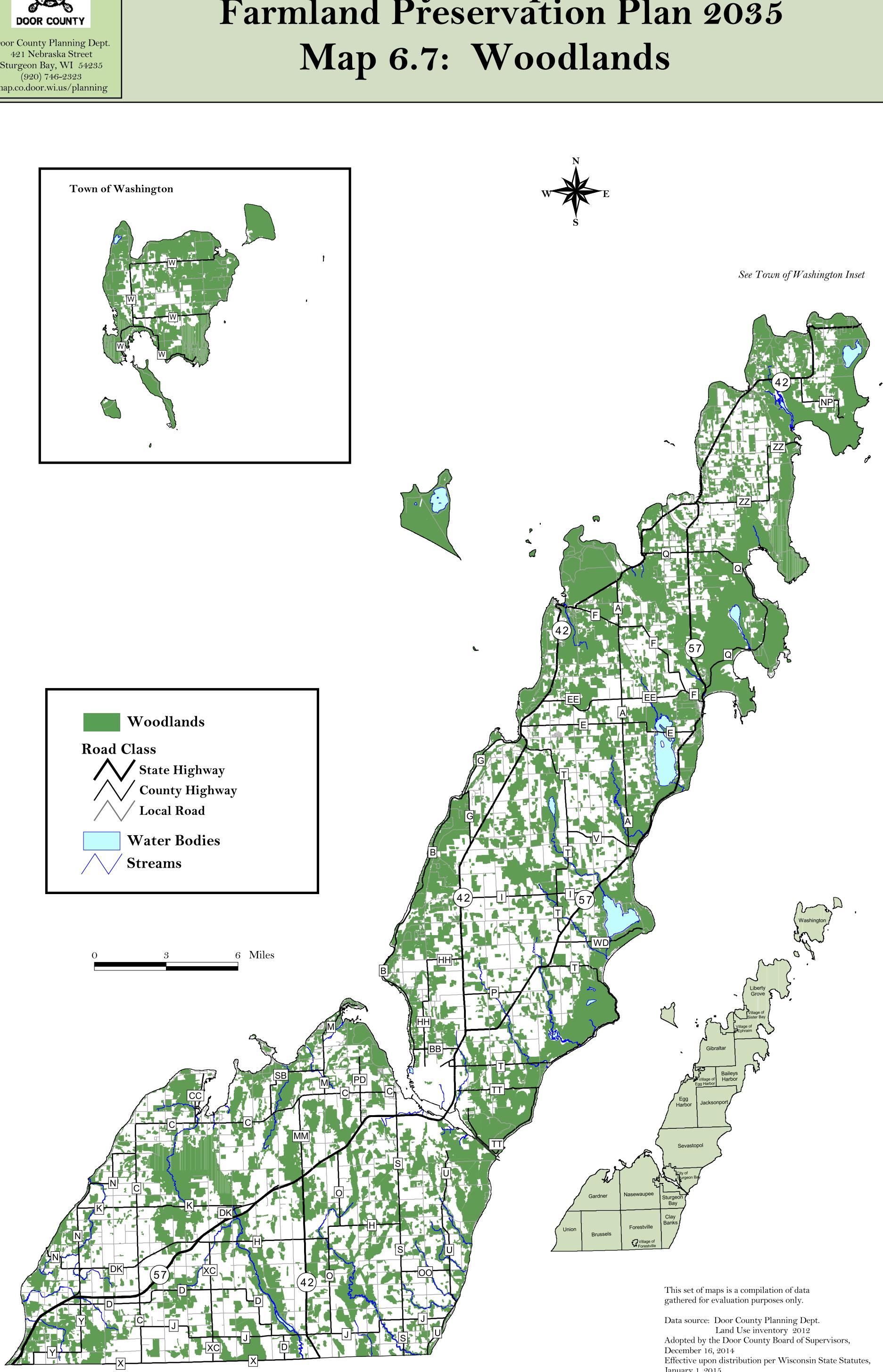
Town of Washington



See Town of Washington Inset



0 3 6 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

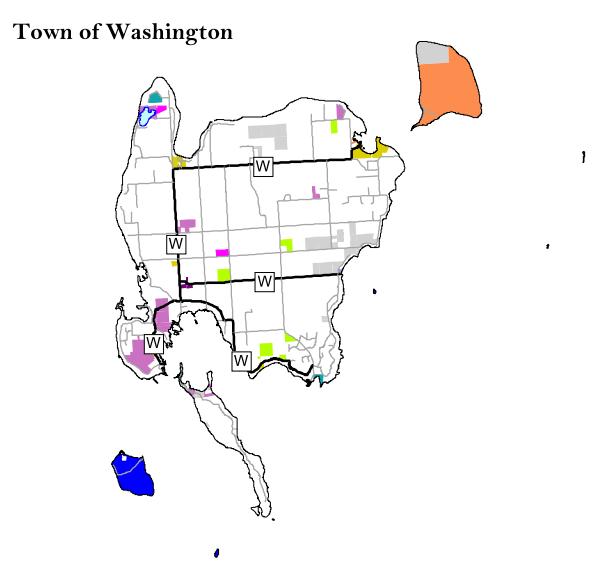
Data source: Door County Planning Dept.  
Land Use inventory 2012  
Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015



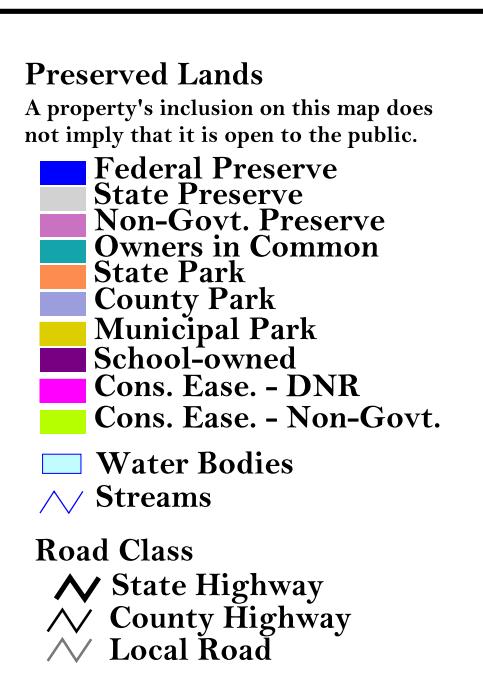
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# Door County Comprehensive and Farmland Preservation Plan 2035

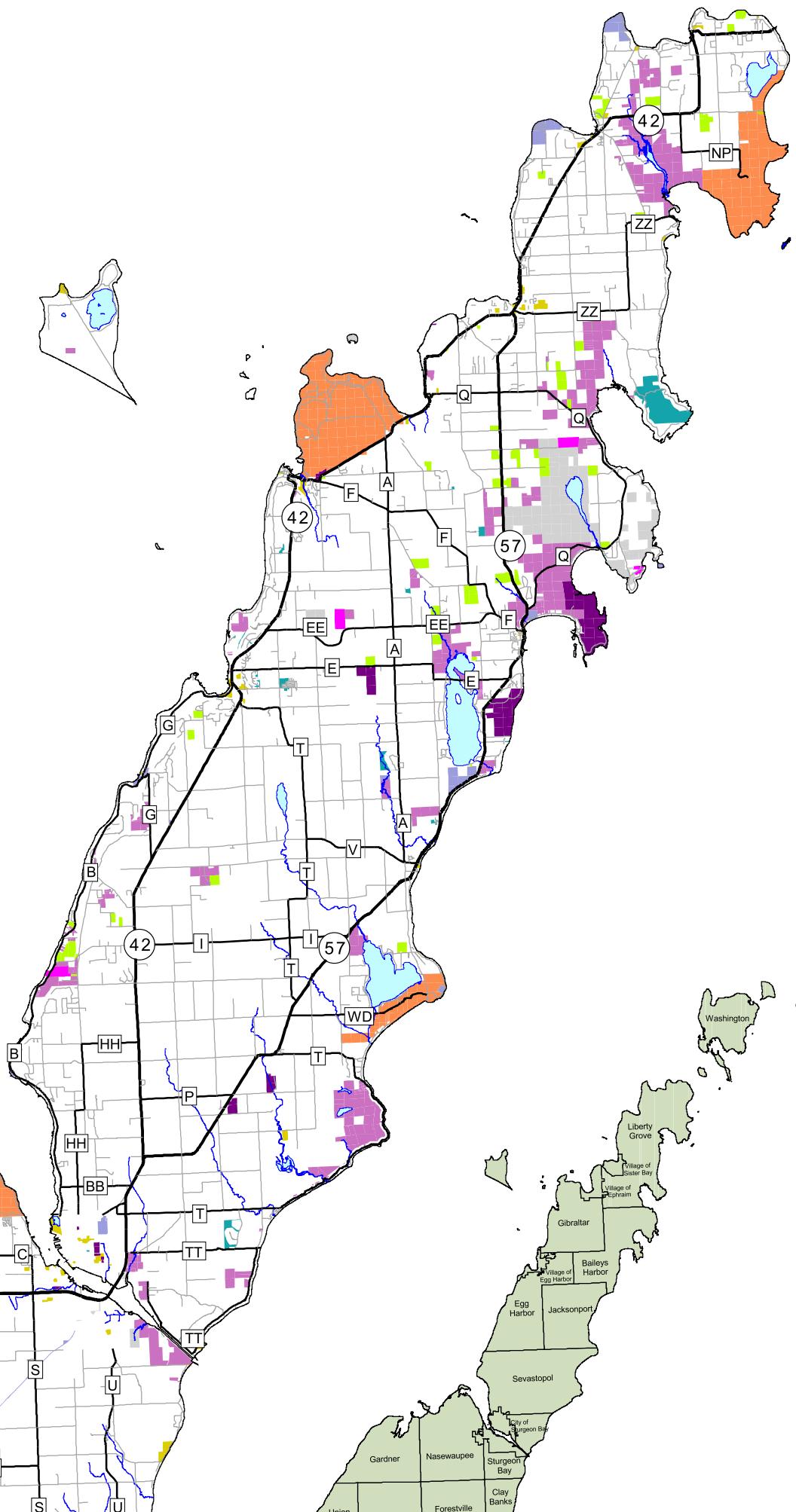
## Map 6.8: Preserved Lands



See Town of Washington Inset



0 3 6 Miles



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Door County Real Property 2014 records

Adopted by the Door County Board of Supervisors, December 16, 2014  
Effective upon distribution per Wisconsin State Statutes, January 1, 2015

## CHAPTER 7: AGRICULTURAL RESOURCES

## INTRODUCTION

Door County's soils, topography, and moderate climate are the foundation for its diverse agricultural products, ranging from dairy to a variety of fruits and vegetables. Dairy contributes the most to the county's farm product sales, followed by grains, cattle and calves, vegetables, and tart cherries and apples. While Door County continues to evolve as a diverse agricultural producer, the county's total number of farms and farm acreage, including orchards, has trended downward. Agricultural acreage has decreased from roughly 219,000 acres in 1964, or 70% of the county's total area of land, to 131,955 acres in 2012, or 42% of the county's total area of land. Agricultural losses have coincided with the increase in seasonal and year-round population, particularly in the northern part of the county. Towns in northern Door County that experienced high population and seasonal home growth also had some of the greatest percentage declines in dairy farm numbers, with some towns losing all of their dairy farms.

This chapter covers information required by both the comprehensive and farmland preservation planning laws. The first section gives an overview of Wisconsin's Farmland Preservation Program and the history of farmland preservation planning and zoning in Door County, which is then followed by discussion on agricultural land use and specialties, key resources and infrastructure, trends, anticipated changes, and key issues and proposed actions.

## WISCONSIN'S FARMLAND PRESERVATION PROGRAM

### OVERVIEW

Wisconsin adopted the Farmland Preservation Act (Ch. 91, Wis. Stats.) in 1977 with the goal of encouraging retention of farmland by providing state income tax relief directly to farmland owners and operators. This law enabled local governments to develop farmland planning and zoning programs which would allow farmers to potentially become eligible to receive income tax credits. These tax credits would only become available if the municipality within which the farm operated had adopted a farmland preservation plan and ordinance that was certified by the Department of Agriculture, Trade, and Consumer Protection (DATCP). With a plan certified by DATCP, a municipality could have an Exclusive Agricultural (EA) zoning district where farmers with land zoned EA could automatically qualify to earn income tax credits without entering into a DATCP contract. Farmers in other zoning districts or unzoned areas could earn income tax credits only after entering into individual contracts with DATCP. In addition to being in either an EA zoning district or having an individual DATCP contract, farmers also needed to be in compliance with state soil and water conservation standards before receiving any income tax credits.

On July 1, 2009, a revised Ch. 91, Wis. Stats., called the "Working Lands Initiative" (WLI), took effect. The goal of WLI is still to preserve the retention of farmland, but the focus is now on preserving larger and more contiguous areas of agricultural land, as well as more diverse agricultural uses. New uses were added to the list of qualifying agricultural uses, including maple syrup production, Christmas tree production, and horse and pony farms. Provided that the activity is conducted for the purpose of earning an income or livelihood, agricultural uses may include the following:

- Crop or forage production (including orchards)
- Keeping of livestock, and horses/ponies
- Beekeeping
- Nursery, sod, or Christmas tree production
- Forest management
- Floriculture
- Aquaculture

- Fur farming
- Enrollment in federal agricultural commodity payment program or federal or state agricultural land conservation payment program
- Maple syrup production

For property owners to become eligible to receive income tax credits, their land must be zoned EA and/or be located within an area designated by the state as an Agriculture Enterprise Area (AEA). If the land is located within an AEA area, the property owner must also sign an individual 15-year contract with DATCP to be eligible to receive tax credits. Income tax credit amounts and eligibility requirements are discussed below.

<b>Program</b>	<b>Income Tax Credit</b>
Agricultural Enterprise Area (with 15-year DATCP contract)	\$5.00 per acre
Exclusive Agricultural Zoning	\$7.50 per acre
Agricultural Enterprise Area & Exclusive Agricultural Zoning	\$10.00 per acre

All owners/operators must also:

- earn at least \$6,000/year in gross farm revenue (or \$18,000 over 3-year period);
- be in compliance with NR 151 Agricultural Performance Standards;
- use the land primarily for agriculture; and
- have paid property taxes.

To qualify for EA zoning income tax credits, a municipality's farmland preservation plan and zoning ordinance must meet the new farmland preservation statutory requirements and be certified by DATCP. Once the plan and ordinance are certified and the property is in compliance with the new zoning and other requirements outlined in the farmland preservation legislation, the farmer is then eligible to receive the income tax credits. As of 2014, the Town of Clay Banks is the only town in Door County with EA zoning.

The AEA program is a new component of the law, created with the goal of targeting financial resources to larger and more contiguous agricultural land, as opposed to widely dispersed farms with individual contracts. In order for farmland to qualify for AEA income tax credits, the municipality's farmland preservation plan must meet the new statutory requirements and be certified by DATCP. Once the plan is certified, a consortium of five or more farms with 1,000 acres or more of contiguous land that is designated on the municipality's farmland preservation plan map as farmland area can qualify to become an AEA by submitting an application to DATCP through their municipality. If the application is approved, farmers in the AEA are then eligible for income tax credits after entering into individual, 15-year contracts with DATCP. DATCP will no longer enter into individual contracts unless the farm is located within an AEA. If farmland is both zoned EA and under an AEA contract, it qualifies to receive the highest income tax credit amount available. As of January 2014, there are 25 designated AEAs covering almost 750,000 acres state-wide. DATCP has the authority to designate up to 2 million acres total.

A third program created under WLI, but now on hold, is the Purchase of Agricultural Conservation Easements (PACE) program. PACE was created with the intention of preserving agricultural land permanently through monetary compensation to agricultural landowners in return for deed restrictions on their land. The state was to provide 50% matching grants, funded by conversion fees for the rezoning of land out of EA zoning, to cooperating local governments for the purchase of agricultural conservation easements from willing landowners. Any PACE purchase was required to have a permanent deed restriction, binding current and future owners to using the property for

agricultural uses only.

After the PACE program was authorized in the 2009-2011 biennial budget, with \$12 million in bonding authority, 16 projects received preliminary approval from DATCP. However, funding for the PACE program, along with the fee for rezoning out of the EA district, were removed from the 2011-2013 biennial budget. Subsequently, the legislature decided to continue to provide funding for the 16 projects, plus one additional project, covering 5,124 acres, but discontinue accepting any more applications. Since Door County did not apply for PACE funding, there are no projects located in the county.

### **HISTORY OF DOOR COUNTY'S FARMLAND PRESERVATION PLANNING AND ZONING**

In 1978, Door County contracted with DATCP and the Department of Local Affairs and Development (now the Department of Development) to develop a farmland preservation plan showing which land should be considered for agricultural preservation. Participants in the planning process consisted of a farmland preservation planning committee that oversaw the work of the Door County Planning Department (DCPD), town committees, and a technical advisory committee. The resulting Door County Farmland Preservation Plan was adopted by the Door County Board of Supervisors in 1982 and subsequently certified by DATCP. Administered by the DCPD and in effect in all 14 towns, the plan identified areas of prime agricultural importance within which farmers could enter into contracts with DATCP, qualifying them for income tax credits under the state's Farmland Preservation Program. Required soil and water conservation standards were also established within the plan.

Door County amended its zoning ordinance in 1984 to include an EA zoning district, which was then implemented only in the Town of Clay Banks. Between EA zoning in the Town of Clay Banks and other individual contracts with DATCP, Door County had approximately 12,200 acres of land enrolled in the farmland preservation program in 2005. This acreage represented 41 landowners in EA zoning and 72 landowners with individual contracts. By 2010, Door County's acreage in farmland preservation had dropped by 4,809 acres to approximately 7,391 acres of enrolled land, representing 38 landowners in EA zoning and 35 landowners with individual contracts.

Currently, the Town of Clay Banks is still the only town in the county with EA zoning. In order for property owners with EA zoning to continue to receive income tax credits, Door County is required to have a new, certified farmland preservation plan in place by December 31, 2014 and a certified zoning ordinance in place by December 31, 2015.

## **AGRICULTURAL LAND USE AND SPECIALTIES**

### **AGRICULTURAL LAND USE**

The amount of agricultural land in Door County depends on the source and varies based on the definition of agricultural land that is used by the reporting agencies. Reported amounts are between 105,000 and 132,000 acres, or between 34% and 42% of the county's total land area. Listed below are estimates from three sources:

- **United States Department of Agriculture (USDA) Census of Agriculture.** The USDA reported that, in 2012, Door County had 131,955 acres of farmland, consisting of 42% of the total land area in the county. The USDA survey includes all productive agricultural land, as well as land that is fallow but could be tilled at any time. The majority of statistics cited in this chapter are from the Census of Agriculture.
- **Door County Planning Department.** A 2013 land use inventory done by the DCPD shows 117,749 acres, or approximately 37% of the county's total land area, as agricultural. This land use inventory was conducted via field surveys and did not include fallow land in the

agricultural land use category; fallow land was categorized as "open space." More information on how the 2013 land use inventory was conducted and developed may be found in Chapter 10, Land Use, of this volume.

- **Door County Real Property.** According to the Real Property database, there were 105,717 agriculturally assessed acres, or 34% of all land in Door County, in 2013. Per state law, only land currently in agricultural production can be assessed as agricultural; fallow agricultural land is categorized as undeveloped. More discussion on property assessment for agricultural uses is provided below.

## AGRICULTURAL PROPERTY TAX ASSESSMENT

An assessment is the value placed upon property, which in turn determines how much property tax will be owed for that property. Definitions for the land use assessment categories relevant to agriculture – Agricultural, Agricultural Forest, and Undeveloped Land – are listed below. More information on property tax assessment can be found in Chapter 10, Land Use, of this volume.

- **Agricultural** - used for farms, ranches, dairies, nurseries, orchards, and other land devoted primarily to the production of crops, plants, vines, or trees (excluding forestry operations). It also applies to the keeping, grazing, or feeding of livestock and animal specialties such as horses, rabbits, bees, pets, and fish.
- **Agricultural Forest** - land that is producing or is capable of producing commercial forest products if the land is: contiguous to a parcel that has been classified in whole as agricultural land (the contiguous agricultural parcel must have the same owner); located on a parcel that contains agricultural land; or located on a parcel where at least 50 percent of the acreage was converted to agricultural land.
- **Undeveloped Land** - includes areas commonly called marshes, swamps, thickets, bogs, or wet meadows. This class also includes fallow tillable land (assuming agricultural use is the land's highest and best use), road rights-of-way, ponds, depleted gravel pits, and land that, because of soil or site conditions, is not producing or capable of producing commercial forest products.

The assessed value of agricultural land is based on its use in agriculture, its ability to generate agricultural income, rather than what the land would sell for on the open market. This valuation standard is referred to as "use-value" assessment. Agricultural land is exclusive of buildings and improvements that are devoted primarily to agricultural use; buildings and improvements on a farm, such as barns, houses, and silos, are separately classified and assessed at fair market value. Assessment amounts for agricultural land are generally well below the potential sale value.

Table 7.1 shows the number of parcels, acreage, and valuation of agricultural property in Door County in 2002 and 2013. For this timeframe, the total number of agricultural parcels increased by 9%, while the total acreage of assessed agricultural land declined by 7%. Also between 2002 and 2013, the total value of agriculturally assessed land decreased by 41%, inflation-adjusted to 2013.

**Table 7.1: Agricultural Land Use Assessment, Door County**

Tax Year	# Parcels	Acres	\$ Land
			Assessment*
2002	4,758	113,351	\$30,422,060
2011	5,210	105,717	\$17,999,300
<b># Change</b>	<b>452</b>	<b>-7,634</b>	<b>-12,422,760</b>
<b>% Change</b>	<b>9%</b>	<b>-7%</b>	<b>-41%</b>

Source: *Door County Real Property Listing*, for the years listed.

\* Inflation-adjusted to 2013.

Table 7.2 below shows the total value, total acres, and average value per acre of agriculturally assessed land for Door County and its sub-areas in 2013. All of Door County had 105,717 acres of agricultural land with a total assessed value of \$17,999,300. The county's average assessed value per acre of agricultural land was \$170. Southern Door had the most agricultural acreage, at 62,945, and highest total land value, at \$10,532,200. Northern Door had 42,424 acres of agricultural land with a total land value of \$7,413,900. The City had 348 acres of agricultural land with a total land value of \$53,200. Average agriculturally assessed land value per acre was the highest in Northern Door, at \$190, followed by Southern Door, \$177, and the City, \$122.

**Table 7.2: Agriculturally Assessed Land Values, Door County**

Municipality	Total Agriculturally Assessed Land Values	Total Agriculturally Assessed Acres	Average Agriculturally Assessed Land Values per Acre
Northern Door	\$7,413,900	\$42,424	\$190
Southern Door	\$10,532,200	\$62,945	\$177
City	\$53,200	\$348	\$122
<b>Door County</b>	<b>\$17,999,300</b>	<b>\$105,717</b>	<b>\$170</b>

Source: *Door County Real Property Listing*, 2013.

### **AGRICULTURAL SPECIALTIES**

According to UW-Extension, agriculture in Door County accounted for \$288.4 million (14%) of the county's total business sales in 2011. Of this \$288.4 million, \$220.4 million resulted from the sale of all farm and value-added products. As reported by the 2012 Census of Agriculture, the top five commodities contributing to farm product sales in 2012 were (in millions):

- milk, \$38.5
- grains, \$22.8
- cattle and calves, \$5.7
- vegetables, \$5.6
- fruits and berries, \$4.4

### **TOP COMMODITIES BY STATE AND NATIONAL RANKING**

According to the 2012 U.S. Census of Agriculture, Door County's top six commodities by value of sales when ranked against other counties in the state that produce the same commodity (universe) are: fruits and berries (ranked 9<sup>th</sup>); nursery, greenhouse, floriculture, and sod (ranked 16<sup>th</sup>); vegetables, melons, potatoes, and sweet potatoes (ranked 17<sup>th</sup>); cut Christmas trees and short rotation woody crops (ranked 42<sup>nd</sup>); and sheep, goats, wool, mohair, and milk (ranked 42<sup>nd</sup>). (See Table 7.3.)

**Table 7.3: Top Six Commodities by Value of Sales, State and Door County**

<b>Value of Sales by Commodity</b>	<b>Sales</b>	<b>State Rank</b>	<b>Universe</b>
Fruits and berries	\$4,449,000	9	70
Nursery, greenhouse, floriculture, & sod	\$3,107,000	16	71
Vegetables, melons, potatoes, & sweet potatoes	\$5,639,000	17	70
Cut Christmas trees and short rotation woody crops	\$30,000	40	67
Milk from cows	\$38,500	42	68
Sheep, goats, wool, mohair, and milk	\$117,000	42	68

Source: USDA Census of Agriculture, 2012.

Also according to the 2012 Census, when ranked against the rest of the counties in the nation that produce the same commodities, Door County's top five commodities are: milk and other dairy products from cows (ranked 199<sup>th</sup>); fruits and berries (ranked 202<sup>nd</sup>); vegetables, melons, potatoes, and sweet potatoes (ranked 336<sup>th</sup>); nursery, greenhouse, floriculture, and sod (ranked 592<sup>nd</sup>); and cut Christmas trees and short rotation woody crops (ranked 618<sup>th</sup>). (See Table 7.4.)

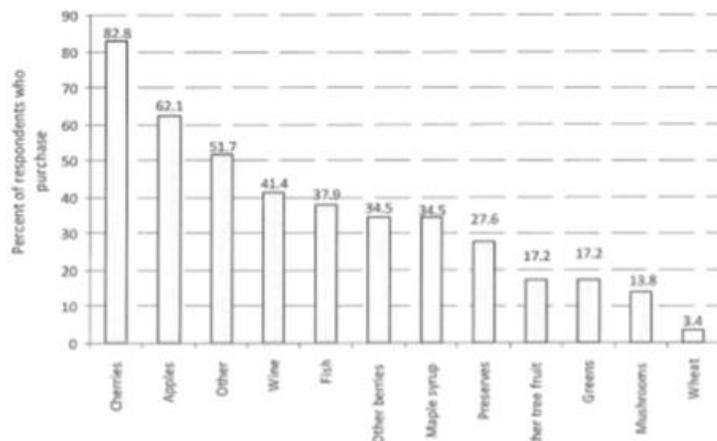
**Table 7.4: Top Five Commodities by Value of Sales, U.S. and Door County**

<b>Value of Sales by Commodity</b>	<b>Sales</b>	<b>U.S. Rank</b>	<b>Universe</b>
Milk and other dairy products from cows	\$38,500,000	199	2,038
Fruits and berries	\$4,449,000	202	2,724
Vegetables, melons, potatoes, & sweet potatoes	\$5,639,000	336	2,802
Nursery, greenhouse, floriculture, & sod	\$3,107,000	592	2,678
Cut Christmas trees & short rotation woody crops	\$30,000	618	1,530

Source: USDA Census of Agriculture, 2012.

## LOCAL RETAIL

A 2008 study done by the University of Wisconsin-Extension office entitled “An Evaluation of Food and Culture Tourism in Door County - Retailers’ Perspective on Local Food Networks” surveyed food-related retail establishments in the county regarding purchasing practices. The businesses surveyed included restaurants, supermarkets, cooking schools, and bakeries, all of which purchase fresh food and add value to them for resale to consumers. Results from the 30 responses received showed that cherries and apples were the most frequently purchased local items. Other popular local items identified in the study were an “other” category (corn, eggs, tomatoes, potatoes, beef, pumpkins, and grapes), wine, fish, berries, and maple syrup. (See Figure 7.1.)

**Figure 7.1: Most Common Local Food Items Sold, Door County**

Source: Survey of Door County retailers, Department of Rural Sociology, University of Wisconsin-Madison, January 2008.

## AGRICULTURAL RESOURCES AND INFRASTRUCTURE

### **KEY AGRICULTURAL RESOURCES**

General information regarding Door County's climate, geology and topography, soils, groundwater, and water supply can be found in this volume, as listed below.

- **Climate, Geology and Topography, and Soils:** Starting on p. 95, Chapter 6, Natural Resources.
- **Groundwater:** Pages 100 (general description), 110-113 (threats to groundwater), and 124-127 (plans and programs to protect), Chapter 6, Natural Resources.
- **Water Supply:** Pages 198-199, Chapter 9, Community Facilities and Utilities.

### **KEY AGRICULTURAL INFRASTRUCTURE**

Door County's key agricultural infrastructure includes a cooperative, a variety of food processing plants, and one cold-storage business.

### **DOOR COUNTY COOPERATIVE**

The Door County Cooperative, located in the City of Sturgeon Bay, offers the following products and services:

- agronomy services, including custom spray application, nutrient management planning, soil and tissue testing, and fertilizer recommendations;
- fertilizer and crop-protection products; and
- seeds, including corn, alfalfa, winter wheat, and lawn.

In addition to the products and services listed above, the Shirley Feed Mill, a division of the Door County Cooperative located in De Pere, Wisconsin, offers full-service feed manufacturing, grain merchandising and storage, grain drying, and nutrition consulting.

## PROCESSING AND STORAGE

### Cherry Processing

- *Seaquist Cherry Processing Plant (Town of Liberty Grove)*. About two-thirds of the Montmorency cherries raised in Door County are processed and packed here.
- *Country Ovens (Town of Forestville)*. Country Ovens processes fresh cherries into dried cherries, syrup, and cherry juice.

### Meat Processing

- *Marchant's Foods, Inc. (Town of Brussels)*. Marchant's is a state-inspected meat processing plant. It is Hazard Analysis and Critical Control Point certified, a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement, and handling, to manufacturing, distribution, and consumption of the finished product.
- *Door County Custom Meats (Town of Sevastopol)*. Door County Custom Meats is also a state-inspected custom meat processing plant.

**Fish Processing and Cold Storage** (City of Sturgeon Bay). Dan's Fish Market processes locally caught and other fish and also offers cold storage for rent to other businesses.

**Cheese Processing** (Town of Clay Banks). Renard's Cheese produces a variety of cheese and cheese spreads.

## **OTHER AGRICULTURAL RESOURCES AND INFRASTRUCTURE**

Door County has a variety of enterprises involved in agricultural-related research, promotion, and education.

### The Community's Garden

The Community's Garden is a non-profit community garden located on the Door County Memorial Hospital campus. The garden includes an area for the hospital to raise produce for the cafeteria and 45 plots of land that are rented out to community members. Future plans include an 11-acre park to be built in conjunction with the Hospital, City of Sturgeon Bay, Door County YMCA, Door County UW-Extension, and Crossroads at Big Creek. In addition to the garden plots, a conceptual design for future garden development shows the following:

- areas for themed gardens, including a children's garden
- small greenhouse/activity building that will house a demonstration kitchen, space for starting seedlings, and classroom designed for interactive learning
- formal perennial herb garden
- production gardens for use in hospital kitchens

Activities planned for the Community's Garden related to agriculture include:

- nutrition classes for children and families, to include learning where food comes from, harvesting of food, hands-on cooking and canning classes, and utilizing foods when in season
- gardening classes and work projects for children and families
- classes focusing on land and water preservation
- senior citizen gardening classes and activities
- physical therapy, including horticultural therapy

## Culinary Schools

Door County has two cooking schools, offering instruction from professional chefs as well as events and classes focusing on local foods:

- *Northeastern Wisconsin Technical College (NWTC)* - Located in the City of Sturgeon Bay, NWTC offers a variety of cooking and food preservation classes, including a local foods cooking class.
- *Savory Spoon Cooking School* - Located in Ellison Bay (Town of Liberty Grove), the Savory Spoon Cooking School is a seasonal school open from June to October.

## Door County Master Gardeners Association, Inc.

The Master Gardener program, conducted throughout the United States and Canada, is an educational and volunteer program that provides horticulture training through local university extensions in exchange for volunteer work. Entry into the Door County Master Gardener Association (DCMGA) requires 36 hours of education and 24 hours of volunteer work, as well as an exam at the end of the training period. Thereafter, members need to have 10 hours of education and 24 hours of volunteer time per year to remain a certified Master Gardener. Master Gardeners assist with garden lectures, exhibits, demonstrations, school and community gardening, diagnostic servicing, research, and other projects.

DCMGA conducts several events and activities throughout the year, in addition to maintaining The Garden Door, a one-acre educational and show garden the group created at the Peninsular Research Station. DCMGA also propagates seeds every spring in a greenhouse donated by the Research Station, ending in a plant sale the last Saturday in May. In 2009, there were 108 different varieties of plants grown in the greenhouse. Other events and activities include "Taste of the Garden Door," "Pesto Festo," and a youth program.

## Door County Shepherd's Market

The Door County Shepherd's Market, held annually in the Town of Egg Harbor, promotes products from locally raised sheep, goats, alpacas, and llamas. They also have a mission to educate the public about animals, the fibers they produce, and the traditional handcrafts and fiber arts that utilize these locally grown fibers. The annual market event features fleeces, yarns, rovings (bundles of fiber), wearable art, spinning and weaving equipment, fair trade baskets, and other related fiber accessories from local artists.

## Northeastern Wisconsin Technical College

The NWTC offers both a certificate program in Organic Agriculture Practices and a degree program in Farm Business & Production Management, with many classes offered at the Sturgeon Bay campus.

- *Organic Agriculture Practices Certificate.* The Organic Agriculture Practices Certificate teaches students the skills, science, and art of producing crops, livestock, and foods using organic and sustainable principles. Students learn the following skills and practices:
  - applying organic systems principles to their land
  - appraising and managing soil health
  - practicing organic animal husbandry
  - applying organic practices to field crops and horticultural crops
  - creating a simple agricultural business plan, including marketing
  - evaluating alternative crops and livestock
  - composing an ongoing business operation and management plan
  - planning the transition of a conventional enterprise into an organic one
  - completing forms necessary to document organic or conservation program status

- accessing financial, technical, and service program resources
- modeling a balanced sustainable-organic agriculture system
- *Farm Business & Production Management Program.* The Farm Business and Production Management program covers basic farming production and business management principles needed to be an efficient farmer. Students in this program learn how to calculate production costs for forage, grain, beef, pork, and milk products. They also learn how to prepare, assess, and implement environmentally-friendly business, soil, crop, and livestock management plans.

### **Peninsular Agricultural Research Station**

Scattered throughout the state, the College of Agricultural and Life Sciences (CALS) at the University of Wisconsin-Madison operates 12 agricultural research stations. Each station's emphasis relates to the needs of agriculturists in the area who encounter environmental conditions (climate and soil) similar to those at the station. Located in the Town of Sevastopol and in existence since 1922, the Peninsular Agriculture Research Station of Door County is primarily a field laboratory for fruit specialists to develop pest control programs and to conduct other research focused on improving yields and quality of apples, cherries, grapes, and raspberries. Additionally, the station conducts grain and vegetable research and is home to the NRSP-6 US Potato Genebank, the world's largest collection of wild and cultivated potato species. The US Potato Genebank's mission is to collect, classify, preserve, evaluate, and distribute nearly 5,000 samples of more than 150 potato species.

Wine grapes and malting barley are emerging crops in Wisconsin. The Peninsular Station, in coordination with the University of Wisconsin-Extension, Door County office, is currently experimenting with the production of both cold weather grapes and malting barleys. Wisconsin has a growing micro-brewery industry with over 80 craft breweries, many of which are working towards using only ingredients produced in Wisconsin. With the market for barley on the rise, the Peninsular Station is experimenting with both winter and spring varieties. The station has also been experimenting with wine grape varietals since 2008, collecting data on the sensitivity of varietals to copper and sulfur. Copper and sulfur can be beneficial as fungicides since they are considered reduced-risk pesticides, however, some grape varieties display a phytotoxic response to copper or sulfur.

### **University of Wisconsin-Extension Door County.**

The University of Wisconsin-Extension Door County employs a full-time agricultural agent who works with the farm community, agribusiness, and government agencies to address issues affecting individual producers and the overall agricultural economic base of the county. The agricultural agent provides information on a variety of topics, including the following:

- farm and financial management
- livestock manure and nutrient management and water quality
- using information systems to make management decisions
- crops and soils
- dairy and livestock production management
- lowering production inputs to maintain profitability

The agricultural agent is currently involved with wine grape and barley experimentation, as described above, and developing relationships with the American Malting Barley Association and Wisconsin Vintners Association.

**Wisconsin Cherry Growers, Inc.** Based in the Town of Egg Harbor, the mission of the Wisconsin Cherry Growers, Inc. is to bring together those interested in the production, research, utilization, and marketing of Wisconsin cherries. Membership includes growers, associate members,

raw product processors, and area food manufacturers producing cherry products for wholesale and/or retail sale.

## AGRICULTURAL TRENDS

### ECONOMIC IMPACT

Table 7.5 compares agriculture data for the years 2000 and 2011, with 2000 dollar values inflation-adjusted to 2011, as published by the University of Wisconsin-Extension office in Door County. According to UW-Extension, agriculture in Door County totaled \$288.4 million in economic activity in 2011, up 17% from the year 2000. Of this amount, \$220.4 million was generated from the direct sales of all farm and value-added products and \$68.0 million was generated from indirect sales, made up of business-to-business sales and spending of earnings. UW-Extension estimates that one dollar of sales from agricultural products generates an additional \$0.31 in business sales from other parts of the county's economy. Between 2000 and 2011, agricultural income increased by \$47.7 million (113%) and tax dollars paid by agricultural uses increased by \$3.0 million (50%). The only agricultural economic indicator to go down between 2000 and 2011 was the number of jobs, which went from 2,199 to 2,098.

**Table 7.5: Change in Economic Impact of Agriculture, Door County**

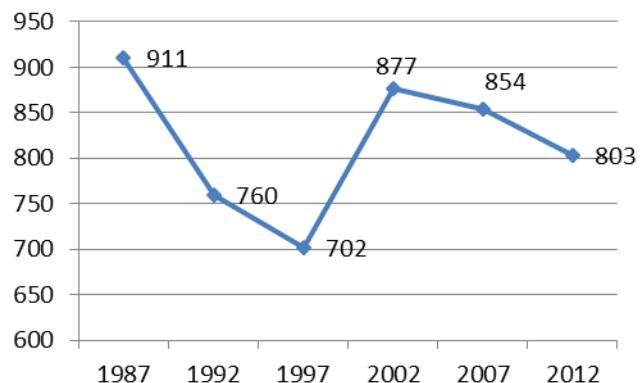
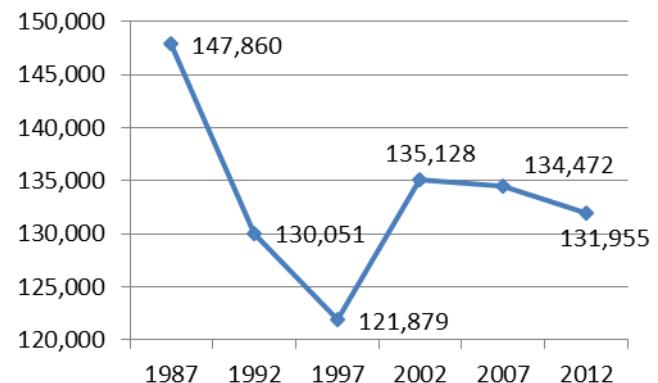
Agriculture	2000*	2011	% Change
	(\$, millions)		
Direct Sales	186.8	220.4	18%
Business-to-Business Sales	52.0	48.3	-7%
Spending of Earnings	7.7	19.7	156%
<b>Total Economic Activity</b>	<b>246.5</b>	<b>288.4</b>	<b>17%</b>
Agricultural Income	42.1	89.8	113%
Taxes	6.0	9.0	50%
Number of Jobs	2,199	2,098	-5%

Source: UW-Extension - Door County, 2000 & 2011.

\*Inflation-adjusted to 2011.

### TRENDS IN AGRICULTURAL LAND USE

According to the USDA Census of Agriculture, in 2012 Door County had 803 farms and 131,955 acres of farmland, consisting of 42% of the county's total land. (See Figures 7.2 and 7.3 below.) The USDA defines a farm as any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. Land in farms includes crop and livestock acreage, pasture, land in summer fallow, idle cropland, and land enrolled in the Conservation Reserve Program or other set-aside or commodity acreage programs. Acreage of woodland and wetland adjacent to farmland are included in the Census of Agriculture count, although it is not used for pasturing or to produce anything.

**Figure 7.2: Total Number of Farms****Figure 7.3: Total Farm Acres**

Source: USDA - National Agricultural Statistical Survey, for the years cited (Figures 7.1 & 7.2).

Between the 1987 and 2012 Censuses, Door County lost 15,905 acres (10.8%) of its farmed land and 108 (11.9%) of its total number of farms. Though farm numbers in Door County have been in decline overall, between 1997 and 2002 the number of farms increased by 175. The UW-Extension Door County office attributes at least part of this increase to the change in classification of farms by the USDA for the 1997 Census, which added operations having five or more horses or ponies, including those with no agricultural sales. Prior to the 1997 Census, farms with horses and ponies were counted as farms only if they had \$1,000 or more in agricultural sales. Another change in classification of farms made by the USDA for the 1997 Census was to include Christmas tree farms, farms wholly enrolled in the Conservation Reserve Program (land conservation), and two other industries – maple syrup production and short rotation woody crops, such as aspen and other fast-growing trees – in farm counts. (Short rotation woody crops are grown for the paper and biofuel industry; as of 2014, none are produced in Door County.)

Between the 1987 and 1997 Censuses, the county lost 18% of its farmland and 23% of its total number of farms. A surge in farmland and number of farms occurred between 1997 and 2002, when there was an 11% gain in farmland and a 25% increase in number of farms, which UW-Extension Door County attributes at least partially to the way USDA counts farms (described above). Then, between the 2002 and 2012 Censuses, the county lost almost 2% of its farmland and 6% of its number of farms. A significant portion of overall agricultural land loss is attributable to the loss of dairy operations in northern Door County, coinciding with large seasonal population increases in the same area.

In addition to losing dairy farms, the decline in total number of farms may have to do with the absorption of some mid-sized farms by large farm operations. Between 1987 and 2012, the number of mid-sized farms (50 - 499 acres) declined by 38%. (See Table 7.6.) During the same timeframe, the number of large farms (500+ acres) increased by 47%; thus, the decline in mid-size farms appears to have been, at least in part, due to farm consolidation. Small farms, or "hobby" farms (less than 50 acres), in Door County increased by 74% during that same timeframe, indicating a growing niche market, as discussed in more detail later.

**Table 7.6: Number of Farms by Acres, Door County**

Farm Size (acres)	Year				
	1987	1992	1997	2002	2007
1 to 9	26	37	41	44	37
10 to 49	161	141	123	263	282
50 to 179	434	295	301	347	311
180 to 499	256	258	208	174	183
500 to 999	31	24	21	38	28
>1,000	3	5	8	11	13
<b>Total</b>	<b>911</b>	<b>760</b>	<b>702</b>	<b>877</b>	<b>854</b>
<b>% Change</b>	--	-17%	-8%	25%	-3%
					-6%

Source: USDA - National Agricultural Statistical Survey, for the years cited.

Grouped by value of sales, the number of farms decreased in all categories between 1987 and 2012, except for those with less than \$2,500 in sales and those with \$100,000 or greater in sales. (See Table 7.7.) Farms with sales of less than \$2,500 consisted of 22% of the total number of farms in 1987, increasing to 41% in 2012. Farms with sales of \$100,000 or greater consisted of 12% of the total number of farms in 1987, increasing to 16% in 2012.

**Table 7.7: Farms by Value of Sales, Door County**

Farm Sales (\$)	Year				
	1987	1992	1997	2002	2007
< 2,500	202	168	190	426	351
2,500 to 4,999	101	82	78	58	69
5,000 to 9,999	122	88	57	61	62
10,000 to 24,999	135	97	98	87	97
25,000 to 49,999	101	78	85	65	71
50,000 to 99,999	142	118	74	72	61
100,000 or >	108	129	120	108	143
<b>Total</b>	<b>911</b>	<b>760</b>	<b>702</b>	<b>877</b>	<b>854</b>

Source: USDA - National Agricultural Statistical Survey, for the years cited.

### **TRENDS IN AGRICULTURAL PRODUCTION AND ENTERPRISES**

Livestock and agronomic crops are down county-wide, but dairy still continues to contribute the most in farm product sales. Cherry production is also down county-wide, but the county is experiencing some renewed growth in apple production, as well as advancing in other specialty crops such as wine grapes. Snap beans and green peas have historically done well in the county due to the well-drained soils and cool summers. Door County is experiencing growth in the organic, naturally grown, and greenhouse foods. Finally, the production of landscape trees and plants, as well as landscape and grounds maintenance, are rapidly growing segments of the county's agricultural industry.

### **LIVESTOCK AND DAIRY FARMING**

Livestock farming has trended downward for all categories, in terms of both number of farms and number of animals, except for the "beef cow" and "layers and pullets" categories. The number of beef cow farms and animals nearly doubled between 1992 and 2012. For the same timeframe, the number of "layers and pullets" animals dropped slightly, although the number of farms nearly doubled.

According to the USDA, of the 803 farms in Door County in 2012 there were 72 dairy farms housing 9,864 milk cows. (See Table 7.8.) Drastic declines in dairy operations occurred between 1987 and

2007 when the number of dairy farms fell by over 60%, from 280 to 114, and the number of dairy cows fell by declined by over 40%, from 12,578 to 8,141, with losses occurring primarily in northern Door County. Between 2007 and 2012, the number of dairy farms continued to drop by over 36%, from 114 to 72, but the number of dairy cows increased by 21%, from 8,141 to 9,864.

**Table 7.8: Livestock and Other Animals, Door County**

Year	#	1992	1997	2002	2007	2012
<b>Cattle &amp; Calves</b>	farms	400	306	307	247	212
(includes beef & milk cows)	animals	26,658	23,038	22,489	23,647	23,852
<b>Beef Cows</b>	farms	58	61	103	97	100
	animals	573	608	840	1,170	1,129
<b>Milk Cows</b>	farms	280	201	151	114	72
	animals	12,578	10,615	9,286	8,141	9,864
<b>Hogs and Pigs</b>	farms	51	17	29	22	9
	animals	2,392	910	423	264	38
<b>Sheep &amp; Lambs</b>	farms	23	21	31	29	23
	animals	728	910	714	717	499
<b>Layers &amp; Pullets</b>	farms	33	30	50	49	60
	animals	1,370	946	1,036	1,391	1,287

Source: USDA - National Agricultural Statistical Survey, for the years cited.

Door County has one Concentrated Animal Feeding Operation (CAFO), located in the Town of Forestville. A CAFO is defined by the Wisconsin Department of Natural Resources as a farm with 1,000 or greater animal units, with one animal unit the equivalent of a 1,000 pound animal. Chickens, turkeys, hogs, beef, or dairy animals, when combined to weigh 1,000 pounds, constitute one animal unit. S&S Ag Enterprises raises custom heifers and has approximately 5,500 heifers at any given time, making it the largest custom heifer-raising operation in Wisconsin. S&S raises heifers from 350 pound calves to just prior to the heifer giving birth, at which time the animal is transported back to the owner's farm where it will become part of the milking herd.

### AGRONOMIC CROPS

Door County produces a variety of agronomic crops (see Table 7.9), or feed-stock for dairy production such as forage (hay, haylage, and grass hay) and corn silage. As the dairy industry in the county has declined so has the total acreage of agronomic crops, dropping by over one-half in acreage between 1987 and 2012. Despite this drastic decline, forage crops are still produced on more acres than any other crop. For the same timeframe, cash-cropping - the production of grains, such as corn, soybeans, and wheat - has steadily increased.

**Table 7.9: Major Agronomic Crops, Door County**

Crop (acres)	Year					
	1987	1992	1997	2002	2007	2012
Corn (grain)	12,179	11,769	12,006	12,864	16,910	17,848
Corn (silage)	7,283	9,917	6,997	6,366	7,167	8,041
Forage	49,384	43,064	36,225	27,779	26,383	22,819
Oats	16,373	11,489	7,900	5,388	3,669	2,993
Soybeans	326	1,213	2,756	8,764	8,866	10,757
Wheat (all)	2,112	3,147	6,094	8,121	12,013	12,389

Source: USDA - National Agricultural Statistical Survey, for the years cited.

### FRUIT CROPS

Door County produces several fruit crops on over 3,000 orchard acres, with a long-standing tradition and reputation for tart cherries. The cooling effects of Green Bay and Lake Michigan result in the delay of spring, which slows down budburst in cherries, thereby reducing the potential for

frost damage to blossoms. Although Door County produces more tart cherries than any county in Wisconsin, both the acreage and number of farms producing cherries are in decline. In the mid-1940s, there were roughly 700 cherry growers in the county, but by 2002 there were only 65 farms producing tart cherries, on 2,429 acres. Acres of tart cherry farms increased to 2,516 acres in 2007, but then dropped to 2,429 acres in 2012. In 2012, only 53 tart cherry farms remained. (See Table 7.10.) The production of sweet cherries has grown overall between 1987 and 2012, from 17 farms and 49 acres in 2007 to 28 farms and 87 acres in 2012.

**Table 7.10: Tart and Sweet Cherries, Door County**

Type	#	Year					
		1987	1992	1997	2002	2007	2012
Tart	farms	134	124	90	65	60	53
	acres	3,622	3,113	2,638	2,249	2,516	2,429
Sweet	farms	17	14	24	22	27	28
	acres	49	24	30	46	54	87

Source: USDA - National Agricultural Statistical Survey, for the years cited.

In 1992, there were 93 apple farms with 1,274 acres; in 2012 there were only 55 apple farms with 468 acres. Perhaps mitigating these losses are two newer hybrids, the SweeTango® and Honeycrisp. The University of Wisconsin Peninsular Research Station was the first place in Wisconsin to grow Honeycrisp apples in the early 1990s. Honeycrisp grows especially well in Door County due to the short, cold growing season. SweeTango®, around since 2009, is only grown by 45 producers around the U.S. and Canada. Wood Orchard, located in the Town of Egg Harbor, was one of the first orchards to grow Honeycrisp and is the only Wisconsin grower of SweeTango®.

A number of minor fruit crops are also produced in Door County, including raspberries, strawberries, and grapes. (See Table 7.11.) More discussion on grape growing, wineries, and the Wisconsin Ledge Viticultural Area can be found in the next section. Other orchard fruit crops grown in Door County include apricots, peaches, pears, and plums.

**Table 7.11: Raspberries, Strawberries, and Grapes, Door County**

Crop	#	Year					
		1987	1992	1997	2002	2007	2012
Raspberries	farms	11	13	17	16	20	18
	acres	ND	13	12	ND	14	12
Strawberries	farms	6	11	20	13	15	9
	acres	8	16	27	ND	21	13
Grapes	farms	ND	3	4	12	11	17
	acres	ND	ND	ND	20	56	78

Source: USDA - National Agricultural Statistical Survey, for the years cited.

ND = No Data.

## VEGETABLE CROPS

According to UW-Extension Door County, snap beans and green peas do well in Door County because of its well-drained soils and cool summers. Between 1992 and 2002, the production of snap beans in Door County grew from 1,263 acres to 3,476 acres, but the 2012 Census shows that production is declining slightly. In 2007, there were 3,441 acres of snap beans; in 2012, there were 3,316 acres. (See Table 7.12.) For the same timeframe, the production of green peas grew from 1,777 acres to 5,517 acres, but then dropped to 4,614 acres in 2012.

It seems that crop diversification may at least partially explain decreasing production of snap beans and green peas. Beet production grew markedly between 2002 and 2012, from one acre to 357 acres and 3 farms to 14 farms. Additionally, over 100 acres combined are used to grow pumpkins,

potatoes, sweet corn, and tomatoes.

**Table 7.12: Snap Beans and Green Peas, Door County**

Crop	#	Year					
		1987	1992	1997	2002	2007	2012
Snap Beans	farms	41	25	29	51	46	46
	acres	2,065	1,263	1,806	3,476	3,441	3,316
Green Peas	farms	49	42	56	84	78	70
	acres	2,247	1,777	2,480	5,517	3,735	4,614
Beets	farms	0	3	3	3	6	14
	acres	0	1	<1	1	(D)	357

Source: USDA - National Agricultural Statistical Survey, for the years cited.

## SUSTAINABLE, ORGANIC, AND LOCAL AGRICULTURE

In general, the terms organic, sustainable, and local agriculture mean the following:

- Sustainable agriculture is the practice of farming using principles of ecology, the study of relationships between organisms and their environment.
- Organic means crops grown without artificial pesticides, fertilizers, GMOs, irradiation, or sewage sludge, and animals raised without hormones or antibiotics. Certified Organic methods follow specific rules established by USDA. Organic products are not necessarily local or sustainable.
- Local means foods grown or raised within a given radius that can range from a few to hundreds of miles.

The U.S. Congress addressed sustainable agriculture in a 1990 Farm Bill, defining the term as an integrated system of plant and animal production practices having a site-specific application that will, over the long term:

- satisfy human food and fiber needs;
- enhance environmental quality and the natural resource base upon which the agricultural economy depends;
- make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- sustain the economic viability of farm operations; and
- enhance the quality of life for farmers and society as a whole.

Sustainable agriculture techniques include:

- use of biological control, crop rotations, and other techniques to manage weeds, insects, and diseases
- an emphasis on biodiversity of the agricultural system and the surrounding environment
- use of rotational grazing and mixed forage pastures for livestock operations and alternative health care for animal well being
- reduction of external and off-farm inputs and elimination of synthetic pesticides and fertilizers and other materials, such as hormones and antibiotics
- awareness and use of fair labor practices and worker treatment
- a focus on renewable resources, soil and water conservation, and management practices that restore, maintain, and enhance ecological balance

While no agency reports on the sustainability of agricultural operations in Wisconsin, many producers in Door County use a combination of the activities described above, whether they are certified organic or not. The USDA National Organic Program is explained in more detail below, as well as some figures on organic production in the county. Grass farming taking place in the county is also discussed below, since it is one better-known example of a sustainable agricultural technique. Lastly, the UW-Extension Door County office annually publishes a guide to agricultural producers that grow or raise food or fiber for sale within Door County and nearby Kewaunee County. The guide also lists Door County restaurants and retailers that use or sell locally produced agricultural products. UW-Extension Door County's Web site address may be found in the Resources and Further Information section.

### **USDA National Organic Program**

Organic farming was the original type of agriculture and was practiced for thousands of years until it was virtually wiped out after the industrial revolution. Its practice involves many sustainable farming techniques such as crop rotation, composting, and biological pest control. Organic farming was formally recognized by the U.S. under the 1990 Organic Foods Production Act, which outlines the principal guidelines for organic production as the use of materials and practices that enhance the ecological balance of natural systems and that integrate the parts of the farming system into an ecological whole. Accordingly, the primary goal of organic agriculture, as defined under the 1990 farm bill, is to optimize the health and productivity of interdependent communities of soil life, plants, animals, and people.

The USDA National Organic Program defines organic food as that which is produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using 1) most conventional pesticides, 2) fertilizers made with synthetic ingredients, or sewage sludge, 3) bioengineering, or 4) ionizing radiation.

Products certified as organic under the USDA organic certification program may have the term "organic" on their labels. Before a product can be certified "organic," a government approved certifier inspects the farm where the food is grown to make sure the farmer is following all the rules necessary to meet USDA organic standards. Organic agriculture practices cannot ensure that products are completely free of synthetic residues, but methods are used to minimize cross-pollution via air, soil, and water. Organic food handlers, processors, and retailers adhere to standards that maintain the integrity of organic agricultural products. Note that not all farmers practicing organic farming techniques choose to become certified due to rigorous certification requirements.

According to the 2012 Census of Agriculture, Door County had 15 farms that sold organic products with a market value of \$886,000. Although not directly comparable to the 2012 Census of Agriculture, the 2002 Census shows that Door County then had only three certified organic farms, selling products with a market value of \$253,000. For information on organic farms and local producers in Door County, contact the University of Wisconsin-Extension office listed in the Resources and Further Information section at the end of this chapter.

### **Grass Farming**

The USDA defines grass farming and grass-based farming as agricultural production that relies on pasture or rangeland to supply the protein and energy requirements of livestock. Grazing and forage feeding replaces high grain diets, close confinement, and feedlot-finishing during most or all of an animal's lifetime. The producer focuses on pasture plant and soil management, and proper stocking density and rotational grazing. Pasture-based animal agriculture promotes environmental stewardship and community development owing to certain sustainable management practices.

According to the USDA, there are two types of grass-based products: grass-fed animals fed solely on grass and hay, and grass-finished animals pastured long enough to create intermuscular marbling, but which have also been fed non-grass food. One farm in Door County has been certified by the non-profit organization Eat Wild as meeting their criteria for grass-fed products. Narrow Gate Farm, located in the Town of Liberty Grove, produces grass fed beef, chicken, turkey, pork, and eggs. Waseda Farms, a certified organic farm located in the Town of Jacksonport, also specializes in grass-based farming.

### **TRENDS IN AGRICULTURAL LAND SALES**

Table 7.14 provides information on agricultural land sold in Door County between 2002 and 2012, as reported by the USDA - National Agricultural Statistical Survey, with dollar values inflation-adjusted to 2012. Of the 9,140 total agricultural acres that exchanged hands during that time, 1,491, or about 16%, were converted to non-agricultural uses after selling. For all years except 2008, agricultural lands diverted to non-agricultural uses after selling drew a higher market value. The most acres of agricultural land sold diverted to non-agricultural uses was the highest in 2002, at 543. The highest average cost per acre of land diverted to non-agricultural uses was \$12,539, in 2006.

Since 2002, the conversion of agricultural land to non-agricultural use in Door County has trended downward. Over 82% of the total acres diverted between 2002 and 2012 happened between 2000 and 2004. Sales of land diverted to non-agricultural uses slowed down significantly between 2005 and 2009, then stopped between 2010 and 2012 when zero acres were diverted.

**Table 7.14: Agriculture Land Sales, Door County**

Year	Ac. Sold Cont as Agr.	Ave. Cost Per Ac.	Ac. Sold Diverted from Agr.	Ave. Cost Per Ac.	Total Ac. Sold
2002	508	\$3,226	543	\$3,407	1,051
2003	468	\$3,000	431	\$4,952	899
2004	946	\$4,143	256	\$9,743	1,202
2005	800	\$3,847	64	\$12,502	864
2006	456	\$4,171	102	\$12,539	558
2007	393	\$4,800	55	\$8,465	448
2008	1,170	\$4,113	10	\$3,519	1,180
2009	465	\$4,201	30	\$5,244	495
2010	294	\$3,926	0	--	294
2011	812	\$4,210	0	--	812
2012	1,337	\$4,094	0	--	1,337
<b>Total/Ave.</b>	<b>7,649</b>	<b>\$3,976</b>	<b>1,491</b>	<b>\$7,546</b>	<b>9,140</b>

Source: USDA - National Agricultural Statistical Survey, for the years cited.

## ANTICIPATED CHANGES IN AGRICULTURE

This section addresses anticipated changes in the nature, scope, location, and focus of agricultural production, processing, supply, and distribution. According to the Door County UW-Extension Agriculture Agent, current trends discussed previously are expected to continue. Overall, the amount of land dedicated to agriculture will probably continue to decline, primarily because dairy farming will continue to decline. The production of row crops (corn, soybean, etc.), commercial vegetables, and apple and cherry production are expected to stay about the same.

Small agricultural production and markets such as niche farming, community supported agriculture, and farmer's markets are expected to do well as the trend in local purchasing and agricultural tourism continues to grow. Local production, processing, distribution, and purchasing in Door County are the subjects of a local food network study described in the next section. Agricultural tourism is also a growing market in Door County. Broadly defined, agricultural tourism involves any agriculturally-based operation or activity that brings visitors to a farm or ranch. Niche farming, such as growing grapes for wine-making and malting barley for beer making, are growing in popularity in Door County and across the country. Also, the so-called green industry, such as lawn care and maintenance, is expected to grow due to an aging population in need of hired help.

### **LOCAL FOOD NETWORK STUDY**

Local purchasing is a preference to buy locally produced goods and services over those produced farther away. Developing local food networks is a growing trend across the country and the focus of some study and activity in Door County. According to a report by UW-Madison, UW-Extension, and Door County Agricultural Extension, *An Evaluation of Food and Culture Tourism in Door County*, a local food network is the "social and economic infrastructure necessary to bring food produced in a given region to market, and final consumption in that same region." The goal of developing a local food network is to create linkages between food producers, processors, agricultural cooperatives, local restaurants, grocery stores, and end consumers within a chosen region. Although Door County's food network is not formalized in any way, it is viewed by the authors of the report as being already fairly well-developed on its own because of the county's unique mix of agricultural specialization and tourism.

Although the report does not go into detail regarding activities specific to developing a local food network in Door County, it does offer some guidance by pointing out barriers. A major barrier for both producers and retailers is the lack of a centralized and organized method for collecting and distributing local food to markets. In addition, from the producer's perspective, matching supply with demand is difficult and buyers pay too little for their products. In summary, the study concludes that there is more demand for local foods than what producers are currently supplying and that further relationship-building is needed between the county's agriculture and tourist industries in order to strengthen the county's local food network.

Door County's food network is supported by the variety and diversity of agricultural resources described in the previous section. Many of these resources are already participating in the local food network in some form, including several types of markets, wineries/distilleries/breweries, culinary schools, and food/wine tourism.

## **SMALL AGRICULTURE MARKETS**

Door County has a large number of agricultural producers who sell their products locally at roadside stands, farmers markets, or directly from the farm. These producers raise an assortment of agricultural products from asparagus to yak meat. Many of these operations are small in comparison to conventional farms and are therefore difficult to identify. Increased interest in buying and consuming locally grown food products led to an effort by UW-Extension Door County in 2008 to identify these producers. UW-Extension identified over 80 producers that produce and sell agricultural products locally, an estimated 15 – 20 percent of all farmers in Door County. For information on Door County agricultural producers selling products locally, contact the UW-Extension office listed in the Resources and Further Information section at the end of this chapter. Community Supported Agriculture businesses and public farmers markets operating in Door County are described below.

### **Community Supported Agriculture**

Community Supported Agriculture (CSA) is described by the USDA as a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or culturally, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Membership in the CSA provides the farmer with working capital in advance of the growing season, typically giving the farmer better prices for their crops and some financial security. Membership also relieves the farmer of most direct marketing costs. Typically, members of the farm sign up in advance of the growing season at a specified dollar amount and in return receive shares in the farm's produce throughout the season. Members get the satisfaction of reconnecting to the land and participating directly in food production, while also sharing in the risks of farming, including poor harvests due to weather or pests. Listed below are the CSAs currently operating in Door County.

- Steep Creek Farm (Town of Forestville)
- Door to Door Local Harvest (Town of Brussels)
- Carmon's Gardens (Town of Egg Harbor)
- Ellison Bay Farm Fresh (Town of Liberty Grove)

### **Farmers Markets**

Farmers markets are described by the USDA as an integral part of the urban/farm linkage and continue to rise in popularity, mostly due to growing consumer interest in obtaining fresh products directly from the farmer. Farmers markets give consumers access to locally grown, farm-fresh produce, and the opportunity to cultivate relationships with the farmers who grow the produce. Farmers markets continue to be an important sales outlet for agricultural producers nation-wide; as of mid-2011, there were 7,175 farmers markets operating throughout the U.S., an increase of 17 percent from 2010. Some farmers in parts of the country have expressed concern that there are too many markets, although that concern does not seem to be a problem in Door County. Listed below are the farmers markets that operate in Door County during the growing season.

- Baileys Harbor Farmers Market (summer and winter, Town of Baileys Harbor)
- Settlement Shops Farmers Market (Town of Gibraltar)
- Jacksonport Farmers Market (Town of Jacksonport)
- Sister Bay Corner of the Past Farmers Market (Village of Sister Bay)
- Farmers Market at the Country Walk Shops (Village of Sister Bay)
- City of Sturgeon Bay Farm/Craft Market (City of Sturgeon Bay)

### **Door County Four Seasons Market**

In 2011, the City of Sturgeon Bay partnered with Door County Economic Development Corporation (DCEDC) to initiate a redevelopment plan and implementation strategy for the Sturgeon Bay West Waterfront Area. The West Waterfront Area is an underutilized stretch of prominent waterfront located at the western approach to two bridges, the Maple-Oregon St. and Michigan St. bridges,

which connect Sturgeon Bay's central business districts.

The West Waterfront Area Redevelopment Plan & Implementation Strategy discusses a 20,000 square foot two-story retail showcase of the food and arts of Door County, called the Door County Four Seasons Market. This market would showcase and promote the county's agricultural and cultural resources and serve as a "trailhead to Door County farms and foods." The Market could also provide a permanent home for the existing Sturgeon Bay Farm and Craft market that currently takes place outdoors June through October. With the City of Sturgeon Bay's status as the county seat and the largest community in the county, the Market could potentially serve the local community year-round while also serving as the entry point for tourists going farther north.

In 2013, a new tax incremental financing district was approved for the west waterfront area. Tax increment financing is a funding tool which allows municipalities to use anticipated gains in future property tax revenue to pay for improvements needed for the property's redevelopment.

## **AGRICULTURAL TOURISM**

### **"WISCONSIN LEDGE" VITICULTURAL AREA**

In 2013, the Alcohol and Tobacco Tax and Trade Bureau (ATTB) approved an application proposing to establish an approximately 3,800 square mile viticultural area in northeast Wisconsin, including all of Door County, called the "Wisconsin Ledge." Viticultural areas are designated by the ATTB to allow vintners to better describe the origin of their wines and to allow potential consumers better identification. Petitions to become a viticultural area are rigorous in that every claim in the application has to have substantial documentation backing it up. Approximately 198 viticultural areas now exist in the United States, with the majority of them in California. Only one other viticultural area is designated in Wisconsin, called "Lake Wisconsin," located in the south-central part of the state.

The Wisconsin Ledge application included over 200 pages of factual data relating to geography, climate, soils, hydrology, and distinguishing features, as substantiated by numerous scientists and experts. The geography of the area includes most of the Wisconsin portion of the Niagara Escarpment ridgeline, the highest elevations of the broader cuesta landform. The northernmost portion of the area lies at the tip of Door County, the southern-most portion lies in Dodge County, and the western-most portion lies in Fond du Lac County. The area forms a general triangle shape, varying in width from 750 miles and extending 172 miles from north to south. It includes nearly 2.5 million acres, 11 counties, and 14 wineries growing almost 400 acres of wine grapes.

Underlying the Wisconsin Ledge viticultural area is the Eastern Dolomite Aquifer, consisting of dolomitic limestone and porous karst features that enhance the delivery and availability of water and nutrients to grapevines. This aquifer maintains a constant temperature of 50 degrees Fahrenheit, which keeps the soils at more consistent temperatures. Soils in the Wisconsin Ledge viticultural area were deposited by glacial drift and consist of unsorted till and thin layers of stratified gravel, sand, and clay. In addition to well-suited soils, marine influences from Lake Michigan, Lake Winnebago, and Green Bay create a generally longer and warmer growing season that averages three weeks longer than nearby areas, resulting in additional time for grapes to reach maturity before harvesting.

The petitioners and supporters of the "Wisconsin Ledge" viticultural area expect that this formal recognition by the ATTB will make the region a destination for worldwide travelers.

## DOOR COUNTY WINE TRAIL

There are eight wineries participating in the Door County Wine Trail, including von Stiehl winery in Algoma (Kewaunee County). Below is a list of the seven wineries located in Door County. These wineries offer cherry and other fruit wines, cold-hardy grape varietals produced on-site, and wines made off-site. Most offer tours and tastings.

- Door 44 Winery (City of Sturgeon Bay)
- Door Peninsula Winery/Door County Distillery (Carlsville, Town of Egg Harbor)
- Harbor Ridge Winery (Town of Egg Harbor)
- Orchard Country Winery (Town of Gibraltar)
- Red Oak Vineyard (Town of Nasewaupee)
- Simon Creek Vineyard & Winery (Town of Jacksonport)
- Stone's Throw Winery (Town of Baileys Harbor)

## DISTILLERIES/BREWERIES

There are two distilleries and two breweries located in Door County, all using or planning to begin using locally grown products in the production process.

- Door Peninsula Winery/Door County Distillery (Town of Egg Harbor)
- Island Orchard Cider (Ellison Bay, Town of Liberty Grove)
- Shipwrecked Brewery (Village of Egg Harbor)
- Door County Brewing Company (Town of Baileys Harbor)

Also, over 1,200 acres of certified organic wheat grown annually on Washington Island is shipped to Madison, Wisconsin where it is made into beer and spirits (Death's Door Spirits).

## FARM-TO-TABLE

At its most basic, the term “farm-to-table” refers to the stages of food production, including harvesting, storage, processing, packaging, sales, and consumption. More broadly, farm-to-table refers to a movement concerned with producing food locally and delivering that food to local consumers. Farm-to-table is also linked to the local food movement, organic farming initiatives, sustainable agriculture, and community-supported agriculture.

The farm-to-table movement is at least in part due to somewhat recent backlash against genetically-modified organisms in food and changes in attitude about food production. Reasons for the change in attitude are concern over the scarcity of fresh local ingredients, poor flavor and nutritional value of ingredients transported from long distances, increasing reliance on genetically modified foods, disappearance of small family farms, disappearance of heirloom and open pollinated fruits and vegetables, and highly centralized food production and distribution systems.

Restaurants and schools engage in farm-to-table activity when they buy their produce directly from local farmers. Many restaurants in Door County already purport to use local ingredients and some grow their own ingredients. The Gibraltar School District started buying and serving local organic beef in 2012. The local food network study described previously suggests that there is potential for growth in the farm-to-restaurant dimension, based on a survey the authors conducted of mean sales of locally produced farm products to key target markets. The study showed that direct sales to restaurants and supermarkets was low compared to other types of sales, such as whole, direct, and farm market. Note that the study did not comment on potential for growth amongst the school districts.

## **NATIONAL TRENDS**

The U.S. has two-thirds fewer farmers than a century ago, down from 6 million in 1910 to just over 2 million today, and the average age of American farmers has climbed to 57 years in 2011. The USDA expects that one-quarter (500,000) of all farmers will retire in the next twenty years. Concerned with the trend of aging farmers and lack of young farmers to take their place, the National Young Farmers' Coalition (NYFC) conducted a survey of 1,000 farmers from around the country to identify barriers preventing young people from getting into farming, particularly those under the age of 36. The study found that capital, land access, and health insurance are the largest barriers.

Lack of capital and slow-moving capital were found to be the biggest challenges for people looking to begin farming. Loans to beginning farmers are offered through the USDA's Farm Service Agency, however, current loan rules often disqualify even experienced farmers with good credit. For real estate transactions, it takes up to thirty days for a Farm Service Agency loan applicant to qualify and up to a year to receive any funds. Even if approved, the \$300,000 loan limit is not enough in many real estate markets; from 2000 to 2010, the average price of farmland nation-wide doubled from \$1,090 per acre to \$2,140. Land access was the second biggest concern reported in the NYFC study; farmers under the age of 30 were 70% more likely to rent land than those over 30, of whom only 37% rented land. Finally, the cost of health care was the third ranking concern of survey respondents. The Bureau of Labor Statistics ranks farming as the fourth most deadly occupation. Young farmers are most at risk for injury and death as they learn to use equipment new to them and do not yet have the physical stamina needed to prevent certain injuries. Some of the survey statistics are listed below:

- 78% of farmers ranked "lack of capital" as a top challenge for beginners, with another 40% ranking "access to credit" as the biggest challenge
- 68% of farmers ranked land access as the biggest challenge faced by beginners
- 70% of farmers under 30 rented land, as compared to 37% of farmers over 30
- 74% of farmers ranked apprenticeships as among the most valuable programs for beginners
- 55% of farmers ranked local partnerships as one of the most valuable programs, and 49% ranked Community Supported Agriculture as a top program

The NYFC report makes recommendations at the federal, state, and local levels which could help more young and beginning farmers by supporting more training and education, improving access to capital and credit, and addressing land accessibility and affordability issues. At the federal level, Congress can include the "Beginning Farmers and Ranchers Opportunity Act," which supports many of the specific recommendations in the NYFC report, in the next farm bill. States can help preserve farmland by offering tax credits for farmers that sell their land to beginners, legalizing and improving apprenticeships, offering new farmer grants, providing affordable health insurance to small businesses, offering student loan forgiveness, and creating agricultural land affordability protections. At the local level, the report recommends creating market opportunities for farmers by starting CSA groups, shopping at farmers markets, and sourcing institutional food from local farms. It also recommends protecting existing farmland through zoning and the purchase of development rights. See below for a more detailed list of recommendations provided in the report.

### **National Young Farmers' Coalition Report Recommendations**

#### **1) Support Training and Education**

- Renewal and expansion of the Beginning Farmer and Rancher Development Program; this program provides funding for beginning farmer-training opportunities. (Federal)
- Fund the National Sustainable Agriculture Information Service "ATTRA," a database of farm apprenticeships and internships throughout the country. (Federal)

- Legalize apprenticeships and ensure protection of apprenticed farmers. (State)

## 2) Improve Access to Capital and Credit

- Help young farmers make capital improvements for sustainable farming by restoring the Environmental Quality Incentives Program. (Federal)
- Support the Conservation Stewardship Program and increase set-asides to beginning farmers. (Federal)
- Continue and improve on credit opportunities for young and beginning farmers. (Federal)
  - Make existing Farm Service Agency loan programs work for young and beginning farmers.
  - Make the Farm Service Agency more accessible by training agents to work with young and beginning farmers and by expanding on-line resources.
  - Provide microcredit for beginning farmers.
  - Fund beginning farmer and rancher individual development accounts, which would match saving funds and require business planning courses.
  - Offer loan pre-approval for beginning farmers.
- Provide student loan forgiveness for young and beginning farmers. (Federal)
- New farmer grants; competitive small grants to help young people get started in agriculture. (State)
- Health care for small businesses. (State)
- Student loan forgiveness. (State)

## 3) Address Land Access and Affordability

- Offer tax credits for leasing or selling land to a beginning farmer. (Federal)
- Prioritize affordability within the Farm and Ranch Lands Protection Program so that land with price increase controls is given priority. (Federal)
- Continue and expand the Transition Incentives Program, which offers extra payments to farmers in the Conservation Reserve Program who sell or lease their land to beginning farmers. (Federal)
- Provide affordability protections for farmland; implement a requirement for parcels with agricultural easements to be resold at "agricultural value." (State)
- Provide tax incentives for landowners who rent or sell to beginning farmers. (State)

#### 4) Local Initiatives

- Start or join a CSA
- Shop at local farmers markets
- Source institutional foods from local farms
- Encourage farm-friendly zoning
- Sell or rent land to a young and beginning farmer
- Join the National Young Farmer's Association and organize local efforts

### RESOURCES AND FURTHER INFORMATION

#### LOCAL

##### **City of Sturgeon Bay - West Waterfront Redevelopment Plan**

(<http://www.sturgeonbaywi.org/departments/community-development/west-waterfront-redevelopment-plan>)

##### **The Community's Garden** (<http://thecommunitysgarden.org>)

The Community's Garden is a non-profit working to showcase the connection between a community's well-being and nature.

##### **Door County Cooperative** (<http://www.doorcountycoop.com>)

##### **Door County Master Gardeners Association** (<http://www.dcmga.org>)

The mission of the Door County Master Gardeners Association is, in partnership with UW-Extension, to strive to make a positive impact on horticulture in our community through education, community outreach, and stewardship of the environment.

##### **Door County Real Property Listing Department** (<http://www.co.door.wi.gov>)

Real Property Listing processes all information recorded in the Register of Deeds Office pertinent to the transfer of land, including property owners, parcel numbers, addresses, acres, fire numbers, and assessed and equalized values on all parcels of land in the county.

##### **Door County Shepherds' Market** (<http://www.dcshepherdsmarket.com>)

The Shepherds' Market promotes products from locally raised sheep, goats, alpacas, and llamas, and educates the public about locally raised animals, the fibers they produce, and the traditional handcrafts and fiber arts that utilize these fibers.

##### **Northeastern Wisconsin Technical College - Sturgeon Bay Campus**

(<http://www.nwtc.edu/atnwtc/places/SturgeonBay>)

- **Sustainable Food & Agriculture Systems Program - Green Bay Campus** (<http://www.nwtc.edu/academics/ProgTeamSites/OSAFE>). The Sustainable Food & Agriculture Systems program prepares students with entrepreneurial and technical skills necessary to manage a profitable, environmentally sound agricultural business.

##### **Savory Spoon Cooking School** (<http://www.savoryspoon.com>)

The Savory Spoon Cooking School, member of the International Association of Culinary Professionals, is a seasonal school open from June through October each year.

**University of Wisconsin-Extension Door County (<http://www.door.uwex.edu>)**

The Door County UW-Extension Office works to bring knowledge of the University to Door County citizens and help people apply this information. The study “*An Evaluation of Food and Culture Tourism in Door County*,” discussed in this chapter, can be found on this website.

**University of Wisconsin Madison - Peninsular Research Station**

(<http://www.ars.wisc.edu/peninsular>)

The Peninsular Station serves as a field laboratory for fruit specialists to develop pest control programs and conduct other research to improve yields and quality of apples, cherries, grapes, and raspberries. Small grains and vegetable research is also conducted at this facility.

**Wisconsin Cherry Growers Association (<http://www.wisconsincherries.org>)**

Located in the Village of Egg Harbor, the purpose of the Wisconsin Cherry Growers Association is to bring together those interested in the production, research, utilization, and marketing of Wisconsin cherries. Members include growers, raw product processors, area food manufacturers producing cherry products for wholesale and/or retail sale, and associate members.

**STATE**

**Wisconsin Department of Agriculture, Trade, and Consumer Protection**

(<http://www.http://www.datcp.state.wi.us>)

DATCP is the agency responsible for food safety, animal and plant health, protecting water and soil, and monitoring fair and safe business practices. They are also the agency that administers the farmland preservation planning and zoning programs discussed in this chapter.

**FEDERAL**

**American Farmland Trust (<http://www.farmland.org>)**

Founded in 1980 by a group of farmers and conservationists concerned about the rapid loss of the nation's farmland to development, American Farmland Trust is a non-profit membership organization dedicated to protecting our nation's strategic agricultural resources.

**National Young Farmers' Coalition (<http://www.youngfarmers.org>)**

The National Young Farmers' Coalition mission is to represent, mobilize, and engage young farmers to ensure their success.

**United States Department of Agriculture – Farm Service Agency (<http://www.fsa.usda.gov>)**

The Farm Service Agency administers and manages farm commodity, credit, conservation, disaster and loan programs as laid out by Congress. These programs are designed to improve the economic stability of the agricultural industry and to help farmers adjust production to meet demand.

- **National Agricultural Statistics Service (NASS) (<http://www.nass.usda.gov>)**. The NASS conducts an agriculture census every five years.
- **National Organic Program (<http://www.ams.usda.gov>)**

**Wisconsin Rural Development (<http://www.rurdev.usda.gov/wi>)**

The USDA Rural Development seeks to improve the economy and quality of life in all of rural America. Their financial programs support public facilities and services such as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service. They also promote economic development by supporting loans to businesses through banks and community-managed lending pools.

## CHAPTER 8: TRANSPORTATION

## INTRODUCTION

This chapter provides an overview of the Wisconsin Department of Transportation (WisDOT) and Door County Highway Department, followed by an inventory of the existing transportation network within Door County, including: the roadway system; air, water, bicycle, and pedestrian transportation; and transportation service providers. This chapter also provides an inventory of transportation planning done for the county, including regional railroad, county highway, airport, bicycle and pedestrian planning, and publicly-subsidized transportation.

## STATE AND COUNTY TRANSPORTATION DEPARTMENTS

### **WISCONSIN DEPARTMENT OF TRANSPORTATION**

The WisDOT, officially established in 1967, works with federal, state, and local agencies to meet changing and growing travel needs in Wisconsin. The WisDOT is responsible for planning, building, and maintaining Wisconsin's network of state highways and the interstate highway system. The department also plans and promotes air, rail, water, and bicycle and pedestrian transportation. The department shares in the costs of building and operating all modes of transportation at the county and municipal levels.

The primary funding source for maintaining, rehabilitating, and reconstructing county highways and local roads is the state's disbursement of general transportation aids. This is the largest WisDOT funding program, providing payments to counties for costs associated with such activities as road reconstruction, filling potholes, snow removal, and marking pavement. All local governments are required to file a certified plat with WisDOT each year indicating any increase or decrease in the mileage of public roads or streets. If there has been no change in total local road and street miles, the government must still file with WisDOT a certified plat or a certified statement to that effect.

WisDOT also administers the Transportation Alternatives Program (TAP) intended to "expand travel choice, strengthen the local economy, improve the quality of life, and protect the environment." TAP is a new legislative program that was authorized in 2012 by federal transportation legislation, the Moving Ahead for Progress in the 21st Century Act (MAP-21). With certain exceptions, TAP allocates federal funds to transportation improvement projects that meet eligibility criteria for the Safe Routes to School Program, Transportation Enhancements, and/or the Bicycle & Pedestrian Facilities Program, as described below.

- Safe Routes to School (SRTS). This program creates safer walking and biking routes in order to encourage children in grades K-8 to walk and bike to school, promoting healthier lifestyles for children. It is also intended to decrease auto-related emissions near schools. Funding is provided to state departments of transportation to create and administer SRTS programs.
- Transportation Enhancements (TE). In July 2012, MAP-21 discontinued TE as a distinct funding set-aside, however, certain TE categories that increase multi-modal transportation alternatives and enhance communities and the environment were integrated into TAP. These funds provide up to 80% of costs for a wide variety of projects such as bicycle or pedestrian facilities, landscaping or streetscaping, and the preservation of historic transportation structures. The twelve categories of eligible activities are listed below.
  - facilities for pedestrians and bicycles
  - safety and educational activities for pedestrians and bicyclists
  - acquisition of scenic easements and scenic or historic sites
  - scenic or historic highway programs, including the provision of tourist and welcome centers

- landscaping and other scenic beautification
  - historic preservation
  - rehabilitation and operation of historic transportation buildings, structures, or facilities
  - preservation of abandoned railway corridors
  - control and removal of outdoor advertising
  - archaeological planning and research
  - mitigation of water pollution due to highway runoff or reduction of vehicle-caused wildlife mortality
  - establishment of transportation museums
- Bicycle and Pedestrian Facilities Program (BPFP). BPFP funds bicycle and bicycle/pedestrian facilities. Because the TE program also extensively funds bicycle and pedestrian facilities, the two programs share the same application, review, and selection process. Per state statute, BPFP cannot fund exclusively pedestrian projects or streetscaping projects even if the streetscaping includes some bicycle and pedestrian elements.

Other types of local transportation planning and funding assistance provided by WisDOT are described throughout this chapter.

### **DOOR COUNTY HIGHWAY DEPARTMENT**

The Door County Highway Department is responsible for developing, maintaining, and operating a safe and reliable transportation system in the County. Its primary responsibility is the ongoing maintenance, snow and ice control, design, and construction of 588 lane miles of County Trunk Highways. The Highway Department also similarly services state highways, three lift bridges owned by the state, and local roads through agreements with towns and villages.

There are three Highway Department shop facilities, located in the City of Sturgeon Bay (City), Village of Sister Bay, and Town of Brussels. Each facility distributes fuel to county and other government vehicles, with a fourth fueling location at the old Highway shop on 14th Avenue in the City. The Highway Department purchases the fuel, which in turn is used by over 400 vehicles belonging to 26 county departments and other agencies. The Highway Department also operates six mines, producing an average of 85,000 cubic yards of material per year, and a hot mix production plant, producing an average of 53,000 tons per year.

## **INVENTORY OF TRANSPORTATION NETWORK**

### **ROADWAY SYSTEM**

WisDOT maintains the Wisconsin Information System for Local Roads (WISLR), a comprehensive database developed by WisDOT to aid local governments with management of Wisconsin's 100,000 miles of local roads. The WISLR system can be used to help guide local planning and budgeting decisions by identifying both physical and administrative attributes of a municipality's roadway system, as listed below.

Physical attributes

- surface type
- left and right shoulder
- one way
- right-of-way
- median type
- left and right curb
- parking

- traffic lanes
- pavement rating
- sidewalks

#### Administrative attributes

- owner
- road category
- access control
- urban location
- federal urban/rural
- area
- functional classification
- national Highway System data
- highway
- performance Monitoring System data
- international Roughness Index data
- high Occupancy Vehicle Lane data
- strategic Highway Network data

According to WisDOT, as of 2012, Door County has 102 miles of state highways, 294 miles of county highways, and 873 miles of town roads; there are also approximately 152 miles of private roads. The backbones of the county's local transportation system are State Trunk Highways (STHs) 42 and 57. STH 42 runs approximately 59 miles, the entire length of the mainland of the county, from the Town of Forestville to Northport (in the Town of Liberty Grove). STH 57 runs over 53 miles from the Town of Union to the Village of Sister Bay. STHs 42 and 57 converge in the Town of Nasewaupee, approximately four miles southwest of the City of Sturgeon Bay, and split again about 2 miles northeast of the city, in the Town of Sevastopol.

### FUNCTIONAL CLASSIFICATION OF HIGHWAYS AND ROADS

WisDOT uses functional classification for general transportation planning, referencing highway and street construction standards, and to determine eligibility for allocation of federal funds. Door County's highways and roads are divided into three categories, or functional classes, as defined by WisDOT: 1) arterial roads, 2) collector roads, and 3) local streets and roads. Road category is determined by the function that the highway, street, or road serves in relation to population, land use, access, and traffic volume. The upper limits of the system – principal arterials, for example – emphasize traffic mobility (long, uninterrupted travel), whereas the lower limit local roads and streets emphasize access. The county's functional classification system is illustrated on Map 8.1, found at the end of this document. Listed below are descriptions of each functional class/sub-classification and examples of these classifications in Door County.

#### Arterials

The function of an arterial is to move traffic quickly, safely, and efficiently over medium-to-long distances, often between regions as well as between major economic centers. Arterial highways are further categorized, based on traffic volumes, as either "principal" or "minor." Door County has two roads classified as arterial, described below.

- *State Trunk Highway 42.* STH 42 enters the county north of the City of Algoma where it is classified as a minor arterial. It becomes an “other” principal arterial where it converges with STH 57 in the Town of Nasewaupee until it splits in the Town of Sevastopol, where it becomes a minor arterial again. From there, STH 42 runs along the west side of the county through the Town of Egg Harbor, the Village of Egg Harbor, the Town of Gibraltar, the Village of Ephraim, the Town of Liberty Grove, and the Village of Sister Bay. STH 42 continues north from the Village of Sister Bay, through the Town of Liberty Grove, passing through the communities of Ellison Bay and Gills Rock, and ending at Northport.
- *State Trunk Highway 57.* STH 57 enters Door County north of the City of Green Bay in the Town of Union, near the western shore. It converges with STH 42 in the Town of Nasewaupee and splits in the Town of Sevastopol. STH 57 is classified as an “other” principal arterial between the Town of Union and the Town of Sevastopol, where it splits from STH 42 and becomes a minor arterial. STH 57 then continues on the east side of the county through the Towns of Jacksonport, Baileys Harbor, and Liberty Grove until it intersects with and ends at STH 42 in the Village of Sister Bay. In 2008, WisDOT completed an \$80 million expansion of STH 57 from a two-lane highway to a four-lane divided highway, from the county border to the City of Sturgeon Bay.

### **Collectors**

The primary function of roads classified as “collectors” is to provide general “area to area” routes for local traffic. Collector roads take traffic from the local road system (and the land-based activities supported by the local roads) and provide relatively fast and efficient routes to residential neighborhoods, commercial areas, and industrial areas.

- *Major Collectors:* Major collectors provide service to moderate-sized communities and other intra-area traffic generators, and link those generators to nearby larger population centers or higher-function routes.
- *Minor Collectors:* Minor collectors provide service to all remaining smaller communities, link the locally important traffic generators with their rural hinterland, and are spaced consistent with population density so as to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road.

Examples of major collector roads include County Highways S and C in Southern Door and County Highways A, B, and F in Northern Door. Examples of minor collector roads include County Highways MM and U in Southern Door and County Highway I in Northern Door.

### **Local Roads**

The primary purpose of local roads is to provide direct access to adjacent land and provide for travel over relatively short distances on an inter-town or intra-town basis. They also tend to serve as the end destination of most trips. All roads not classified as arterials or collectors are classified as local roads. Door County has approximately 878 miles of public local roads, comprising 76% of the total road miles in the county.

### **Driveways**

Driveways to local roads and streets may impair vehicle safety if improperly sited and/or designed. The Wisconsin statutes allow municipalities to issue permits for all new driveways, including the potential prohibition of driveways that would be deemed unsafe due to location (at the base or top of hills, within a specified distance from an intersection, etc.). The permit process can also regulate the size and design of driveways. Most municipalities in Door County have driveway ordinances and the appropriate municipality should be contacted for further information. Note that Door County has a Uniform Addressing Ordinance, described further in Chapter 10,

Land Use, which gives the Door County Planning Department authority to assign new addresses (such as when new driveways are being installed to accommodate new construction) and to oversee the naming of roads in all unincorporated areas.

## TRAFFIC COUNTS AND CRASHES

The WisDOT provides all state communities with traffic counts for state and county highways once every three years. Traffic volume information is presented as Annual Average Daily Traffic (AADT) figures, calculated for a particular intersection or segment of road. Door County traffic volumes were last calculated in 2012. The counts are conducted for 48 hours and then adjusted in order to report a 24-hour average weekday count for the specific data collection period. Average daily traffic volumes collected for Door County can be obtained on-line from WisDOT.

Vehicle crash reports are filed with WisDOT by county and city police departments, providing the time, location, type, and severity of the crash. The number, location, and severity of accidents often indicate problems with road and street alignments, construction, or the geometric design of the street. A variety of measures, including alterations in the street geometry, enlargement of the intersection turning radii, placement of more prominent signs, relocation of access drives, and speed changes, are often used to alleviate problem areas. Detailed crash information for Door County can be found on-line from WisDOT.

## BRIDGES

The WisDOT owns and funds operation of Door County's three movable bridges, all located in the City of Sturgeon Bay: the Michigan Street Bridge, the Maple-Oregon Bridge, and the Bayview Bridge. The WisDOT Northeast Regional Office in Green Bay does the specialized maintenance required of these bridges and contracts with the Door County Highway Department to operate the bridges. Navigation on Sturgeon Bay is under the jurisdiction of the United States Coast Guard, which also has jurisdiction over the schedules of operation for all three bridges.

### Michigan Street Bridge

The Michigan Street Bridge, centrally located in downtown Sturgeon Bay, was completed in 1930. This bridge was built as part of the State Hwy 42/57 corridor and was the only road connection between Southern and Northern Door until the opening of the Bayview Bridge in 1978. The Michigan Street Bridge is 1,420 feet long and has a vertical clearance of 14 feet above normal water in closed position – taller pleasure craft and most commercial vessels require opening of the bridge to pass through. The Michigan Street Bridge is on both the National and State Registers of Historic Places and is the only example in Wisconsin of a double-leaf, rolling lift, bascule through truss structure with overhead counter-weights.

### Maple-Oregon Bridge

The Maple-Oregon Bridge was completed in October 2008 and carries traffic between Maple Street on the west side of the bay to Oregon Street on the east side. It is located between the Michigan Street Bridge and the Bayview Bridge, approximately 750 feet southeast of the Michigan Street Bridge and about 7,000 feet northwest of the Bayview Bridge. The Maple-Oregon Street Bridge is a rolling-lift bascule girder bridge with mechanically driven centerlocks. It is approximately 1,055 feet long from pier-to-pier and has 24 feet of vertical clearance above the water when in closed position.

## **Bayview Bridge**

The Bayview Bridge, located approximately 7,800 feet southeast of Michigan Street, was completed in 1978 as part of a STH 42/57 bypass around the city. Its movable span is a double-leaf rolling-lift deck-girder bascule structure with Scherzer centerlocks. The bridge provides vertical clearance of approximately 49 feet at the centerline of its span in the closed position and opens upon request for all watercraft.

## **TRUCKING**

There are two private trucking terminals in the county, located in the City of Sturgeon Bay. Smith & Schartner Trucking, Inc. is located at 951 S. Duluth Avenue and Peninsula Trucking is located at 420 N. 14th Avenue. In February 2006, Wisconsin's Administrative Code was modified to allow trucks with trailers longer than 48 feet to operate on STH 57 north of Sturgeon Bay. Prior to that, longer trailers had to drop off deliveries in Sturgeon Bay at one of the two private terminals described above and then be distributed further north via alternate transportation methods. This rule was changed at the request of the Chamber of Commerce, now the Door County Visitor Bureau, to benefit Northern Door business owners.

## **PARK-AND-RIDE LOTS**

Park-and-ride lots are parking lots where individuals can leave their vehicles in order to carpool. Benefits include gas savings, decreased congestion on roads, decreased congestion in destination parking lots, and reduced pollution. The WisDOT opened its first park-and-ride lot in Door County near STH 57 and CTH C (Brussels) in 2008, which can accommodate up to 25 cars. There are also two park-and-ride lots in Brown County, located along STH 57. More information about these lots can be found at the WisDOT Web site listed in the Resources and Further Information section at the end of this chapter.

## **DOOR COUNTY COASTAL BYWAY**

In 1999, a new state law authorized WisDOT to develop and administer a Scenic Byways program in order to take advantage of federal funding for highway improvement. In 2005, WisDOT created the Wisconsin Scenic Byways program, which currently has four state-designated scenic byways, including the Door County Coastal Byway (DCCB). This scenic byway program is a cooperative effort between local communities and WisDOT to identify and promote state highway corridors with scenic and/or historical attributes that provide travelers an enjoyable visual, educational, and recreational experience. According to WisDOT, Wisconsin scenic byways should:

- be part of the state highway system (a numbered state or federal highway other than an interstate) and be at least 30 miles long;
- offer travelers outstanding scenic views or historic resources combined with recreational and/or cultural attributes; and
- be initiated/supported by local groups and governments.

Benefits of scenic byway designation include:

- eligibility to compete for federal discretionary scenic byway funds;
- increased tourism and economic development in communities along a designated byway;
- unique signs, markers, brochures, and ongoing promotional efforts that enhance a community's "marketability";
- potential designation as a National Scenic Byway or All-American Road, which are marketed to national and international travelers;
- promotion of partnerships between local governments, businesses, civic groups, and community leaders;
- strengthening of civic pride and promotion of communities as attractive places to live and work; and

- identification of an area's scenic, historical, and recreational treasures for the enjoyment of future generations.

The DCCB, established in 2010, is a 66-mile loop that begins in the City of Sturgeon Bay and loops around the northern part of the county along STHs 42 and 57, along the shores of Lake Michigan and Green Bay. All municipalities along the loop, except for the Town of Egg Harbor, are participating in the program. In order to be designated a scenic byway, Door County needed a 10-year Corridor Management Plan (CMP) in place that describes the vision and goals for the byway, including how the byway will be managed, promoted, and protected, and who will have responsibility for various projects along the byway. The CMP is intended to complement other planning documents, such as this plan.

The DCCB works with the Door County Visitor Bureau for marketing and promoting the Coastal Byway, as well as multiple other partners to implement the CMP. More information about projects resulting from the CMP are discussed in Chapter 9, Community Facilities and Utilities.

## RUSTIC ROADS

In 1973, the Wisconsin State Legislature established the Rustic Roads program to help citizens and local governments identify and preserve the state's remaining scenic and lightly-traveled country roads. Each road in the program is labeled with a unique brown and yellow sign that contains a small placard identifying the road by its numerical number within the statewide system. These routes travel through some of Wisconsin's most scenic countryside and provide an opportunity for hikers, bikers, and motorists to travel along them with slower automobile speeds. The maximum speed limit on a Rustic Road has been established by law at 45 miles per hour (mph). A speed limit as low as 25 mph may be established by the local governing authority.

An officially designated Rustic Road continues to be 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, and a Rustic Road is eligible for state aids just like any other public highway. A Rustic Road may be dirt, gravel, or paved, and one-way or two-way. It may also have bicycle or hiking paths adjacent to or incorporated in the roadway area. To qualify for the Rustic Road program, a road should:

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

Listed below are descriptions and locations of the four Rustic Roads in Door County.

- **Rustic Road 9** – County Highway T (Glidden Drive) between Brauer Road and Whitefish Bay Road is marked as Rustic Road 9. This 6.7 mile long road runs along the Lake Michigan shoreline, passing through sand dunes, heavily wooded areas, and streams containing natural spawning grounds for trout and smelt.

- **Rustic Road 38** – Cana Island Road, extending from County Q east to Cana Island, is Rustic Road 38, a 2.5 mile long road passing through a unique boreal forest between Moonlight Bay and North Bay. The surrounding woods are filled with spruce, cedar, white pine, and various species of rare and valuable plants. This route provides scenic views of Cana Island Lighthouse and the Lake Michigan shoreline.
- **Rustic Road 39** – The area of Ridges Road beginning at STH 57, continuing to Point Drive and the Old Lighthouse Point Natural Area is marked as Rustic Road 39. It is a 2.5 mile long route with panoramic views of heavily wooded areas and the lakeshore.
- **Rustic Road 77** – County TT, running northerly to its intersection with Lake Michigan Drive, is marked as Rustic Road 77. This 3.5 mile long route begins at the Coast Guard station and lighthouse at its southern end and then runs north parallel to Lake Michigan. Many types of trees, including cedars, maples, white birch, and pines line this route.

More information about rustic roads can be found at the WisDOT Web site listed in the Resources and Further Information section at the end of this chapter.

### **AIR TRANSPORTATION**

There are four public-use airports that service the region, three of which are located in Door County: Door County Cherryland, Ephraim-Gibraltar, and Washington Island. The fourth, Austin-Straubel International, is located near the City of Green Bay.

#### **DOOR COUNTY CHERRYLAND AIRPORT**

Door County Cherryland Airport, owned and maintained by the County of Door, is located on a 436-acre parcel one mile west of the City of Sturgeon Bay along Park Road and CTH C. This airport is classified as a Transport/Corporate airport, serving corporate jets, small passenger and cargo jet aircraft used in regional service, and small airplanes (piston or 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 - 6,800 feet.

Cherryland's existing airfield configuration consists of two runways. Runway 2/20 is the primary runway with a length of 4,600 feet. Runway 10/28 serves as a secondary or crosswind runway with a length of 3,200 feet. Both runways have medium-intensity runway lights, four unit precision approach path indicators, and runway-end identification lights. Cherryland's primary runway length of 4,600 feet and pavement strength ratings – 16,000 pounds single-wheel and 22,000 pounds dual-wheel – restrict the size and types of aircraft able to safely use the airport. A feasibility study was conducted by the airport in 2003 regarding lengthening the east/west runway, but the Airport and Parks Committee decided in 2008 that the cost of extending the east/west runway far outweighed the benefits.

Occupying the 5,600 square foot terminal are the Airport Director and staff, the Fixed Base Operator (FBO), and Avis Car Rental Agency. Express Airport Services, LLC is the fixed-base operator offering air-craft charter services. Other services provided include aircraft maintenance, flight instruction, scenic air rides, and fueling. The tie-down area has 33 paved tie-downs, with additional space available. There are a total of 60 hangar buildings on the airport property, with sizes ranging from 100 feet x 120 feet to 42 feet x 32 feet. There is no scheduled passenger service and none likely in the future due to security requirements put in place by the Federal Aviation Administration for all airports since the September 11, 2001 terrorist attacks. The terminal has 24-hour access to self-service fuel, a flight planning and pilots lounge, and restrooms.

ThermaTron-X – one of the top ten employers in the county – shuttles their assembly workers to

job sites throughout the country on a corporate jet housed at Cherryland.

### **EPHRAIM-GIBRALTAR AIRPORT**

The Ephraim-Gibraltar Airport is owned and maintained by the Village of Ephraim and the Town of Gibraltar. The airport, located in the north central portion of the Town of Gibraltar, is classified as a Basic Utility-A airport facility. It is 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. The facility has one 2,700-foot asphalt runway and one 2,364-foot turf runway.

This airport is open year-round, but staffed only from May to October and on-call in the off-season. It has a 216 square-foot terminal building, one courtesy van, car rental service, car parking, self-service aviation fueling, eight courtesy bicycles, and airport management services. The airport also has a 2,500 square-foot maintenance building. Vehicle parking facilities are available at 20 short-term and 23 long-term spots. The site currently has 29 hangars with two people on a waiting list for hangar space.

### **WASHINGTON ISLAND AIRPORT**

The Washington Island Airport is owned by the Town of Washington and is located on Airport Road in the northwest portion of the island. It is classified as a Basic Utility-A airport 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 or multi-engine, seating between two and ten people. The facility has two 2,230-foot turf runways and 15 hangars. No fuel service is available.

### **AUSTIN-STRAUBEL INTERNATIONAL AIRPORT**

The Austin-Straubel International Airport is owned by Brown County and is located on Airport Drive, just west of the City of Green Bay. The third largest airport in the state, it is classified as an Air Carrier/Cargo airport, designed to accommodate virtually all aircraft including wide-body jets and large military transports. The airport has two concrete runways with lengths of 8,701 feet and 7,700 feet. Austin Straubel, as of 2014, is served by four passenger airlines flying to six destinations: Chicago, Illinois; Detroit, Michigan; Milwaukee, Wisconsin; Minneapolis, Minnesota; and Fort Meyers and Orlando, Florida. The Door County-Green Bay Shuttle provides year-round transportation between Austin-Straubel Airport and Door County.

Contact information is provided in the Resources and Further Information section at the end of this chapter for the four airports listed above. In addition to these four public-use airport facilities, there are also eight privately-owned airstrips or helicopter landing pads in Door County. These facilities, with turf runways ranging from 2,000 to 3,000 feet long, are primarily used by recreational pilots and for medical emergencies.

### **WATER TRANSPORTATION**

Door County's water transportation system includes the Port of Sturgeon Bay and ferry services. Also, the U.S. Coast Guard is located in the City of Sturgeon Bay and oversees multiple facets of water transportation and recreational water usage, including inspections, law enforcement, and safety.

### **POR T OF STURGEON BAY**

The Port of Sturgeon Bay houses Bay Shipbuilding Company and Palmer Johnson, Inc., two of the major shipbuilding and ship repair facilities on Lake Michigan. Bay Shipbuilding has been building, converting, and repairing ships in Sturgeon Bay since 1968. They specialize in large ship construction projects, but also construct dredges and dredging support equipment (scows, deck barges, tugs, etc.) and bulk cargo self-unloading installations. Bay Shipbuilding is the leading builder

of self-unloading bulk carriers, which are among the largest ships traveling the Great Lakes, but they also work on military vessels and small craft for commercial use. The company operates on 50 acres of property on the Sturgeon Bay ship canal, housing the only graving dock in the Great Lakes capable of serving carriers over 1,000 feet. Bay Shipbuilding also has a small graving dock, one floating dock, docking space for 18 vessels, five crawler cranes with lifting capacities of up to 80 tons, and a 200-ton gantry crane.

Palmer Johnson, Inc. is a manufacturer of world-class custom luxury yachts for domestic and international customers. Founded in 1918, Palmer Johnson got its start building and repairing boats for the Great Lakes commercial fishing fleet. The firm's first wooden yacht was built in 1928, the start of its reputation as a builder of small, high quality yachts. Today, the company specializes in welded aluminum construction and continues its reputation as one of the world's leading builders of luxury high-performance yachts.

## FERRIES

There are three ferry services in Door County with set schedules going to Washington Island/Rock Island and several operators within the Town of Gibraltar on call for trips between Fish Creek and Chambers Island. There is also a ferry that connects Manitowoc, Wisconsin with Ludington, Michigan.

- **Island Clipper Passenger Ferry** – The Island Clipper is a 65-foot ferry with 149 passenger seats. It carries people between Gills Rock (Town of Liberty Grove) and Washington Island from late May through mid-October.
- **Washington Island Ferry** – This ferry line has a fleet of five vessels which carry people, bicycles, cars, vans, motorcycles, scooters, snowmobiles, and trucks between Northport (Town of Liberty Grove) and Washington Island, year-round.
- **Rock Island Ferry** – The “Karfi” is a 49 passenger-only ferry that transports people between Jackson Harbor, Washington Island and Rock Island State Park. The ferry operates from mid-May to mid-October.
- **Fish Creek to Chambers Island** – Several operators are on call year-round, as long as the water is open, to transport people between Fish Creek and Chambers Island.
- **Lake Michigan Car Ferry** – This car and passenger ferry links Ludington, Michigan with Manitowoc, Wisconsin from mid-May to mid-October, reducing what would be a 450-mile drive to a four-hour ferry trip.

## UNITED STATES COAST GUARD

The U.S. Coast Guard “Marine Safety Detachment” Station, located at the east end of the Sturgeon Bay Ship Canal, was established in 1886 as part of the U.S. Life Saving Service. There are also seasonal stations on Washington Island and in the City of Green Bay that operate only during the summer months. The Marine Safety Detachment unit, including the seasonal units, is a multi-mission unit responsible for executing the Coast Guard’s Port Safety and Security, Marine Environmental Protection, and Commercial Vessel Safety missions under the Department of Homeland Security. They perform a variety of tasks each day, ranging from conducting port security patrols, processing vessel arrivals, inspecting U. S. and foreign commercial vessels, and conducting waterfront facility exams for compliance with federal regulations.

The Coast Guard’s area of responsibility for marine inspections covers over 300 miles of coastline, extending 35 nautical miles offshore and including all navigable waters of western Lake Michigan (including all of Green Bay) from the city of Kenosha, Wisconsin on the Lake Michigan side, north

to Thompson, Michigan (just west of Manistique, Michigan). This area includes 21 facilities that are subject to the Maritime Transportation and Security Act of 2002, including several oil transfer facilities. In an average year, these facilities receive 150 foreign vessel arrivals, 80 of which come from ports in Europe or South America, with the remainder coming from Canadian ports.

All stations conduct search and rescue operations, law enforcement operations, and provide recreational boating safety education. The Sturgeon Bay station conducts ice rescue operations during the winter. The typical case-load for a station during the summer is between 150 and 200 search and rescue operations and over 200 law enforcement boardings, with the Sturgeon Bay station also conducting 10 - 20 ice rescue cases during the winter.

### **BICYCLE AND PEDESTRIAN TRANSPORTATION**

Door County municipalities have received various federal grants administered through WisDOT for bicycle and pedestrian projects, as listed in Table 8.1. The City of Sturgeon Bay and the Village of Sister Bay are the only municipalities to have received grant money for pedestrian-related projects. Bicycle facilities, as defined by the American Association of State Highway and Transportation Officials, include shared roadways (no signs or markings), signed shared roadways, bicycle lanes, and shared-use paths.

- Shared roadways have no bicycle designations or facilities. In Door County, shared roadways include all local roads, collectors, and minor arterials with low traffic volumes that are safe for bicycle travel.
- Signed shared roadways are designated by bicycle route signs and serve either to provide continuity to other bicycle facilities or to designate preferred routes through high-demand corridors.
- Bicycle lanes are established with appropriate pavement markings and signage along streets in corridors where there is significant bicycle demand and where there are distinct needs that can be served by the lanes. The purpose of bicycle lanes is to improve conditions for bicyclists on the street. As of 2013, only the City of Sturgeon Bay has bicycle lanes.

**Table 8.1: WisDOT-Funded Bicycle and Pedestrian Projects, Door County**

<b>Year Project Title</b>	<b>Municipality</b>	<b>Federal Cost</b>	<b>Local Cost</b>	<b>Total Cost</b>
1994 Ahnapee Trail	Door County	\$118,640	\$29,660	\$148,300
1994 Tri-County Recreational Corridor	Door County	\$400,000	\$100,000	\$500,000
1998 Ahnapee Trail Extension	C. of Sturgeon Bay	\$45,200	\$11,300	\$56,500
1999 Sister Bay Bike/Pedestrian Path	V. of Sister Bay	\$56,800	\$14,200	\$71,000
2000 Bike Path	T. of Gibraltar	\$144,880	\$36,220	\$181,100
2000 Regional Bike Plan	C. of Sturgeon Bay	\$36,400	\$9,100	\$45,500
2000 Sturgeon Bay Bridge Bike Path	C. of Sturgeon Bay	\$112,000	\$28,000	\$140,000
2000 Sister Bay Bike Path STH 42	V. of Sister Bay	\$336,800	\$84,200	\$421,000
2004 Ahnapee Trail Bike Path Extension	C. of Sturgeon Bay	\$132,000	\$33,000	\$165,000
2007 Sturgeon Bay School District SRTS Plan	C. of Sturgeon Bay	\$60,000	\$0	\$60,000
2009 Sidewalk Addition & Education Program	C. of Sturgeon Bay	\$192,363	--	\$192,363
2010 County Bicycle and Pedestrian Plan	Door County	\$80,000	\$20,000	\$100,000

*Source: Wisconsin Department of Transportation.*

Shared-use paths generally are used to serve corridors involving streets and highways not suitable for bicyclists or where wide utility or former railroad rights-of-way exist, permitting facilities to be constructed away from the influence of parallel streets. The City of Sturgeon Bay and the Village of

Sister Bay have the only urban shared-use paths in the county. Other recreational shared-use paths include the Ahnapee State Park Trail, Sunset Trail in Peninsula State Park, and Potawatomi Trail in Potawatomi State Park.

More information on a newly-adopted county-level bicycle and pedestrian plan may be found later in this chapter. More information on recreational bicycle and other types of trails can be found in Chapter 9, Community Facilities and Utilities.

## **TRANSPORTATION SERVICE, REFERRAL, AND COORDINATION**

### **DOOR COUNTY TRANSPORTATION CONSORTIUM/DOOR-TRAN**

Needs assessment surveys conducted by the Door County United Way in 1998 and 2005 indicated affordable transportation was among the most significant needs for Door County residents. In response, in 2006, representatives from non-profits, for-profits, and government agencies involved in providing transportation services and/or analyzing transportation needs formed the Door County Transportation Consortium (Door-Tran), now a 501(c)3 non-profit organization. Since then, Door-Tran has been studying and implementing ways to coordinate and provide transportation services in its mission to connect people to “transportation services that are affordable, available, and accessible.”

Door-Tran offers many services such as trip planning, information and referral, half-price taxi vouchers, and volunteer transportation programs. In 2014, Door-Tran expanded its services to include vehicle repair and purchase loans, taking over this program from We Are HOPE Inc. This loan program provides low-income residents of Door County the option to repair or purchase a vehicle when their needs cannot be met through other transportation services and a bank loan is not an option.

Door-Tran is contracted by the County of Door to maintain and train volunteers and schedule trips for the Veteran Volunteer Transportation Program. This program provides free transportation to and from veteran clinics for veterans who are not able to utilize any of the other transportation options available in the county. Volunteer drivers use county-owned, wheelchair-accessible vehicles. Since the program started in 2011, 449 rides have been provided. As of 2014, Door-Tran also receives federal New Freedom funds to operate the County-Wide Volunteer Transportation Program, which offers a sliding-scale fare based on miles traveled and household income. This program relies on volunteer drivers, who are reimbursed for their mileage.

Lastly, Door-Tran, in partnership with Door County, was instrumental in implementing a shared-ride taxi and public connector system in Door County. Door 2 Door Rides offers public transportation at an affordable price in the Sturgeon Bay and Town of Nasewaupee area and in the Northern Door County area. Shuttles also run to and from Egg Harbor, Valmy, Sister Bay, Algoma, and Brussels. All vehicles are safe, clean, and wheelchair-accessible. In 2013, Door 2 Door Rides provided over 34,000 rides.

## INVENTORY OF TRANSPORTATION PLANNING

This section presents information on transportation planning activities in Door County and on existing state, regional, county, and local transportation-related plans relevant to Door County.

### WISCONSIN DEPARTMENT OF TRANSPORTATION MULTIMODAL TRANSPORTATION PLAN

In 2009, WisDOT finalized their “Connections 2030 – Wisconsin’s Long-Range Multimodal Transportation Plan,” which addresses all forms of transportation over a 20-year planning horizon: highways, local roads, air, water, rail, bicycle, pedestrian, and transit. The overall goal of the plan is to create an “integrated multimodal transportation system that maximizes the safe and efficient movement of people and products throughout the state, enhancing economic productivity and the quality of Wisconsin’s communities while minimizing impacts to the natural environment.” The plan outlines specific projects for the Door Peninsula Corridor that run from Green Bay to Sturgeon Bay, with additional projects planned for northern Door County. The projects listed in this plan for Door County that have not yet been completed are as follows:

- Short-Term (2008-2013)
  - Develop southwest Canal Harbor for the Port of Sturgeon Bay.
- Mid-Term (2014-2019)
  - Support runway extension at the Door County Cherryland Airport in Sturgeon Bay, if supported by environmental document.
  - Bicycle/Pedestrian - provide urban and rural accommodation along STH 42/57 from Michigan Street to the where the highways split on the north end.
- Long-Term (2020-2030)
  - Implement results of STH 42/57 Traffic Operations and Safety Study which may include adding lanes from the Bayview Bridge north to the mid-junction, if supported by environmental document. (See the next section for further information.)
  - Construct new interchange at Stone Road (Town of Nasewaupee) and CTH C, if supported by environmental document.
- Entire Planning Period. Construct candidate passing lanes from Sturgeon Bay to Egg Harbor, if supported by environmental document.

### HIGHWAYS AND BRIDGES

#### **STH 42/57 TRAFFIC OPERATIONS AND SAFETY STUDY**

The WisDOT analyzed traffic and safety issues along STH 42/57 from the south junction (where the two highways come together south of Sturgeon Bay at County MM) to the mid-junction (where they split north of Sturgeon Bay). The purpose of this study was to evaluate 28 intersections along STH 42/57, determine any deficiencies, and develop alternatives to address any needs. The WisDOT evaluated improvement alternatives and made final recommendations for design and implementation, as described below.

#### **Short -Term Improvements**

- Alabama Street - Conversion of the intersection to right-turn only (similar to Utah Street).
- Egg Harbor Road – Roundabout.
- Rosy Lane to Ashland Avenue - Raised median.

- STH 42/CTH MM - Improved stop-control.
- Michigan Street – Roundabout.
- Bridge Queue Mitigation - To improve safety as a result of the queues that develop from the Bayview Bridge drawbridge, provide additional advance warning via flashing warning signs located further away from the bridge. These signs would be linked to the current signs and would flash to alert drivers of a bridge opening. Currently, queues as a result of the drawbridge opening extend past the existing signs during peak hours.

### Long-Term Improvements

- CTH PD/Park Drive - Improved stop-control. As development occurs on Wanek Road, a dedicated left-turn lane should be constructed for southbound STH 42/57 traffic to increase safety.
- CTH C/CTH S/Duluth Avenue – Roundabout. Roundabout recommended to reduce number of lanes of westbound vehicles from the Green Bay Road on-ramp that must weave across traffic to turn left at the intersection.
- Ashland Avenue to Duluth Avenue - Raised median. Construct a raised median from Ashland Avenue to Duluth Avenue in order to increase safety along the corridor and preserve the functionality of STH 42/57 as development expands in Sturgeon Bay.
- Utah Street to Alabama Street - Four-lane corridor. Recommended in order to increase capacity north of the bridge and provide a median in which to store vehicles turning from the side streets. When this alternative is implemented, the intersections of Utah Street and Alabama Street should retain their existing control (right-turn only), but be modified for a four-lane corridor.
- Gordon Road – Roundabout. Recommended in order to minimize traffic queues and provide a better level of service than the stop-controlled intersection. This intersection should be designed to accommodate large trucks using this route to access shipbuilding yards on the north side of Sturgeon Bay.
- Forest Road - Improved stop-control. Recommended in order to improve the sight distance for vehicles on Forest Road by realigning the intersection slightly east. Also, dedicated left- and right-turn lanes on STH 42/57 to remove slowing and stopping vehicles from through traffic and a median to allow vehicles to make a two-stage crossing when turning left from Forest Road.
- Jorns Road/STH 42 - Roundabout recommended.

### Local Improvements

- CTH PD/Park Drive - Improved stop-control. Add a right-turn flare on CTH PD.
- Ashland Avenue - Improved signalized intersection on the north leg of the intersection and a raised median to prevent vehicles from blocking incoming traffic while waiting to make a left turn.
- Neenah Avenue - Improved signalized intersection to improve overall level of service for peak hours. Bike lanes should be provided on Neenah Avenue through the project area.

- Circle Ridge Road/Clay Banks Road/CTH U - Improved stop-control. Recommended in order to improve level of service for vehicles on the south leg by adding a dedicated right-turn lane.

## Other Recommendations

- Multi-modal
  - The extension of the Ahnapee State Trail planned for the east side of STH 42/57 north of the Bayview Bridge should be located at least 40' east of edge of traveled way for proposed roadway. If trail is located less than 40' from the proposed roadway, a visual barrier separation from vehicular traffic is necessary.
  - A multi-modal connection from Memorial Drive to the bike/pedestrian path on the STH 42/57 bridge should be accommodated.
  - Provide pedestrian accommodations at all reconstructed intersections.
- Local Planning
  - Local planning should encourage extending Emerald Lane to the east to provide an alternate east/west route parallel to STH 42/57, promoting long-term traffic flow in the city.
  - Current access to STH 42/57 should be preserved, but no additional access points should be created. Implement access control measures on all portions of STH 42/57 between the south- and mid-junctions.
  - The Pond Lane intersection with STH 42/57 should be removed. Since this is currently a grass roadway, its removal should not have significant effects. Removing this roadway would eliminate an access point in an already crowded corridor.
  - Maintain the Green Bay Road ramps. These ramps provide a direct route to and from downtown Sturgeon Bay and should be maintained.

## BRIDGES

In conjunction with the STH 42/57 study described above, WisDOT is considering a fourth movable bridge as a twin to the existing Bayview Bridge. If built, the bridge would operate simultaneously with the Bayview Bridge.

WisDOT is also studying potential cost reductions and greater efficiency in operating all the existing and potential movable bridges through remote operation. A feasibility study conducted by WisDOT in 2007 estimated the cost for the necessary bridge electrical and control upgrades, remote control conversion, and fiber optic installation at \$2 million. The study's cost analysis showed that capital costs could be recovered in four years through operating cost savings. The WisDOT is currently working on remote control design for the Michigan Street and Maple-Oregon bridges. See WisDOT in the Resources and Further Information section for more information on the feasibility study.

## COUNTY HIGHWAY PLAN

The Door County Highway Department has a five-year plan that proposes roadwork schedules for county highways, including activities such as paving projects, routine maintenance, and seal-coating. The plan is available by contacting the Door County Highway Department; contact information is listed in the Resources and Further Information section at the end of this chapter.

## **WISCONSIN PORTS MASTER PLAN**

A partnership consisting of WisDOT, Wisconsin Commercial Ports Association, Wisconsin Coastal Management Program, Wisconsin Economic Development Corporation, Port of Green Bay, and Center for Freight and Infrastructure (CFIRE) was created to develop a master plan for Wisconsin ports. Kicked-off in 2013, this partnership will create a strategic plan and development initiatives to help increase commercial development of Wisconsin's ports and support local and statewide economic development. The team will assess Wisconsin's commercial port infrastructure, their current and potential markets, and related policies and programs. These assessments will then be used to create a strategic action plan to attract sustainable markets, encourage community development, and support the economic growth of Wisconsin's commercial ports.

## **RAILROAD AND BUS SERVICE**

The Midwest Regional Rail Initiative, in existence since 1996, is a currently stalled effort to develop an improved and expanded passenger rail system in the Midwest. Participants on the steering committee consisted of Amtrak, WisDOT, and eight other Midwest states. Goals of the initiative, as outlined in the Midwest Regional Rail Transportation Plan, are to increase operating speed, train frequencies, system connectivity, and service reliability. Included in the Plan is a proposal to expand Amtrak service to Green Bay, Wisconsin, with dedicated feeder bus service to Sturgeon Bay. This Plan and other information pertaining to rail travel can be found on the WisDOT Web site listed in the Resources and Further Information section listed at the end of this chapter. Currently, there is no railroad service in Door County.

## **AIRPORTS**

The airport development process involves coordination between the Federal Aviation Administration, WisDOT Bureau of Aeronautics, and the airport owner. The WisDOT's Airport Improvement Program combines federal, state, and local resources to help fund improvements to over 100 public-use airports throughout the state primarily owned by counties, cities, towns, and villages. Improvements can include runway construction and reconstruction, land acquisition, navigational aids, and lighting.

The Five-Year Airport Improvement Program is WisDOT's tool for scheduling individual airport projects eligible for federal and state assistance. The first two years of the program's five-year schedule primarily includes only projects that have been formally petitioned by the airport owner. Many of the projects scheduled for the last three years of the program are tentative. The program is dynamic in that it changes due to fluctuating funding levels at federal, state, and local levels of government. Even though a work item may be eligible for funding, it does not guarantee funding, or funding on the airport's stated schedule.

The Five-Year Airport Improvement Program includes projects for the Cherryland, Ephraim-Gibraltar, and Washington Island airports.

## **BICYCLE AND PEDESTRIAN**

In January 2014, Door County adopted the Door County Bicycle, Pedestrian, and Recreational Facilities Plan. The planning process began in 2010 when the Door County Highway Department was awarded TE/BPFP funding in the amount of \$80,000 for bicycle and pedestrian planning. The key programs and policies identified in the plan are listed below. The Plan also maps out a recommended bikeway network that consists of signed routes, shared use paths, and paved shoulders.

- Consider establishing a county-wide Complete Streets Policy (see below).
- Establish a permanent Pedestrian and Bicycle Advisory Committee to focus on non-motorized transportation in the public right-of-way.

- Partner with municipalities, bicycle, and other user groups to implement programs across the county.

According to the National Complete Streets Coalition, established in 2005, complete streets are those designed and operated to enable safe access and travel for all users; pedestrians, bicyclists, motorists, transit users, and travelers of all ages and abilities are able to move along the street network safely. Wisconsin's Pedestrian and Bicycle Accommodations law addressing Complete Streets was codified in 2009 as s. 84.01(35), Wis. Stats. and later into administrative rule as Transportation 75. This legislation requires WisDOT to ensure that, with some exceptions, bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state or federal funds.

Four municipalities in the county also have bicycle and pedestrian plans: the City of Sturgeon Bay, the Village of Egg Harbor, and the Towns of Baileys Harbor and Gibraltar.

### **DOOR COUNTY PUBLIC TRANSIT**

Door-Tran, in partnership with Door County, plans on expanding Door 2 Door Rides' services to the gap that currently exist between the City of Sturgeon Bay and the Northern Door service area. This gaps contain the Town of Jacksonport and most of the Town of Egg Harbor.

Also, Door County plans to incorporate the Senior Resource Center bus into Door 2 Door Rides in 2015. The county anticipates that Door-Tran will take on an increased planning role with Door 2 Door Rides, especially grant writing and marketing, while Door County will retain its role as fiscal agent for grant funding and ultimately be responsible for the management of the public transit system. Door County uses federal and state funds to provide for and coordinate transportation services in the county through three programs, listed below.

- *Section 5311 – Non-Urbanized Area Formula Funds.* This program provides funding to support public transportation in areas with a population of less than 50,000. Door County has used this fund to help implement the Door 2 Door shared-ride taxi and connector routes provided by the Senior Resource Center and Sunshine House, Inc. (a life skills and employment program for individuals with disabilities).
- *Federal Transit Administration Section 5316 – Job Access and Reverse Commute.* This program provides funding to support the development and maintenance of job access projects for eligible low-income individuals to and from jobs and activities related to their employment. It also provides funding for reverse commute projects that transport residents of urban areas to outside employment.
- *Section 5317 – New Freedom Program.* This program provides new transportation services beyond what is already required by the Americans with Disabilities Act of 1990 to assist individuals with disabilities getting to and from jobs and employment support services. Door County has used this fund to pay for 1.5 Mobility Management staff members who coordinate between for-profit, non-profit, and government transportation systems. New Freedom funds are also used to subsidize half-price taxi and ferry vouchers for individuals who meet income guidelines and have a disability. New Freedom funds are expected to be cut in 2015 when the program is rolled into another federal program.

### **Door County Coordinated Public Transit/Human Services Transportation Plan**

Every four years, Door County is required to update its Coordinated Public Transit/Human Services Transportation Plan, first published in 2008, in order to continue to be eligible for the funds described above. Items required to be in the plan are a provider inventory, assessment of needs, strategies/activities to meet needs, and funding opportunities. The Plan was last updated in 2012, with input

from public, private, and non-profit transportation and human service providers. Strategies and action items resulting from the 2012 planning process are listed below.

- Increase and maintain transportation options and services for disadvantaged residents and/or surrounding areas.
  - Search out and apply for funding to support county transit and other mobility programs and staff.
  - Improve/expand service hours, geographic coverage, and same-day service.
  - Expand volunteer driver program and explore possible rideshare programs.
  - Establish out-of-county routes for medical, employment, and other purposes.
- Continue to coordinate and collaborate with local and regional providers, service partners, and citizens.
  - Explore joint purchasing options for things such as fuel, vehicle maintenance, training, and substance abuse testing.
  - Maintain and expand fleet as needed to meet demand and replacement needs, using funding as available.
  - Explore the option of a one-call scheduling and dispatching center for all transportation services available in the county.
  - Explore opportunities for connections to the Washington Island ferry dock.
  - Work with University of Wisconsin – Green Bay to complete a community needs assessment and/or evaluation of current services.
- Improve customer access and convenience of transportation services available.
  - Continue to offer customer travel training.
  - Improve wheelchair transportation options for the rural areas and outside of Door 2 Door and the Connectors.
  - Improve service convenience for riders including veterans going to Veteran Affairs facilities.
  - Explore the opportunity to link mobility by bike with transportation options available.
  - Complete a customer satisfaction survey and/or consumer audit of the transportation programs to gauge effectiveness and convenience of the system.
- Develop, improve, and maintain communication of transportation options and resources to members of the community and agencies.
  - Continue to update the transportation service inventory and transportation resource guide.
  - Continue involvement in the Northeast WI Regional Access to Transportation Committee, WI Association of Mobility Managers, and Community Transportation Association of

America to maintain a regional perspective and work toward possible regional improvements.

- Improve the ease of finding transportation options on the website and by adding links to Door-Tran and Door 2 Door Rides on other agency and county sites.

## RESOURCES AND FURTHER INFORMATION

### LOCAL AGENCIES

#### **Door County Highway Department (<http://www.co.door.wi.gov>)**

The Highway Department performs all the maintenance and construction work on the County Trunk Highway system. It also provides for the general maintenance of state highways under contract with the state and provides maintenance and construction work on local roads and streets under agreements with the various local municipalities.

#### **Door County Planning Department (<http://www.map.co.door.wi.us/planning>)**

The department's primary functions are administration and enforcement of the county's zoning, land division, and other land use management ordinances; preparation and implementation of the county comprehensive plan and farmland preservation plans; acting as a resource for local public officials and residents on a variety of community development plans or projects; and administering the county addressing program. The Door County Bicycle, Pedestrian, and Recreational Facilities Plan can be found on the Planning Department's Web site.

#### **Door-Tran (<http://www.doorcountytran.com>)**

Door-Tran provides transportation-related information and referrals to non-profit and for-profit providers.

#### **Airports**

- Austin-Straubel International Airport (<http://www.flygrb.com>)
- Door County Cherryland (<http://www.map.co.door.wi.us/airport>)
- Ephraim-Gibraltar Airport (<http://www.friendsofephraimgibraltarairport.com/>)
- Town of Washington (920) 847-2448

#### **Ferries**

- Island Clipper (<http://www.islandclipper>)
- Washington Island Ferry Line (<http://www.wisferry.com>)
- Rock Island Ferry Line (<http://www.wisferry.com>)
- Lake Michigan Car Ferry (<http://www.ssbadger.com>)

### STATE AND REGIONAL AGENCIES

#### **Bay-Lake Regional Planning Commission (<http://www.baylakerpc.org>)**

The BLRPC was created in 1972 by Governor Lucey under s. 66.945, Wis. Stats., as the official area-wide planning agency for northeastern Wisconsin. It currently encompasses eight counties: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan. The BLRPC provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region.

### **Bicycle Federation of Wisconsin (<http://www.bfw.org>)**

The Bicycle Federation of Wisconsin is a statewide, non-profit, bicycle advocacy organization working towards making Wisconsin a better place to bicycle through advocacy, coordination, and education.

### **Wisconsin Department of Transportation (<http://www.dot.wisconsin.gov>)**

The WisDOT, officially established in 1967, is responsible for planning, building, and maintaining Wisconsin's network of state highways and Interstate highway system. The WisDOT also plans, promotes, and financially supports statewide air, rail, and water transportation, as well as bicycle and pedestrian facilities.

- **Division of Transportation Investment Management - Bureau of Aeronautics (<http://www.dot.wisconsin.gov/modes/air.htm>)**

The aeronautics Bureau provides aviation and safety education and training for pilots, mechanics, and schools; regulates tall towers; acquires surplus property for public airport use; administers all state and federal aid for airport improvements; and provides technical assistance to airport operations.

## **FEDERAL AGENCIES**

### **U.S. Coast Guard - Marine Safety Detachment Sturgeon Bay**

(<http://www.uscg.mil/d9/msdsturgeonbay>)

The U.S. Coast Guard - Marine Safety Detachment Sturgeon Bay is a multi-mission unit responsible for executing the Coast Guard's Port Safety and Security, Marine Environmental Protection, and Commercial Vessel Safety missions under the Department of Homeland Security.

### **U.S. Department of Transportation - Federal Aviation Administration (<http://www.faa.gov>)**

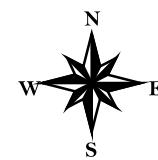
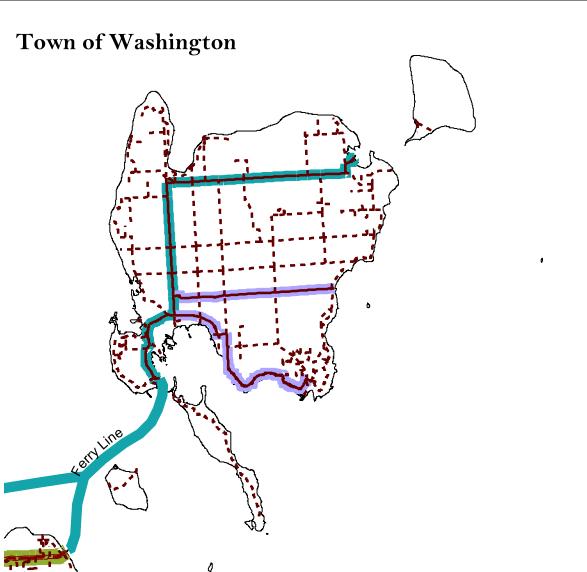
The FAA is responsible for the advancement, safety, and regulation of civil aviation, as well as overseeing the development of the air traffic control system and commercial space travel.



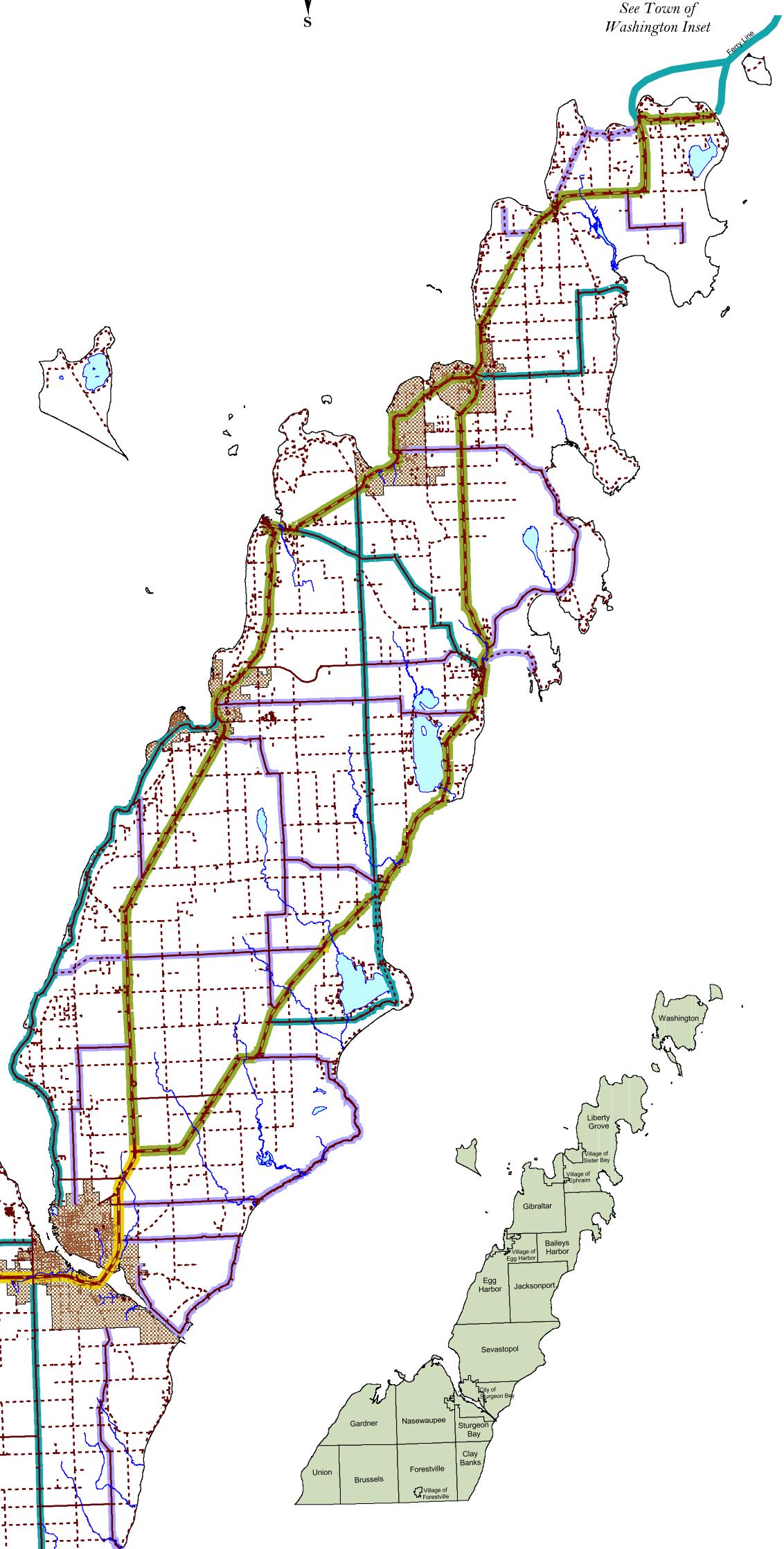
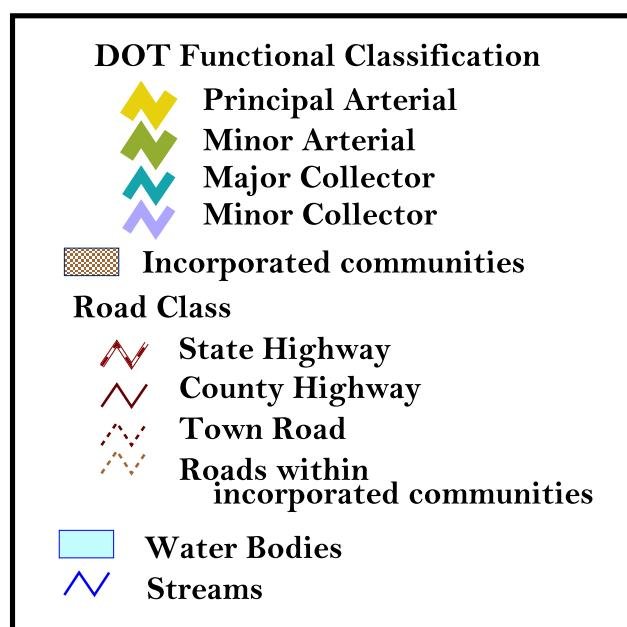
Door County Planning Dept.  
421 Nebraska Street  
Sturgeon Bay, WI 54235  
(920) 746-2323  
[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 8.1: Functional Classification of Roads



See Town of Washington Inset



This set of maps is a compilation of data gathered for evaluation purposes only.

Data source: Wisconsin DOT 2013

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

# **CHAPTER 9: COMMUNITY FACILITIES AND UTILITIES**

## INTRODUCTION

This chapter provides an inventory of utilities and community facilities serving Door County, including: municipal wastewater treatment (sewer) systems; private on-site wastewater treatment systems; water supply systems; storm water management systems; electric service; natural gas; renewable energy; telecommunications; administrative facilities; solid waste (garbage) disposal and recycling; road maintenance; protective and emergency services; educational facilities; libraries; health care facilities; child care facilities; cemeteries; churches; and recreational resources. Lastly, an inventory of community facilities plans and projects is provided.

## UTILITIES

### **MUNICIPAL WASTEWATER TREATMENT (SEWER) SYSTEMS**

Sewerage systems in Wisconsin are subject to Department of Natural Resources (DNR) administrative rules. A "sewerage system" is defined by the DNR as the collection of all structures, conduits, and pipes by which sewage is collected, treated, and disposed of, with the exception of building plumbing and the service pipes from the buildings to the municipally-owned sewers. Private on-site wastewater treatment systems (POWTS) are excluded from the definition of sewerage system and are handled separately. The DNR, through the Bureau of Watershed Management, regulates the discharge from sewerage systems into waters of the state with Wisconsin Pollutant Discharge Elimination System Wastewater permits. Sewer facilities located in Door County authorized via this program are listed below in Table 9.1.

**Table 9.1: Sewer Facilities, Door County**

<b>Facility</b>	<b>Service Area/Capacity</b>
Baileys Harbor Wastewater Treatment Facility	Baileys Harbor "downtown"
Egg Harbor Wastewater Treatment Facility	Village of Egg Harbor
Ephraim Wastewater Treatment Facility	Village of Ephraim
Fish Creek Sanitary District 1 Wastewater Treatment Facility	Fish Creek (part of Town of Gibraltar)
Forestville Wastewater Treatment Facility	Village of Forestville
Maplewood Sanitary District No. 1	Maplewood (part of Town of Forestville)
Sebastopol Sanitary District No. 1 Wastewater Treatment Facility	Institute and Valmy (both in Town of Sebastopol)
Sister Bay Wastewater Treatment Facility	Approximately one-half of the Village of Sister Bay and part of the Town of Liberty Grove.
Sturgeon Bay Utilities Wastewater Treatment Facility	City of Sturgeon Bay and one parcel in the Town of Nasewaupee, but also accepts and treats septic and holding tank waste from other areas of the county.
Wisconsin DNR Peninsula State Park Wastewater Treatment Facility	Peninsula State Park

*Source: Door County Planning Department.*

Areas served by these municipal wastewater treatment systems are also illustrated on Maps 10.1 (A – C), 2014 Land Use, found at the end of this document. Areas served by these treatment systems make up approximately 21% of all parcels and 31% of all housing units in Door County.

## **PRIVATE ON-SITE WASTEWATER TREATMENT SYSTEMS**

A POWTS, as defined in s. 145.01(12), Wis. Stats., is a “a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure. This term also means an alternative sewage system approved by the department including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure, or a system located on a different parcel than the structure.”

A POWTS employs biological and mechanical processes to remove the viruses, bacteria, and other contaminants contained in most domestic wastewater discharged from a dwelling or public building. A POWTS is designed to remove organic matter, nutrients, nitrates, and pathogens (disease-causing bacteria, viruses, parasites, and other micro-organisms) from wastewater. The ability of a POWTS to remove or break down chemical pollutants varies for different substances. A POWTS is generally not designed to treat chemicals and pharmaceuticals; research remains underway as to the impact these have on groundwater quality and the treatment capabilities of a POWTS to keep these from entering groundwater. Medications and hazardous chemicals, paints, paint thinners, antifreeze, and substantial amounts of chlorine-treated water should never be disposed of in any type of wastewater treatment system, including municipal systems.

Private property owners are required to obtain a sanitary permit for a POWTS prior to obtaining a building permit, per s.145.195, Wis. Stats. The general process for obtaining a permit for a vacant lot requires a soil test, system design, state/county plan review, county-issued state sanitary permit, and finally, system installation. This process may take months to complete. There are a number of different types of POWTS permitted in Wisconsin, with widely varying installation and maintenance costs depending on the size and type of system. Which type of POWTS may be installed is based on soil depth and suitability, in addition to other site conditions of the property that may include but are not limited to slope, topography, and setbacks. State and county regulations set minimum allowable distances between wastewater system components and buildings, property lines, wells, water lines, and streams.

Most septic systems consist of a septic tank that disposes of effluent to a drain field. The most common POWTS are in-ground/conventional, mound, and at-grade systems. Holding tanks do not provide any on-site treatment and are considered a system of last resort, but are also regulated as POWTS. The most common types of POWTS and the typical depth of soil required for each are as follows:

- In-Ground/Conventional: > 48 inches
- At-Grade: 36 inches - 48 inches
- Mound: ~6 inches - < 36 inches
- Holding Tank: < ~6 inches

As a way to mitigate the limitations of the various soil types and site conditions, the Wisconsin Department of Commerce originally created in 1980 what is now COMM 83, Wis. Admin. Code in order to provide “uniform standards and criteria for the design, installation, inspection, and management of POWTS, so that they are safe and will protect public health and the waters of the state.” COMM 83 was revised in 2000 to allow the use of new technologies for POWTS sewage systems. The revised code gives property owners flexibility to meet environmental performance standards and achieve the same desired end result as prescriptive means. For example, the code now allows the use of soil absorption systems, such as mound systems, on sites with at least six inches of suitable existing soil. Prior to the revisions, a holding tank would have been the only alternative for these types of sites.

In Door County, there are approximately 14,000 POWTS, of which 3,500 are holding tanks. In the past ten years, approximately 50% of all new POWTS installed have been conventional-type systems.

### **WATER SUPPLY**

Although surrounded by Lake Michigan and Green Bay, the primary source of drinking water for Door County residents is groundwater. Due to the geology of the county, groundwater is easily impacted by surface activities and surface waters. As discussed in Chapter 6, Natural Resources, the county's generally thin soils over fractured bedrock, soils with high permeability rates, karst features, and closed depressions all contribute to the high potential for groundwater contamination. These geologic factors are also the primary reasons for the rapid movement of groundwater, which gives Door County aquifers an extremely quick recharge time. Because of the high number of private wells – roughly two-thirds of the county's households rely on private wells – relatively little consistent information/data exists on the status of groundwater in Door County. What is known is based on historic events, limited monitoring, and professional judgment. Known problems for both municipal and private wells in Door County have included primarily bacterial contamination and nitrates. Nitrates have not been an issue for municipal water systems, but have been a problem for some private wells.

Both surface and groundwater in Door County is used for domestic, livestock, industrial, commercial, and public purposes. According to United States Geological Survey water use data collected between 1979 and 2005, total water use in Door County was as low as 3.3 million gallons per day (MGD) in 1985 and as high as 6.9 MGD in 2000. In 1979, total water usage was at 3.75 MGD and remained relatively steady until 2000, when it jumped to 6.85 MGD. Domestic water use hit its highest level in 2005 at about 1.5 MGD, increasing by 20% from its low of 1.25 MGD in 1979. Irrigation also hit its highest level in 2005, at about 1.25 MGD, increasing by 400% from its low of .25 MGD in 1979. Between 1979 and 2005, the proportion of groundwater use in the county decreased from over 99% to about 72%, with surface water supply making up the other 28%.

### **MUNICIPAL WATER SYSTEMS**

Since 1974, the Environmental Protection Agency has set national safety standards for over 80 contaminants that may occur in drinking water. The Safe Drinking Water Act of 1996 gives the EPA responsibility for setting national drinking water standards for public water systems, which are administered in Wisconsin through the DNR, in cooperation with the Public Water System Owners and Operators. A "Public Water System" means a system for provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A public water system can either be a community system, serving entities such as a municipality, mobile home park, or subdivision; or a non-community system, serving entities like a school, factory, or wayside.

Three areas in Door County are served by municipal water systems: 1) the Village of Sister Bay and an adjacent portion of the Town of Liberty Grove; 2) Maplewood (part of the Town of Forestville); and 3) the City of Sturgeon Bay. These systems, detailed in Table 9.2, provide water for a little less than one-third of all households in Door County.

**Table 9.2: Municipal Water Systems, Door County**

	<b>City of Sturgeon Bay</b>	<b>Village of Sister Bay &amp; Town of Liberty Grove</b>	<b>Maplewood</b>
<b>Supplier</b>	Sturgeon Bay Utilities	Sister Bay Utilities	Maplewood Sanitary District
<b>Source</b>	wells	wells	wells
<b>Storage Capacity</b>	ground - 1,350,000 gal.; overhead - 700,000 gal.	standpipe - 100,000 gal.; tower - 150,000 gal.	none
<b>System Capacity</b>	4,968,000 gal./day	1,610,000 gal./day	136,000 gal./day with one well out of service or 272,000 with both wells running
<b>Average Consumption</b>	1,600,000 gal./day	winter - 130,000 gal./day; summer - 340,000 gal./day	6,179 gal./day
<b>Peak Consumption*</b>	2,500,000 gal./day	498,000 gal./day	38,000 gal./day
<b>Connections (# of meters)</b>	3,965 residential; 450 commercial; and 40 industrial; serving an est. 9,000 people	Village - 776 residential & 185 commercial; Town - 138 residential & 20 commercial	44 residential & 6 commercial, serving an estimated 122 people

Source: DNR, 2008.

\*Peak consumption is the highest quantity of water consumed over a given time period, most commonly expressed as daily or hourly.

## PRIVATE WELLS

Private wells are those that are not part of a public water supply, have fewer than 15 connections, and serve fewer than 25 people. Private wells are not subject to federal regulations, but are regulated by the Private Water Supply Program of the DNR under NR 812, Well and Pump Code, and NR 146, Well Driller and Pump Installer Licensing Code. Wisconsin has had well and pump regulations since 1936 and has been recognized as a national leader in well construction and pump installation standards. The Well and Pump Code is based on the premise that if a well and water system is properly located, constructed, installed, and maintained, the well should provide safe water continuously without the need for treatment.

Due to Door County's high risk for groundwater contamination, the county has requirements above and beyond the typical state requirements for well-drilling in place, such as additional casing requirements. The well casing is a steel or plastic pipe that lines the well, keeping it from caving in and protecting contamination of the ground water by surface water. In 1971, based on the findings of a study conducted by the Wisconsin Geological Survey of the county's groundwater, the county set casing depths for two different "zones", with minimum requirements of 100 feet and 170 feet depending upon which zone the well was located within. (State-wide, wells constructed prior to 1957 were required to have a uniform minimum casing of 40 feet; between 1957 and 1971, a uniform minimum casing of 100 feet was required. Currently, state-wide requirements vary depending on site conditions.) Since 2006, the transition areas between those zones are now required to have a minimum of 140 feet of casing. In some situations, the DNR grants variances for construction and/or usage of a well with less than the minimum required casing amounts. The DNR may also recommend more casing based on known contamination in an area.

## **STORMWATER MANAGEMENT SYSTEMS**

Stormwater runoff is rain and melting snow that flows off building rooftops, driveways, lawns, streets, parking lots, construction sites, and industrial storage yards. In urbanized areas, pipes are laid underground in order to capture runoff from streets and parking lots. Unlike sanitary sewer pipes, which collect wastewater from homes and businesses and convey it to a wastewater treatment plant, storm sewer pipes are separate and collect stormwater runoff from inlets, catch basins, or drains

located along street curbs and in parking areas. Rural areas typically have a system of open ditches and culverts. There are no municipal treatment systems for stormwater in Door County, so stormwater generally gets discharged untreated into waterbodies. Individual developments, depending upon the type, size, and location of the project, may have an on-site detention/retention system, including rain gardens, swales, wet ponds, bioretention systems, or other infiltration practices.

The majority of stormwater infrastructure found in Door County are ditch and culvert systems located in rural areas. Areas with a storm sewer system are the City of Sturgeon Bay; the Towns of Baileys Harbor, Gibraltar, Liberty Grove, and Sevastopol (Institute and Valmy); and the Village of Ephraim.

Stormwater management in the Lake Michigan Basin (including Door County) has gained more attention in recent years with regard to water quality issues: more development creates greater runoff and increased susceptibility to water pollution. Polluted runoff contributes to habitat destruction, fish kills, reduction in drinking water quality, harbor and stream siltation, and reduced recreational value. Both voluntary and regulatory programs designed by the DNR are in place in order to decrease the impact of polluted runoff into the water resources of Wisconsin. Chapter 6, Natural Resources, discusses the problems related to runoff and the DNR programs implemented through the Door County Soil and Water Conservation Department that are in place to manage both urban and agricultural runoff.

## **ENERGY**

### **ELECTRIC SERVICE**

Door County's total annual electrical consumption is approximately 570 million kilowatt hours, with a kilowatt peak load equal to or greater than 110,000 kilowatts per hour. Peak load is the highest amount of electrical demand or "load" for a given time period, most commonly expressed as daily or hourly. Door County's total electrical consumption by county residents and visitors translates into the use of over 500,000 tons of coal annually. Except for a few small home-based alternative energy systems, all of the county's energy for electricity is imported from outside the county.

Wisconsin Public Service (WPS) supplies the majority of power to Door County's residential, agricultural, commercial, and industrial customers, except for the Sturgeon Bay Utilities service area and the Town of Washington.

Sturgeon Bay Utilities (SBU) maintains an electric distribution system that services over 8,300 customers in the City of Sturgeon Bay and the Towns of Clay Banks, Nasewaupee, Sevastopol, and Sturgeon Bay. Utility staff members are responsible for maintaining three substations with current capacity of over 98 megawatts and over 281 miles of overhead and underground transmission lines. Over 3,300 transformers regulate the voltage measured by 9,400 meters used by its customers.

SBU is customer-owned and a member of Wisconsin Public Power, Inc. (WPPI). WPPI, created to provide reliable, low-cost power and services to its member/owners, is a regional power company serving 50 customer-owned electric utilities. Through WPPI, these public power utilities share resources and own generation facilities that provide reliable, affordable electricity to more than 190,000 homes and businesses in Wisconsin, Upper Michigan, and Iowa. WPPI supplies electricity to approximately 60 percent of the load served by municipal electric systems in Wisconsin, based on energy sales.

The Washington Island Electric Cooperative Inc., a private electric service utility established in 1945, serves approximately 700 year-round residents and 1,300 seasonal residents on Washington Island.

## Transmission Lines

Most electric power for the county is transmitted along high voltage electric transmission lines owned and operated by the American Transmission Company (ATC). The ATC, formed in 2001, is a transmission-only utility that owns and operates approximately 9,350 miles of transmission lines and 500 substations. It serves approximately two-thirds of Wisconsin, including Door County. Four transmission lines run through Southern Door to the City. Only one transmission line serves all of northern Door County (north of the Dunn station). Major transmission lines within Door County include 138 kilovolt lines. Smaller electric transmission lines (69 kilovolt) also traverse throughout the county.

The ATC publishes an annual 10-year Transmission System Assessment Summary Report that outlines systems limitations and solutions for each of their five zones in Wisconsin. The September 2014 report recommends rebuilding a 69 kilovolt line between Dyckesville and the City, to be in service by the year 2016. ATC also plans to upgrade equipment at the Canal substation.

## NATURAL GAS AND OTHER HEATING FUELS

WPS provides natural gas service to the City of Sturgeon Bay and Southern and Central Door, including the Towns of Brussels, Forestville, Gardner, Nasewaupee, Sevastopol, Sturgeon Bay, and Union. County residents and businesses without natural gas service have individual on-site tanks for liquid propane or fuel oil, purchased from other private vendors. Wood stoves and pellet stoves have also become increasingly popular as energy costs rise and renewable energy sources receive greater attention in the media. Pellets are made from recycled sawdust, wood shavings, corn, walnut and peanut shells, and similar biomass wastes that are ground up, compressed, and extruded.

## RENEWABLE ENERGY SOURCES

Renewable energy is from sources that may be maintained in a constant supply over time and there are five categories: water, sun, wind, biomass (e.g., wood, manure, and other agricultural byproducts), and geothermal energy (heat stored within the earth). Use of renewable energy reduces the negative environmental impacts of burning fossil fuels such as oil and natural gas. It can also increase the diversity of an area's energy mix by tapping into local energy sources, thus increasing energy independence and reliability.

Wisconsin's State Energy Office is responsible for encouraging generation of electric power and transportation fuels from renewable resources to capture more of the emerging bioindustry and renewable energy market, making clean energy more affordable, and creating good-paying jobs through the production of renewable energy. Specific responsibilities include:

- ensure and facilitate implementation of energy independence initiatives;
- serve as the single point of contact and ombudsperson for businesses, local units of government, and non-governmental organizations pursuing bio-development, energy efficiency, and energy independence;
- develop energy independence policy options;
- identify federal funding opportunities and facilitate state/local government and private sector application for funding; and
- perform duties necessary to maintain federal designation and federal funding.

In 2006, state administration set a strategic goal to generate 25% of Wisconsin's electricity and transportation fuels from renewable resources by 2025. In 2008, administration introduced Clean Energy Wisconsin, a plan detailing strategies to promote renewable energy, increase energy

security, create new jobs, and improve the environment. The plan also outlines a program called the Wisconsin Energy Independent Community (WEIC) partnership. The WEIC program was a voluntary agreement between local communities and the Office of Energy Independence to help meet the state's energy independence goals. Communities that participate in the program commit to adopting the state's "25 by 25" goal of generating 25% of its electricity and transportation fuels from renewable resources by 2025. Communities can gain additional recognition by advancing through three levels of participation. At each level, communities agree to meet goals such as participating in community education and communication efforts, enacting municipal purchasing and green building standards, and preparing a community energy audit and plan.

Participation in the WEIC partnership was to provide communities with access to state and federal funding, increased technical assistance, and improved energy efficiency, resulting in savings to local budgets and capital. The WEIC program also positioned the state and local communities to receive funding from the Energy Efficiency and Conservation Block Grant program authorized by Congress in 2007 and administered by the U.S. Department of Energy. As a result, Wisconsin received \$11.7 million in American Recovery and Reinvestment Act funding. This grant closed on March 6, 2013, most likely due to the failure of the Joint Select Committee on Deficit Reduction to reach agreement on \$1.2 trillion in cuts to federal spending, which triggered automatic cuts in the federal government known as sequestration. Those cuts went into effect March 1, 2013 after Congress and the President failed to agree on a plan to stop them.

Prior to the closing of the Energy Efficiency and Conservation Block Grant program, Door County passed a resolution in 2009 supporting the state "25x25 Goals" for energy independence. An ad-hoc committee was to be created in order to develop and make recommendations to the Property Committee with respect to advance energy independence within Door County and to coordinate and support those efforts approved by the Property Committee and/or County Board. The county has not yet established this committee.

In 2011, S&S Ag Enterprises, Inc. a Door County custom-heifer raising facility with approximately 5,500 heifers, completed construction of an anaerobic digester, a concrete vessel that holds the manure where bacteria breaks it down to produce methane. This methane is collected and piped to a generator where electricity is produced and sold to Wisconsin Public Service. It is estimated that the electricity produced powers 750 homes annually.

### **Focus on Energy**

Focus on Energy, a consortium of public and private energy agencies, has worked with Wisconsin residents and businesses since 2001 to install cost-effective energy efficiency and renewable energy projects. Information, resources, and financial incentives from Focus on Energy help to implement projects that otherwise would not be completed, or to complete projects sooner than scheduled. The program intends to help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect the environment, and control the state's growing demand for electricity and natural gas. Over 21 Focus on Energy projects have been completed in Door County, including solar electric, solar hot water, and wind projects.

### **Wisconsin Public Service NatureWise Program**

Wisconsin Public Service offers a mix of wind and biomass-produced electricity through its Nature-Wise program. It can be purchased for \$2.40 extra per month for 100 kilowatt-hours, which represents 15-20% of a typical customer's monthly electric use.

### **Sturgeon Bay Utilities/Wisconsin Public Power Incorporated Renewable Energy Program**

Through SBU's membership in WPPI, customers have access to energy from renewable resources. The residential Renewable Energy Program and Green Power for Business program allow any customer of a utility participating in WPPI the option to purchase electricity from clean energy

sources at an extra cost. Renewable resources include electricity generated by two wind turbines located on the Buffalo Ridge in southwest Minnesota; wind farms in Dodge and Fond du Lac Counties, Wisconsin and Joice, Iowa; and a biogas-to-energy facility in Wisconsin's Fox Valley.

Financial assistance is also available through SBU's Renewable Energy Incentive program for installation of renewable energy systems at homes or small businesses. Rebates and low-interest loans are available for residential customers who install qualifying solar water heating, photovoltaic panels, or small-scale wind turbine systems. SBU also offers evaluations to determine if a renewable energy system makes sense at a specific location.

### **Wind Energy**

In 2007, Focus on Energy commissioned a study to produce maps showing predicted long-term mean annual wind speed at 30, 40, 60, 70, and 100 meters above ground. These maps were produced by incorporating meteorological, topographic, and land cover data into a computer simulation tool. Some of the best wind resources in the state of Wisconsin are found along the coastal areas of Lake Michigan, extending from the Illinois-Wisconsin border to Washington Island on the lake side, and from just north of Door County's southern border to Washington Island on the Green Bay side. Patches of inland areas were also found to have significant wind power, located primarily between the southern border of the county extending north to the Towns of Jacksonport and Egg Harbor, and also an area in the Town of Liberty Grove.

Before the Great Recession, the Office of Energy Independence reported that wind energy could provide 7% of all renewable energy state-wide in 2025. Subsequent to this report, an article published by the University of Wisconsin-Stevens Point Center for Land Use Education in their Land Tracker Newsletter (Fall 2008) projected a total of 114,000 acres of land state-wide would be required in order to achieve the 7% wind energy production. Though not considered predictive, the study randomly selected locations throughout high wind regions in Wisconsin where wind turbines could be located in order to achieve this goal, including three sites in southern Door County located near the Door-Kewaunee border. These three sites would be comprised of a total of 48 turbines (16 turbines per site) and 1,920 acres (640 acres per site). The study assumes each turbine would require 40 acres of land. Information on where to find the article publishing this study is provided in the Resources and Further Information section at the end of this chapter.

### **Solar Energy**

Prior to the Great Recession, the Office of Energy Independence reported that solar energy could provide 5% of the state's renewable energy in 2025, mostly achieved through small increases in urban areas. According to the same study described above, 11,000 acres of land state-wide could produce enough solar energy to meet this goal. The study project map shows the City of Sturgeon Bay as a possible area for producing solar energy, most likely in the form of rooftop solar panels.

## **TELECOMMUNICATIONS**

Telecommunications is the exchange of information over significant distances by electronic means. The medium of signal transmission can be electrical wire or cable, optical fiber, or electromagnetic fields. Free-space transmission and reception of data by means of electromagnetic fields is called wireless.

The simplest form of telecommunications takes place between two stations. However, it is common for multiple transmitting and receiving stations to exchange data amongst themselves. Such an arrangement is called a telecommunications network, of which the internet is the largest example. On a smaller scale, examples include:

- corporate and academic wide-area networks (WANs)
- telephone networks
- police and fire communications systems

- taxicab dispatch networks
- groups of amateur radio operators

A broadcast network, consisting of a single transmitting station and multiple receive-only stations, is also considered a form of telecommunications. Radio and television broadcasting are the most common examples.

Prior to 2012, much of the county had access to only dial-up internet, a slow and cumbersome method of using the internet over a phone line. The Door County Economic Development Technology Council, formed in 2000 and consisting of information technology professionals from leading area companies, local elected officials, and other concerned citizens, has been working on improving the reliability of and access to telecommunications technology for the county. The Technology Council took the lead in educating the community on the importance of broadband telecommunications, a much faster method of using the internet and telecommunicating, for future economic development. The Council has commissioned and released studies on the available telecommunications infrastructure in the County, a Technology Needs and Market Study, and a feasibility study for fiber to the home telecommunications deployment.

Nsight/Cellcom began building a new fiber optic network in Door County in 2011 and started offering 4G services in 2012. This broadband network runs through the City all the way up to Gills Rock, delivering high-speed Internet access, increasing capacity for data services, and expanding the wireless network. High-demand users, including the Sturgeon Bay Industrial Park, the hospital, and the shipyards, feed directly off the fiber line. Households and businesses not directly on the fiber line can still benefit because the line connects to all Nsight/Cellcom wireless tower sites in Door County, enabling enhanced wireless services.

### Telecommunication Providers

Door County's internet and mobile service providers and areas can be viewed on the Door County Web Map, listed in the Resources and Further Information section at the end of this chapter. The map shows what service providers and data speeds are available at a specific site or property within the county. The map can also show the service coverage area for each of the providers in the county.

The telecommunications service provider information on the Door County Web Map is based on data provided to the Wisconsin Public Service Commission by the providers. This map is intended for planning and general use only; the service provider needs to be contacted for site-specific service availability.

### Radio Stations

There are four radio broadcasting companies with offices and/or transmitters in Door County.

- **The Lodge 106.9.** Established in 2008, The Lodge plays rock music broadcast from a tower in Baileys Harbor that primarily covers Northern Door. The Lodge also acquired WSRG (97.7 FM), which transmits from Sturgeon Bay.
- **Nicolet Broadcasting, Inc.**
  - WBDK (96.7 FM) Rock
  - WRKU (102.1 FM) Rock
  - WRLU (104.1 FM) Country
  - WSBW (105.1 FM) Rock

- **WDOR (910 AM & 93.9 FM).** Since 1951, WDOR has provided adult contemporary music, daily local and national news, and sports coverage.
- **Wisconsin Public Radio.** Wisconsin Public Radio is a civic and cultural resource that reflects the values and resources of the University of Wisconsin and the State of Wisconsin.
  - WPNE Green Bay (89.3 FM)
  - WHID Green Bay (88.1 FM)
  - WHND Sister Bay (91.9 FM)
  - WHDI Sister Bay (89.7 FM)
- **Bethesda Christian Broadcasting (BCF, formerly WPFF).** WPFF first went on the air in 1991, playing contemporary Christian music for parts of Wisconsin and Michigan.
  - WLNI (88.5)
  - WPFF (90.5 FM)
- **Radio 74 Internationale:** WQQA (91.7 FM) is a Christian radio station licensed broadcasting from the Village of Forestville.

## COMMUNITY FACILITIES

### ADMINISTRATIVE FACILITIES

County administrative facilities include the Door County Government Center, Justice Center, and other facilities, as listed below. Note that county departments and oversight committees are discussed in more detail in Chapter 10, Intergovernmental Cooperation.

The Door County Government Center is located at 421 Nebraska Street in the City of Sturgeon Bay and houses the County Board Chair office as well as the following county departments:

- County Administrator
- County Clerk
- Corporation Counsel
- Finance
- Human Services (created via merger of Community Programs and Social Services in 2013)
- Information Systems
- Land Information Office
- Maintenance
- Planning
- Public Health
- Real Property Listing
- Register of Deeds
- Sanitarian
- Soil and Water Conservation
- Treasurer
- UW-Extension
- Veteran Services

The Door County Justice Center is located at 1201 S. Duluth Avenue in the City of Sturgeon Bay and houses the following county departments:

- Child Support
- Circuit Court
- Clerk of Circuit Court
- District Attorney
- Register in Probate
- Sheriff

Other county facilities are:

- Cherryland Airport, 3538 Park Drive, Sturgeon Bay
- Emergency Management, 319 South 18th Ave, Sturgeon Bay (also two satellite locations, in the Village of Sister Bay and the Town of Brussels)
- Highway Department, 1001 South Duluth, Sturgeon Bay (also three shop facilities in the City of Sturgeon Bay, Village of Sister Bay, and Town of Brussels)
- Library, 107 South Fourth Avenue, Sturgeon Bay (and seven branch locations)
- Museum, 18 North Fourth Avenue, Sturgeon Bay
- Parks Department, 3538 Park Drive, Sturgeon Bay
- Senior Resource Center, 832 North 14th Street, Sturgeon Bay

### **SOLID WASTE MANAGEMENT**

Broadly defined, solid waste is any material no longer used for its originally intended purpose that will be discarded, treated to reclaim its original properties, or processed to be used for an alternative purpose. Wisconsin's DNR Waste and Materials Management Program (WMMP) is responsible for proper management of solid waste and working with local governments, private industry, organizations, and individual citizens to reduce waste, increase reuse, and recycle. The WMMP requires licenses and permits for facilities or activities related to collecting, storing, transporting, treating, and disposing of solid waste. Listed below are types of facilities that may require a license or permit:

- landfills
- storage facilities
- transfer facilities
- solid waste processing facilities
- incinerators
- woodburning facilities
- yard and food residual composting facilities
- municipal solid waste combustors

Access to information on sites and facilities operating at sites that are regulated by the WMMP is available on the DNR website through the Solid and Hazardous Waste Information System.

In 1997, Door County adopted a Solid Waste Management ordinance that is administered by the Door County Highway Department. The department is also responsible for performing the ongoing maintenance and regulatory testing of the closed Door County Landfill in the Town of Nasewaupee (off Hainesville Road). In 2008, the Highway Department conducted the county's first electronics equipment collection and recycling program, using funds from the DNR annual household recycling grant. Since 2008, they have sporadically conducted "clean sweep" collections of hazardous and toxic materials.

## WISCONSIN DEPARTMENT OF NATURAL RESOURCES - LICENSED SOLID WASTE AND RECYCLING FACILITIES

A few municipalities in Door County provide solid waste collection services for residents through public works departments or contracts with private haulers. Throughout the majority of the county, residents must contract with private haulers for waste pick-up or take waste themselves to a collection site where the municipality has arranged for private haulers to collect garbage and recycling. Listed below are the types of facilities licensed by the DNR and definitions of those facilities. Licensed facilities in Door County can be found at the DNR Solid and Hazardous Waste Information Management System Web site listed in the Resources and Further Information section at the end of this chapter. Individual municipalities should be contacted for further information regarding their solid waste and recycling programs.

- **Solid Waste Landfills** - A facility, not classified as a landspreading or surface impoundment facility, where solid waste is disposed on land by utilizing the principles of engineering to confine the solid waste to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth or other approved material as required.
- **Solid Waste Storage/Processing (Non-Landfill) Facilities** - A facility for the storage of solid waste on a temporary basis in such a manner as not to constitute ultimate disposal of solid waste. Solid waste is baled, shredded, pulverized, composted, classified, separated, combusted, or otherwise treated or altered by some means to facilitate further transfer, processing, utilization, or disposal. Processing facilities do not include operations conducted by scrap metal, paper, fiber, or plastic processors, which are excluded from the definition of solid waste facilities.
- **Solid Waste Transfer Facilities** - A facility at which transferring of solid waste from one vehicle or container to another, generally of larger capacity, occurs prior to transporting to the point of processing or disposal.
- **Solid Waste and/or Recyclables Transporters** - An operation which transports vehicles, containers, or other means of conveying solid waste from the primary source of collection and includes all activities up to such time as the waste is delivered to a facility for transfer, processing, treatment, or disposal.
- **Solid Waste Woodburning** - A facility for open burning of dry, unpainted, and untreated wood; stump; or other woody materials. This term does not include air curtain destructors, incinerators, or municipal solid waste combustors.

## RECYCLING

Wisconsin's Solid Waste Reduction, Recovery and Recycling Law was enacted in 1990 in order to create new ways to manage solid waste and encourage reduction, reuse, and recycling of the state's solid waste. This law effectively made recycling a mandatory activity by prohibiting certain materials from being disposed of in landfills within the state. Recycling is regulated under Ch. 287, Wis. Stats. and administered by the DNR through NR 542 to 548, Wis. Admin. Code.

A Wisconsin community must have an approved recycling program in order to use a Wisconsin landfill for disposal of municipal solid waste generated in that community. Door County has a county-wide recycling ordinance and a recycling program approved by the DNR and administered by the Door County Highway Department. The county's recycling ordinance, effective in 1995, promotes recycling, composting, and resource recovery.

In order to receive state grants, the Highway Department works with local units of government that also have recycling programs approved by the DNR. Once grant funds are received from the state, the Highway Department redistributes these funds to local governments based on their prorated collection volumes to the total amount collected. In 2011, the Highway Department secured \$78,997 in state grants, which was redistributed to the 14 local governments with approved recycling programs – the Towns of Baileys Harbor, Brussels, Egg Harbor, Gardner, Gibraltar, Jacksonport, Liberty Grove, Nasewaupee, Union, Washington; the Villages of Egg Harbor and Sister Bay; and the City of Sturgeon Bay.

Individual municipalities are responsible for implementing their recycling programs. The City of Sturgeon Bay has curbside pickup of recyclables or residents can bring their recyclables to the Waste Management facility located at 1509 Division Road. The villages as well as each of the towns either maintain a local recycling drop-off center for their residents, contract with a private hauler, or require residents to dispose of recyclables on their own. Individual municipalities should be contacted for more specific information.

In 2011, Door County property owners involved in community-sponsored programs recycled 1,688 tons of paper and cardboard, and 1,081 tons of commingled aluminum, glass, and plastics.

### **OPEN BURNING AND TRASH INCINERATION**

Open burning is defined by the DNR as burning any material outdoors without any air pollution controls in place. Burning in an unconfined area, a container, or a pile are all considered to be open burning. Under state law, individual homeowners can legally burn small quantities of their own dry leaves, plant clippings, brush, and clean, untreated, unpainted wood. Local ordinances may be more stringent and may prohibit burning of certain materials (like leaves and other yard wastes) or may prohibit open burning entirely. Burning of any of these materials is discouraged because it pollutes the air, can cause health problems, and is a fire hazard.

Before burning, it is advisable to contact the local fire authority to find out if a local or state burning permit is needed or if emergency burning restrictions are in effect. Generally, businesses, industries, and municipalities need DNR approval and a license to burn any waste materials, including clean wood waste or brush. State law prohibits anyone (including homeowners or businesses) from burning recyclable materials banned from landfills, garbage, wet materials, combustible rubbish, oily substances, asphalt materials, plastic of any kind, and rubber products.

Door County has an Outdoor Refuse Burning and Fireworks Ordinance, originally adopted in 1988. The purpose of the ordinance is to protect residents from air pollution and fire hazards due to open burning, outdoor burning, and refuse burning. Permits are issued by municipal fire chiefs, clerks, or other designated officials.

### **WISCONSIN CLEAN SWEEP**

Wisconsin Clean Sweep was created in 2003 by the merger of the Agricultural Clean Sweep Program and the Household Hazardous Waste Grant Program. Its mission is to assist communities in improving and sustaining public health, environmental, and animal safety by reducing risk of exposure to hazardous chemicals, pesticides, and prescription drugs. The program is administered by the Department of Agriculture, Trade, and Consumer Protection and uses money from the state's Recycling Fund to provide grants to counties, cities, towns, regional planning commissions, and other municipalities to collect unwanted chemicals, pesticides, and drugs. Grants can be provided for temporary or one-day collections, and permanent facilities or continuous collections.

The Door County Sheriff's Department collects prescription drugs 8:00 a.m. - 4:30 p.m., Monday through Friday. Clean Sweeps are scheduled occasionally throughout the county.

## **COMPOSTING**

Since 1993, when yard materials were banned from landfill disposal, many communities and individuals have taken up composting. Composting of yard, garden, and vegetable food materials can replenish vital soil organic matter, microorganisms, and nutrients for crops. All composting operations, other than household, are subject to DNR rules. DNR regulation of composting operations varies, depending on the size of the operation and the materials being composted. Local ordinances may also apply to any type of composting, from household to large-scale commercial operations.

Household composting operations require no contact with, or license or approval from, the DNR for up to 50 cubic yards of yard, manure, and vegetable food materials. On-site farm composting of certain agricultural wastes (crop residue, manure, and animal carcasses utilized for agricultural purposes) also does not require any license or approval. The DNR provides technical assistance for composting operations of all sizes, and may conduct inspections and pursue enforcement, particularly in response to complaints.

Door County has only one municipal composting site, owned and operated by the City of Sturgeon Bay. People residing within the city limits may dispose of leaves, brush, grass clippings, etc. Disposal of brush at this site by contractors or landscapers is prohibited, although grass clippings and leaves are accepted.

According to the DNR, Wisconsin generates 500,000 tons of materials annually – including food scraps – that could be composted and made into useful products. DNR staff are working with nonprofits, local governments, and businesses to facilitate the growth and expansion of composting operations in Wisconsin.

## **ROAD MAINTENANCE**

The Door County Highway Department is responsible for maintaining the county highway system for the safety and convenience of people traveling through Door County. The department also provides for the general maintenance of state highways, under contract with the state and construction work on local roads, under agreements with various local municipalities. More information on the county's roadway system can be found in Chapter 7, Transportation.

## **POSTAL SERVICES**

Table 9.3 shows U.S. Postal Service locations serving Door County residents and businesses.

**Table 9.3: Post Offices, Door County**

<b>Post Office</b>	<b>Zip Code</b>
Baileys Harbor	54202
Brussels	54204
Egg Harbor	54209
Ellison Bay	54210
Ephraim	54211
Fish Creek	54212
Forestville	54213
Sister Bay	54234
Sturgeon Bay	54235
Washington Island	54246

*Source: United States Postal Service*

*Note: The Algoma, Casco, and Luxemburg post offices in Kewaunee County also serve some southern Door County residents.*

## **PROTECTIVE AND EMERGENCY SERVICES**

Protective and emergency services in Door County include law enforcement, fire protection, and emergency services (including ambulance services and emergency management).

### **LAW ENFORCEMENT**

The Door County Sheriff's Department provides law enforcement services and operates the county jail. The department oversees the operation of the 911 Dispatch Center, providing dispatch services for the Sheriff's Department, Sturgeon Bay Police Department, County Ambulance, DNR, State Patrol, and the Coast Guard. The Towns of Baileys Harbor, Gardener, Gibraltar and Washington also have their own constable.

#### **Door County Jail**

The Door County jail has a maximum capacity of 143 inmates. The jail, housing both male and female inmates, is authorized for state inmates, but is not certified for juveniles.

### **FIRE STATIONS**

Fire protection for Door County residents is provided by the fire departments listed below.

- Baileys Harbor Fire
- Brussels-Union-Gardner (BUG) Fire
- Egg Harbor Joint Fire
- Ephraim Fire
- Gibraltar Fire and Rescue
- Jacksonport Fire
- Sister Bay/Liberty Grove Fire (two shared locations)
- Southern Door Fire
- Sturgeon Bay Fire
- Washington Island Fire

Each department, most of which are primarily staffed by volunteers, maintains mutual aid agreements with neighboring departments to ensure there is adequate response and coverage during large fire events.

#### **Insurance Service Office Public Protection Classification**

The adequacy of fire protection is evaluated by a private company, the Insurance Service Office (ISO). ISO collects information on municipal fire-protection efforts in communities throughout the United States, providing an objective, nationwide standard. These standards help communities and fire departments evaluate their public fire-protection services and in planning and budgeting for facilities, equipment, and training. Throughout the United States, insurers of homes and businesses use ISO's Public Protection Classifications (PPC) in calculating premiums.

ISO analyzes the relevant community-level data using a manual to review the fire-fighting capabilities of individual communities, called the Fire Suppression Rating Schedule. This manual measures the major elements of a community's fire-suppression system and develops the PPC grading, a number from 1 to 10. Class 1 represents the best protection, while Class 10 indicates that the area's fire protection does not meet ISO's minimum criteria. As of 2008, Door County municipal PPC ratings range from Class 4 to Class 10. A community's PPC rating depends on the analysis of several components of fire protection, including:

- fire alarm and communication systems, such as telephone systems, telephone lines, staffing, and dispatching systems;
- the fire department itself, such as equipment, staffing, training, and geographic distribution of fire companies; and

- the water supply system, such as the condition and maintenance of hydrants and evaluation of the amount of water available compared with the amount needed to suppress fires.

PPC ratings are no longer available on the ISO website, but ratings are released free of charge to municipal fire chiefs.

## EMERGENCY SERVICES

The Door County Emergency Services Department is charged with two primary functions in two separate divisions.

- The Emergency Ambulance division provides emergency care and transport of the sick and injured from three locations in the county. The home base for the Door County Emergency Medical Service (EMS) is located in the City of Sturgeon Bay, with staffed satellite units in the Village of Sister Bay and Town of Brussels.
- The Emergency Management division is charged with the mitigation, planning, and response to natural and human-made disasters in the county.

### Emergency Ambulance Division

The State of Wisconsin describes a desirable emergency medical response as a chain of survival. It lists the links of that chain as follows:

1. Easy and absolute access to a public safety answering point.
2. The dispatch or sending of trained people to the caller who can assist and determine which resources are needed to address the problem.
3. The transport and care of those sick and injured parties to an appropriate medical facility.
4. The diagnostic and definitive care of the sick and injured at the receiving facility.
5. The transportation of the diagnosed sick and injured on to a specialized facility for specialized treatment not offered locally.

Door County owns and operates emergency ambulance services, one of only two or three other counties in the state that does this. Municipal-owned and operated emergency ambulance services are often regarded as what communities should work toward when considering consolidation or regionalization of services. The Door County system is a “complete” emergency response network, accessed by dialing 911, where the “call-taker” and the call “dispatcher” is the same person. While this arrangement might not work in an urban area, in a small community it avoids transferring calls or repeating information. Many counties in the state have multiple call centers in various cities which result in confusion and transfer of emergency calls that sometimes get lost.

When a call for emergency medical assistance comes into the dispatch center, the dispatcher passes the information on to multiple agencies. Information first goes to one of ten First Responder agencies in the county. First Responders are groups of trained volunteers supported by the local municipalities to provide emergency help. Often, they are on the scene prior to arrival of an ambulance and assist the ambulance crew in directions to the home, care of the patient, extraction of the patient from the home. They will also assist family members and other tasks necessitated by an emergency. They generally do not get involved in the transport of the patient, but will at times assist the ambulance transport team when asked.

Following determination of need for care and transport to a medical facility, the patient will be transported by a county-operated ambulance crew. The crew may be Emergency Medical Technicians (EMT) or paramedics depending on the needs of the patient. The difference between an EMT and a paramedic is the amount of training the technician received, and the skills s/he can perform.

Door County Memorial Hospital has 24-hour emergency care staffed by physicians and nurses. EMS of Door County transports over 1,400 people each year to the emergency department, and the department handles thousands more on a walk-in basis. Sometimes patients are better served by a specialty care hospital in an urban area. Following a local diagnostic, an emergency hospital-to-hospital transporter will be called if it is determined that more definitive care is needed.

Paratran Ambulance Service is a private business offering emergency hospital-to-hospital transports and scheduled non-emergency transports from nursing homes and community-based residential facilities to Door County Memorial Hospital. EMS and Paratran also provide assistance to each other in times of crisis and overflow.

Washington Island also operates a rescue squad with two fully-equipped ambulances tied into the county's 911 dispatch system. They work in conjunction with Door County Memorial Hospital and, depending on the seriousness of the injury or ailment, coordinate transportation off the island with either emergency helicopter, ferry, or U.S. Coast Guard service. The island also has a clinic that is open during weekdays, staffed by two year-round physician assistants.

### **Door County Emergency Management**

Door County Emergency Management directs and supports response agencies and departments within Door County, such as federal and state emergency management agencies, and local military, professional, and volunteer groups, in the event of a disaster or emergency (fires, hazardous material spills, nuclear attack, etc.). Emergency Management provides organized analysis, planning, decision-making tools, and assignment of available resources to mitigate, prepare for, respond to, and recover from the effects of all hazards. Door County Emergency Management has two offices, one in the City of Sturgeon Bay and the other in the Village of Sister Bay.

## **EDUCATION**

### **PRIMARY AND SECONDARY EDUCATION**

Door County has five public school districts and four private/parochial schools. (See Table 9.4.) Children in the county may also be home-schooled, or utilize the state's open enrollment program to receive education in public school districts located outside of Door County. Map 1.1, found at the end of this document, shows the public school districts in the county. There are also around 100 children throughout the county who are schooled at home.

### **POST-HIGH SCHOOL EDUCATION**

Door County is part of the Northeast Wisconsin Technical College (NWTC) District of the Wisconsin Technical College System. The NWTC campus is located in Sturgeon Bay in a 60,000 square-foot facility. A total of 20 associate degree programs are offered. The college is known for its Diesel and Heavy Equipment Technician technical diploma and Diesel Equipment Technology associate programs. It is also known for its Hotel and Restaurant Management associate's degree program, where students can learn technical, management, financial, and other skills necessary to run a successful lodging, convention, or food service business. Culinary courses are offered to program students and area residents.

The college also offers a Practical Nursing technical diploma and Nursing Associate's Degree programs. Other programs include Nursing Assistant, Welding, Supply Chain Management, Landscaping/Horticulture, Applied Engineering Technology, Jewelry Repair & Fabrication, Leadership Development program, and Office Assistant. Basic education assistance is available to prepare individuals for the General Education Development (GED)® and the High School Equivalency Diploma. NWTC is also home to the Learning in Retirement program for retired or semi-retired individuals.

The nearest four-year universities are located in Green Bay and the Fox Valley, including University of Wisconsin-Green Bay, St. Norbert College, and Lawrence University.

**Table 9.4: Public and Private/Parochial Schools, Door County**

School	Grades	2008 Enrollment	2012 Enrollment	# Change
<b>Gibraltar</b>				
Elementary	K - 5	257	242	-15
Middle	6 - 8	148	134	-14
High	9 - 12	206	205	-1
<b>Total</b>		<b>611</b>	<b>581</b>	<b>-30</b>
<b>Sebastopol</b>				
Elementary	K - 6	248	222	-26
Junior High	7 - 8	70	127	57
High	9 - 12	217	142	-75
<b>Total</b>		<b>535</b>	<b>491</b>	<b>-44</b>
<b>Southern Door</b>				
Elementary	PreK - 5	516	523	7
Middle	6 - 8	278	237	-41
High	9 - 12	422	392	-30
<b>Total</b>		<b>1,216</b>	<b>1,152</b>	<b>-64</b>
<b>Sturgeon Bay</b>				
Sunset Elementary	Early childhood; PreK; Challenge Program	79	187	108
Sawyer Elementary	K - 2	250	189	-61
Sunrise Elementary	3 - 5	217	262	45
Thomas J. Walker Middle	6 - 8	231	237	6
Sturgeon Bay High	9 - 12	477	393	-84
<b>Total</b>		<b>1,254</b>	<b>1,268</b>	<b>14</b>
<b>Washington Island</b>				
Elementary	K - 8	46	24	-22
High	9 - 12	32	37	5
<b>Total</b>		<b>78</b>	<b>61</b>	<b>-17</b>
<b>Private/Parochial</b>				
St. John Bosco Grade School	K - 8	140	114	-26
St. Peter's Evangelical	PreK - 8	99	83	-16
Peninsula Christian School	3 - 12	7	9	2
Zion Lutheran	PreK - 8	30	26	-4
<b>Total</b>		<b>276</b>	<b>232</b>	<b>-44</b>

Source: Coordinated Educational Services, 2012.

## **LIBRARIES**

The Door County Library is a consolidated public library system with eight libraries located around the county. The library in Sturgeon Bay includes administrative services to support all library sites and also houses the Miller Art Museum.

The Door County Library is a member of the Nicolet Federated Library System, a state-funded agency that provides services to its member libraries. It also belongs to the OWLSnet Consortium, sharing materials with other public libraries in Shawano, Marinette, Florence, Kewaunee, Menomonie, Oconto, Outagamie, and Waupaca counties and the Oneida Nation. The county's eight library locations are listed below:

- Sturgeon Bay Library, City of Sturgeon Bay
- McArdle Library, Town of Baileys Harbor
- Egg Harbor Library, Village of Egg Harbor
- Ephraim Library, Village of Ephraim
- Fish Creek Library, Fish Creek (part of Town of Gibraltar)
- Forestville Library, Village of Forestville
- Sister Bay/Liberty Grove Library, Village of Sister Bay
- Washington Island Library, Town of Washington

## **HEALTH CARE**

### **HOSPITAL AND CLINICS**

Door County Memorial Hospital/Ministry Health Care, located in the City of Sturgeon Bay, is the only hospital in the county. Serving Door County since 1943, it is a fully accredited, acute care hospital and outpatient medical center with 25 licensed beds, a cancer center, and an outpatient center. The hospital provides an array of services and specialties that include home health care, a skilled nursing facility for long-term care and rehabilitation services, a rehabilitation services department, and the North Shore Medical Clinic. The hospital also has The Women's and Children's Health Center, specializing in obstetrics/gynecology and pediatrics. More than 175 physicians serve on the hospital and clinic medical staff.

Since the early 1990s, North Shore Medical Clinic has been a department of Door County Memorial Hospital with satellite locations in the City of Sturgeon Bay, Fish Creek (Town of Gibraltar), and the Town of Washington. Combined, these clinics offer both family and multi-specialty practice, including ear, nose, and throat (ENT), family medicine, internal medicine, neurology, orthopedics, podiatry, pulmonary medicine rheumatology, and urology. Comprehensive diagnostic and ancillary services are also available, including a fully equipped laboratory, X-ray facilities, bone densitometry, OB ultrasound, mammography, stress testing, and EKGs.

Other clinics and healthcare centers in the county include:

- **Aurora Medical Group/Healthcare Center & Aurora BayCare Medical Center** (a joint venture of Aurora Health Care and BayCare Clinic). Aurora has a Sister Bay clinic (Aurora Nor-Door Clinic) for urgent care as well as services such as x-ray, laboratory, and occupational health. Aurora Clinics located in the City of Sturgeon Bay are listed below.
  - Aurora Health Center
  - Aurora Dialysis Center – hemodialysis and peritoneal dialysis services
  - Aurora Rehabilitation Center – inpatient and outpatient services, helping patients recover from illnesses, chronic conditions, and orthopedic or work-related injuries.
  - BayCare Clinic
    - Cardiology
    - Green Bay Eye Clinic
    - Oral & Maxillofacial Surgery
    - Orthopaedic Surgery & Sports Medicine
    - Neurological Surgeons
    - Pharmacy
    - Physical Medicine & Rehabilitation
    - Plastic Surgery
    - Urgent Care/Walk-In Care
    - Urological Surgeons

- **Prevea Door County Health Center**, City of Sturgeon Bay – Preventive Cardiology
- **Community Clinic of Door County**, Village of Sister Bay and City of Sturgeon Bay – a non-profit clinic providing common, non-emergency primary and mental health care to people without adequate health insurance.

## **ASSISTED LIVING FACILITIES**

“Assisted Living Facility” is a term encompassing three types of facilities licensed, certified, or registered by the Wisconsin Department of Health. All assisted living facilities combine housing with services to help people remain as independent as possible. Door County has several assisted living facilities licensed by the Department of Health, including nursing homes, Adult Family Homes (AFH), Community Based Residential Facilities (CBRF), and Residential Care Apartment Complexes (RCAC).

## **NURSING HOMES**

A nursing home is a place of residence for people who require constant medical oversight, but at a lower level than a hospital. Usually the residents are elderly, but the label “nursing home” can apply to places of care for the mentally or physically ill. There are three nursing homes in Door County.

- **Door County Memorial Hospital Skilled Nursing Facility**, City of Sturgeon Bay. Skilled nursing care for eight short-term beds (up to two months) and 22 long-term beds.
- **Golden Living Center-Dorchester Corporation** (also known as the Beverly Living Center – The Dorchester), City of Sturgeon Bay. A limited liability corporation (for-profit) providing short-term care and long-term nursing home care, intensive clinical care, and Alzheimer's care. Skilled nursing care provided for 138 beds.
- **Good Samaritan Society - Scandia Village** (Evangelical Lutheran Good Samaritan Society), Village of Sister Bay. Good Samaritan Society-Scandia Village is a senior living community, including independent living apartments, skilled nursing care for 60 beds, and a special care unit for those with Alzheimer's and dementia. As of 2013, Scandia Village was nearing the end of an \$8 million dollar capital campaign to add to the campus and remodel existing spaces.

## **ADULT FAMILY HOMES**

AFHs are facilities where three or four adults unrelated to the operator reside and receive care, treatment, or services that are above the level of room and board, including up to seven hours per week of nursing care per resident. The AFH facilities in Door County change frequently and may be found at the Wisconsin Department of Health's Web site, listed in the Resources and Further Information section at the end of this chapter.

## **COMMUNITY BASED RESIDENTIAL FACILITIES**

CBRFs are facilities where five or more unrelated people live together in a community setting. Services provided include room and board, supervision, support services, and may include up to three hours of nursing care per week. The CBRF facilities in Door County are:

- **Anna's Healthcare, Inc.**, City of Sturgeon Bay. Capacity of 70 for advanced aged, physically disabled, terminally ill, and irreversible dementia/Alzheimer's.
- **Cardinal Ridge Residential Care**, City of Sturgeon Bay. Capacity of 26 for advanced aged, developmentally disabled, and irreversible dementia/Alzheimer's.
- **The Gathering of Door County**, City of Sturgeon Bay. Capacity of 19 for advanced aged, irreversible dementia/Alzheimer's, physically disabled, and terminally ill.

- **Hearthsides**, Village of Sister Bay. Capacity of 15 for advanced aged, irreversible dementia/Alzheimer's, and terminally ill.
- **HIL Florida** (Homes for Independent Living of Wisconsin, LLC), City of Sturgeon Bay. Capacity of six for the developmentally disabled.
- **Whispering Heights CBRF**, City of Sturgeon Bay. Capacity of 19 for advanced aged, irreversible dementia/Alzheimer's, persons with AIDS, physically disabled, and terminally ill.
- **Whispering Pines**, City of Sturgeon Bay. Capacity of 19 for advanced aged, irreversible dementia/Alzheimer's, physically disabled, and terminally ill.
- **Whispering Winds**, City of Sturgeon Bay. Capacity of 12 for advanced aged.
- **Woodview of Scandia**, Village of Sister Bay. Capacity of 20 for advanced aged, irreversible dementia/Alzheimer's, and terminally ill.

### **RESIDENTIAL CARE APARTMENT COMPLEXES (RCAC)**

RCACs are facilities where five or more adults live where services provided (listed below) to residents do not exceed 28 hours per week. Each apartment must have a lockable entrance and exit, a kitchen including a stove or microwave, and individual bathroom, sleeping, and living areas.

- Supportive services. Activities related to general housekeeping and transportation to community services and recreational activities.
- Personal assistance. Services related to activities of daily living (e.g., dressing, eating, bathing, and grooming).
- Nursing services. Health monitoring, medication administration, and medication management.

There are two RCAC facilities in the county:

- **Good Samaritan Society-Scandia Village** (Evangelical Lutheran Good Samaritan Society), Village of Sister Bay; 58 apartments.
- **Pine Crest Village LLC**, City of Sturgeon Bay; 43 apartments.

### **ADULT AND CHILD CARE SERVICES**

#### **ADULT DIRECT CARE**

The Sunshine House, located in Sturgeon Bay, offers adult day care for the developmentally disabled. Services offered include feeding, mobility, activities, personal hygiene, and employment. Enhancement of abilities are also developed through one-on-one service, pre-vocational skills training, and more. More information about the Sunshine House's role in employing their clients can be found in Chapter 5, Economic Development.

#### **CHILD CARE FACILITIES**

The Department of Children and Families licenses Wisconsin's child care centers. State law requires anyone caring for four or more children unrelated to the provider and under the age of 7 years to be licensed. There are two main categories of licensed care: Family Child Care (up to eight children in care at any one time) and Group Child Care (nine or more children in care at any one time). Day camp is another type of licensed program that is seasonal and oriented to the out-of-doors.

As of April 10, 2013, there were 15 licensed/certified childcare facilities in Door County, most of which were privately-owned and some of which operate in private homes. Three of the facilities are classified as “family” centers, with up to 8 children enrolled, 11 are classified as “group” centers, with 9 or more children enrolled, and there is one licensed “camp.” Eleven operate full-time, opening as early as 5:30 a.m. and closing as late as 5:45 p.m. Information detailing each childcare facility’s classification, hours, days of operation, and capacity is available through the Wisconsin Department of Children and Families Web site, listed in the Resources and Further Information section at the end of this chapter. The Door County Human Services Department also has information on child day care services and certification. Some residents use unlicensed in-home/private childcare facilities located throughout the county and surrounding areas.

The group childcare facilities listed in Table 9.5 are licensed by the State of Wisconsin as of April 10, 2013.

**Table 9.5: Group Childcare Facilities, Door County**

Facility	Location	Capacity	Ages
Adventures Child Care, Inc.	Town of Brussels	39	6 wks. - 12 yrs
Barker Child Development Center	City of Sturgeon Bay	92	6 wks. - 12 yrs.
Door County Childcare Services, Inc.	City of Sturgeon Bay	87	6 wks. - 12 yrs.
Noah's Ark Child Care Center	City of Sturgeon Bay	40	6 wks. - 12 yrs.
Northern Door Children's Center	Village of Sister Bay	112	6 wks. - 11 yrs.
Peninsula Preschool, Inc.	Village of Ephraim	16	3 - 5 yrs.
Sturgeon Bay Head Start	City of Sturgeon Bay	39	3 - 5 yrs.
Washington Island Preschool	Washington Island	12	3 - 5 yrs.
YMCA Kids Club Southern Door	Brussels	25	4 - 10 yrs.
YMCA Kids Club Sturgeon Bay	City of Sturgeon Bay	20	3 - 11 yrs.
YMCA Kids Club Sunrise School	City of Sturgeon Bay	32	5 - 11 yrs.

Source: *Wisconsin Department of Child and Family Services, April 10, 2013.*

### **CHURCHES AND CEMETERIES**

In addition to traditional religious services, Door County churches offer a variety of activities and services for both members and non-members, including food pantries, transportation, social activities, meals, and more. Contact individual municipalities and/or local information offices for specific church information.

A list of cemeteries in Door County, compiled based on county records and as published in *Cemeteries of Wisconsin*, can be found in Chapter 3, Historical and Cultural Resources (Table 3.5). Small family cemeteries, un-named cemeteries, and other burial sites may not be included in this list. Note that the Sturgeon Bay Library Laurie History Room has a list of everyone buried in Door County.

### **RECREATIONAL RESOURCES**

Door County has many outdoor recreational resource areas, including state, county, and local municipal parks and preserves, as well as physical recreation centers. Table 9.6 lists the location and acreage of the state and county parks. All parks, including municipal parks, are shown on Map 6.8, Preserved Lands, found at the end of this document.

There are also many preserved lands in the county offering public recreation opportunities in addition to those discussed below. Preserved lands are discussed in Chapter 6, Natural Resources, and depicted on Map 6.8. Note that not all lands depicted on the map are open to the public, such as certain lands under conservation easement and federal preserves.

**Table 9.6: Door County Parks**

Name	Geographic Location	Acreage
Ahnapee State Trail	City of Sturgeon Bay; Towns of Sturgeon Bay, Nasewaupee, Forestville; Village of Forestville	147
Baileys Harbor Ridges	Town of Baileys Harbor	40
Cana Island Lighthouse	Town of Baileys Harbor	11
Cave Point	Town of Sevastopol	19
Chaudoir's Dock	Town of Union	5
Door Bluff Headlands	Town of Liberty Grove	180
Ellison Bluff	Town of Liberty Grove (Ellison Bay)	195
Forestville Dam	Town of Forestville	72
Frank E. Murphy	Town of Egg Harbor	17
John Miles	City Sturgeon Bay	66
Lily Bay	Town of Sturgeon Bay	0.45
Lyle Harter-Matter Sanctuary	Town of Baileys Harbor	41
Meridian	Town of Jacksonport	140
Olde Stone Quarry	Town of Sevastopol	13
Percy Johnson Memorial	Town of Washington	5
Robert M. Carmody	Town of Gardner	8
Robert La Salle	Town of Clay Banks	29
Sugar Creek	Town of Gardner	37
Tornado Memorial	Town of Gardner	3
Newport State Park	Town of Liberty Grove	2,469
Peninsula State Park	Town of Gibraltar (Fish Creek)	3,624
Potawatomi State Park	Town of Nasewaupee	1,083
Rock Island State Park	Town of Washington (Rock Island)	820
Whitefish Dunes State Park	Town of Sevastopol	866

Source: *Door County Land Information Office.*

## STATE PARKS

Door County has five state parks, more than any county in Wisconsin, described below and listed in Table 9.6. All are owned and managed by the DNR.

- **Newport State Park**, Wisconsin's only formally designated "Wilderness Park", is located northeast of Ellison Bay in the Town of Liberty Grove on the tip of the Door Peninsula. The park contains 2,469 acres and 11 miles of Lake Michigan shoreline. Cool winds off Lake Michigan create habitats similar to boreal forests, supporting plant life typically found in Canada. The park contains evergreen and hardwood forests, wetlands, and upland meadows. It also offers an interpretive center, naturalist programs, camping sites, picnic areas, and 38 miles of hiking trails, 17 of which are open to off-road bicycles. In the winter, 26 miles of trails are available for cross-country skiing, including 12.5 miles for classical skiing and 2 miles for skate skiing. There are also 4.5 miles of trails open for snowshoeing.
- **Peninsula State Park** is a 3,624-acre park in the Town of Gibraltar. Established in 1909, it is one of the largest and most well attended state parks in Wisconsin, receiving over one million visitors annually. The park has nearly seven miles of Green Bay shoreline and contains a landscape of forests, meadows, wetlands, and 150-foot rocky bluffs. The park offers a wide variety of summer and winter outdoor recreational activities, including: trails for nature study, hiking, snowmobiling, cross-country skiing, mountain biking, and road biking; camping; a swimming beach; a picnic area with concessions; a boat launch; a nature center; a lighthouse open for tours; and a 75-foot observatory tower offering views of Green Bay and the Village of Ephraim and Town of Gibraltar. The majority of the park is forested, mainly with white birch and other northern hardwoods.

- **Potawatomi State Park** is in the Town of Nasewaupee, on the shores of Green Bay and Sturgeon Bay. This 1,083-acre park ranges from flat or gently rolling terrain to steep slopes along the shoreline. Most of the park is heavily wooded. The park offers a variety of year-round activities, including camping, hiking, swimming, cross-country skiing, and snowmobiling. A 75-foot observation tower rises above the forest canopy, giving a panoramic view of Sawyer Harbor and Green Bay.
- **Whitefish Dunes State Park** is an 866-acre “day use” park set along Lake Michigan. It was established in 1967 to protect the fragile dune environment. Whitefish Dunes has more visitors than any other day use park in Wisconsin. Its shoreline, composed of sandy shoreline and rocky bluffs, extends nearly three miles. An observation deck offers views of the park's forests, wetlands, and the shoreline. For people with disabilities, the park has an accessible beach grid system and interpretive loop. Whitefish Dunes has 14 miles of hiking trails, of which 11 are groomed for winter skiing. The park also offers a 2.5-mile multi-use winter trail for snowshoers and hikers. The park is a designated State Natural Area offering a combination of natural features including the Lake Michigan shoreline, shoreline on an interior lake, dense upland forest, a winding creek with wetlands, and the highest sand dunes in Wisconsin.
- **Rock Island** is a primitive island off the tip of Door County and northeast of Washington Island. Rock Island offers hiking trails, the oldest lighthouse in Wisconsin and 2,000 feet of beach. Vehicles are not allowed on the 912-acre island. Stone buildings, built by a wealthy inventor and his family, are available for touring.

## COUNTY PARKS

Door County has 19 county parks – including the state-owned, county leased and operated Ahnapee Trail – comprising of approximately 1,029 acres. Tornado Memorial Park was the first county park, purchased and created by the Door County Board of Supervisors in 1927, followed by the purchase and creation of Robert La Salle Park in 1929 and Frank E. Murphy Park in 1933. The 19 county parks are listed in Table 9.6 and described below. Brief discussion regarding county parks is provided below and the recreation plan guiding parkland acquisition and management can be found in Chapter 10, Land Use.

- **Ahnapee State Trail** is owned by the State of Wisconsin, but leased to and maintained by Door County. It's approximately 15 miles of trail (encompassing 147 acres), connecting the City of Sturgeon Bay to the City of Algoma, offers hiking, biking, horseback riding, nature study, and snowmobiling.
- **Baileys Harbor Ridges Park** is a 40-acre park in the Town of Baileys Harbor immediately adjacent to and surrounded by The Ridges Sanctuary. It offers a swimming beach, parking, and restroom facilities. The park is also home to two range light houses that are no longer in operation.
- **Cana Island Lighthouse** is an 11-acre park in the Town of Baileys Harbor. The island is accessible only via a rocky causeway. Tours of the lighthouse are offered during the summer season.
- **Cave Point Park** is a 19-acre park in the Town of Sevastopol immediately adjacent to Whitefish Dunes State Park. Cave Point features wave-worn limestone bluff edges and underwater caves. The park offers a one-half mile hiking trail, shoreline access, a picnic area, parking, and restroom facilities.

- **Chaudoir's Dock Park** is a 5-acre park located in the Town of Union on Green Bay. The park offers a protective breakwater and dock, a boat launch, and restroom facilities.
- **Door Bluff Headlands** is a 180-acre, largely undeveloped park located in the Town of Liberty Grove, featuring scenic views of vertical bluffs and a variety of tree and plant species.
- **Ellison Bluff Park** is a 195-acre park located in the Town of Liberty Grove offering a picnic area, restrooms, parking, a viewing platform that overlooks Green Bay, and hiking trails.
- **Forestville Dam Park** is a 72-acre park in the Town of Forestville that lies along the east side of the Forestville Pond. The park features a small boat launch, picnic area, and parking areas as well as access to the Ahnapee State Trail and the Ahnapee River.
- **Frank E. Murphy Park** is a 17-acre park in the Town of Egg Harbor with a sand beach, boat launch, bathhouse for swimmers, picnic and restroom facilities, and a dock for fishing.
- **George K. Pinney Park** is a 13-acre park in the Town of Sevastopol with a fishing area, a boat launch, restroom facilities, and picnic areas.
- **John Miles Park** is a 66-acre park located in the City of Sturgeon Bay offering soccer fields, a playground, parking, picnic, restroom facilities, and stock car races in the summer.
- **Lily Bay County Park** is a 0.5-acre park located in the Town of Sturgeon Bay with a boat launch.
- **Lyle Harter-Matter Sanctuary** is an undeveloped 41-acre park in the Town of Jacksonport featuring a wildlife sanctuary serving as nesting ground for various species of waterfowl.
- **Meridian Park** is a 140-acre park located in the Town of Jacksonport, contiguous with Lyle-Harter-Matter Sanctuary. The park is largely undeveloped except for a small wayside located in the southeast corner of the park, on State Trunk Highway 57, which contains a monument noting the site's location halfway between the equator and the North Pole. The wayside has picnic, parking, and restroom facilities.
- **Percy Johnson Memorial Park** is a 5-acre park in the Town of Washington on the eastern side of Washington Island. The park offers picnic, restroom, and swimming facilities.
- **Robert M. Carmody Park** is an 8-acre park in the Town of Gardner offering a large boat launch, parking, and restroom facilities.
- **Robert La Salle Park** is a 29-acre park located in the Town of Clay Banks with 440 feet of public access to Lake Michigan. The park offers swimming, a picnic area, parking, restrooms, and volleyball courts.
- **Sugar Creek Park** is a 37-acre park in the Town of Gardner with a boat launch, fishing, a picnic area, parking, restrooms, volleyball courts, and a disc golf course.
- **Tornado Memorial Park** is a 2.6-acre park in the Town of Gardner, with picnic and restroom facilities. It became the first county park in 1927 and the Door County Historical Society recognizes it as a historical site.

## LOCAL PARKS

In addition to state and county parks, nearly all of Door County's municipalities own and operate their own park and recreation systems. There are more than 70 municipal parks in the county – city, village, and town-owned – totaling approximately 630 acres.

## RECREATION CENTERS

Door County has two YMCA locations, in the City of Sturgeon and Fish Creek (Town of Gibraltar). The YMCA offers a variety of programs for children, adults, and seniors. Both locations have a swimming pool, exercise room, weight room, and track. The Sturgeon Bay facility offers childcare, a young adult room, an outdoor track, and a gymnastics facility. Washington Island has a community recreation center.

## RECREATIONAL MARINAS AND BOAT LAUNCHING FACILITIES

There are more than two dozen marinas located throughout Door County. Table 9.7 lists the major public and private harbors and marinas in the county. Activities available from these harbors and marinas include but are not limited to charter fishing, pier fishing, boat and boat slip rentals, cruises, and tours.

**Table 9.7 Marinas, Door County**

Municipality	Marina
Town of Baileys Harbor	Baileys Harbor Municipal Marina Baileys Harbor Yacht Club & Resort
Village of Egg Harbor	V. Egg Harbor Municipal Dock
Village of Ephraim	Anderson Dock Ephraim Municipal Dock Ephraim Yacht Harbor
Town of Gardner	Wave Pointe
Town of Gibraltar (Fish Creek)	Alibi Dock Marina Fish Creek Municipal Dock
Town of Liberty Grove	J.J.'s Dockside at Gills Rock Seaquist Bay Shore Wagon Trail Resort & Marina Wills Park Marina Yacht Works & Marina
Village of Sister Bay	Al Johnson's Marina Sister Bay Municipal Dock
Town of Washington	Jackson Harbor Town Dock Kap's Marina Shipyard Island Marina
City of Sturgeon Bay	Bay Marine Center Pointe Marina Great Lakes Yacht Services Harbor Club Marina Leathem Smith Marina Quarter Deck Marina Snug Harbor Inn Stone Harbor Marina Sturgeon Bay Marine Center

*Source: Door County Planning Department.*

Door County owns seven boat-launching facilities, listed below, maintained and operated by the county Parks Department. Residents and non-residents are required to pay a fee of \$5.00 per launch to use the county launch sites; permits can be purchased on an annual basis. Note that in addition to the county boat-launch facilities, there are many local boat-launch sites and road rights-of-way that provide access to Green Bay and Lake Michigan.

- Chaudoir's Dock, Green Bay (Town of Union)
- Forestville Dam, Ahnapee River (Town of Forestville)
- Frank E. Murphy, Horseshoe Bay (Town of Egg Harbor)
- George K. Pinney Park, Sturgeon Bay (Town of Sevastopol)
- Lily Bay, Lake Michigan (Town of Sevastopol)
- Robert M. Carmody, Little Sturgeon (Town of Gardner)
- Sugar Creek, Green Bay (Town of Gardner)

## GOLF COURSES

Door County has eleven golf courses, listed below.

- Alpine Golf Course and Resort (36 holes), Town and Village of Egg Harbor
- Bay Ridge Golf Course (9 holes), Village of Sister Bay
- Cherry Hills Golf Course (18 holes), Town of Sevastopol
- Deer Run Golf Course and Resort (9 holes), Town of Washington
- Horseshoe Bay Golf Club (18 holes), Town of Egg Harbor
- Idlewild Golf Course (18 holes), Town of Nasewaupee
- Maxwelton Braes Golf Course (18 holes), Town of Baileys Harbor
- The Orchards at Egg Harbor Golf Course (18 holes), Village of Egg Harbor
- Peninsula State Park Golf Course (18 holes, plus 6-hole short course), Town of Gibraltar
- Stonehedge Golf Course and Driving Range (9 holes), Town of Egg Harbor
- 27 Pines Golf Course and Driving Range (9 holes), Town of Sturgeon Bay

## ROUTES AND TRAILS

### Bicycling

There are over 42 miles of off-road bike trails in four of the five state parks and a 12-mile multi-purpose trail that connects Algoma with Sturgeon Bay (the Ahnapee Trail). Well-known state park recreational paths include the Sunset Trail in Peninsula State Park and the Potawatomi Trail in Potawatomi State Park. The City of Sturgeon Bay and the Village of Sister Bay have the only urban shared-use paths intended for both recreational and transportation uses.

### Recreational Trails

In addition to the Ahnapee Trail, there are many other hiking, cross-country skiing, snowshoeing, and snowmobile trails in the five state parks and county parks. Further information regarding miles and types of trails in the state and county parks can be obtained by contacting the DNR and Door County Parks Department, listed in the Resources and Further Information section at the end of this chapter. Also note that many of the preserved lands, discussed in Chapter 6, Natural Resources, and depicted on Map 6.8 at the end of this document, have hiking trails. (Note: Not all lands depicted on the preserved lands map are open to the public.) Information about different types of land-based trails is listed below.

- *Ice Age Trail.* The Ice Age Trail is a National Scenic Trail, located entirely within Wisconsin, winds for more than 1,000 miles along the edge of the last continental glacier in Wisconsin. Starting in Potawatomi Park, the trail connects to the Ahnapee State Trail and eventually ends at Interstate State Park on the Minnesota border. The Ice Age Trail is intended to be a premier hiking trail and conservation resource for silent sport and outdoor enthusiasts. The

trail traverses some of Wisconsin's most scenic landscapes and helps tell the story of the last Ice Age by highlighting Wisconsin's unique glacial features.

- **Snowmobile Trails.** There are approximately 212 state-funded miles of snowmobile trails in the county, as well as another 40+ miles of unfunded trails maintained by the private snowmobile clubs in the county (listed below).
  - Southern Door Snow Travelers, Little Sturgeon (Town of Gardner)
  - Door Central Snowgoers, Village of Egg Harbor
  - Top of the Thumb, Ellison Bay (Town of Liberty Grove) and Village of Sister Bay
  - Villagers, Villages of Ephraim and Sister Bay; Towns of Baileys Harbor and Gibraltar
  - Red River Riders, Town of Brussels
  - Door Drifters, Town of Sturgeon Bay
  - Door Pioneer Trailblazers, Carlsville (Town of Sevastopol)
- **Cross-County Skiing.** Door County has over 54 miles of groomed cross-country ski trails and six miles of designated snowshoe trails. These trails are located in Crossroads at Big Creek, Newport State Park, Peninsula State Park, Potawatomi State Park, and Whitefish Dunes State Park.
- **Horseback and Pony Riding.** There are several private horseback and pony riding facilities in the county. Horseback riding is allowed on the Ahnapee Trail.

### **Lake Michigan Water Trail**

Water trails are aquatic pathways defined by regular, legal access points to the water and are primarily oriented around non-motorized boating. Water trails often serve other public recreation uses that require access to water, such as fishing, swimming, and sightseeing. Developed water trails offer access points with public amenities such as parking, picnic areas, restrooms, wayfinding signs, and camping. Formally delineated water trails can be particularly helpful in planning and implementing infrastructure for shoreline segments where geographic conditions necessitate the installation of a dock, a staircase, or other types of structures necessary for access.

Lake Michigan's shore is over 1,600 miles long, with approximately 523 of those miles in Wisconsin. A consortium of agencies consisting of Bay-Lake Regional Planning Commission, DNR, Wisconsin Coastal Management Partnership, National Oceanic and Atmospheric Administration, and the National Park Service published in 2011 a planning document entitled "Wisconsin's Lake Michigan Water Trail Project." The goal of the plan is to develop a new water trail along the Wisconsin shoreline of Lake Michigan by identifying gaps or zones where further public access is needed and targeting these areas for increased public land holdings. Additionally, the DNR plans to develop a branding strategy for local communities and private affiliates to use in their marketing and to provide educational opportunities that will encourage understanding of the Lake Michigan ecosystem.

The Water Trail plan shows Door County broken into three segments/maps: Green Bay East Shore, Northern Door County, and Sturgeon Bay to Two Creeks Buried Forest. According to the plan, there are 90 access points along the county's coastline, with varying degrees of accessibility, as described below:

- **Developed Access.** A site that provides water access via a public boat ramp or dock. (35 sites)
- **Carry-In Access.** A site with a beach that provides easy kayak access to the water with little user conflict from adjacent landowners. (32 sites)
- **Alternate Access.** Non-ideal carry-in access site that may be only a road that ends at the water. Alternate access sites may have a bit of a steep slope to the water, require wading or

paddling through marsh, or present minimal potential for user conflict from adjacent landowners. (7 sites)

- **Emergency Access.** Use of these sites (primarily road ends) is restricted by limited parking options, high user conflict potential, or agreements with site owners that only permit emergency egress. (16 sites)

The built-out Lake Michigan Water Trail ideally will have no more than five miles between sites with restroom access and no more than ten miles between sites with public camping. The plan identifies gaps along the trail where there are additional needs for access or public camping. Gaps identified in Door County are listed below:

- A 9.7 mile gap along the east shore of Green Bay in the Town of Nasewaupee, near Sturgeon Bay, that stretches from Sand Bay Lane to off Sherwood Point Road.
- A 6.6 mile gap along the Green Bay side of the Northern Door Peninsula, stretching from Sister Bay Beach to Ellison Bay Women's Club. This gap runs along a stretch of bluff with no staircases, making public access difficult.
- A 4.0 mile gap across "Death's Door" to Detroit and Washington Islands that is less than five miles long, but has significant needs and opportunities for providing safe passage.
- A 10.6 mile gap along the west shore of Washington Island from the Washington Island Ferry docks to Gudmundson Drive. This gap includes some bluff areas.
- A 29.3 mile gap along the Lake Michigan side of Door County, stretching from Sand Bay in the Town of Liberty Grove to Baileys Harbor Ridges Park. The North Bay Road and Bues Point Ramp sites break up this gap somewhat, but there is still more than five miles remaining between each site along this gap.
- A 6.8 mile gap stretching from Anclam Park in the Town of Baileys Harbor to CTH V/Lake Park Drive. Public access is available within this segment, but public camping is limited.

## FISHING AND HUNTING

### Strawberry Creek Chinook Facility

Fish spawning (egg-taking) keeps the Great Lakes stocked with non-native fish for sport fishing, including Coho and Chinook salmon, steelhead (migratory rainbow trout), and some brown trout. Salmon and trout are stocked in tributaries of Lake Michigan and Lake Superior, where they imprint on the scent of the water before moving into the lakes. When the fish are adults, they return to their original tributaries to spawn, but the streams get too warm for the young fish to survive. The role of the DNR is to gather the eggs from the adults, hatch the eggs, and rear them at state fish hatcheries. When the fish are six inches long they are ready to smolt, trading in their large dark spots for a silvery sheen, after which they are released into tributary streams, where the cycle begins again.

Chinook salmon, also known as "King" salmon, were first introduced in Lake Michigan tributaries in 1887 but did not reproduce well and eventually disappeared. In the late 1960s, DNR fishery biologists from New York, Wisconsin, and Michigan began stocking them again as a way to control alewives, an exotic species of fish, and create a new sport fishery. Located in the City of Sturgeon Bay, the Strawberry Creek Chinook Facility was started by the DNR in 1969, the first Chinook salmon stocking program in the state. That year, approximately 65,000 fingerlings were stocked to boost the predator fish population and control an exploding invasive alewife population. Since 1969, an average of

200,000 fingerlings per year have been released from the facility. In 1972, a fish trap was constructed at the facility so that Chinook eggs could be collected from mature fish returning to the creek. The eggs are used for the DNR's Great Lakes stocking program and for other state and federal stocking programs. Surplus eggs are sold to a bait company and profits are returned to the overall fish propagation program.

Salmon naturally die after spawning. After processing at egg collection facilities, fish over 36 inches are sent to a company in Algoma where the fish are turned into liquid fertilizer. Fish over 36 inches are more hazardous to consume than smaller fish; the larger the fish, the more harmful pollutants accumulate in its fatty tissues. Fish that are less than 36 inches are donated to five local food pantries. In addition to spawning responsibilities, employees at the facility have been collecting detailed biological information about the spawning run since the late 1970s. This biological data provides important information on Chinook age, growth, movement, relative survival, and comparisons of various disease treatment techniques, and for other studies. The data is also being used to readjust stocking formulas for Wisconsin. The alewife population is at its lowest level since the 1970s – primarily due to invasive species such as the zebra and quagga mussels that compete with alewives for the same food – thus there is less food for the Chinook. For 2013, Wisconsin decided to reduce its Chinook salmon stocking levels by almost 38 percent, the equivalent of about 440,000 fish.

## Hunting and Fishing Associations

- **Door County Fish Farm and Game Club.** A non-profit located in the City of Sturgeon Bay, the Door County Fish Farm and Game Club's mission is to preserve and promote the heritage of hunting, fishing, and trapping in Door County. The Club sponsors and supports activities such as:
  - youth pheasant hunt
  - Learn to Turkey Hunt program
  - raise and release pheasant chicks into the wild (2,400 annually)
  - organize and sponsor ATV rider safety programs
  - assist with local DNR hunter safety programs
- **Whitetails Unlimited.** Founded in 1982, Whitetails Unlimited is a national non-profit conservation organization, with its headquarters located in Sturgeon Bay. Whitetails Unlimited raises funds to support educational programs, habitat conservation, and preservation of the hunting tradition for the direct benefit of the white-tailed deer and other wildlife. The organization lists the following goals on its website:
  - Conduct a national educational campaign designed to address and instill in the general public, with emphasis on youth, a basic understanding of practical conservation measures.
  - Promote the acquisition, restoration, and management of wildlife habitat.
  - Preserve the hunting tradition for future generations.

## Hunting and Trapping Opportunities

- **State Parks.** For hunting and trapping opportunities in Door County state parks, go to the DNR Web site listed in the Resources and Further Information section at the end of this chapter.
- **Nature Conservancy.** The Nature Conservancy allows hunting on its Shivering Sands, Kangaroo Lake, Mink River Estuary, and North Bay properties.
- **Door County Land Trust.** The Door County Land Trust allows hunting on the following properties:

- Bay Shore Blufflands Preserve Unit 1 (Town of Egg Harbor)
- Detroit Harbor Preserve (Town of Washington)
- Domer-Neff Preserve (Town of Washington)
- Ephraim Preserve at Anderson Pond (Village of Ephraim)
- Gilson-Peterson Forest (Town of Liberty Grove)
- Hibbards Creek Preserve (Town of Egg Harbor)
- Kangaroo Lake Preserve (Town of Baileys Harbor)
- Kellner Fen Preserve (Town of Sturgeon Bay)
- Lautenbach Woods Preserve - North Unit (Town of Egg Harbor)
- Lautenbach Woods Preserve - South Unit (Town of Egg Harbor)
- Legacy Preserve at Clay Banks (Town of Clay Banks)
- Mostek Preserve (Town of Washington)
- Oak Road Wetland Preserve (Town of Egg Harbor)
- Picha Forest (Town of Egg Harbor)
- Richter Community Forest Preserve (Town of Washington)
- Sturgeon Bay Ship Canal Nature Preserve (Town of Sturgeon Bay)
- Three Springs Preserve (Village of Sister Bay)
- White Cliff Fen (Town of Egg Harbor)

## **COMMUNITY FACILITIES PLANNING**

Both the state and Bay-Lake Regional Planning Commission have developed bicycle and recreational trail plans for Door County. The county has also adopted both an outdoor recreation plan (see Chapter 10) and a county-wide bicycle, pedestrian, and recreational facilities plan (see Chapter 8). Many other municipalities have developed master plans for waterfronts, downtowns, bicycling, and outdoor recreation. Additionally, there are several municipal and non-profit plans to build educational facilities.

## **MASTER PLANNING**

- **Wisconsin Department of Natural Resources** - State Recreational Trails Network Plan (2003)
- **Bay-Lake Regional Planning Commission** - Bicycle Transportation Facility Plan for the Bay-Lake Region (2002)
- **Door County**
  - Bicycle, Pedestrian, and Recreational Facilities (2014)
  - Parks and Open Space Plan, 2011 - 2015
- **City of Sturgeon Bay**
  - West Waterfront Redevelopment Plan (2011)
  - Bicycle Master Plan (2011)
- **Village of Egg Harbor**
  - Downtown Mixed-Use District Redevelopment Plan (2012)
  - Village Center Strategy (2010)
  - Bicycle and Pedestrian Plan (2010)
- **Village of Sister Bay**
  - Downtown Redevelopment Plan and Implementation Strategy (2013)
  - Comprehensive Outdoor Recreation Plan, 2014-2018
- **Town of Baileys Harbor** - Bicycle Plan (2011)
- **Town of Gibraltar** - Bicycle and Pedestrian Plan (2010)
- **Town of Sturgeon Bay** - Comprehensive Outdoor Recreation Open Space Plan, 2008 - 2013

- **Town of Washington** - Detroit Harbor Enhancement Plan (2013)

## EDUCATIONAL COMMUNITY FACILITIES

- **Greater Escarpment Organization of Door County** - Town of Liberty Grove. The mission of the Greater Escarpment Organization of Door County (GEO-DC) is to cultivate knowledge and stewardship of the Niagara Escarpment and its geological, ecological, and cultural wonders through raising awareness in people of all ages and from all walks of life. GEO-DC plans to build and operate an educational center which will coordinate escarpment education, research, and resource protection policy with Canada and the rest of the international community. The center will provide indoor and outdoor learning opportunities for people to learn about, experience, and appreciate the Niagara Escarpment.
- **Library and Niagara Escarpment Interpretive Center** - Village of Egg Harbor. The Village is planning a new building that will house the village library, public restrooms, a Niagara Escarpment interpretive center, visitor center, and other community services.
- **Ridges Sanctuary Interpretive Center** - Town of Baileys Harbor. According to the Ridges, the interpretive center will promote environmental stewardship and do the following:
  - Protect the Ridges and act as a model to help protect other natural areas throughout the Midwest.
  - Serve as a gateway to The Ridges and other natural areas throughout Door County, communicating the interplay of geology, hydrology, ecology, and land use.
  - Support programming and resource space to allow for expanded year-round educational programs that better serve members, the community, and Door County residents and to provide “relevant, meaningful learning experiences for children, adults and families.”
  - Create a visible entrance to the Sanctuary, orienting visitors to the site and its importance.

## RESOURCES AND FURTHER INFORMATION

### LOCAL AGENCIES

#### Door County Departments (<http://www.co.door.wi.gov>)

- **Aging and Disabilities Resource Center** (<http://adrcdoorcounty.org>)  
An Aging and Disability Resource Center, or ADRC, offers the general public a single source for information and assistance on issues affecting older people (age 60 and older) and people with disabilities (age 18 and older) regardless of their income. Information and assistance is free and confidential.
- **Emergency Services.** Emergency Services consists of Emergency Management and Ambulance Service. Emergency Management establishes policies in accordance with federal, state and regional standards in developing and/or updating procedures in event of natural or human-made disasters, (fires, hazardous material spills, nuclear attack, etc.) and to assure a plan of action. Ambulance Services coordinates activities of the Emergency Medical Services Department in emergency transport and care of the sick and injured.
- **Parks** (<http://map.co.door.wi.us/parks>). Oversees development and operation of 19 county parks, totaling 792 acres.
- **Planning** (<http://map.co.door.wi.us/planning>). Administers wind energy facility and telecommunications tower ordinances.
- **Public Health.** Works collaboratively with the State Division of Public Health, Department of Health and Family Services to ensure the health of the community.
- **Highway.** Performs all the maintenance and construction work on the County Trunk Highway system. They also provide for the general maintenance of the State Highway under contract with the state and provides maintenance and construction work on local roads and streets under agreements with the various local municipalities.
- **Human Services.** Duties include: child welfare services, child neglect and abuse investigations, case management services, alternate care for children, juvenile court services, child day care services and certification, services to help people remain in the community, family planning; information and referral planning, and financial assistance. Human Services also includes the Aging and Disabilities Resource Center (<http://www.adrcdoorcounty.org>).
- **Sanitarian** (<http://map.co.door.wi.us/sanitarian>). Administers the private sewage program in Door County and is involved with other environmental health problems associated with the County.
- **Senior Resource Center.** Provides services or resources to older persons (60+) which will assist them to remain active participants in family and community life.
- **Sheriff** (<http://www.doorcountysheriff.org>). Provides law enforcement services and operates the county jail.

- **Soil and Water Conservation** (<http://map.co.door.wi.us/swcd>). Services include the preparation of conservation and construction plans for landowners to address the conservation and environmental needs of their land and land use, including nonpoint pollution of the ground or surface waters, soil erosion, well testing, surface water runoff, and more.

#### **Door County Economic Development Corporation Technology Council**

(<http://www.doorcountybusiness.com>)

The DCEDC Technology Council is a group of IT professionals who have been working since 2000 to improve reliability and access to the most up-to-date telecommunications technology for the entire county. The council has commissioned and released studies on the available telecommunications infrastructure in the county, including a Technology Needs and Market Study and a feasibility study for a new fiber-to-the-home telecommunications deployment.

#### **Door County YMCA** (<http://www.doorcountyymca.org/index.php>)

The Door County YMCA has facilities in the City of Sturgeon Bay and in Fish Creek (Town of Gibraltar).

#### **Northeast Wisconsin Technical College (NWTC) - Sturgeon Bay Campus**

(<http://www.nwtc.edu/SturgeonBay>)

NWTC is a two-year technical college, serving northeast Wisconsin by providing education, training, and life-long learning opportunities for individuals and businesses in order to develop a skilled workforce.

#### **Sturgeon Bay Utilities (SBU)** (<http://www.sbunet.com>)

SBU is a locally-owned and -operated electric, water, and wastewater utility, serving over 8,000 customers in the Sturgeon Bay area, founded in 1904 by the citizens of Sturgeon Bay. SBU also serves as a regional processing facility for wastewater and sewage both in the City of Sturgeon Bay and the entire Door Peninsula.

#### **Sunshine House** (<http://www.sunshinehouseinc.org>)

Since 1971, the Sunshine House Inc. has been providing services to Door County residents with special needs and/or disabilities. Services offered include direct care, transportation, work services, supported employment, and recreational activities.

**Washington Island Electric Co-op.** Phone: (920) 847-2541

**Washington Island Recreation Center** (<http://www.moslingreccenter.org>)

### **REGIONAL AND STATE AGENCIES**

#### **American Transmission Company (ATC)** (<http://www.atcllc.com>)

ATC started business on January 1, 2001, as the first multi-state, transmission-only utility in the United States. ATC provides electric transmission service in an area from the Upper Peninsula of Michigan, throughout the eastern half of Wisconsin, and into portions of Illinois. More than 9,300 miles of high-voltage transmission lines and 500 substations provide communities with access to local and regional energy sources.

#### **Focus on Energy** (<http://www.focusonenergy.com>)

Focus on Energy works with eligible Wisconsin residents and businesses to install cost effective, energy efficient, and renewable energy projects. Focus on Energy provides information, resources, and financial incentives to help implement projects that otherwise would not be completed, or to complete projects sooner than scheduled.

### **University of Wisconsin–Extension (<http://www.uwex.edu>)**

- **Solid and Hazardous Waste Education Center** (<http://www4.uwm.edu/shwec>). The Solid and Hazardous Waste Education Center's mission is to enhance Wisconsin's environment and economy by providing quality education, information, and technical assistance to promote the sustainable use of natural resources.
- **Wisconsin Geological and Natural History Survey** (<http://www.uwex.edu/wgnhs>). The survey conducts earth-science surveys, field studies, and research, providing objective scientific information about the geology, mineral resources, water resources, soil, and biology of Wisconsin.

### **University of Wisconsin - Stevens Point/Center for Land Use Education (<http://www.uwsp.edu/CNR/landcenter>)**

A joint venture of UW-Extension and the College of Natural Resources at the University of Wisconsin-Stevens Point, CLUE creates learning opportunities for communities to help them make sound land use decisions and promote a sustainable Wisconsin.

**Wisconsin Department of Children and Families** (<http://dcf.wisconsin.gov>). The mission of the Children and Families is to promote the economic and social well-being of Wisconsin's children and families.

**Wisconsin Department of Health Services** (<http://dhs.wisconsin.gov>). The mission of Health Services is to protect and promote the health and safety of the people of Wisconsin.

### **Wisconsin Department of Natural Resources**

- **State Park System** (<http://dnr.wi.gov/topic/parks>). The Wisconsin State Park System provides places for outdoor recreation and for learning about nature and conservation.
- **Waste Management and Materials Program** (<http://dnr.wi.gov/org/aw/wm/SturgeonBayServiceCenter>). The Waste Management and Materials Program develops policies and offers technical assistance to actively encourage the reduction, recycling, and reuse of wastes as raw material for new products. It also oversees the management of solid and hazardous waste through storage, treatment, and disposal.
- **Solid and Hazardous Waste Information Management System** (<http://sotw.dnr.state.wi.us/sotw>Welcome.do>). SHWIMS on the Web provides access to information on sites, and facilities operating at sites, that are regulated by the Wisconsin DNR Waste Management program. Activities that occur at facilities include landfill operation, waste transportation, hazardous waste generation, wood burning, waste processing, sharps collection, and more.

### **TELEPHONE SERVICE PROVIDERS**

Telecommunication Providers (<http://map.co.door.wi.us/map>). Door County's internet and mobile phone service providers and service areas can be viewed on the Door County Web Map.

### **RADIO BROADCASTING COMPANIES**

- FM 106.9 The Lodge (<http://www.fm1069thelodge.com>)
- Nicolet Broadcasting (<http://www.doorcountydailynews.com>)
- Magnum Broadcasting, Inc. Phone: (920) 743-6677
- WDOR (<http://www.wdor.com>)
- Wisconsin Public Radio (<http://www.wpr.org>)
- WPFF Radio (<http://www.wpff>)

## **SCHOOLS**

### **PUBLIC SCHOOLS**

- Gibraltar School District (<http://www.gasd.new.rschooltoday.com>)
- Sevastopol School District (<http://www.sevastopol.k12.wi.us>)
- Southern Door County School District (<http://www.southerndoor.k12.wi.us>)
- Sturgeon Bay School District (<http://www.sturbay.k12.wi.us>)
- Washington School District (<http://www.islandk12.wi.us>)

### **PRIVATE SCHOOLS**

- Peninsula Christian School. Phone: (920) 743-6065
- St. John Bosco Catholic School (<http://www.johnboscoschool.org>)
- St. Peters Evangelical Lutheran School (<http://www.stpeterslutheran.net>)
- Zion Lutheran School. Phone: (920) 743-2325

## **HOSPITALS AND CLINICS**

- Aurora Health Center ([www.aurorahealthcare.org](http://www.aurorahealthcare.org))
- Door County Memorial Hospital/Ministry Health Care (<http://www.ministryhealth.org/DCMH/home.nws>)
- Prevea Door County Health Center (<http://www.prevea.com>)
- Community Clinic of Door County (<http://www.communityclinicofdoorcounty.org>)

## **ASSISTED LIVING FACILITIES**

### **Nursing Homes**

- Door County Memorial Hospital Skilled Nursing Facility (<http://www.ministryhealth.org>)
- Golden Living Center - Dorchester (<http://www.beverlycares.com/BL>)
- Good Samaritan Society - Scandia Village Door County (<http://www.good-sam.com>)

### **Community-Based Residential Facilities**

- Cardinal Ridge Residential Care (<http://www.cardinalridge.com>)
- Cornerstone of Sturgeon Bay (<http://www.cardinalridge.com>)
- Hearthside (<http://www.cordialcare.com>)
- Homes for Independent Living of WI LLC (<http://www.hil-wi.com>)
- Sturgeon Bay Senior Living (<http://sturgeonbayseniorliving.com>)
- Woodview of Scandia (Evangelical Lutheran Good Samaritan) (<http://www.good-sam.com>)

### **Residential Care Apartment Complexes**

- Good Samaritan Society - Scandia Village (<http://www.good-sam.com>)
- Pine Crest Village LLC (<http://www.doorpinecrest.com>)

## CHAPTER 10: LAND USE

## INTRODUCTION

This chapter discusses a variety of topics related to land use, including: past and current land use inventories; existing land use controls in place at the county level; parcel and assessment information; fair market value and property tax information; trends in property assessment and market values; and finally, projections as to future land availability for residential, commercial, manufacturing, and agricultural uses.

*Note that the terms “parcel” and “property” refer to all forms of real property ownership, including condominium land and buildings, and are used interchangeably throughout this chapter. The term “lot” refers to all forms of real property ownership, except for condominium ownership.*

## 2014 LAND USE INVENTORY

### **2014 LAND USE TYPES AND AMOUNTS**

Listed below are the land use categories depicted on Maps 10.1, A – C, found at the end of this document, which display land uses county-wide as of 2014.

The general land use categories used in the 2014 county-wide land use maps are based on the Standard Land Use Classification methodology. This system was developed and finalized between 1974 and 1975 under the guidance of the State Planning Office by a consortium of various groups from around the state that conduct land use inventories. More information regarding the land use classification system can be obtained by contacting the Door County Planning Department or Bay-Lake Regional Planning Commission (contact information is listed in the Resources and Further Information section at the end of this chapter).

These land use categories are not to be construed as zoning designations, but rather indicators of existing development and land uses. More detailed information regarding these general land use categories and their sub-categories and how/where they were assigned throughout the county is available from the Planning Department.

**Residential** - Use of land for non-transient-occupant dwelling units, both transportable and permanent structures. Uses are coded into subcategories of single-family, two-family, multi-family, mobile home, and group quarters, although are generalized and depicted as “residential” on the 2014 land use inventory maps.

**Commercial** - Use of land for retail sales or trade of goods and/or services, including lodging and commercial headquarter offices.

**Industrial** - Use of land for fabrication, wholesaling, or long-term storage of products and for extraction (mining) or transformation of materials.

**Transportation** - Use of land corridors for the movement of people or materials, including local, county, and state roads and parking facilities. Other transportation uses include air, marine, and non-motorized-related transportation.

**Communications/Utilities** - Use of land for generation, processing, and/or transmission of electronic communication; water, electricity, petroleum, or other transmittable products; and the disposal, waste processing, and/or recycling of byproducts.

**Governmental/Institutional** - Use of land for public and private facilities for education, health, or assembly; cemeteries and related facilities; and all government facilities used for administration or safety except public utilities and areas of outdoor recreation.

**Parks and Recreation** - Use of land for out-of-doors sport and general recreation facilities, for camping or picnicking facilities, nature exhibits, and the preservation or protection of historical and other cultural amenities.

**Open Space/Fallow Fields** - Land in transition from agricultural use to natural area, open meadows, and large lawn areas.

**Agricultural** - Use of land for growth or husbandry of plants and animals and their products and for associated facilities such as sheds, silos, and other farm structures. This category also includes cropland, pasture areas, and silvicultural uses.

**Water Features** - Lakes, ponds, rivers, and flowages.

**Woodlands, Wetlands, Natural Areas** - Land primarily in a natural state, including wetlands and woodlands, and conservancy areas.

The breakdown of Door County's land uses and acreages for each category, based on the 2014 maps, is shown in Table 10.1 below. Note that overall:

- Door County covers over 315,000 acres
- Natural areas are the largest land category in the county, covering more than 38% of the county's total land area.
- Agricultural uses are the second largest land use category in the county, covering more than 37% of the county's total land area.
- Residential uses account for the largest developed land use, covering over 5% of the county's total land area.
- Recreational uses, primarily consisting of local, county, and state parks, comprise 4% of the developed uses in the county.

**Table 10.1: 2014 Land Use Inventory Summary, Door County**

Land Use Classification	Acres	% Total Land
Woodlands, Wetlands, Natural Areas	121,250	38.5%
Agricultural	117,749	37.3%
Open Space/Fallow Fields	32,789	10.4%
Residential	15,952	5.1%
Parks and Recreation	12,545	4.0%
Transportation	5,491	1.7%
Water Features	3,588	1.1%
Industrial	1,980	0.6%
Commercial	2,063	0.7%
Communications/Utilities	1,091	0.3%
Governmental/Institutional	797	0.3%
<b>Total Land Area</b>	<b>315,295</b>	<b>100.0%</b>

Source: Door County Planning Department, 2014.

Table 10.2 breaks down land use types for the unincorporated areas of the county (the fourteen towns).

**Table 10.2: 2014 Land Use Inventory Summary,  
Unincorporated Door County**

Land Use Classification	Acres	% Total Land
Agricultural	116,807	38.6%
Woodlands, Wetlands, Natural Areas	116,967	38.6%
Open Space/Fallow Fields	31,533	10.4%
Parks and Recreation	11,689	3.9%
Residential	13,069	4.3%
Transportation	4,856	1.6%
Water Features	3,577	1.2%
Industrial	1,625	0.5%
Commercial	1,302	0.4%
Communications/Utilities	979	0.3%
Governmental/Institutional	484	0.2%
<b>Total Land Area</b>	<b>302,888</b>	<b>100.0%</b>

Source: Door County Planning Department, 2014.

## EXISTING LAND USE CONTROLS

There are a variety of land use management plans, ordinances, programs, and policies in place in Door County at the federal, county, and municipal levels. Outlined in this section are those plans and ordinances adopted for county-level administration. Note that comparable or complementary plans in place at the municipal-level are referenced in discussing those county-level plans and ordinances but are not discussed in detail. Property owners, developers, and other interested parties are advised to contact individual municipalities for more information on any of the plans and ordinances mentioned in this section as well as other plans, ordinances, programs, and policies that may be in effect at the municipal level.

### PLANS

Door County's land use management plans are the Door County Comprehensive and Farmland Preservation Plan 2035 (this plan), the Door County Land and Water Resource Management Plan, the Door County Comprehensive Forest Plan, and the Door County Parks and Open Space Plan.

All municipalities in Door County have adopted comprehensive plans, except for the Towns of Forestville, Jacksonport, and Washington. (The Towns of Jacksonport and Washington have existing town land use plans in place, although not comprehensive plans.) Many municipalities have developed master plans for waterfronts, downtowns, bicycling, and outdoor recreation. Residents and property owners are advised to check with both county and municipal officials regarding any pertinent plan goals or ordinance requirements before pursuing any new uses of land or construction.

### COMPREHENSIVE AND FARMLAND PRESERVATION PLAN(S)

In 2014, the Door County Board of Supervisors adopted the "Door County Comprehensive and Farmland Preservation Plan 2035" (this plan) which discusses and makes recommendations regarding a wide variety of issues primarily related to land use in the county. The overall goals of this plan are as follows:

**GOAL 1.** Improve communication and knowledge regarding land use issues between all levels of government and residents, and support or initiate cooperative efforts on issues requiring multi-jurisdictional coordination.

**GOAL 2.** Preserve and protect the county's surface water, groundwater, wildlife habitats, and natural features.

**GOAL 3.** Protect existing agriculture and promote sustainable agricultural operations.

**GOAL 4.** Maintain, preserve, and enhance the community's rural atmosphere and agricultural heritage.

**GOAL 5.** Preserve historic sites and community character, and support, as appropriate, cultural and historical festivals, events, and activities.

**GOAL 6.** Encourage quality affordable housing and economic opportunities for the current and future population.

**GOAL 7.** Support the development, maintenance, and up-grading of utilities, community facilities, and services in an efficient, coordinated, and cost-effective manner to service the current and future needs of the community's residential and commercial uses.

**GOAL 8.** Support the development - at the lowest possible environmental and social cost - of a transportation system that is safe, economical, efficient, integrated, inter-modal, and interconnected, and adaptable to changes in demand and technology.

The county's comprehensive plans historically have been and will likely continue to be primarily implemented through the Door County Zoning and Land Division Ordinances which are administered by Door County Planning Department (DCPD) staff, the Door County Board of Supervisors' Resource Planning Committee, and the county board-appointed Board of Adjustment. The county also administers floodplain, wind energy facility, telecommunications tower, and airport height limitation ordinances.

As noted in the introduction to this document, this Resource Report constitutes Volume II of the Door County Comprehensive and Farmland Preservation Plan 2035, and was developed in compliance with the state's comprehensive and farmland planning legislation. Volume I contains the vision statements, goals, and issues and opportunities related to each planning topic.

### **DOOR COUNTY LAND AND WATER RESOURCE MANAGEMENT PLAN**

The *Door County Land and Water Resource Management Plan 2011-2015* was developed by the Door County Soil and Water Conservation Department (SWCD) and approved by the Land Conservation Committee. The plan identifies challenges and establishes goals and strategies to protect the land and water resources of Door County; SWCD implements the plan goals through a variety of programs as described in Chapter 6, Natural Resources.

### **DOOR COUNTY COMPREHENSIVE FOREST PLAN**

The *Door County Comprehensive Forest Plan (2006)*, written and administered by the Wisconsin Department of Natural Resources, provides a broad overview of the county's history and the landscape and ecology of the area, as well as detail on forestry topics and issues relevant to the county. More information on this plan can be found in Chapter 6, Natural Resources.

## PARK AND OUTDOOR RECREATION PLANS

The *Door County Parks and Open Space Plan*, adopted by the County Board of Supervisors, covers the planning period for 2011 through 2016. This plan addresses recreational opportunities, needs, and potential, as well as a recreation action program for the county. Objectives stated in the plan are to:

- identify and detail a coordinated park and outdoor recreation program to meet the needs and demands of Door County residents and visitors;
- promote and encourage the development of sufficient park and recreational facilities of high quality; and
- identify and preserve sites with significant scenic, historical, archaeological, and natural characteristics.

The City of Sturgeon Bay, Village of Sister Bay, and the Towns of Brussels, Liberty Grove, and Sturgeon Bay also have their own outdoor recreation plans. As of the end of 2014, the Town of Gardner was in the process of adopting one. More information on county and local parks and other recreational opportunities is provided in Chapter 9, Community Facilities and Utilities.

## **ORDINANCES**

There are many ordinances in place in Door County that deal with land use and development, described below. Note that when multiple ordinances are applicable to one project, the most restrictive will typically prevail.

## ZONING

The purpose of a zoning ordinance is to promote and protect public health, safety, aesthetics, and other aspects of general welfare. These goals are achieved through the regulation and restriction of the use and development of property. A municipality with a zoning ordinance is divided into zoning districts (geographically defined areas) that have regulations regarding things such as: 1) allowable land uses, 2) minimum lot size and width, 3) placement and height of structures, and 4) the percentage of a lot that may be covered with impervious surfaces.

In the late 1960s, the State of Wisconsin enacted legislation requiring counties to adopt and administer zoning ordinances in the shoreland areas of unincorporated areas (towns). This authority and responsibility is set forth in s. 59.692, Wis. Stats., and NR 115 - 117, Wis. Admin. Code. Shorelands are defined as areas:

- within 1,000 feet of the ordinary high water mark of navigable lakes, ponds, or flowages; and/or
- within 300 feet of the ordinary high water mark of navigable rivers or streams, or to the landward side of a floodplain of the navigable reaches of rivers or streams, whichever distance is greater.

The statute established a 75-foot setback from the ordinary high water mark of navigable waters for all structures, although setbacks may be reduced in certain cases. The statutes also establish minimum lot sizes and standards regarding vegetation and tree-removal in shoreland areas.

Door County first adopted zoning in 1968, after the state's enactment of the shoreland zoning legislation. The *Door County Zoning Ordinance* underwent a comprehensive revision in the early 1990s, with final adoption on February 28, 1995. This ordinance is in effect in nine of the fourteen towns: Baileys Harbor, Clay Banks, Forestville, Gibraltar, Jacksonport, Liberty Grove, Sevastopol, Sturgeon Bay, and Washington. Per state statute, the county zoning ordinance is also in effect in the shoreland areas of the county's remaining five towns: Brussels, Egg Harbor, Gardner, Nasewaupee,

and Union. Note that the Towns of Brussels and Union have adopted and administer town-level zoning ordinances outside of their shoreland areas, while the Towns of Egg Harbor, Gardner, and Nasewaupee do not have any zoning outside of their shoreland areas. The county zoning ordinance is administered and enforced by the Door County Resource Planning Committee, Board of Adjustment, and Planning Department staff members. Contact the DCPD for information on viewing or purchasing current zoning maps and regulations.

Finally, the incorporated municipalities in the county – the City of Sturgeon Bay and the Villages of Egg Harbor, Ephraim, Forestville, and Sister Bay – all have their own zoning ordinances. Contact the appropriate municipality for information on viewing or purchasing current zoning maps and regulations.

### **WISCONSIN'S BUILDING CODE**

All municipalities in Door County have adopted the state's Uniform Dwelling Code (UDC), outlined in Ch. 320-325, Wis. Admin. Code, Safety and Professional Services. This code covers the construction and re-construction of residential and commercial buildings, including plumbing, electrical, and air flow systems. The UDC is enforced by municipal building inspectors and state-contracted UDC inspection agencies. The Wisconsin Division of Safety and Buildings facilitates uniformity of its enforcement through code development, code interpretations, special investigations, inspector training and certification, processing of petitions for variance, and monitoring manufactured dwelling factories. For further information about specific regulations, contact the municipality within which the project will be located.

### **LAND DIVISION**

Door County has regulated certain divisions of land since 1970 in order to promote public health, safety, aesthetics, and general welfare. The *Door County Land Division Ordinance*, adopted by the Door County Board of Supervisors in 2012, is administered by the Door County Resource Planning Committee and DCPD staff and is in effect in all 14 towns. Although some activities are exempt, all divisions of land into new lots of less than 10 acres in size are reviewed under this ordinance. The Towns of Egg Harbor and Nasewaupee; the Villages of Ephraim, Egg Harbor, and Sister Bay; and the City of Sturgeon Bay have their own land division ordinances. Further discussion on land division regulations and administration in Door County may be found in Chapter 11, Intergovernmental Cooperation.

### **FLOODPLAIN ZONING**

The original *Door County Floodplain Zoning Ordinance*, adopted by the Door County Board of Supervisors in 1982, was based on flood study maps prepared for the county by the Federal Emergency Management Agency (FEMA) between 1977 and 1978. In January 2009, per FEMA and Wisconsin Department of Natural Resource (DNR) mandates, the original floodplain ordinance was rescinded and an updated version was adopted by the county board. The new ordinance includes digitized maps, at a much larger scale than the previous maps, and incorporated a 1988 flood study of the county. The elevations required for a property to be considered out of the floodplain increased in most areas of the county by roughly seven-tenths of one foot, and the elevations are measured in a different datum than the previous ordinance. Amendments to the maps can only be made by FEMA, and only when property owners are able to provide surveyed elevations showing their property is actually above the floodplain elevation levels. Some other small regulatory changes were also mandated, but regulations in general have not changed significantly from the original 1982 ordinance.

The Door County Floodplain Ordinance, administered by the Door County Resource Planning Committee and DCPD staff members, is in effect in all 14 towns. The county floodplain ordinance regulates the following within FEMA-designated floodplain areas: residential development; storage of hazardous materials; land uses that may be detrimental to permitted uses in adjoining districts;

sewage disposal; wells for drinking water; and wastewater ponds or facilities, except those permitted under NR 110.15, Wis. Admin. Code.

In 2012, FEMA initiated a new coastal analysis and mapping study in order to create updated floodplain maps for coastal counties along the Great Lakes. FEMA's analysis will be based on updated one-percent annual chance (100-year) flood elevations from a comprehensive storm surge study being done by the U.S. Army Corps of Engineers. This storm surge analysis encompasses coastal floodplains in the eight states bordering the Great Lakes. DCPD staff members have been offering comments to FEMA during the development of these new maps, which are expected to be released for public review sometime between 2014 and 2016. The county will ultimately be required to adopt the new maps as part of the county floodplain ordinance.

The City of Sturgeon Bay and the Villages of Ephraim and Forestville also administer and enforce their own municipal floodplain ordinances.

### **TELECOMMUNICATIONS TOWER**

The *Door County Telecommunications Tower Ordinance* was adopted by the Door County Board of Supervisors in 2004. Administered by the Door County Resource Planning Committee and DCPD staff members, it is in effect in all 14 towns. This ordinance regulates the development and installation of telecommunications towers and related facilities. The City of Sturgeon Bay and the Village of Sister Bay also have telecommunications ordinances, which they administer and enforce. With new telecommunications legislation adopted at the state-level in 2013, this ordinance will be updated in the near future.

### **WIND ENERGY FACILITIES**

Door County has regulated the construction and operation of wind energy facilities since 1999, with the most recent ordinance adopted in 2008. Subsequently, legislation enacted in 2009 (Wisconsin Act 40) required that, in order to guide and make more consistent local procedures for the review and approval of such systems, statewide criteria for the installation or use of a wind energy system with a nominal operating capacity of less than 100 megawatts shall be used. A wind energy system generating 100 megawatts or more is regulated by the Wisconsin Public Service Commission (PSC). Systems less than 100 megawatts can be regulated by municipalities, if the municipality has enacted an ordinance.

Act 40 required the PSC to develop rules specifying the conditions a political subdivision may set for wind energy systems. The PSC rules that went into effect March 1<sup>st</sup>, 2011 essentially outline how a municipality can regulate wind energy systems and that if a political subdivision chooses to regulate wind energy systems, its ordinances cannot be more restrictive than the PSC's rules. A municipality can only regulate what is expressly allowed by statute or PSC rules, which include setback requirements, noise and shadow flicker standards, limits on signal interference and stray voltage, standards for construction and operation, and decommissioning requirements. Although the new PSC rules are already in effect, a municipality has at least three months, potentially up to four months, to develop an ordinance in compliance with the PSC rules upon receipt of an application. Door County will be updating its ordinance in the near future in order to be in compliance with state regulations.

### **AIRPORT HEIGHT LIMITATION**

The *Door County Airport Height Limitation Ordinance* was adopted by the Door County Board of Supervisors in 1977. Administered by the Door County Resource Planning Committee and DCPD staff members, it regulates areas around the Door County Cherryland Airport in portions of the City of Sturgeon Bay and the Towns of Nasewaupee and Sevastopol. The ordinance establishes zones with specific height restrictions that no structure or tree shall exceed. Note that in the near future the county will likely be updating this ordinance and associated maps due to proposed runway expansion.

The Town of Gibraltar and the Village of Ephraim also have a height limitation ordinance for the Ephraim-Gibraltar airport, administered by a joint commission.

### **UNIFORM ADDRESSING**

The *Door County Uniform Addressing Ordinance* was adopted by the County Board of Supervisors in 2000. This program is administered and enforced by DCPD staff members and the Door County Resource Planning Committee, although its activities support and are coordinated with several other departments, including Emergency Services, Sheriff/Dispatch, Information Systems, Real Property Listing, and Register of Deeds. Its primary purpose is to clearly identify properties in order to improve emergency response capability by establishing a unique address for each property in the county and coordinating that naming/numbering system with the addressing systems of incorporated areas. The addressing program is further coordinated with the E-911 emergency response system through tracking and updating of telephone numbers with telephone companies.

## **PARCEL AND ASSESSMENT INFORMATION**

### **GENERAL PARCEL INFORMATION**

Wisconsin state law allows parcels of land to be delineated into smaller parcels by either subdividing or declaring condominiums, with each type regulated by a separate set of state statutes. Ch. 236, Wis. Stats. regulates the subdivision of land into smaller parcels for the purpose of maintaining each of the resultant parcels as a whole; the ownership of a parcel and any buildings on that parcel are owned as one. Chapter 703, Wis. Stats. regulates condominium declarations, which allows separate ownership of land and buildings on a single parcel.

The parcel analysis described below was conducted using parcels where the land and buildings are owned as a whole, called “lots,” and on parcels where ownership is separated, called “condominiums.” Also, for the purpose of this section, condominium parcels intended for sole occupation by an owner are referred to as “units” and condominium parcels intended for occupation by multiple owners are referred to as “common areas.”

Per the records in the Door County Real Property Listing Department, as of May 2013, Door County contains 40,662 parcels, totaling 305,416 acres. That number includes all forms of ownership, including condominium land and buildings, but does not include deed gaps and overlaps, road rights-of-way, and waterbodies.

Of the 40,662 parcels, 34,455 are lots and the remaining 6,386 parcels are condominiums, consisting of units and common areas. The 34,455 lots cover 304,243 acres and average 8.8 acres in size. (See Table 10.3.) Northern Door has the most lots and lot acreage, with 19,694 lots covering 169,046 acres. Southern Door has 10,191 lots covering 129,649 acres, and the City has 4,569 lots covering 5,548 acres. Southern Door has the highest average lot size, at 12.7 acres, followed by Northern Door, at 8.6 acres, and the City, at 1.2 acres.

**Table 10.3: Lot Parcels, Door County Areas**

Municipality	# Vacant Lots	# Improved Lots	Total # of Lots	Total Lot Acres	Ave. Lot Size (ac.)
Northern Door	9,271	10,423	19,694	169,046	8.6
Southern Door	4,865	5,325	10,190	129,649	12.7
City of Sturgeon Bay	889	3,682	4,571	5,548	1.2
<b>Total</b>	<b>15,025</b>	<b>19,430</b>	<b>34,455</b>	<b>304,243</b>	<b>8.8</b>

Source: *Door County Real Property Listing, May 2013*.

Of the 34,455 lots in Door County, 15,025 (44%) are vacant and 19,390 (56%) have “improvements.” Both Northern Door and Southern Door have approximately the same percentage of lots with improvements, between 52-53%; while 80% of the City of Sturgeon Bay’s lots have improvements.

Table 10.4 shows the number and percentage of lots by size. Of the county’s 34,455 lots, over one-half are less than 2 acres in size and approximately 67% are less than 5 acres in size. Only 2,146 (6.2%) of all lots in the county are 40 acres or greater in size. The remaining 6,386 parcels consist of condominium units and common areas, which cover 1,173 acres. Out of these parcels, 6,208 are condominium units, with 5,209 (84%) of those units located in Northern Door, 692 (11%) in Southern Door, and 307 (5%) in the City of Sturgeon Bay. (See Table 10.5.) Out of the 6,208 condominium units in the county, 5,121 (82%) have improvements.

**Table 10.4: Lot Sizes**

Size (ac.)	#	%
0 - .171	1,284	3.7%
.172 - .499	5,445	15.8%
.500 - .999	5,045	14.7%
1.000 - 1.999	6,213	18.0%
2.000 - 4.999	4,978	14.5%
5.000 - 9.999	3,179	9.2%
10.000 - 19.999	2,333	6.8%
20.000 - 39.999	3,799	11.0%
40.000+	2,146	6.2%
<b>Total</b>	<b>34,422</b>	<b>100.0%</b>

Source: *Door County Real Property Listing, May 2013.*

**Table 10.5: Condominium Units, Door County Areas**

Municipality	# Vacant	# Improved	Total # of
	Units	Units	Units
Northern Door	928	4,281	5,209
Southern Door	148	544	692
City of Sturgeon Bay	11	296	307
<b>Total</b>	<b>1,087</b>	<b>5,121</b>	<b>6,208</b>

Source: *Door County Real Property Listing, May 2013.*

## **ASSESSMENT LAND USE CATEGORIES**

An assessment is the value placed upon property, which in turn determines how much property tax will be owed for that property. The local assessor of each taxation district, the towns, villages, and city determines the assessed value of all taxable property, with the exception of manufacturing property. The Wisconsin Department of Revenue (DOR) makes the annual assessment of all manufacturing property in the state. Assessment land use categories are established by the DOR, with the eight statutory classifications for real property as follows: (1) residential, (2) commercial, (3) manufacturing, (4) agricultural, (5) undeveloped, (6) agricultural forest, (7) productive forest land, and (8) other; see below for more information. Note that a single parcel of land may include multiple assessment categories. Also described below is the DNR forest crop land category, which gets taxed under special provisions in the state statutes.

- **Residential** - This assessment category is used for land upon which a dwelling unit is located, but also includes vacant land where the most likely use would be for residential development. Land that does not fit into any other category is also assessed as residential. According to state statute guidelines, apartment buildings of less than four units are to be classified as

residential and buildings with four units or more are to be classified as commercial. Note, however, that in practice, some local assessors are assessing apartment buildings of four or more units as residential.

- **Commercial** - This category includes all land and improvements primarily devoted to the buying and reselling of goods for a profit. As mentioned previously, apartment buildings of four or more units should also be classified as commercial, but in practice some local assessors assess these properties as residential.
- **Manufacturing** - This category includes all land, buildings, structures, and other real property used in manufacturing, assembling, processing, fabricating, making, or milling tangible personal property. It also includes warehouse, storage facilities, or offices in support of the manufacturing property.
- **Agricultural** - This category is used for farms, ranches, dairies, nurseries, orchards, and other land devoted primarily to the production of crops, plants, vines, or trees (excluding forestry operations). It also applies to the keeping, grazing, or feeding of livestock and animal specialties such as horses, rabbits, bees, pets, and fish. Agricultural land is assessed at its use value.
- **Undeveloped Land** - This category includes areas commonly called marshes, swamps, thickets, bogs, or wet meadows. This class also includes fallow tillable land (assuming agricultural use is the land's highest and best use), road rights-of-way, ponds, depleted gravel pits, and land that, because of soil or site conditions, is not producing or capable of producing commercial forest products. Undeveloped land is assessed at 50% of full value.
- **Agricultural Forest** - This category is used for land that is producing or is capable of producing commercial forest products if the land is: contiguous to a parcel that has been classified in whole as agricultural land (the contiguous agricultural parcel must have the same owner); located on a parcel that contains agricultural land; or located on a parcel where at least 50% of the acreage was converted to agricultural land. Agricultural forest land is assessed at 50% of full value.
- **Productive Forest Land** - Forested land that does not meet the "agricultural forest" criteria outlined above is assessed as "productive forest land." This category includes land that is producing, or capable of producing, commercial forest product, including forested areas being managed or set aside to grow tree crops for industrial wood or to obtain tree products such as sap, bark, or seeds. Forested areas that are not being used commercially are included in this classification.
- **Other** - This category is used for buildings and improvements for the families of farm operators, including spouse, children, parents, and grandparents.
- **DNR Forest Crop Land** - The Forest Crop Law program, in effect 1927-1985, was designed to encourage sound forestry practices and to stimulate the economies of the northern counties. Prior to this program, forest land was assessed on the value of the land plus the value of the standing timber crop, encouraging premature cutting and discouraging long-term investment in forestry. Under the Forest Crop Law, forest land entered into this program is taxed at a constant rate while the timber is taxed according to its value when harvested. The Forest Crop Law was replaced by the Managed Forest Law (MFL) in 1986, although properties may still be under contract per the previous program.

The MFL is a landowner incentive program that encourages sustainable forestry on private woodlands in Wisconsin. The law incorporates timber harvesting, wildlife management, water quality, and recreation to maintain a healthy and productive forest. To participate in the MFL program, landowners designate property as “Open” or “Closed” to public access for recreation, and commit to a 25- or 50-year sustainable forest management plan. The plan sets the schedule for specific forestry practices which landowners must complete. In return, MFL participants make a payment in lieu of regular property taxes plus a yield tax on harvested trees. Yield taxes go to the local municipality to help offset the annual property taxes that are deferred while properties are enrolled in the MFL.

In addition to the eight DOR assessment categories listed above, the Door County Real Property Listing database uses a tax-exempt classification for public and non-profit ownership. Also, some parcels will not be assessed at all, because they are newly created or are assessed as part of an associated parcel, such as condominium common areas and some easements.

Table 10.6, based on Door County Real Property Listing Department records as of May 2013, shows acreage of DOR land use assessment categories and its percentage of total assessed acres for Door County and its sub-county areas. Note that Table 10.6 does not include DNR forest crop land nor does it show tax-exempt and other properties without a DOR assessment category (i.e., common areas, easements assessed as part of another parcel, etc.). As noted above, a tax parcel may be assessed in more than one category; thus, the total number of acres shown in each assessment category row in Table 10.6 reflects the actual acreage in that assessment category, not the acreage of parcels that contain that assessment category.

**Table 10.6: Real Property Listing Land Use Assessment Categories, Door County**

	Door County		Northern Door		Southern Door		City	
	Ac.	%	Ac.	%	Ac.	%	Ac.	%
Residential	62,690	25.5%	51,267	40.2%	9,533	8.3%	1,890	46.1%
Commercial	6,558	2.7%	3,920	3.1%	1,543	1.3%	1,095	26.7%
Mfg.	252	0.1%	29	0.0%	57	0.0%	166	4.1%
Agricultural	105,717	42.9%	42,424	33.2%	62,945	55.0%	348	8.5%
Undeveloped	30,281	12.3%	10,843	8.5%	18,873	16.5%	565	13.8%
Pro. For.	23,008	9.3%	12,083	9.5%	10,898	9.5%	27	0.7%
Other	1,843	0.7%	745	0.6%	1,093	1.0%	5	0.1%
Ag. For.	15,864	6.4%	6,357	5.0%	9,507	8.3%	0	0.0%
<b>Total</b>	<b>246,213</b>	<b>100.0%</b>	<b>127,668</b>	<b>100.0%</b>	<b>114,449</b>	<b>100.0%</b>	<b>4,096</b>	<b>100.0%</b>

Source: *Door County Real Property, May 2013.*

\* This table contains data for only those properties that have an associated assessment land use category; it therefore does not include tax-exempt properties or newly-created properties.

County-wide, the top three assessed categories are “agricultural,” at almost 43% of all the assessed land; “residential,” at over 25%; and “undeveloped,” at over 12%. “Productive forest” accounts for over 9% of all the assessed land in the county. The remaining 11% or so of the county’s assessed land area is a mixture of assessment types. Note that these assessment categories differ significantly from the land use inventory data due to the way land is assessed versus how it was inventoried. For example, the “residential” assessment category acreage of 62,690 is markedly greater than the field-surveyed inventory county-wide acreage of 15,952 acres (Table 10.1) due to the fact that land that does not fall into any one of the DOR categories defined above is categorized as residential by the assessors. For example, a vacant lot that is not in agricultural production, fallow, or being used for any of the other land use categories is given a “residential” assessment, whether there is a house on it or not. In comparison, the land use inventory survey was conducted based on visual appearance: the same vacant lot that is categorized as “residential” for assessment purposes would have been coded as “open space,” within the natural areas category, for the purpose of the land use inventory.

Over 40% of Northern Door is assessed as “residential,” over 33% as “agricultural,” and the remaining 27% as a mixture of other uses. Southern Door is assessed as 55% “agricultural,” slightly over 16% “undeveloped,” and over 8% “residential.” The City is assessed as just over 46% “residential” and over 26% “commercial,” with “undeveloped” the third largest category, at over 13%.

## **PROPERTY ASSESSMENT VALUES**

*Note: All figures listed in this section are from the Door County Real Property Listing Department and are to be used as general guidelines only. The databases used for this analysis contain a mixture of assessment value years: the 2002 figures contain all 2002 assessment values; the 2008 figures are approximately two-thirds 2008 assessment values and one-third 2009 assessment values; and the 2013 figures are approximately one-half 2012 assessments values and one-half 2013 assessment values.*

*Assessment information given for “land values” includes assessed values for land only, exclusive of improvements, regardless of whether the parcel is vacant or improved. Assessment information given for “improvement values” includes only improvements; no land values are included.*

*Assessment information given for “improved values” includes land and improvement values only for parcels that have an improvement value greater than zero. All dollar values are inflation-adjusted to 2013.*

## **ALL ASSESSMENT CATEGORIES**

Tables 10.7 - 10.10 contain information on combined totals for the eight DOR statutory assessment categories described previously. DNR forest crop land, tax-exempt, and other unassessed parcels (i.e., common areas) are not included in these totals.

### **All Assessed Land**

The total value of all assessed land in Door County in 2013 was over \$3.0 billion. (See Table 10.7.) For the same year, the average value of land on a per acre basis was \$12,475. The City of Sturgeon Bay had the highest average assessed value per acre, at \$46,187, followed by Northern Door at \$18,864, and Southern Door at \$4,142.

**Table 10.7: All Assessed Land Values, Door County Areas**

Area	\$	Ac.	Per Acre Average
Northern Door	\$2,408,360,500	127,668	\$18,864
Southern Door	\$474,002,400	114,449	\$4,142
City	\$189,183,400	4,096	\$46,187
<b>Door County</b>	<b>\$3,071,546,300</b>	<b>246,213</b>	<b>\$12,475</b>

*Source: Door County Real Property Listing, May 2013.*

### **All Assessed Improvements**

The total assessed value of all real estate improvements excluding land in Door County as of 2013 was over \$4.1 billion. (See Table 10.8.) (Note: Tax-exempt properties that contain buildings are given an improvement value of \$0.) Door County’s average improvement value (excluding land) per tax parcel in 2013 was \$168,256. Northern Door had the highest average improvement value per parcel, at \$194,855, followed by the City at \$146,693, and Southern Door at \$116,228.

**Table 10.8: All Assessed Improvements, Door County Areas**

<b>Area</b>	<b>\$</b>	<b># Parcels</b>	<b>Per Parcel Average</b>
Northern Door	\$2,865,153,700	14,704	\$194,855
Southern Door	\$682,144,900	5,869	\$116,228
City	\$583,546,100	3,978	\$146,693
<b>Door County</b>	<b>\$4,130,844,700</b>	<b>24,551</b>	<b>\$168,256</b>

Source: *Door County Real Property Listing, May 2013.*

### All Assessed Improved Land

In 2013, Door County had a total improved parcel value of over \$6.5 billion, including land and improvement values. (See Table 10.9.) All parcels with improvement values greater than zero are included.) For the same year, the average assessed value for improved land was \$266,747 on a per parcel basis and \$58,609 on a per acre basis. Northern Door had the highest per parcel average, at \$322,772; southern Door and the City were at \$178,984 and \$189,140, respectively. On the other hand, the City had the highest per acre assessment average, at \$283,282. Southern Door had the lowest, at \$22,257.

**Table 10.9: All Assessed Improved Land, Door County Areas**

<b>Area</b>	<b>\$</b>	<b># Parcels</b>	<b>Acres</b>	<b>Per Parcel Average</b>	<b>Per Acre Average</b>
Northern Door	\$4,746,041,300	14,704	61,886	\$322,772	\$76,690
Southern Door	\$1,050,460,000	5,869	47,196	\$178,984	\$22,257
City	\$752,397,000	3,978	2,656	\$189,140	\$283,282
<b>Door County</b>	<b>\$6,548,898,300</b>	<b>24,551</b>	<b>111,738</b>	<b>\$266,747</b>	<b>\$58,609</b>

Source: *Door County Real Property Listing, May 2013.*

### All Assessed Property Trends

The total assessed value of Door County real estate (land and improvements) for tax purposes, as of May 2013, was over \$7.2 billion. (See Table 10.10.) The total value of all land in the county was over \$3.0 billion and the total value of all improvements was over \$4.1 billion. Between 2002 and 2013, the total assessed value for both land and improvements increased by 33%; the total assessed value for land increased by 29%, and the total assessed value for improvements increased by 35%.

**Table 10.10: All Assessed Property Trend, Door County**

<b>Year</b>	<b>Acres</b>	<b>Land</b>	<b>Improvement</b>	<b>Total</b>
		<b>Assessment</b>	<b>Assessment</b>	
2002*	253,136	\$2,377,974,165	\$3,055,759,125	\$5,433,733,290
2013	246,213	\$3,071,546,300	\$4,130,844,700	\$7,202,391,000
<b># Change</b>	<b>-6,923</b>	<b>\$693,572,135</b>	<b>\$1,075,085,575</b>	<b>\$1,768,657,710</b>
<b>% Change</b>	<b>-3%</b>	<b>29%</b>	<b>35%</b>	<b>33%</b>

Source: *Door County Real Property Listing.*

\*Inflation-adjusted to 2013.

Note that the total assessed acreage of the county is shown as having decreased by 6,923 acres, a difference at least partially attributable to enrollment of land into the DNR Managed Forest Law program, explained in more detail below.

Table 10.11 below shows total acres for DOR land use categories, including DNR Forest Crop Land and tax-exempt properties. The largest decrease occurred in the “productive forest” category, where there was a loss of 16,265 acres; it is likely that much of this land was converted to “agricultural forest.” Prior to 2004, forested land adjacent to agricultural uses was classified as Productive Forest.

In 2003, Wisconsin Act 230 created the “agricultural forest” category, s. 70.32(2)(c)1d, Wis. Stats., which defined “agricultural forest” as land that is producing or is capable of producing commercial forest products, if the land satisfies specified conditions, including being adjacent to agricultural land. As mentioned previously, agricultural forest land is assessed at 50% of its full value. In 2013, the “agricultural forest” category had 15,864 acres.

**Table 10.11: Real Property Listing Land Use Assessment Categories, Door County**

	2002		2013		2002 - 2013	
	Ac.	%	Ac.	%	# Change	% Change
Residential	69,546	23.3%	62,690	23.2%	-6,856	-9.9%
Commercial	5,985	2.0%	6,558	2.4%	573	9.6%
Mfg.	405	0.1%	252	0.1%	-153	-37.8%
Agricultural	113,351	37.9%	105,717	39.1%	-7,634	-6.7%
Undeveloped	22,328	7.5%	30,281	11.2%	7,953	35.6%
Pro. For.	39,273	13.1%	23,008	8.5%	-16,265	-41.4%
Other	2,249	0.8%	1,843	0.7%	-406	-18.1%
Agr. For.	--	--	15,864	5.9%	--	--
DNR & Exempt	45,593	15.3%	53,034	17.7%	7,441	16.3%
<b>All Land Uses</b>	<b>298,730</b>	<b>100.0%</b>	<b>299,247</b>	<b>110.6%</b>	<b>517</b>	<b>0.2%</b>

Source: *Door County Real Property, 2002 and May 2013*.

The second largest decrease occurred in the “agricultural” category, which decreased by 7,634 acres, followed by the “residential” category, at 6,856 acres. As discussed in Chapter 7, Agricultural Resources, the county has been experiencing a decline in agriculture, in large part due to the loss of dairy farming. The 6,856 residential acre decrease is likely due to conversion to either “undeveloped” land or into the DNR Managed Forest Law (MFL) program. Typically, a vacant forested property not enrolled in the MFL program will be assessed as “residential” and pay out more in taxes.

## RESIDENTIAL ASSESSMENT CATEGORY

### Residentially Assessed Land

Table 10.12 below shows the total land value (improvements are excluded), acres, and average value per acre of residentially assessed land for Door County and its sub-county areas. County-wide, in 2013 there were 62,690 total acres of residentially assessed land, valued at over \$2.6 billion and averaging \$42,667 per acre in value. Northern Door by far had the most residentially assessed land in the county at 51,267 acres (82% of the total residentially assessed land), compared to Southern Door with 9,533 acres (15%) and the City with 1,890 acres (3%). Both Northern Door and Southern Door had approximately equivalent average assessed values per acre, at \$42,250 and \$40,378, respectively. The City had 1,890 acres of residentially assessed land, averaging \$65,531 per acre in value.

**Table 10.12: All Residentially Assessed Land Values, Door County Areas**

Area	\$	Acres	Per Acre Ave.
Northern Door	\$2,166,047,900	51,267	\$42,250
Southern Door	\$384,922,900	9,533	\$40,378
City	\$123,854,000	1,890	\$65,531
<b>Door County</b>	<b>\$2,674,824,800</b>	<b>62,690</b>	<b>\$42,667</b>

Source: *Door County Real Property Listing, May 2013*.

### Residentially Assessed Improvements

Table 10.13 below shows the total improvement value, number of parcels, and the average value of improvements on a per parcel basis for residentially assessed properties in Door County and its sub-county areas. In 2013, there were 21,060 parcels with residential improvements valued (excluding land) at almost \$3.5 billion. The average residentially assessed improvement value per parcel for the county was \$166,019. Northern Door had the highest per parcel average, at \$196,091, followed by Southern Door, \$120,414, and the City, \$116,101.

**Table 10.13: Residentially Assessed Improvements,  
Door County Areas**

Area	\$	# Parcels	Per Parcel
			Ave.
Northern Door	\$2,526,442,500	12,884	\$196,091
Southern Door	\$582,320,300	4,836	\$120,414
City	\$387,775,700	3,340	\$116,101
<b>Door County</b>	<b>\$3,496,358,500</b>	<b>21,060</b>	<b>\$166,019</b>

Source: *Door County Real Property Listing, May 2013.*

\* These figures include residential improvement values only; land values are not included.

### Residentially Assessed Improved Land

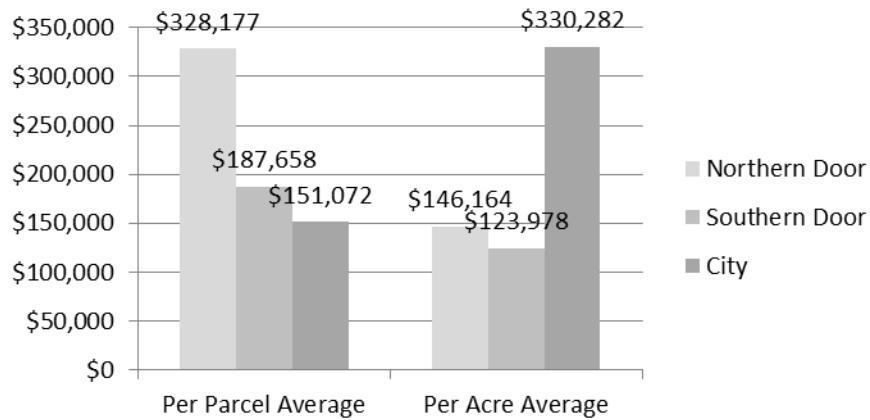
Average assessed values for residentially improved land are shown in Table 10.14 and Figure 10.1 below. For residential land in Door County in 2013, the total improved parcel value was over \$5.6 billion, with the average improved value at \$269,881 per parcel and \$150,518 per acre. Northern Door had the highest average value per parcel, at \$328,177, and the City had the highest average value per acre, at \$330,282. The City had the lowest average value per improved residential parcel, at \$151,072, while Southern Door had the lowest per acre average, at \$123,978.

**Table 10.14: Residentially Assessed Improved Land, Door County**

Area	\$	# Parcels	Acres	Per Parcel Average	Per Acre Average
Northern Door	\$4,228,236,700	12,884	28,928	\$328,177	\$146,164
Southern Door	\$907,515,400	4,836	7,320	\$187,658	\$123,978
City	\$500,047,700	3,310	1,514	\$151,072	\$330,282
<b>Door County</b>	<b>\$5,683,703,400</b>	<b>21,060</b>	<b>37,761</b>	<b>\$269,881</b>	<b>\$150,518</b>

Source: *Door County Real Property Listing, May 2013.*

**Figure 10.1: Residentially Assessed Improved Land, Door County Areas**



Source: *Door County Real Property Listing, May 2013.*

### All Residentially Assessed Property Trend

Between 2002 and 2013, total assessed residential acreage in the county decreased by 9%, while the total value of all residentially assessed land and improvements increased by 33%. (See Table 10.15.) As mentioned previously, it is likely that the large majority of the 6,586 residential acres “lost” between 2002 and 2013 were enrolled in the DNR Managed Forest Law program in order to take advantage of lower taxes.

**Table 10.15: Trend in All Residentially Assessed Property, Door County**

Year	Acres	Land	Improvement	\$ Total
		Assessment	Assessment	
2002*	69,546	\$2,040,003,539	\$2,434,400,809	\$4,474,404,348
2013	62,960	\$2,714,004,551	\$3,547,754,381	\$6,261,758,932
<b># Change</b>	<b>-6,586</b>	<b>\$674,001,012</b>	<b>\$1,113,353,572</b>	<b>\$1,787,354,584</b>
<b>% Change</b>	<b>-9%</b>	<b>33%</b>	<b>46%</b>	<b>40%</b>

Source: *Door County Real Property Listing, 2002 and May 2013.*

\*Inflation-adjusted to 2013.

### COMMERCIAL ASSESSMENT CATEGORY

#### Commercially Assessed Land

Table 10.16 below shows the total land value, acres, and average value per acre of commercially assessed land for Door County and its sub-county areas. In 2013, there were 6,558 acres of commercially assessed land, valued at almost \$250 million and with an average per acre value of \$38,069. Northern Door had the most acreage of commercially assessed land, at 3,920 acres, followed by Southern Door, 1,542 acres, and the City, 1,095 acres. The City’s commercially assessed land had the highest average value, at \$59,240 per acre, followed by Northern Door, \$42,453 per acre, and Southern Door, \$11,908 per acre.

**Table 10.16: Commercially Assessed Land, Door County Areas**

Area	\$	Acres	Per Acre Average
Northern Door	\$166,416,600	3,920	\$42,453
Southern Door	\$18,373,600	1,543	\$11,908
City	\$64,867,400	1,095	\$59,240
<b>Door County</b>	<b>\$249,657,600</b>	<b>6,558</b>	<b>\$38,069</b>

Source: *Door County Real Property Listing, May 2013.*

#### Commercially Assessed Improvements

Table 10.17 below shows the total value of improvements, the total number of improved parcels, and the average value of improvements on a per parcel basis for commercially assessed properties for Door County and its sub-county areas. In 2013, there were 2,492 parcels county-wide with commercially assessed improvements (excluding land), valued at over \$528 million and averaging \$212,045 per parcel. The City had the highest value per parcel, at \$307,510, followed by Northern Door, \$200,279, and Southern Door, \$101,101.

**Table 10.17: Commercially Assessed Improvements, Door County Areas**

Area	\$	# of Parcels	Per Parcel
			Average
Northern Door	\$293,208,200	1,464	\$200,279
Southern Door	\$39,631,500	392	\$101,101
City	\$195,576,100	636	\$307,510
<b>Door County</b>	<b>\$528,415,800</b>	<b>2,492</b>	<b>\$212,045</b>

Source: Door County Real Property Listing, May 2013.

\* These figures include commercial improvement values only; land values are not included.

### Commercially Assessed Improved Land

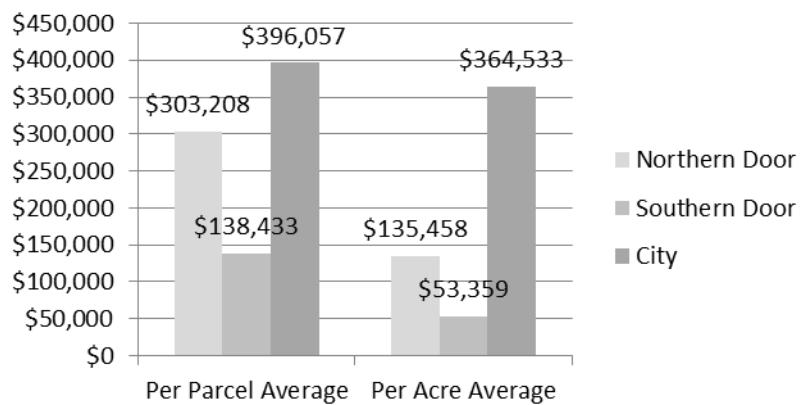
Average values for commercially assessed improved land are shown in Table 10.18 and Figure 10.2 below. In 2013, county-wide there were a total of 2,492 improved commercial parcels and 5,040 acres, valued at over \$750 million. The average value of these parcels was \$300,985 per parcel and \$148,820 per acre. The City had the highest average value per commercially improved parcel, at \$396,057, and also the highest average value per acre, at \$364,533. Southern Door had the lowest average value per commercially improved parcel, at \$138,433, and the lowest average value per acre, at \$53,359.

**Table 10.18: Commercially Improved Land, Door County Areas**

Area	\$	# Parcels	Acres	Per Parcel	Per Acre
				Average	Average
Northern Door	\$443,895,800	1,464	3,277	\$303,208	\$135,458
Southern Door	\$54,265,600	392	1,017	\$138,433	\$53,359
City	\$251,892,200	636	691	\$396,057	\$364,533
<b>Door County</b>	<b>\$750,053,600</b>	<b>2,492</b>	<b>5,040</b>	<b>\$300,985</b>	<b>\$148,820</b>

Source: Door County Real Property Listing, May 2013.

### Figure 10.2: Commercially Improved Land, Door County Areas



Source: Door County Real Property Listing, May 2013.

### All Commercially Assessed Property Trend

Between 2002 and 2013, total commercially assessed acres increased by 573 acres (10%) and the total value of that acreage and its improvements increased by 11%. (See Table 10.19.) Both land and improvement values increased between 11% and 12% for the same timeframe.

**Table 10.19: Trend in All Commercially Assessed Property, Door County**

<b>Year</b>	<b>Acres</b>	<b>Land Assessment</b>	<b>Improvement Assessment</b>	<b>\$ Total</b>
2002*	5,985	\$226,464,043	\$485,046,870	\$711,510,913
2013	6,558	\$253,314,483	\$536,155,821	\$789,470,304
<b># Change</b>	<b>573</b>	<b>26,850,440</b>	<b>51,108,951</b>	<b>77,959,391</b>
<b>% Change</b>	<b>10%</b>	<b>12%</b>	<b>11%</b>	<b>11%</b>

Source: *Door County Real Property Listing*.

\*Inflation-adjusted to 2013.

### AGRICULTURAL AND UNDEVELOPED ASSESSMENT CATEGORIES

The assessed value of agricultural land is based on its use in agriculture, its ability to generate agricultural income rather than its fair market value (see below for discussion of fair market value). This valuation standard is referred to as “use value” assessment, for which the state uses four different formulas based on the productivity of the land for calculating value. Agricultural land is exclusive of buildings and improvements that are devoted primarily to agricultural use; buildings and improvements on a farm, such as barns, houses, and silos, are separately classified and assessed at fair market value. “Undeveloped” land, as described previously, includes fallow fields and is assessed at 50% of full value. The assessment amounts shown for agricultural and undeveloped land are generally well below the potential sale value.

Table 10.20 below shows the total value, total acres, and average value per acre of agriculturally and undeveloped assessed land for Door County and its sub-county areas. County-wide, there were 105,717 total acres of agriculturally assessed property, valued at almost \$18 million and averaging \$170 per acre in 2013. For the same year, there were 30,281 total acres of undeveloped assessed land, valued at over \$26 million and averaging \$863 per acre.

**Table 10.20: Agriculturally and Undeveloped Assessed Land, Door County Areas**

<b>Area</b>	<b>Agricultural</b>			<b>Undeveloped</b>		
	<b>\$</b>	<b>Acres</b>	<b>Per Acre Average</b>	<b>\$</b>	<b>Acres</b>	<b>Per Acre Average</b>
Northern Door	\$7,413,900	42,424	\$175	\$12,190,100	10,843	\$1,124
Southern Door	\$10,532,200	62,945	\$167	\$13,696,800	18,873	\$726
City	\$53,200	347	\$153	\$255,800	565	\$453
<b>Door County</b>	<b>\$17,999,300</b>	<b>105,717</b>	<b>\$170</b>	<b>\$26,142,700</b>	<b>30,281</b>	<b>\$863</b>

Source: *Door County Real Property Listing, May 2013*.

### All Agriculturally and Undeveloped Assessed Property Trends

According to the Real Property Listing database, the total acreage of assessed agricultural land in Door County declined by 7,634 acres (7%) between 2002 and 2013. (See Table 10.21.) For that same time period, the total acreage of assessed undeveloped land increased by 7,953 acres (122%). It is likely that the large majority of the 7,634 acres previously assessed as agricultural became “undeveloped,” if a fallow field, or converted to DNR forest crop land, in order to take advantage of lower taxes.

**Table 10.21: Trend in Agriculturally and Undeveloped Assessed Property, Door County**

<b>Tax Year</b>	<b>Agricultural</b>		<b>Undeveloped</b>	
	Acres	Land Assessment	Acres	Land Assessment
2002*	113,351	\$29,982,883	22,328	\$11,754,200
2013	105,717	\$18,262,946	30,281	\$26,142,700
<b># Change</b>	<b>-7,634</b>	<b>-\$11,719,937</b>	<b>7,953</b>	<b>\$14,388,500</b>
<b>% Change</b>	<b>-7%</b>	<b>-39%</b>	<b>36%</b>	<b>122%</b>

Source: *Door County Real Property Listing*.

\*Inflation-adjusted to 2013.

## FAIR MARKET VALUE AND PROPERTY TAX INFORMATION

### **FAIR MARKET VALUE**

Fair market value is defined as the dollar amount for which a property would be sold by a willing seller to a willing buyer under normal market conditions. According to state statutes, the assessment of properties in all assessment classes except agricultural should bear a direct relationship to the fair market value. Assessments should be uniform "at the full value which could ordinarily be obtained therefore at private sale" (s. 70.32, Wis. Stats.). This standard applies to residential, commercial, forest, other class property (farm buildings and farm sites), and the manufacturing class (which is state-assessed). The exceptions are undeveloped and agricultural forest, both of which are assessed at 50% of their full value, and agricultural property, which is assessed at its use value. Individual property values typically change every year due to inflation (or deflation), but most municipalities do not review and revalue assessments every year because it is an expensive and time-consuming process. In recognition of the difficulty in maintaining assessed values at 100% of fair market values every year, state statutes require that each major class listed above must be assessed within 10% of its full equalized value during the same year at least once every five years.

Since municipal reassessments occur at different times and are conducted by different assessors, assessed property values are not uniform across jurisdictional boundaries. In order to address this lack of uniformity, the DOR annually develops a total equalized value for each municipality in the state, independent of the local assessor's estimates. While local assessors estimate the value of each parcel within a municipality, the DOR estimates the value of the entire city, village, or town. A municipality's total equalized value is an estimate of the market value of all non-agricultural property plus the use value of agricultural lands within that municipality. Equalization is needed to measure taxable values in all municipalities using the same yardstick in order to allocate certain property tax levies, allocate state aids to local governments, and calculate allowable municipal debt. If locally assessed values were used to allocate county taxes, municipal assessors would have an incentive to deliberately undervalue property in order to decrease the burden on their taxpayers.

Changes in equalized value from year to year are caused by increases or decreases in market prices, annexation gains or losses, new construction, demolition of buildings, relocations of businesses, and changes in the taxable status of property. The DOR develops equalized values by analyzing: 1) sales, 2) use value, 3) property appraisals, 4) local reports, and 5) s. 70.57, Wis. Stats., Corrections. These methods are explained in detail in *Wisconsin's Equalized Values: The Uniform Valuation of Taxable Property*, listed in the Resources and Further Information section at the end of this chapter.

The DOR apportions county property tax levy to individual municipalities by calculating an average assessment level. A municipality's total assessed value in relationship to its total equalized value for all major assessment classes is called the assessment level, and is derived by dividing the

municipality's total assessed value by its total equalized value. Note that when the assessment level is applied to an individual parcel to determine its estimate fair market value, it is called the assessment "ratio" on the property tax bill. The assessment ratio is the same as the municipality's assessment level, but the difference is in the usage of these terms; "level" is usually used to refer to the taxation district and "ratio" to the individual parcel.

The estimated fair market value of an individual property is derived by taking the property's total assessed value and dividing it by the municipality's assessment level. Table 10.22 shows assessment levels and equalized values for each Door County municipality in 2012. For example, the EFMV of a parcel's assessed valued at \$200,000 in the Town of Baileys Harbor would be \$194,799 (\$200,000 divided by 102.67%). The EFMV is the number which is then used in calculating the property tax owed for this parcel.

**Table 10.22: Equalized Value Information by Municipality,  
Door County Municipalities**

Municipality	Total Assessed Value*	Total Equalized Value	% Assessment Level
T. Baileys Harbor	\$504,794,304	\$491,666,800	102.67%
T. Brussels	\$75,763,546	\$75,552,000	100.28%
T. Clay Banks	\$69,485,439	\$65,379,600	106.28%
T. Egg Harbor	\$551,417,445	\$527,369,400	104.56%
T. Forestville	\$79,273,625	\$82,055,300	96.61%
T. Gardner	\$229,107,076	\$225,366,000	101.66%
T. Gibraltar	\$732,138,825	\$714,490,900	102.47%
T. Jacksonport	\$295,826,806	\$270,383,700	109.41%
T. Liberty Grove	\$1,079,573,815	\$1,036,755,800	104.13%
T. Nasewaupee	\$357,768,476	\$349,417,400	102.39%
T. Sevastopol	\$712,782,660	\$699,835,700	101.85%
T. Sturgeon Bay	\$195,279,906	\$179,205,200	108.97%
T. Union	\$134,607,435	\$134,446,100	100.12%
T. Washington	\$321,456,047	\$327,415,000	98.18%
V. Egg Harbor	\$365,672,600	\$353,990,900	103.30%
V. Ephraim	\$351,444,560	\$333,470,500	105.39%
V. Forestville	\$21,477,251	\$19,475,200	110.28%
V. Sister Bay	\$429,473,810	\$409,646,900	104.84%
C. Sturgeon Bay	\$837,562,592	\$811,355,800	103.23%
<b>Door County</b>	<b>\$7,344,906,217</b>	<b>\$7,107,278,200</b>	<b>103%</b>

Source: Wisconsin Department of Revenue, Town, Village, and City Taxes, 2012; Door County Real Property Listing.

\*Numbers are calculated based on DOR numbers.

## AVERAGE ESTIMATED FAIR MARKET VALUES

Door County's total equalized value in 2012 for all land and improvements, including vacant land, was \$7,107,278,200, a decrease of \$78,083,400 (1%) from the 2007 equalized value of \$7,185,361,600, inflation-adjusted to 2012. (See Table 10.23.) The county's average equalized value in 2012 was \$174,789, a decrease of \$22,647 from the 2007 average value of \$197,436, inflation-adjusted to 2012. In 2012, Northern Door had the highest average equalized value per tax parcel, at \$207,648, followed by the City, \$165,752, and Southern Door, \$103,819. Compared to 2007 average values, inflation-adjusted to 2012, all areas had a decrease in average value, varying between 12.4% and 15.2%.

**Table 10.23: Average Equalized Values, Door County**

Municipality	2007 Average Equalized Value*	2012 Average Equalized Value	# Change	% Change
Northern Door	\$236,963	\$207,648	-\$29,315	-12.4%
Southern Door	\$119,651	\$103,819	-\$15,832	-13.2%
C. Sturgeon Bay	\$195,562	\$165,752	-\$29,810	-15.2%
<b>Door County</b>	<b>\$197,436</b>	<b>\$174,789</b>	<b>-\$22,647</b>	<b>-11.5%</b>

Source: Wisconsin Department of Revenue, Town, Village, and City Taxes; Door County Real Property Listing.

\*2012 inflation-adjusted.

### **PROPERTY TAXES**

According to Door County Real Property Listing, county property owners owed a total property tax including school, county, local, and other taxes of \$85,468,779 for the year 2012. Table 10.24 shows total property taxes owed for the years 2000, 2007, and 2012, with the 2000 and 2007 dollar amounts inflation-adjusted to 2012. The total property tax increase between 2000 and 2012 was \$7,234,345, an increase of 9.2%. Taxes increased by 18.6% between 2000 and 2007, but then fell by 7.8% between 2007 and 2012.

**Table 10.24: Property Tax Change, Door County**

	Total Taxes*	\$ Change	% Change
2000	\$78,234,434	--	
2007	\$92,747,150	\$14,512,716	18.6%
2012	\$85,468,779	-\$7,278,371	-7.8%
<b>2000 - 2012</b>	<b>--</b>	<b>\$7,234,345</b>	<b>9.2%</b>

Source: Door County Real Property Listing.

\*2012 inflation-adjusted.

Table 10.25 shows total property tax owed by sub-county areas and its percentage of total county property tax. Northern Door paid the highest percentage, at over 61%, followed by the City, at over 20%, and Southern Door, at 18%.

**Table 10.25: Property Taxes, Door County Areas**

Municipality	Property Tax	% of Total	
		Total	County
Northern Door	52,526,842	61.5%	
Southern Door	15,379,719	18.0%	
C. Sturgeon Bay	17,562,218	20.5%	
<b>Door County</b>	<b>85,468,779</b>	<b>100.0%</b>	

Source: Door County Real Property Listing, May 2013.

A slight majority of the real estate taxes, 51.3% of the total, are paid by Door County resident property owners, while the other 48.7% is paid by non-Door County residents (as determined by zip codes to which tax bills are mailed). Table 10.26 shows Door County zip codes (post offices) to which Door County property tax bills were sent in 2012, the number of tax bills sent out for each zip code, the real estate taxes owed from those bills, and the percent that amount represents of the total real estate taxes owed in the county. Note that the taxes owed include only real estate taxes and not personal property, district, special, or forest taxes.

**Table 10.26: Property Tax Mailing Address Zip Codes, Door County**

<b>Door County Zip Codes to Which Tax Bills are Sent</b>	<b>No. of Tax Bills Sent to Zip Code</b>	<b>2012 Real Estate Taxes Owed</b>	<b>% of Total Taxes</b>
54202 (Baileys Harbor)	1,353	\$2,449,659	2.9%
54204 (Brussels)	1,345	\$2,102,590	2.5%
54209 (Egg Harbor)	1,349	\$2,501,237	2.9%
54210 (Ellison Bay)	893	\$1,682,814	2.0%
54211 (Village of Ephraim)	326	\$1,048,530	1.2%
54212 (Fish Creek)	1,105	\$2,512,014	2.9%
54213 (Forestville)	984	\$1,005,019	1.2%
54234 (Village of Sister Bay)	1,449	\$3,477,883	4.1%
54235 (City of Sturgeon Bay)	11,791	\$24,556,881	28.7%
54246 (Washington Island)	880	\$1,492,862	1.7%
54201 (Algoma)*	333	\$365,018	0.4%
54217 (Luxemburg)**	505	\$638,650	0.7%
<b>Total In-County</b>	<b>22,313</b>	<b>\$43,833,157</b>	<b>51.3%</b>
<b>Total Out-of-County</b>	<b>18,349</b>	<b>\$41,635,624</b>	<b>48.7%</b>
<b>Total</b>	<b>40,662</b>	<b>\$85,468,781</b>	<b>100.0%</b>

Source: *Door County Real Property Listing, May 2013.*

\* These are residents in the Towns of Clay Banks and Forestville that have an Algoma mailing address.

\*\*These are residents in the Towns of Brussels and Union that have a Luxemburg mailing address.

## TAX-EXEMPT PROPERTIES

1,953 parcels in Door County, comprising a total of 29,757 acres, are exempt from property taxes. Approximately 15,060 acres (51%) of that total is owned by the state, the majority of that by the DNR.

Of the 29,757 acres exempt from property taxes, the municipalities, agencies, and non-profit organizations shown in Table 10.27 account for almost 89% of that total.

**Table 10.27: Tax Exempt Properties, Door County**

<b>Agency</b>	<b>Acres</b>
State of Wisconsin	15,060
Nature Conservancy	2,752
Door County Land Trust	2,208
Municipalities	1,752
Door County	1,747
Ridges Sanctuary	1,577
UW Board of Regents	774
U.S. Government	568
<b>Total</b>	<b>26,438</b>

Source: *Door County Real Property Listing, May 2013.*

## MULTIPLE LISTING SERVICE VALUES

### MULTIPLE LISTING SERVICE MARKET VALUES

Roughly 90% of all real estate sold in Door County is listed with the Door County Board of REALTORS® Multiple Listing Service (MLS). Therefore, MLS records provide a more accurate indication as to actual market values (rather than assessed) and trends for real estate in the county. All of the following information was taken or calculated using information from the MLS for the dates cited. All figures from the MLS are for Door County real estate sold, except for the information on recent active listings.

### OVERALL INFORMATION

Table 10.28 shows the number of MLS properties sold, total sold price, and average sold price in Door County for the years 2003, 2007, and 2013. Between 2003 and 2013, the total sold price decreased by over \$28 million (17%), and the average sold price decreased by over \$53,000 (21%), from \$254,543 to \$201,193. The total number of properties sold and total sold price hit their peak in 2007, at 742 sales with a value of over \$188 million. In 2013, there were 696 sales with a total value of over \$140 million.

**Table 10.28: Multiple Listing Service, Total Properties Sold, Door County**

Year	Total Properties Sold		Ave. Sold Price	
	Total Sold	Total Sold Price	Ave. Sold Price	Total Sold
2003*	663	\$168,761,927	\$254,543	
2007*	742	\$188,360,569	\$253,855	
2013	696	\$140,030,559	\$201,193	
<b>2003 - 2013</b>				
# Change	33	-28,731,368	-53,350	
% Change	5.0%	-17.0%	-21.0%	

Source: Door County Multiple Listing Service, for the years cited.

\* Inflation-adjusted to 2013.

### MULTIPLE LISTING SERVICE PROPERTIES SOLD IN DOOR COUNTY, 2003-2013, BY CLASS AND TYPE

Table 10.29 shows MLS real estate sales in Door County for 2003, 2007, and 2013 by real estate class consisting of commercial/industrial, condominium, land, or residential. It also shows real estate class by types, consisting of inland, waterfront/view, or category of condominium. Note that most or all condominium listings – “Condominium, Residential” or “Condominium, Hotel” – are also included in one of the residential categories, “Residential, Inland” or “Residential, Waterfront/View.” Note, too, that all classes, except those described as “vacant land,” are improved properties.

**Table 10.29: MLS, Number of Sales by Class and Type, Door County**

Number Sold by Real Estate Class and Type	Change 2003 - 2013				
	2003	2007	2013	#	%
Commercial/Industrial	10	26	27	17	170%
Land, Inland*	143	177	122	-21	-15%
Land, Waterfront/View*	48	29	21	-27	-56%
Residential, Inland	205	247	286	81	40%
Residential, Waterfront/View	69	68	72	3	4%
Condominium, Residential	128	139	111	-17	-13%
Condominium, Hotel	34	41	32	-2	-6%

Source: Door County Multiple Listing Service, for the years cited.

\* Land, Inland and Land, Waterfront/View are both vacant land.

The number of sales for commercial/industrial land was 17 more in 2013 than in 2003, an increase of 170%. For condominiums, both residential and hotel, the number of sales peaked in 2007, but then dropped between 2007 and 2013. Overall, between 2003 and 2013, the sales of residential condominiums dropped by 13% and the sales of hotel condominiums dropped by 6%. Inland land sales also peaked in 2007, but then dropped in 2013 to below 2003 sales, a decrease of 15% between 2003 and 2013. Waterfront/view land sales decreased significantly between 2003 and 2013, with a 56% drop. For the same timeframe, inland residential home sales grew significantly, at 40%, and waterfront/view sales grew slightly, at 4%.

### Residential Sales

Tables 10.30 - 10.33 show MLS figures for total properties sold, total value of those sales, the average sold price for inland homes, waterfront/view homes, condominiums, and hotel condominiums. (Again, note that the inland and waterfront/view categories also include condominium and hotel condominium unit sales.) In the “total” row for tables 10.30 - 10.33, the average sold price figure is the average sold price for all sales during the years listed (2003, 2007, and 2013), while the percent change in average sold price represents the change in average price between 2003 and 2013. All dollar values are inflation-adjusted to 2013.

The average sold price for all residential categories except hotel condominiums peaked in 2007 and then fell to below 2003 average sold prices in 2013. Residential inland home sales were the most stable, with average sold price decreasing by only 1.6%, from \$200,950 to \$197,823, between 2003 and 2013 (see Table 10.30).

**Table 10.30: MLS, Inland Homes Sold, Door County**

Year	Total Number Sold	Total Sold Price	Average Sold Price
2003*	205	\$41,194,711	\$200,950
2007*	247	\$49,887,946	\$201,975
2013	286	\$56,577,276	\$197,823
<b>2003 - 2013</b>			
# Change	81	\$15,382,565	-\$3,127
% Change	<b>39.5%</b>	<b>37.3%</b>	<b>-1.6%</b>

Source: Door County Multiple Listing Service, for the years cited.

\*Inflation-adjusted to 2013.

The average sold price for waterfront/view homes fluctuated much more than inland homes, hitting a high of \$789,714 in 2007 and dropping to a low of \$450,814 in 2013. Overall, between 2003 and 2013, the average sold price decreased by \$191,951, almost 30%. (See Table 10.31.)

**Table 10.31: MLS, Waterfront/View Homes Sold, Door County**

Year	Total Number Sold	Total Sold Price*	Average Sold Price*
2003*	69	\$44,350,793	\$642,765
2007*	55	\$43,434,253	\$789,714
2013	72	\$32,458,626	\$450,814
<b>2003 - 2013</b>			
# Change	3	-\$11,892,167	-\$191,951
% Change	<b>4.3%</b>	<b>-26.8%</b>	<b>-29.9%</b>

Source: Door County Multiple Listing Service, for the years cited.

\*Inflation-adjusted to 2013.

The average sold price for residential condominiums also fluctuated greatly between 2003 and 2013, with an overall decrease of \$70,153 (22%) for this timeframe. (See Table 10.32.) In 2007, the average sold price peaked at \$401,904, dropping in 2013 to \$256,861.

**Table 10.32: MLS, Residential Condominiums Sold, Door County**

Year	Total Number Sold	Total Sold Price	Average Sold Price
2003*	128	\$41,857,832	\$327,014
2007*	139	\$55,864,651	\$401,904
2013	111	\$28,511,582	\$256,861
<b>2003 - 2013</b>			
<b># Change</b>	-17	-\$13,346,250	-\$70,153
<b>% Change</b>	<b>-13.3%</b>	<b>-31.9%</b>	<b>-21.5%</b>

Source: *Door County Multiple Listing Service, for the years cited.*

\*Inflation-adjusted to 2013.

Hotel condominiums are the only residential category where the average sold price consistently dropped between 2003 and 2013, at an overall decrease of over 44% for this timeframe. Average sold price was highest in 2003, at \$145,254, and lowest in 2013, at \$80,619. (See Table 10.33.)

**Table 10.33: MLS, Hotel Condominiums Sold, Door County**

Year	Total Number Sold	Total Sold Price	Average Sold Price
2003*	32	\$4,648,125	\$145,254
2007*	41	\$4,748,022	\$115,805
2013	32	\$2,579,800	\$80,619
<b>2003 - 2013</b>			
<b># Change</b>	0	-\$2,068,325	-\$64,635
<b>% Change</b>	<b>0.0%</b>	<b>-44.5%</b>	<b>-44.5%</b>

Source: *Door County Multiple Listing Service, for the years cited.*

\*Inflation-adjusted to 2013.

### Commercial/Industrial Sales

Table 10.34 shows sales of commercial and industrial property during the years 2003, 2007, and 2013. In the “total” row, the average sold price figure is the average sold price for the three years of data (2003, 2007, and 2013) and the percent change in average sold price represents the change in average price between 2003 and 2013.

Table 10.34 shows that the average MLS sold price for commercial/industrial property in 2013 was \$193,520, a decrease of \$684,867 (78%) from the 2003 average sold price of \$878,387. Total sold price dropped by over \$3.5 million between 2003 and 2013, from \$8.7 million to \$5.2 million. Note that there were a low number of sales in 2003 and there may have been only one or two high-end sales pushing up the average sold price far beyond other years.

**Table 10.34: MLS, Commercial/Industrial Sold, Door County**

<b>Year</b>	<b>Total Number Sold</b>	<b>Total Sold Price</b>	<b>Average Sold Price</b>
2003*	10	\$8,783,872	\$878,387
2007*	26	\$7,191,666	\$276,603
2013	27	\$5,225,050	\$193,520
<b>2003 - 2013</b>			
<b># Change</b>	17	-\$3,558,822	-\$684,867
<b>% Change</b>	<b>170.0%</b>	<b>-40.5%</b>	<b>-78.0%</b>

Source: *Door County Multiple Listing Service, for the years cited.*

\*Inflation-adjusted to 2013.

### Vacant Land Sales

Table 10.35 shows sales of inland vacant property during the years 2003, 2007, and 2013. In the “total” row, the average sold price figure is the average sold price for the three years of data (2003, 2007, and 2013) and the percent change in average sold price represents the change in average price between 2003 and 2013. The MLS average sold price for inland vacant land was \$68,332 in 2013, a decrease of \$31,358 (32%) from the average sold price of \$99,690 in 2003. (See Table 10.35.)

**Table 10.35: MLS, Vacant Land Inland Sold, Door County**

<b>Year</b>	<b>Total Number Sold</b>	<b>Total Sold Price</b>	<b>Average Sold Price</b>
2003*	156	\$15,551,578	\$99,690
2007*	179	\$15,089,689	\$84,300
2013	122	\$8,336,445	\$68,332
<b>2003 - 2013</b>			
<b># Change</b>	-34	-\$7,215,133	-\$31,358
<b>% Change</b>	<b>-21.8%</b>	<b>-46.4%</b>	<b>-31.5%</b>

Source: *Door County Multiple Listing Service, for the years cited.*

\*Inflation-adjusted to 2013.

Table 10.36 shows sales of waterfront or waterview vacant property during the years 2003, 2007, and 2013. In the “total” row, the average sold price figure is the average sold price for the three years of data (2003, 2007, and 2013) and the percent change in average sold price represents the change in average price between 2003 and 2013. The MLS average sold price for waterfront/waterview vacant property was \$206,762 in 2013, a decrease of \$5,496 (3%) from the average sold price of \$212,258 in 2003.

**Table 10.36: MLS, Vacant Land Waterfront/View Sold, Door County**

<b>Year</b>	<b>Total Number Sold</b>	<b>Total Sold Price</b>	<b>Average Sold Price</b>
2003*	57	\$12,098,698	\$212,258
2007*	29	\$10,069,614	\$347,228
2013	21	\$4,342,000	\$206,762
<b>2003 - 2013</b>			
<b># Change</b>	-36	-\$7,756,698	-\$5,496
<b>% Change</b>	<b>-63.2%</b>	<b>-64.1%</b>	<b>-2.6%</b>

Source: *Door County Multiple Listing Service, for the years cited.*

\*Inflation-adjusted to 2013.

## ACTIVE MULTIPLE LISTING SERVICE DOOR COUNTY LISTINGS

To provide further context for the above MLS sales information, Table 10.37 shows the active Door County MLS real estate listings as of January 2014. As above, this information is presented by real estate class and type, condominium listings are included in one of the residential categories, and all classes except those described as “vacant land” are improved properties.

Specifically, the table shows the number of properties in each real estate class and type listed for sale at that time, the range of listing prices for that class of properties, and the average and median price listings for that class. The top four classes of listings, respectively, in terms of number of properties listed, were: 1) inland vacant land, 2) inland residential, 3) residential condominiums, and 4) residential waterfront/view. Waterfront/view residential properties had both the highest average and median prices.

**Table 10.37: MLS, December 2013 Listings by Class and Type, Door County**

Class	Number Listed	Listing Price Range	Average Price	Median Price
Commercial/Industrial	128	15,000-5,500,000	\$474,418	\$299,000
Condo, Residential	200	77,500-1,795,000	\$321,507	\$278,950
Condo, Hotel	101	25,000-549,900	\$122,750	\$98,500
Vacant Land, Inland	803	7,900-979,000	\$75,563	\$49,900
Vacant Land, Waterfront/View	96	19,900-1,995,000	\$350,704	\$224,500
Residential, Inland	393	37,000-3,000,000	\$309,457	\$237,900
Residential, Waterfront/View	162	97,500-8,750,000	\$747,343	\$490,000

Source: *Door County Multiple Listing Service, 2013.*

Note that the average listing price for each class and type of real estate is far higher than the average of actual sales for all classes and types of real estate. For example, the average listing price of residential, waterfront/view properties in December 2013 was \$747,343, while the average sold price of residential, waterfront/view properties in 2013 was \$450,814 (Table 10.31).

## FIVE-YEAR PROPERTY VALUE TRENDS

Tables 10.38 - 10.40 compare approximately five-year data from the Door County Real Property Listing database and the Door County MLS database, both discussed previously in this chapter. The MLS data is from the year 2007 and contains only properties sold for that year. The Door County Real Property data contains about two-thirds property values for 2008 and one-third property values for 2009, and contains all assessed properties in the county. Although the two types of data are not directly comparable, a comparison of the two gives some indication as to how market values move in relation to assessed values.

In all categories, home, commercial and industrial and vacant land property, values decreased between 2007 and 2013, inflation-adjusted to 2013. MLS property values decreased far more than the assessed property values in all categories, in terms of both dollar amounts and percentage. Commercial and industrial MLS property values fell the most, at \$83,083 (30%). Assessed vacant land property values fell the least, at \$387.

Assessed home property values decreased by \$38,907 (13%), compared to \$60,310 (20%) for MLS home property values. Assessed commercial and industrial property values decreased by \$57,995 (18%), compared to \$83,083 (30%) for MLS commercial and industrial property values. Assessed vacant land property values decreased by \$387 (less than 1%), compared to \$42,216 (32%) for MLS vacant land property values.

**Table 10.38: MLS and Assessed Home Property Values, Door County**

<b>Ave. Assessed</b>		
<b>Year</b>	<b>Value**</b>	<b>Ave. MLS Value</b>
2007-2009*	\$297,230	\$309,014
2013	\$258,323	\$248,704
<b># Change</b>	<b>-\$38,907</b>	<b>-\$60,310</b>
<b>% Change</b>	<b>-13%</b>	<b>-20%</b>

Source: *Door County Multiple Listing Service, 2007; Door County Real Property Listing, August 2008 and May 2013.*

\*Inflation-adjusted to 2013.

\*\* Residentially assessed properties with improvement value greater than or equal to \$5,000.

**Table 10.39: MLS and Assessed Commerical and Industrial Property Values, Door County**

<b>Ave. Assessed</b>		
<b>Year</b>	<b>Value**</b>	<b>Ave. MLS Value</b>
2007-2009*	\$319,253	\$276,603
2013	\$261,258	\$193,520
<b># Change</b>	<b>-\$57,995</b>	<b>-\$83,083</b>
<b>% Change</b>	<b>-18%</b>	<b>-30%</b>

Source: *Door County Multiple Listing Service, 2007; Door County Real Property Listing, August 2008 and May 2013.*

\*Inflation-adjusted to 2013.

**Table 10.40: Vacant Land Property Values, Door County**

<b>Ave. Assessed</b>		
<b>Year</b>	<b>Value**</b>	<b>Ave. MLS Value</b>
2007-2009*	\$46,503	\$130,876
2013	\$46,116	\$88,660
<b># Change</b>	<b>-\$387</b>	<b>-\$42,216</b>
<b>% Change</b>	<b>-1%</b>	<b>-32%</b>

Source: *Door County Multiple Listing Service, 2007; Door County Real Property Listing, August 2008 and May 2013.*

\*Inflation-adjusted to 2013.

\*\*Properties with improvement value less than \$5,000.

## DEMAND AND SUPPLY

This section discusses demand for and supply of land in order to identify potential shortages or surpluses of land for future residential, commercial/industrial, and agricultural uses. This section does not include the future land use maps created in 2014, which can be found in Volume I of this plan.

The availability of land to accommodate future growth can be analyzed using two different methods. The first method used to calculate the average acreage projected for each type of land use considers only the acreage allotted to assessed land uses rather than the entire parcel acreage. For example, a 40-acre parcel of which 39 acres is being farmed and one acre is being used for residential purposes will have two assessment categories, one acre for the residential use and 39 for the agricultural. Only

the one acre of residential area is used in calculating current and future acreage requirements for residential land, resulting in lower estimates and projections than the “parcel area” method described below. This “assessed area” method more accurately reflects the exact acreage allotted to each land use within a parcel, but disregards actual existing current ownership and parcel sizes.

The second method used considers the average acreage projected for each type of land use based on current parcel sizes where those land use assessment categories are present. This “parcel area” method takes into consideration the entire area of a property, even if that property is assessed as having more than one type of land use. Using the same 40-acre parcel example above, the entire 40 acres is used in calculating the current average parcel size for residential uses. This method accurately reflects current ownership and parcel sizes, but overestimates the actual amount of land designated to/required by land use categories.

In analyzing future land use demand and supply, both of the above methods will be used, as this allows for identification of a range of projections.

### **RESIDENTIAL DEMAND AND SUPPLY**

The 5,352 new housing units projected to be “demanded” in Door County between 2013 and 2040, as discussed in Chapter 4, Housing, will require additional land (supply). In order to project how much land will be demanded during this planning period, the number of projected new housing units was multiplied by the current average assessed acreage for residential uses and also by the current average parcel size for residential uses to come up with a range of acreage potentially needed. The calculations are described below and are also shown in Table 10.41. These figures were then compared against the acreage of areas deemed appropriate for residential development, as mapped on the future land use maps, in order to identify any potential shortages of residential land over the planning period.

- Assessed area method: The current average size of an improved residentially assessed land area is 1.8 acres, calculated by dividing the total acreage of residentially assessed improved land in the county (36,351 acres) by the number of parcels assessed residentially that have housing units present (20,257).
- Parcel area method: The current average parcel size for an improved residentially assessed parcel is 3.4 acres, calculated by dividing the total acreage in the county of the parcels that have housing units present (68,829) by the number of parcels assessed residentially that have housing units present (20,257).

**Table 10.41: Residential Land Use Demand & Supply, Door County**

	Assessed Area	Parcel Area
a) Number of Parcels w/ Existing Housing Unit	20,257	20,257
b) Residential Acres w/ Existing Housing Unit	36,351	68,829
c) Current Density (b/a)	1.8	3.4
d) Projected Additional Housing Units (2013 - 2040)	5,352	5,352
e) Projected Future Need Residential Acres (c*d)	9,634	18,197
f) Acres of Vacant/Minimally Developed Land w/in 2035 Residential Planning Areas*	11,591	12,985
<b>Total Excess/Shortage (e-f)</b>	<b>1,957</b>	<b>-5,212</b>

Source: Door County Real Property Listing, August, 2013; Door County Comprehensive and Farmland Perservation Plan 2035, Future Land Use Maps.

\*Totals also contain 50% of vacant core area, regardless of land use assessment (321 assessed acres and 363 parcel acres).

Based on the above calculations, and as shown in line "e)", an additional 9,634 - 18,197 acres of residential land is projected to be needed for residential development through 2040. (Assessed area method: 1.8 average residentially assessed land acres x 5,352 projected new housing units = 9,634 acres needed. Parcel area method: 3.4 average residentially assessed parcel acres x 5,352 projected new housing units = 18,197 acres needed.)

*Note: As discussed in Chapter 4, Housing, since the WDOA does not estimate land acreage associated with its total estimated number of housing units present in Door County, the county's Real Property Listing Department database was used to estimate current residential land use density, as described above and shown in Table 10.41. The WDOA estimate of 24,314 housing units present in the county in 2013 counts 4,057 more units than the Real Property Listing query of 20,257 housing units, a difference that is likely due to the fact that the WDOA estimate counts all residential units, even those assessed commercially. Within the Real Property Listing records, residential multi-unit buildings with four or more units are generally assessed as commercial properties and cannot be distinguished from other commercial uses within the database. Subsequently, some of the 20,257 Real Property Listing parcel records have more than one housing unit, but each parcel record only gets counted as having one housing unit. Although these "commercial" residential units are not counted towards residential density, they are instead counted towards commercial density. The commercial and industrial demand and supply analysis described below is intended to be able to accommodate these "commercial" residential uses.*

Potential developable areas for projected residential uses were quantified using the residential land use categories on the future land use maps, as listed below and as described in Chapter 9, Land Use, Volume I, Vision and Goals.

- **Residential** – Areas designated as "Residential" are intended to be developed predominantly with single-family uses, or, where allowed by zoning or other ordinance, mobile homes, group quarters, or non-transient multi-family buildings. Some parcels designated as "Residential" may currently contain duplexes, multi-family developments, or resorts, if those uses are located on parcels currently zoned for primarily single-family residential development, or if the municipality wished to ensure that the long-term development of the property would be primarily residential rather than commercial in nature. "Residential" areas include the majority of the county's shorelines and areas containing smaller lots and/or emerging small lot residential development patterns.
- **Rural Residential** – Areas designated as "Rural Residential" are intended to develop with predominantly single-family residential uses, generally on larger parcels and in areas removed from designated community centers, core areas, or "downtowns." These areas consist primarily of wooded uplands, areas where agricultural activity has greatly diminished, and certain areas adjacent to existing developed areas. Typically, public sewer is not available, though some of these areas have been platted or are beginning to develop at relatively low densities. Development in these areas should continue at modest densities and be consistent with the generally rural character. Commercial activity should be discouraged except for uses that are compatible with lower density residential development.

Outside of the core areas – another future land use map category, encompassing "downtowns" and communities – the acreage of vacant and minimally developed residential land contained within the residential future land use categories described above and as mapped on the future land use maps could potentially accommodate the 5,352 projected housing units. These areas contain roughly 11,591 residentially assessed acres, or 12,985 total parcel acres, of vacant and minimally developed residentially assessed land throughout the county. (Note: The query of Real Property Listing data for vacant and minimally developed residential land was for property with a residential land use assessment, a minimum of 7,500 square feet, less than \$5,000 in

improvement value, not tax exempt, and not a common area.)

Within the core areas, there are a total of 641 assessed acres and 726 parcel acres of vacant and minimally developed land. Since core areas are open to all land use categories, as described in Chapter 9, Land Use, Volume I, Vision and Goals, one-half of this acreage is herein applied to residential uses and the other one-half is applied to commercial use, discussed in the next section.

From the residential assessment acreage perspective, the county currently has more than enough land to accommodate the projected number of future housing units, with a surplus of 1,957 acres. From a parcel size perspective, there potentially could be a “shortage” of at least 5,212 acres of residentially assessed land within the residential future land use and core areas. Note that the 12,985 parcel acres, shown in line “f”, also contain 972 acres of zoned wetland. (Although, only 110 of the 972 acres of land zoned as wetland is assessed as “undeveloped,” a typical assessment category for wetlands.) Potentially, then, there could actually be a parcel size shortage of up to 6,184 acres.

Note, however, as mentioned previously, the parcel size method of calculating residential land use requirements more than likely overestimates the amount of land used now and needed in the future for residential development. Furthermore, this “shortage” is only related to the mapped boundaries of the future land use categories described above; there are also 5,948 acres of residentially assessed vacant and minimally developed land located in the “Rural/Agricultural” future land use areas and 6,209 acres of residentially assessed vacant and minimally developed land in the “Woodland/Wetland/ Natural Area” future land use areas, far exceeding the potential parcel shortage of 6,184 acres.

While “Rural/Agricultural” future land use areas are planned to be primarily agriculture, low density residential development in these areas can, and most likely will, happen. Similarly, the “Woodland/ Wetland/Natural Areas” future land use areas are also planned for some low-density residential development.

As discussed in Chapter 4, Housing, the demand for housing unit development may not exactly match the geographic distribution of residentially assessed properties – nearly three quarters of the vacant and minimally developed residential properties are located in northern Door County. This geographic imbalance may not be of great concern, though, given previous discussion in Chapter 4 that 64% of the growth in total number of housing units between 1970 and 2010 happened in Northern Door. Additionally, properties throughout the county currently not assessed residentially may become available for residential development during the planning period.

Based on the DOA population projections through 2040, the additional 9,634 - 18,197 acres of potentially needed residential land are projected to be developed through the planning period as shown in Table 10.42. See the section in Chapter 4, Housing, entitled “Total Housing Unit Projection,” for discussion on how projections were developed for each of decade through 2040; the five-year figures shown in Table 10.42 are pro-rated based on these decade projections.

**Table 10.42: Projected 5-Year Residential Land Use Demand, Door County**

Years	10-Year Total Housing Unit Projections*	10-Year Growth Projections	5-Year Growth Projections	% Growth	Assessed Area Projection	Parcel Area Projection
2013 (est.)	24,314	--	--	--	--	--
2013 - 2015	--	--	477	8.9%	859	1,622
2015 - 2020	25,982	1,668	1,191	22.3%	2,144	4,049
2020 - 2025	--	--	1,192	22.3%	2,146	4,053
2025 - 2030	28,366	2,384	1,192	22.3%	2,146	4,053
2030 - 2035	--	--	650	12.1%	1,170	2,210
2035 - 2040	29,666	1,300	650	12.1%	1,170	2,210
<b>Total</b>	<b>5,352</b>	<b>5,352</b>	<b>5,352</b>	<b>100.0%</b>	<b>9,634</b>	<b>18,197</b>

Source: U.S. Census Bureau and Wisconsin Department of Administration.

\*See Table 4.15, Chapter 4, Housing.

### **COMMERCIAL AND INDUSTRIAL DEMAND AND SUPPLY**

Projections as to future commercial and industrial land use demand are generally based on the ratio of the current land area where activities occur to the current land area where residential uses occur. (Residential demand/projections are based on population projections, but there is no equivalent upon which to base commercial and industrial demand/projections.) Note that the manufacturing assessment category from the Real Property Listing database was used for the industrial future land use component, as described in more detail below.

Currently, for commercial and industrial assessments, there are 2,539 improved properties throughout Door County, consisting of 5,238 acres in assessed area and 6,755 acres in total parcel area. The calculations conducted to project the future commercial and industrial land use acreage requirements, which assume constant proportions of commercial and industrial land use acreage to residential land use acreage, are described below and are also shown in Table 10.43. Note that the assumption to hold these ratios constant is probably overly optimistic, given that a significant component of the county's population growth through 2040 is expected to be from in-migration of retirees rather than workers.

- Assessed area method: There are currently 5,238 acres of commercially and industrially assessed land area and 36,351 acres of residentially assessed land area. The ratio between those two figures is .144. Applying that ratio to the projected total of residentially assessed land area using the assessment acreage method, 46,710 acres (36,351 [current] + 10,359 [additional projected]), the projected need for future commercial and industrial uses is 6,731 assessed acres. Subtracting existing commercial and industrial assessed acres (5,238) from that figure, the county will need through the year 2040 a projected additional 1,493 acres of commercially and industrially assessed land.
- Parcel area method: There are currently 6,755 acres of parcels that contain commercially and industrially assessed land and 68,829 acres of parcels that contain residentially assessed land. The ratio between those two figures is .098. Applying that ratio to the projected total acres of parcels that will contain residentially assessed areas, 88,396 acres (68,829 [current] + 19,567 [additional projected]), the projected need for future commercial and industrial uses is 8,675 parcel acres. Subtracting existing acres of parcels that contain commercially and industrially assessed land (6,755) from that figure, the county will need through the year 2040 a projected additional 1,920 acres of parcels that contain commercially and industrially assessed areas.

Potential developable areas for projected commercial and industrial uses was quantified using the commercial and industrial land use categories designated on the 2035 future land use maps, as listed below and as described in Chapter 9, Land Use, Volume I, Vision and Goals. Note that the

commercial and industrial uses are analyzed together, primarily because of overlapping future land use category and DOR assessment category definitions and the fact that areas planned for industrial use on the future land use maps contain a large share of vacant and minimally developed land assessed for commercial uses.

- **Commercial** – “Commercial” areas are those intended for development with retail sales, trade of goods and/or services, commercial offices, and commercial lodging establishments and are found largely in community centers, core areas, or “downtowns.” Commercial areas should maintain defined boundaries, avoid excessive access points to major roads by encouraging shared driveways or internal circulation patterns, and have buffering or screening of light industrial uses and storage and parking areas from adjacent public rights-of-way and residential areas. Highway corridor development should avoid further strip development and loss of community separation by limiting future development density, employing stringent setbacks, and requiring screening of new uses. Note that the future land use maps depict many “outlying” (i.e., non-core) commercial areas, reflecting existing commercial zoning or businesses such as multiple occupancy developments; when redevelopment is proposed for the latter, it should be undertaken carefully and with consideration for neighborhood compatibility.
- **Mixed Commercial/Residential** – Areas designated as “Mixed Commercial/Residential” are intended to accommodate a variety of commercial and residential activities, typically higher-density and in designated community centers, core areas, or “downtowns.” There are also several small “Mixed Commercial/Residential” areas scattered throughout the county outside the core areas, most of which have historically been minor development nodes and which are usually situated at a major crossroads. Unlike core areas, public sewer is not expected to extend to any of these outlying areas. Development in these outlying areas should avoid large-scale projects that would conflict with the “small town” character of these communities, alter the visual quality of the surrounding areas, or create conflicts with surrounding agricultural uses.
- **Industrial** – “Industrial” lands are intended for uses such as fabrication, wholesaling, or long-term storage of products and for extraction (mining) or transformation of materials. Note that, as described previously, the “manufacturing” DOR assessment category “includes all land, buildings, structures, and other real property used in manufacturing, assembling, processing, fabricating, making, or milling tangible personal property. It also includes warehouse, storage facilities, or offices in support of the manufacturing property.”

Outside of the core areas, there are between 454 and 557 acres of vacant and minimally developed commercially assessed land contained within the commercial and industrial land use categories areas described above and as mapped on the future land use maps. There are 151 parcels of vacant commercial assessed land located in the “Commercial,” “Mixed Commercial/Residential,” and “Industrial” mapped land use category boundaries throughout the county, totaling 454 assessed acres, or 557 parcel acres. As discussed previously in the residential demand and supply section, there are also an additional 321 assessed acres and 363 parcel acres of vacant and minimally developed land within the core areas that could potentially be available for commercial development. In total, there is between 775 and 920 acres of vacant and minimally developed commercial and industrial land available for development. The totals shown in line “g” of Table 10.43 includes all vacant and minimally developed land within the planning areas categorized for commercial or industrial uses, including the core areas.

(Note: The GIS query for vacant and minimally developed commercial land was for property with a commercial land use assessment, a minimum of 7,500 square feet, less than \$5,000 in improvement value, and not a common area.)

As shown in Table 10.43, the county may have a “shortage” of between 718 and 1,000 acres within the future land use commercial, industrial, and core areas. Note, however, that there are an additional 883 assessed acres, or 1,311 parcel acres, of vacant and minimally developed commercial and industrial assessed land located in the “Rural/Agricultural,” Woodland/Wetland/ Natural Area,” “Residential,” and “Rural Residential” future land use areas. Also, Door County’s projected net population growth is expected to come from in-migration, primarily from retirees moving to the county. As such, the demand projections for commercial and industrial uses are likely to be overestimating what will actually be needed.

**Table 10.43: Commercial and Industrial Land Use Demand and Supply, Door County**

	Assessed Area	Parcel Area
a) Existing Comm./Ind. Acres (Improved)	5,238	6,755
b) Residential Acres w/ Existing Housing Unit	36,351	68,829
c) Constant Proportion of Existing Comm./Ind. Acres (Improved) to Residential Acres w/ Existing Housing Unit (a/b)	0.144	0.098
d) Total Residential Acres in 2040 (Table 10.41 rows b+e)	46,710	88,396
e) Projected Future Need Comm./Ind. Acres (c*d)	6,731	8,675
f) Projected Additional Needed Comm./Ind. Acres (e-a)	1,493	1,920
g) Acres of Existing Vacant Land w/in 2035 Planning Areas*	775	920
<b>Total Shortage (f-g)</b>	<b>718</b>	<b>1,000</b>

Source: *Door County Real Property Listing, August, 2013; Door County Comprehensive and Farmland Preservation Plan 2035.*

\*Totals also contain 50% of vacant core area, regardless of land use assessment (321 assessed acres and 363 parcel acres).

Based on the five-year residential land use demand percentages shown in Table 10.42, the additional 6,731 - 8,675 acres of commercial and industrial land needed through the planning period are projected to be developed as shown in Table 10.44.

**Table 10.44: Projected 5-Year Commercial and Industrial Land Use Demand, Door County**

Years	% Growth	Comm./Ind. Assessed Area	Comm./Ind. Parcel Area
		Projection	Projection
2013 (est.)	--	--	--
2013 - 2015	8.9%	600	773
2015 - 2020	22.3%	1,498	1,931
2020 - 2025	22.3%	1,499	1,932
2025 - 2030	22.3%	1,499	1,932
2030 - 2035	12.1%	817	1,054
2035 - 2040	12.1%	817	1,054
<b>Total</b>	<b>100.0%</b>	<b>6,731</b>	<b>8,675</b>

Source: *U.S. Census Bureau and Wisconsin Department of Administration.*

## AGRICULTURAL DEMAND AND SUPPLY

Currently, there are roughly 105,717 acres of assessed agricultural land in Door County. Based on local as well as regional trends, agricultural land uses are expected to continue to decline in Door County over the 20-year planning period. The 2012 USDA Agricultural Census shows that both the number of and acreage comprised by agricultural uses continues to decrease. Between

2002 and 2012, Door County lost 3,173 acres (2.3%) of its total farmed land and 74 (3.7%) of its total number of farms. Over the long-term, the total amount of agricultural land is expected to continue shrinking; as dairy operations in the county decline, so will the total amount of land dedicated to agriculture. On the positive side, the production of row crops (corn, soybean, etc.), commercial vegetables, and apple and cherry production are expected to stay about the same.

Another positive is that between 2002 and 2012, sales of agricultural land being converted to other uses slowed down drastically. During this time frame, 9,140 acres of agricultural acres were sold and only 1,491 (16%) of those acres were converted to non-agricultural uses after the sale. Over 82% of the total acres diverted between 2002 and 2012 happened between 2000 and 2004. The most acres of agricultural land sold diverted to non-agricultural uses was the highest in 2002, at 543. Between 2005 and 2009, the conversion of agricultural land to non-agricultural use slowed down significantly and then stopped between 2010 and 2012, when zero acres were diverted.

As identified throughout the comprehensive and farmland preservation planning process, county residents and officials hope to be able to retain an agricultural land presence within the county. This plan fully supports both existing and new agricultural ventures, including future land use and farmland preservation maps that allow as much land as possible to be used for agricultural purposes in the future as is at present.

## RESOURCES AND FURTHER INFORMATION

### LOCAL AGENCIES

#### **Door County**

(<http://www.co.door.wi.gov>)

- **Door County Planning Department** (<http://map.co.door.wi.us/planning>)

The department's primary functions are administration and enforcement of the county's zoning, land division, and other land use management ordinances; preparation and implementation of the county comprehensive plan and farmland preservation plans; and acting as a resource for local public officials and residents on a variety of community development plans or projects; and administering the county addressing program.

- **University of Wisconsin – Extension, Door County** (<http://www.uwex.edu/ces/cty/door>)

The Door County UW-Extension Office works to bring knowledge of the University to Door County citizens and to help people apply this information.

#### **Door County Board of REALTORS® (DCBR)** (<http://www.dcbr.org/>).

The DCBR is the local professional association for real estate agents working in Door and Kewaunee Counties. The DCBR collects a variety of information related to housing sales and listings.

#### **Northeast Wisconsin Multiple Listing Service (MLS)** (<http://www.ranw.org/default.asp>).

The Northeast Wisconsin MLS serves multiple counties, including Door County.

## **REGIONAL AND STATE AGENCIES**

### **Bay-Lake Regional Planning Commission (BLRPC) (<http://www.baylakerpc.org>)**

BLRPC provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region. A variety of regional and local planning documents can be found on their Web site, including the Wisconsin Standard Land Use Classification System and the Bay-Lake Regional Comprehensive Plan.

### **Wisconsin Department of Administration - Division of Intergovernmental Relations (<http://www.doa.state.wi.us/>)**

The Division of Intergovernmental Relations supports counties, municipalities, citizens, and businesses by providing support services in land use planning, land information and records modernization, municipal boundary review, plat review, demography, and coastal management programs.

### **Wisconsin Department of Agriculture and Trade Protection - Working Lands Initiative (<http://www.datcp.state.wi.us/workinglands>)**

DATCP works to assure safe food; healthy people, animals, plants and environment; vibrant agriculture; and fair business practices.

### **Wisconsin Department of Natural Resources (DNR) (<http://www.dnr.wi.gov>)**

The DNR is dedicated to the preservation, protection, management, and maintenance of Wisconsin's natural resources. It 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 our state.

- DNR information on wetlands (<http://dnr.wi.gov/wetlands>)
- Door County Comprehensive Forestry Plan (<http://www.wisaf.org/images/DoorCountyComprehensiveForestryPlan.pdf>)

### **Wisconsin Department of Revenue (<http://www.dor.state.wi.us>)**

The mission of the Department of revenue is to administer Wisconsin's tax system to provide revenue that funds state and local government services.

### **Wisconsin Department of Safety and Professional Services (<http://www.dsps.wi.gov>)**

The Department of Safety and Professional Services is responsible for ensuring the safe and competent practice of licensed professionals in Wisconsin and administering and enforcing laws to assure safe and sanitary conditions in public and private buildings.



Door County Planning Dept.  
421 Nebraska Street  
Sturgeon Bay, WI 54235  
(920) 746-2323  
[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 10.1(A): 2014 Land Use Southern Municipalities

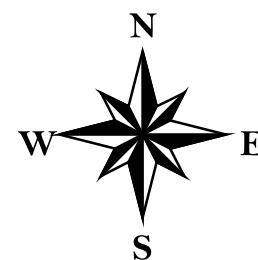
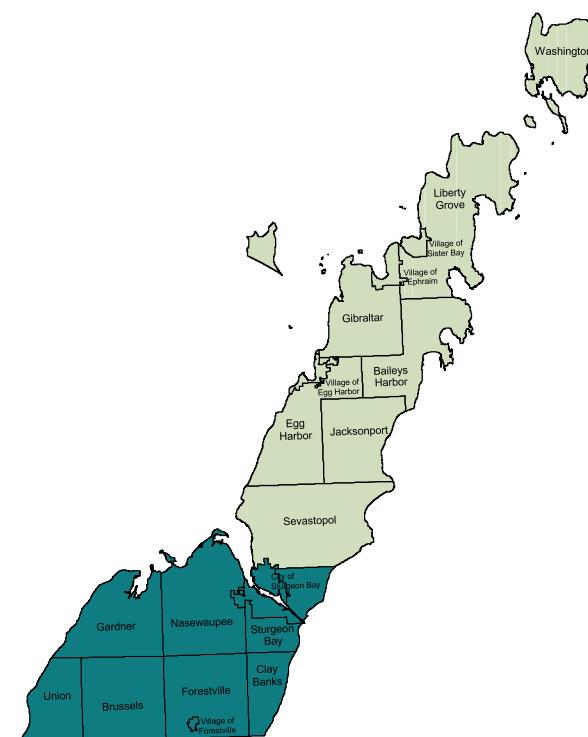
This set of maps is a compilation of data gathered for evaluation purposes only.

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

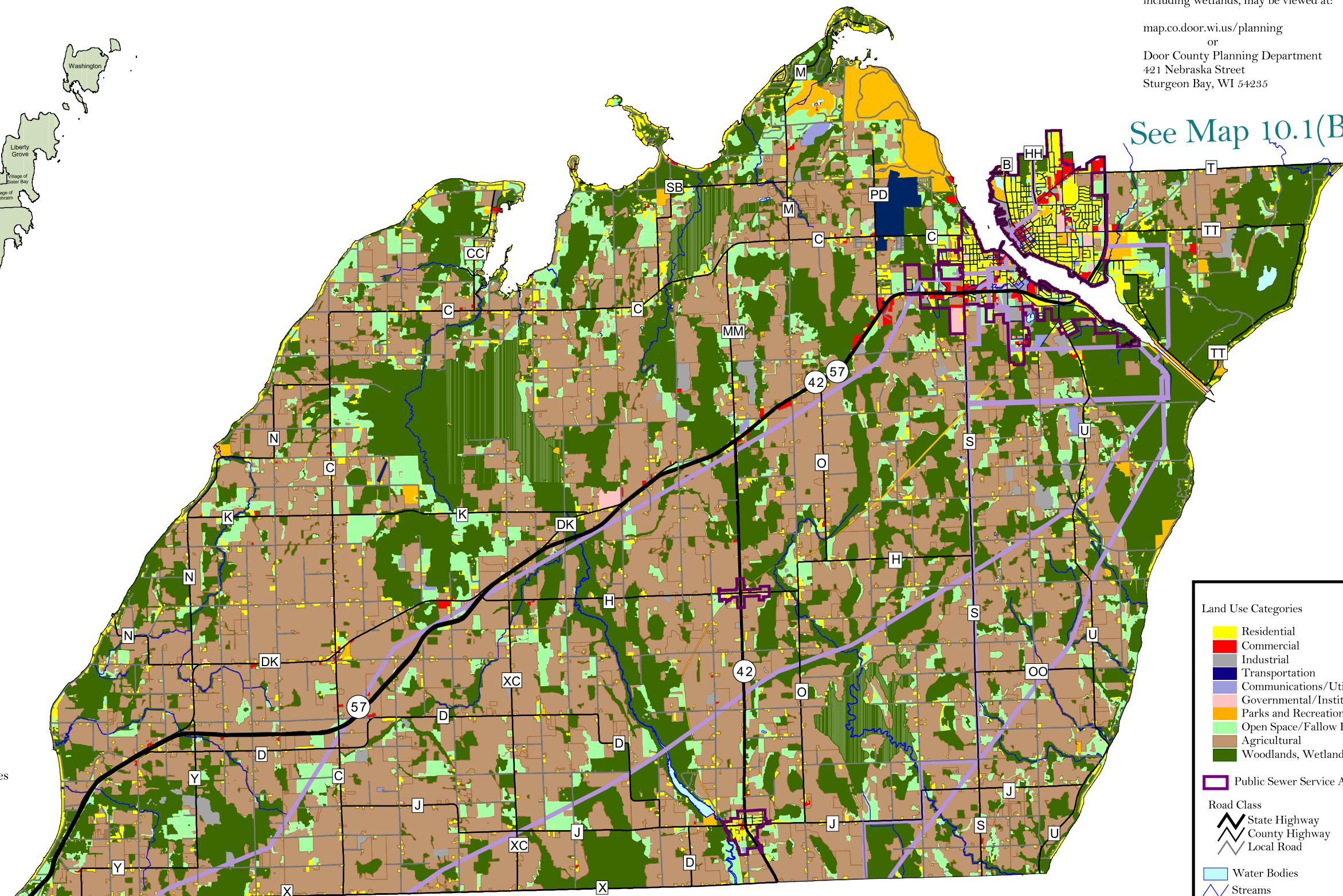
NOTE: Larger-scale land use maps,  
including wetlands, may be viewed at:

[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)  
or  
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See Map 10.1(B)



0 2 4 Miles



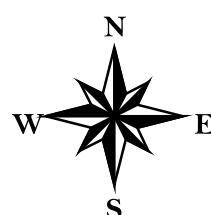
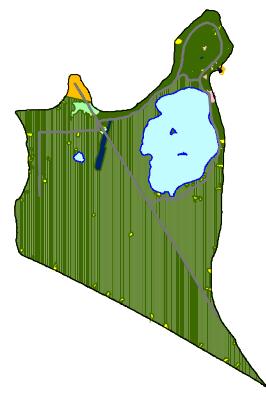
- Land Use Categories**
- Yellow Residential
  - Red Commercial
  - Grey Industrial
  - Dark Blue Transportation
  - Light Blue Communications/Utilities
  - Pink Governmental/Institutional
  - Orange Parks and Recreation
  - Light Green Open Space/Fallow Fields
  - Brown Agricultural
  - Dark Green Woodlands, Wetlands, Natural Areas
- Public Sewer Service Areas**
- Road Class**
- State Highway
  - County Highway
  - Local Road
- Water Bodies**
- Streams**



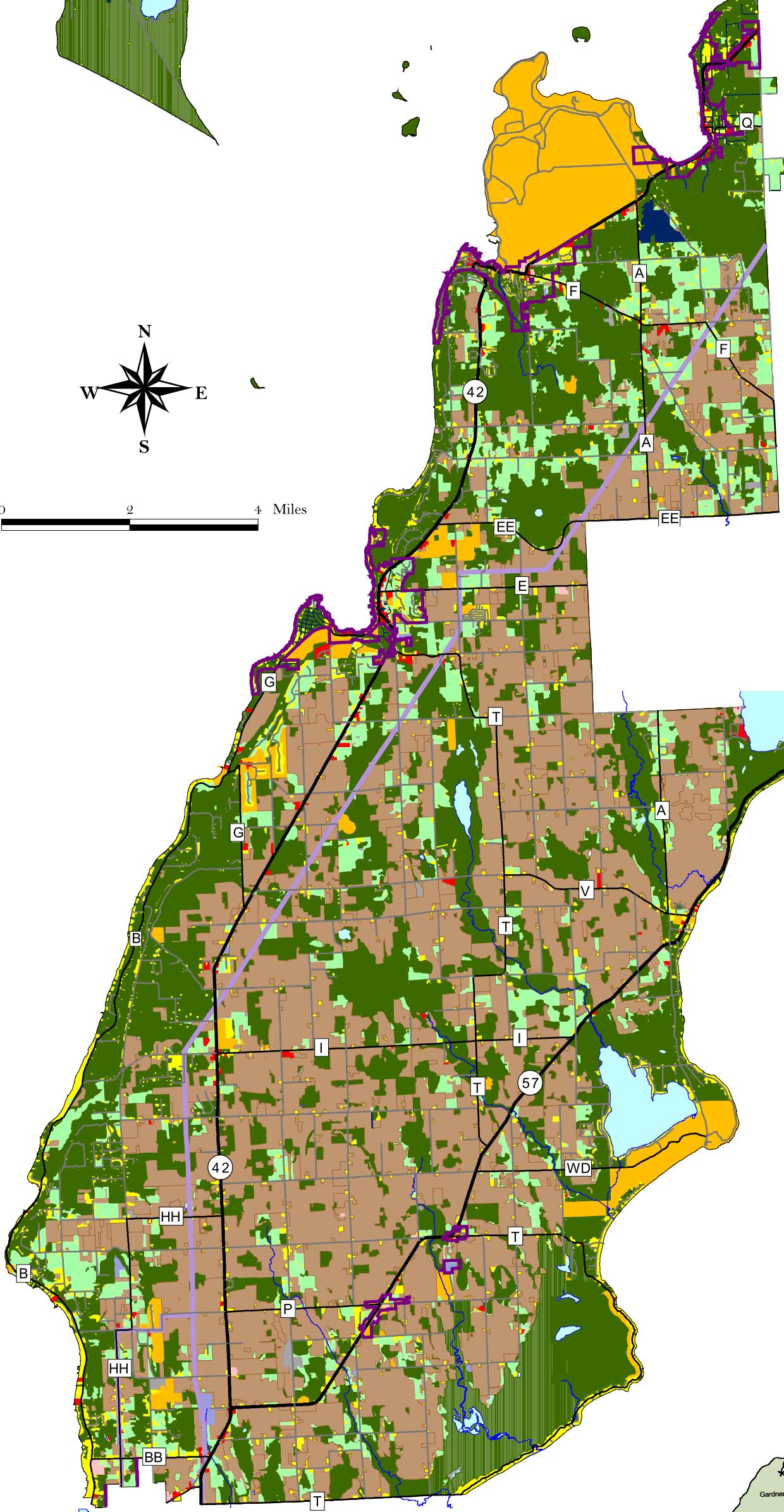
DOOR COUNTY  
Door County Planning Dept.  
421 Nebraska Street  
Sturgeon Bay, WI 54235  
(920) 746-2323  
[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)

# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 10.1(B): 2014 Land Use Central Municipalities



0 2 4 Miles



See Map 10.1(A)

This set of maps is a compilation of data gathered for evaluation purposes only.

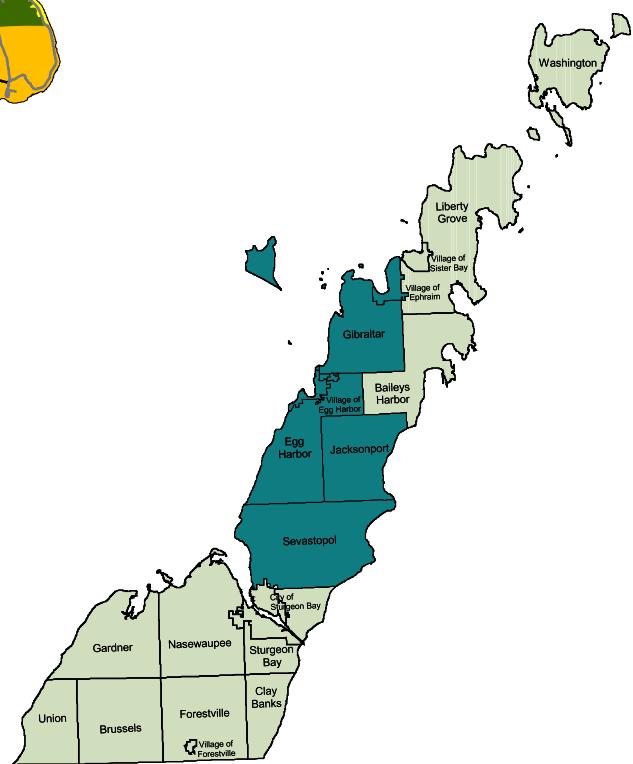
Adopted by the Door County Board of Supervisors, December 16, 2014  
Effective upon distribution per Wisconsin State Statutes, January 1, 2015

NOTE: Larger-scale land use maps, including wetlands, may be viewed at:

[map.co.door.wi.us/planning](http://map.co.door.wi.us/planning)  
or  
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421 Nebraska Street  
Sturgeon Bay, WI 54235

See Map 10.1(C)

Land Use Categories	
Yellow	Residential
Red	Commercial
Grey	Industrial
Dark Blue	Transportation
Purple	Communications/Utilities
Pink	Governmental/Institutional
Orange	Parks and Recreation
Cyan	Open Space/Fallow Fields
Brown	Agricultural
Green	Woodlands, Wetlands, Natural Areas
Public Sewer Service Areas	
Road Class	
Black line	State Highway
Thick black line	County Highway
Thin black line	Local Road
Water Bodies	
Blue	Streams
Light Blue	Water Bodies





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# Door County Comprehensive and Farmland Preservation Plan 2035

## Map 10.1(C): 2014 Land Use Northern Municipalities

This set of maps is a compilation of data gathered for evaluation purposes only.

Adopted by the Door County Board of Supervisors,  
December 16, 2014  
Effective upon distribution per Wisconsin State Statutes,  
January 1, 2015

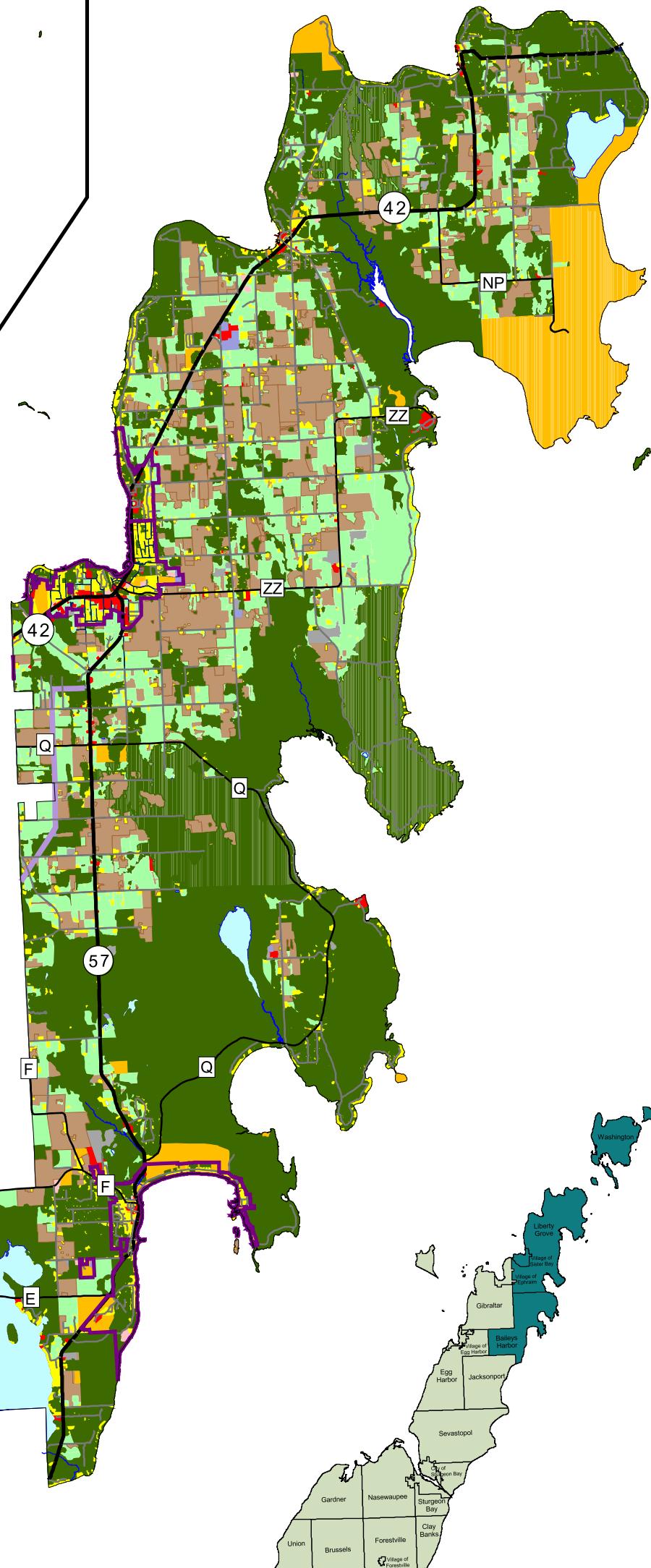
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or  
Door County Planning Department  
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*See Town of Washington Inset*



Town of Washington



*See Map 10.1(B)*

# **CHAPTER 11: INTERGOVERNMENTAL COOPERATION**

## INTRODUCTION

This chapter provides an overview of governments in the County of Door, including the Door County Board of Supervisors, county departments and agencies, and county taxes; local government structure; land use management (planning and zoning) interactions by the county with other government entities; and other types of intergovernmental cooperative relationships. Note that this chapter deals primarily with land use topics, focusing on the Door County Planning Department and Resource Planning Committee, since that department and committee are statutorily responsible for adopting and implementing the county comprehensive plan.

## GOVERNMENTAL STRUCTURE

Local governments in Door County consist of the county, one city, four villages, and fourteen towns.

### **COUNTY**

Wisconsin has 72 counties, the primary political subdivision of the state. Within counties there can be cities, villages, and towns. The Board of Supervisors is the main legislative body of the county, consisting of supervisors elected in nonpartisan elections for two-year terms. Programs and services counties must or may provide are specifically authorized in Wisconsin statutes.

The type of executive official in Wisconsin counties can vary. Counties may have a County Executive elected in a nonpartisan election for a four-year term, an appointed County Administrator, or an appointed Administrative Coordinator. Door County has an appointed County Administrator. Elected officials in Door County include the Sheriff, District Attorney, County Clerk, County Treasurer, Register of Deeds, and Clerk of Court. All of these offices have four-year terms.

Door County contains and interacts with the local municipalities listed below. Descriptions of each type of local municipality are provided in the sections following.

- City of Sturgeon Bay
- Villages of Egg Harbor, Ephraim, Forestville, and Sister Bay
- Towns of Baileys Harbor, Brussels, Clay Banks, Egg Harbor, Forestville, Gardner, Gibraltar, Jacksonport, Liberty Grove, Nasewaupee, Sevastopol, Sturgeon Bay, Union, and Washington

### **CITY**

In Wisconsin, a city is an autonomous incorporated area within one or more counties. As of 2006, Wisconsin had 190 cities. Cities in Wisconsin provide almost all services to their residents, differing from counties and towns in that they have more power to govern themselves in local matters without state interference; they have the highest degree of home rule and taxing jurisdiction of all governments. This "home rule" authority allows them to make their own decisions about their affairs, administration, and much of their public policy, subject to state law.

In order to incorporate as a city, a community must have at least 1,000 citizens if it is in a rural area or 5,000 if it is in an urban area. Cities in Wisconsin are divided into four classes:

- First class: Cities with 150,000 or more people
- Second class: Cities with 39,000 to 149,999 people
- Third class: Cities with 10,000 to 38,999 people
- Fourth class: Cities with 9,999 people or less

The City of Sturgeon Bay, officially incorporated on April 7, 1883, is a fourth-class city. The city, which is the county seat, covers approximately 4,000 acres and has 80 miles of streets and 11 parks. It includes portions of three different school districts: Sturgeon Bay, Sevastopol, and Southern Door.

Cities can choose to hire a city administrator or city manager, instead of electing a mayor, or have both. The City of Sturgeon Bay has both an appointed city administrator and an elected mayor. The city is governed by a Common Council consisting of the mayor and elected alderpersons. The mayor is elected at-large by residents of the City of Sturgeon Bay, and each of the seven districts in the city elect one alderperson. The mayoral term is three years, while the alderpersons serve for two years.

The city employs approximately 70 full-time employees and more than 60 part-time employees during seasonal periods. The city's organization consists of five departments: Police, Fire, Public Works, Community Development, and Administration. In addition to police and fire protection, city services include administration, finance, planning and zoning, real estate assessment, building inspection, street maintenance, snow removal, garbage and recycling collection, park and recreation, and water weed management. The City of Sturgeon Bay has the following boards, commissions, and committees:

- Board of Electrical Examiners
- Board of Public Works
- Board of Review
- Cable Communication System Advisory Council
- City Plan Commission
- Community Protection & Services
- Finance/Purchasing & Building Committee
- Fire & Police Commission
- Historic Preservation Commission
- Industrial Park Development Review Team
- Loan Review Committee/Revolving Loan Committee
- Personnel Committee
- Parks & Recreation Board
- Parks & Recreation Committee
- Parking & Traffic Committee
- Sturgeon Bay Harbor Commission
- Sturgeon Bay Waterfront Redevelopment Authority
- Utility Commission
- Zoning Board of Appeals

## **VILLAGE**

In Wisconsin, a village is an autonomous incorporated area within one or more counties; currently there are 402 villages in the state. Villages provide various services to residents and have a degree of home rule and taxing jurisdiction over them. The home rule authority granted to villages allows them to make their own decisions about their affairs, administration, and much of their public policy, subject to state law.

Villages are governed by a Village President and a Board of Trustees. Village officers include a president, clerk, treasurer, and assessor. Villages may also elect to hire a village manager instead of an elected village president. In order to incorporate as a village, a community must have at least 150 citizens if it is in a rural area (isolated) or 2,500 if it is in an urban area (existing metropolitan area, more densely settled).

Door County has four villages: Egg Harbor, Ephraim, Forestville, and Sister Bay.

## **TOWN**

In Wisconsin, a town is a municipality within a county. Wisconsin has 1,259 towns. All areas in the state that have not been incorporated as cities or villages are parts of towns.

The terms "town" and "township" are sometimes used interchangeably, but in Wisconsin the words are not identical. The word "town" denotes a unit of government while "township" is a surveyor's term describing the basic grid framework for legal descriptions of all land in the state (including land in cities and villages). Originally, most townships were six mile by six mile squares (36 square miles), but natural and human-made boundaries (rivers and county lines, for example) caused some variation. Townships are often annexed by neighboring cities and villages in whole or in part.

Towns are similar to cities and villages in that they provide many of the same services, but they are organized and governed in a different manner. The major distinguishing feature of towns is the fact that they continue to operate as a "direct democracy." State law requires towns to hold "town meetings" where all qualified electors who are age 18 or older and have lived in the town for at least ten days can discuss and vote on town matters, including the town's property tax levy. This means that the electors of the town have more direct control over most local government issues than those living in cities and villages where major decisions are made by elected representatives. Towns also tend to integrate their services with counties to a greater extent than cities and villages.

Towns are governed by an elected town board, which is headed by a board chair. The town board consists of three or five members elected for two-year terms. Towns are also served by a clerk, treasurer, assessor, and can have an appointed or elected town administrator.

Towns, except for those that have adopted village powers, have less authority than villages and cities because they lack the home rule granted to villages and cities by the state. At the minimum, towns maintain their local roads. Towns may choose to provide more services, however, overlapping with those provided by the county. In most cases, towns provide limited services and thus town residents often pay lower taxes than their city or village counterparts.

Town boards can obtain greater planning and regulatory authority when they are granted village powers. Without village powers, when a town wishes to adopt an ordinance to deal with a local concern, the town must decide whether they have specific or implied authority granted to them through state statutes. If authorized by the town electors at a town meeting, the town board may exercise powers relating to villages and conferred on village boards under Ch. 61, Wis. Stats., except those powers which conflict with statutes relating to towns and town boards.

With village powers, the town board may exercise the specific and general powers of a village under s. 61.34, Wis. Stats. Under this authority, the town board's authority includes police power to regulate for the town's health, safety, and welfare. An example of specific village powers that a town board may exercise is comprehensive planning authority.

A town with village powers has some, but not all, of the powers exercised by a village because of different statutory procedures applicable to towns. For example, the statutes provide that a town in a county with comprehensive zoning must first obtain the approval of the electors to engage in town-level zoning and then must obtain approval of the county board before the town zoning ordinance or any amendment to it may take effect. This is in contrast to cities and villages, who may enact local-level zoning without seeking the approval of the county.

In Door County, most of the towns have chosen to exercise village powers. The appropriate municipality should be contacted for further information.

## COUNTY ELECTED OFFICIALS, COMMITTEES, AND DEPARTMENTS

### **DOOR COUNTY BOARD OF SUPERVISORS**

The County of Door and its accompanying government were established in 1851. Door County is governed by an elected Board of Supervisors, currently representing 21 Supervisory Districts. Each supervisory district contains an approximately equal number of residents. Elections are held for all supervisors in April of even-numbered years; all supervisors serve two-year terms. A chair and vice-chair are elected each term by the supervisors themselves.

The Door County Board of Supervisors oversees services provided by Door County, many of which are mandated by the state and/or federal government. Supervisors serve primarily a legislative function, largely limited to policy making, law-making, budgetary approval, and cooperative decision-making. No operational control resides with individual supervisors. Basic county board functions include the following:

- involve, represent, and be accountable to the public
- create budgets and levy taxes
- set policies and regulate
- provide the framework for county services
- oversee county operations
- cooperate with other governments

The county board sets policy through adoption of plans, budgets, ordinances, and resolutions, as described below:

- Plans. A plan involves setting desired future conditions and steps to get there. With regard to land use management, Wisconsin's "Smart Growth" legislation requires county adoption of a comprehensive plan. Other common plans at the county level are strategic plans, which the Door County Board of Supervisors undertook in 2009; capital improvement plans (how money will be spent on infrastructure projects), which the County Board adopts on an annual basis; parks, which the County Board adopts every five years; and transportation.
- Budgets. The budget is the document through which the board determines what services will be provided, how they will be funded, and to what level they will be funded.
- Ordinances. An ordinance is a local law prescribing rules of conduct related to the corporate powers of the governmental body. It is a law that can be enforced by the officials of the governmental body. It is intended to be a permanent part of the governmental code.
- Resolutions. Resolutions deal with matters that are less permanent than ordinances and are more temporary in character. They are more often used to grant special privileges, express opinions, or to communicate with other governmental bodies.

Much of the work described above is conducted through committees comprised entirely of or including at least some supervisors, supported by county staff. Door County committees, as of 2013, are listed in the following sections.

## STANDING COMMITTEES

Standing committees consist almost entirely of county board supervisors and have a continuing existence. Standing committees are policy-making bodies, determining broad outlines and principles governing administration of the departments that they oversee. Door County's standing committees and the departments they oversee (if applicable) are listed in Table 11.1. Agendas and minutes for these committee meetings, as well as committee members, may be found at the door County Web site listed in the Resources and Further Information section at the end of this chapter.

**Table 11.1: County of Door Standing Committees**

Standing Committees	Department(s)
Administrative	Child Support, Corporation Counsel, County Administrator, County Clerk, Human Resources, Veterans Services
Agriculture and Extension	UW-Extension
Airport and Parks	Airport, Parks
Emergency Services/Communications	Emergency Management, Emergency Services
Finance	Finance, Treasurer
Highway	Highway
Information Systems	Information Systems/Land Information Office, Real Property, Register of Deeds
Law Enforcement	Circuit Court Branches I & II, Clerk of Court, District Attorney, Register in Probate, Sheriff
Legislative	--
Negotiating	--
Property	Building Maintenance
Resource Planning *	Planning
Risk Management/Insurance	--
Human Services Board	Human Services

*Source: Door County Administrator.*

\* The Resource Planning Committee is the oversight committee for the adoption and implementation of this comprehensive and farmland preservation plan. It consists of five county board supervisors, typically meeting the first and third Thursdays of every month. Notices of public hearings conducted by the Resource Planning Committee are published in the *Door County Advocate*. Meeting agendas are posted in the Planning Department and next to the County Clerk's office on the first floor of the Government Center, at the library, and at the Justice Center.

## STATUTORY COMMITTEES, COMMISSIONS, AND BOARDS

Statutory committees, commissions, and boards are standing committees comprised of county board members and members-at-large from the community. Members are appointed by the county board chair and confirmed by the county board. Door County's statutory committees, commissions, and boards and the departments they oversee (if applicable) are listed in Table 11.2. Agendas and minutes for these committee meetings may be found at the Door County Web site listed in the Resources and Further Information section at the end of this chapter.

**Table 11.2: Door County Statutory Committees, Commissions, and Boards**

<b>Statutory Committees, Commissions, and Boards</b>	<b>Department(s)</b>
Aging and Disabilities Resource Center Advisory Board	Aging and Disability Resource Center
Board of Health	Public Health, Sanitarian
Civil Service Commission	--
Economic Development	--
Ethics	--
Highway Safety Commission	--
Land Conservation	Soil and Water Conservation
Library Board	Library
Long Term Support Planning Committee	--
Veterans Service Commission	--

*Source: Door County Administrator.*

### **AD-HOC COMMITTEES**

Ad-hoc committees are formed to complete a specific project or assignment under a specific timetable. Members are appointed by the county board chair and confirmed by the county board. Ad-hoc committees are dissolved upon completion of the purpose for which the committee was appointed. Current County of Door ad-hoc committees are listed below:

- Communications Advisory Technical Subcommittee
- Fair Study Committee
- Redistricting
- Senior Resource Center Building Committee
- W-2 Children's Services Network
- W-2 Community Steering Committee

### **OTHER COMMITTEES AND APPOINTMENTS**

County board supervisors also serve on and/or make appointments to a variety of other committees, which operate at or in conjunction with county agencies.

- Bay-Lake Regional Harbor Council Representative
- Bay-Lake Regional Planning Commission Representative
- Civil Service Commission
- Door County Housing Authority
- Economic Development
- Ethics
- Emergency Services/Communications
- Glacierland Resource Conservation and Development, Inc.
- Lakeshore Community Action Partnership Representative
- Land Information Council
- Local Elected Officials
- Local Emergency Planning
- Local Historian
- Museum – Archives (oversees the Door County Museum)
- Poet Laureate
- Wisconsin Development Fund Grant – Loan Review Committee
- Senior Services Advisory Committee
- Zoning Board of Adjustment. In accordance with state statutes, the BOA helps administer the county zoning ordinance through holding public hearings and making decisions regarding petitions for variance and appeals of zoning administrator or Resource Planning Committee decisions.

## **DOOR COUNTY DEPARTMENTS AND AGENCIES**

The County of Door employs over 300 people, working for 32 departments. Departments and their contact information may be found on the Door County Web site, listed in the Resources and Further Information section at the end of this chapter.

The Planning Department, which is responsible for administering and enforcing zoning and other land use-related ordinances and programs, works with nearly all county departments, but works particularly closely with the following:

- **Sanitarian** – As discussed in Chapter 6, Natural Resources, the Sanitarian Department administers Door County's private on-site wastewater treatment systems programs. The Planning Department coordinates the issuance of zoning permits with the issuance of sanitary permits.
- **Real Property Listing** – Real Property Listing processes all information recorded in the Register of Deeds Office pertinent to the transfer of land and retains original copies of all land surveys conducted in the county. The Planning Department relies on Real Property Listing records in administering the county zoning and land division ordinances, particularly when land has been subdivided.
- **Register of Deeds** – Register of Deeds is responsible for the filing and recording of various legal documents including deeds, mortgages, and other documents pertaining to real estate. The Planning Department relies on Register of Deeds records in order to administer the zoning and land division ordinances, and the departments work to coordinate the recording of materials that ensure compliance with Planning Department ordinances.
- **Soil and Water Conservation Department (SWCD)** – As discussed in Chapter 6, Natural Resources, SWCD has responsibility for administration of the county's soil and water conservation programs designed to halt and reverse the depletion of the county's soil resources and pollution of its waters. The SWCD and Planning Departments coordinate a variety of land use management ordinances and programs.
- **Information Systems (IS)/Land Information Office (LIO)** – The IS/LIO manages and coordinates Door County's Geographic Information System (GIS). The Planning Department coordinates with the LIO in many areas, including maintenance of information related to permit issuance, land use-related data creation and maintenance, and mapping.

Also, in administering the county's addressing ordinance and manual, the Planning Department's GIS Mapping Specialist coordinates address numbering, road naming, signage, and related issues with Real Property Listing, IS/LIO, Emergency Services, and the local municipalities.

## **COUNTY TAXES**

Door County's programs and services are primarily funded by property taxes. Table 11.3 illustrates a history of the taxes levied and collected in Door County between 2002 and 2012, with the 2002 dollar values inflation-adjusted to 2012. Note that property taxes fund the local school districts, the vocational school (Northeast Wisconsin Technical College), the county itself, the local municipality within which the property is located, and other taxing jurisdictions, such as sanitary districts.

Between 2002 and 2012, the county's full value increased by over \$421 million (6%) and the total property tax collected increased over \$2.8 million (4%). In looking at taxes broken out by taxing jurisdiction, taxes collected by school districts increased between 2002 and 2012 by 68%. Also, NWTC taxes decreased by 16%, while county, local, and other taxes increased 33%, 65%, and 144%, respectively.

Note that the County of Door has adopted, per statutory guidelines, a sales tax of 0.5% in addition to the state sales tax of 5%, the revenues from which provide a slight offset to property taxes.

**Table 11.3: Comparative Tax Appropriations, Door County**

Year Levied	Full Value	Total			Taxing Jurisdiction Share				
		Property Tax	State Tax Credit	School	Vocational	County	Local	Other	
2002*	\$6,686,155,427	\$88,873,150	\$4,816,959	\$33,553,480	\$10,661,572	\$23,997,868	\$17,389,561	\$3,270,671	
2012	\$7,107,278,200	\$92,747,416	\$5,862,501	\$56,339,174	\$8,923,075	\$31,976,320	\$28,679,916	\$7,984,245	
# Change	\$421,122,773	\$3,874,266	\$1,045,542	\$22,785,694	-\$1,738,497	\$7,978,452	\$11,290,355	\$4,713,574	
% Change	6%	4%	22%	68%	-16%	33%	65%	144%	

Source: Wisconsin Department of Revenue, City, Village and Town Taxes.

\*Inflation-adjusted to 2012.

Under the 2013-2015 state budget, a municipality is allowed to increase its levy over the amount it levied in the prior year by the percentage increase in equalized value from net new construction. If no new construction occurs, then the allowable levy increase is zero percent. There are some exceptions and modifications to levy limits, such as debt service exemptions. Municipalities can also exceed limits if approved by referendum.

These levy limits have been in place for a number of years. Door County has had very low net new construction in recent years, thus has not been able to increase its levy by much.

## LAND USE (PLANNING AND ZONING) PROGRAM INTERACTIONS

With regard to land use issues, the primary types of county and municipal interactions in Door County are relationships required by or established with state and regional agencies and those involving comprehensive and farmland preservation planning, land use education and discussion forums, plat review, and extra-territorial regulation.

### STATE AND REGIONAL LAND USE AGENCIES

#### WISCONSIN DEPARTMENT OF ADMINISTRATION - DIVISION OF INTERGOVERNMENTAL RELATIONS

The Division of Intergovernmental Relations (DIR) works with counties, municipalities, and citizens providing support services in land use planning, land information and records modernization, municipal boundary review, plat review, demography, and coastal management programs. The plat review process is described in more detail in a subsequent section.

The DIR includes the Wisconsin Coastal Management Program (WCMP), a program dedicated to preserving and improving access to the natural and historic resources of Wisconsin's Great Lakes coasts. The WCMP works cooperatively with state, local, and tribal government agencies and non-profit organizations to manage the ecological, economic, and aesthetic assets of the Great Lakes and their coastal areas. Door County has benefited from a variety of WCMP grants, most of which have been awarded to the SWCD. The WCMP, in partnership with the DNR, also developed the Draft Wisconsin Coastal Estuarine Land Conservation Plan, as described in Chapter 6, Natural Resources.

## **WISCONSIN DEPARTMENT OF NATURAL RESOURCES**

The Planning Department works with the DNR regularly on land use issues, most frequently involving shoreland zoning, ordinary high water mark determinations, wetland management, and floodplain management. The wetland, shoreland, and floodplain regulation processes in Door County are described in Chapter 6, Natural Resources. Other land use plans developed by the DNR that incorporate Door County are also described in Chapter 6, including the Wildlife Action Plan and the Land Legacy Report.

## **BAY-LAKE REGIONAL PLANNING COMMISSION**

The Bay-Lake Regional Planning Commission was created in 1972 by Governor Lucey under s. 66.945 (re-titled 66.0309), Wis. Stats., as the official area-wide planning agency for northeastern Wisconsin. The function of Bay-Lake is solely advisory. Bay-Lake has undertaken regional studies focusing on the region's transportation network, population and economic structure, housing characteristics, natural resources, land and water related issues, and those issues that transcend local governmental boundaries.

Bay-Lake operates under the following five principles:

- To assist and advise local government;
- To influence state, regional, and federal plans and programs that reflect the best interest of the Bay-Lake Region;
- To prepare and adopt a comprehensive plan under s. 66.0295, Wis. Stats., for the development of the region;
- To provide technical information about the region for use by public and private agencies; and
- To encourage citizen participation in the planning process.

Bay-Lake provides planning assistance to member municipalities. Door County has maintained sporadic membership in Bay-Lake since its establishment. The county is currently not a member.

## **COMPREHENSIVE PLANNING**

### **COMPREHENSIVE PLAN DEVELOPMENT**

The Door County Planning Department is responsible for the overall development of the county's comprehensive plan in compliance with the requirements of s. 66.1001(4)(a), Wis. Stats., which requires municipalities with a zoning ordinance, subdivision ordinance, or an official mapping program to have a comprehensive plan and to update that plan at least every 10 years. As of January 1, 2010, all land use management decisions based on those zoning or subdivision ordinances or official maps must be consistent with that municipality's comprehensive plan.

The municipalities in Door County required to have a comprehensive plan are:

- County of Door
- City of Sturgeon Bay
- Villages of Egg Harbor, Ephraim, Forestville, and Sister Bay
- Town of Egg Harbor (town subdivision ordinance)
- Towns of Union and Brussels (town-level zoning)

For detailed information on Wisconsin's planning legislation, the process followed in preparation of the Door County Comprehensive Plan, and the county plan vision statements and goals, see

Volume I of the plan.

## **COMPREHENSIVE PLAN IMPLEMENTATION**

As has been true historically, the Door County Zoning Ordinance will presumably continue to be the primary tool the county uses to implement the comprehensive plan. Administration and enforcement of the zoning ordinance are carried out in accordance with state statutes, which outline procedures counties must follow involving towns in potential zoning ordinance text and map amendments. Note that the Planning Department also provides means for additional coordination with the towns that have adopted county comprehensive zoning, such as seeking input on and allowing extra time for town review of applications going to public hearing (conditional use permits, variances, zoning text amendments, zoning map amendments).

Table 11.4 on the following page shows which municipalities have as of October 2014 adopted comprehensive plans as well as which land use management ordinances they have adopted. A description of most of the ordinances listed in Table 11.4 may be found in Chapter 10, Land Use.

## **LAND USE EDUCATION FORUMS**

Since 2006, the Door County Planning Department has held educational/discussion meetings on an approximately quarterly basis with local elected and appointed officials. The purpose of the meetings is to provide educational and discussion forums regarding planning and zoning issues and to help coordinate comprehensive planning and related regulatory activities between the Planning Department and local municipalities. Meetings cover topics and include speakers requested by municipal officials.

Planning Department Zoning Administrators are also actively involved with the Wisconsin County Code Administrators and the Eastern Wisconsin County Code Administrators, attending and organizing educational sessions and serving on various committees.

## **PLAT REVIEW**

The state requires a subdivision plat any time a landowner or landowner's agent divides a lot, parcel, or tract of land for the purpose of sale or building development, where:

- 1) The division creates five or more parcels or building sites (i.e., lots or outlots) of 1 ½ acres each or less; or
- 2) Successive divisions within a five-year period create five or more parcels or building sites (i.e., lots or outlots) of 1½ acres each or less.

Final plats for situations that meet the state requirements listed above are subject to three objecting authorities, as defined by state statutes. The Wisconsin Department of Administration has a Plat Review Program that reviews all subdivision plats as defined by s. 236.02 (12), Wis. Stats. (described above), or as required by local ordinance, for compliance with ss. 236.15, 236.16, 236.20, and 236.21, Wis. Stats. The Wisconsin Department of Transportation reviews subdivision plats for compliance with Trans 233, Wis. Admin. Code, when lands being platted abut a state trunk or interstate highway, or when the subdivider has an interest in land between the subdivision and a state trunk or interstate highway. Door County is also an objecting authority for those subdivision plats located within the city and villages: the Planning Department reviews city and village plats to determine any conflicts with parks, parkways, expressways, major highways, airports, drainage channels, schools, or other planned public improvements.

Municipality	Comprehensive Plan	Zoning	Land Division	Floodplain municipations	Telecom-	Wind Energy	Airport Height	Other Plans & Ordinances
Door County	Yes	Yes - 9 towns under county comprehensive zoning, 5 with county zoning in shoreland only.*	Yes**	Yes***	Yes***	Yes***	Yes	Uniform Addressing Ord.; Solid Waste Management Ord.; Recycling Ord.; Outdoor Refuse Burning and Fireworks Ord.; Farmland Preservation Plan; Parks & Open Space Plan; Land & Water Resource Management Plan; Bicycle, Pedestrian, and Recreational Facilities Plan; County Highway Plan
T. Baileys Harbor	Yes	County	County	County	County	County	No	Bicycle plan
T. Brussels	Yes	County Shoreland & Town	County	County	County	County	No	--
T. Clay Banks	Yes	County	County	County	County	County & Town	No	Holding tank - sludge spreading code
T. Egg Harbor	Yes	County Shoreland Only	County	County	County	County	No	--
T. Forestville	No	County	County	County	County	County	No	--
T. Gardner	Yes	County Shoreland Only	County	County	County	County	No	Concentrated Animal Feeding Operation Ordinance
T. Gibraltar	Yes	County	County	County	County	County	Ephraim-Gibraltar	Bicycle plan
T. Jacksonport	No	County	County	County	County	County	No	--
T. Liberty Grove	Yes	County	County	County	County	County	No	Park & recreation plan, Bicycle Plan
T. Nasewaupee	Yes	County Shoreland Only	County & Town	County	County	County	--	--
T. Sevastopol	Yes	County	County	County	County	County	--	Park & recreation plan
T. Surgeon Bay	Yes	County	County	County	County	County	No	--
T. Union	Yes	County Shoreland & Town	County	County	County	County	No	--
T. Washington	No	County	County	County	County	County	Washington	--
V. Egg Harbor	Yes	Yes	No	No	No	No	No	Building regulations and construction, mobile homes and mobile home parks, sign code, lighting ord., bicycle plan
V. Ephraim	Yes	Yes	Yes	Yes	No	No	Ephraim-Gibraltar	Architectural design ord., historic preservation ord., stormwater/construction site erosion control ord.
V. Forestville	Yes	No	Yes	No	No	No	No	--
V. Sister Bay	Yes	Yes	No	Yes	No	No	No	Park & recreation plan, wellhead protection plan, comprehensive utilities plan
C. Sturgeon Bay	Yes	Yes	Yes	Yes	Yes	No	Yes	Historic preservation ord., waterfront design ord., park & recreation plan, bicycle plan, wellhead protection plan

\* State law requires county zoning to be effective in the shoreland areas of all unincorporated areas, regardless of whether or not the town has adopted county zoning.  
 Shoreland areas are defined as lands within 100' of the ordinary high water mark of navigable lakes, ponds, or flowages, and/or within 300' of the ordinary high water mark of navigable creeks, streams, or rivers, or to the landward side of a floodplain of the navigable reaches of rivers or streams, whichever distance is greater.

\*\* In effect in all 14 towns.

In addition to the objecting authorities listed above, approval authorities for state plat land divisions located within towns include the town board and the county. Approval is based on compliance with any town and county subdivision ordinances or comprehensive plans. Town boards may require installation of public improvements, alterations to utilities, or creation of easements for public benefit.

Door County's Land Division Ordinance, applicable in all 14 towns, is more restrictive than the state and requires a subdivision plat when creating five or more parcels or building sites that are less than 10 acres in area or successive divisions within a five-year period that create a total of five or more parcels. The Towns of Egg Harbor and Nasewaupee also have town-level subdivision ordinances. The more restrictive ordinance (county or town) will supersede.

### **EXTRA-TERRITORIAL REGULATION AND COOPERATIVE AGREEMENTS**

Extra-territorial regulation may be applied by cities and villages, giving them some control regarding zoning and subdivisions within a limited area outside their incorporated boundaries. Cooperative boundary agreements are also permitted by state statutes in order to help municipalities coordinate development of the territory covered within plans.

### **EXTRA-TERRITORIAL SUBDIVISION REGULATION**

Sections 236.10 and s. 62.23, Wis. Stats. grant incorporated villages and cities the authority to review plats within surrounding unincorporated areas. The extraterritorial subdivision jurisdiction for 1<sup>st</sup> through 3<sup>rd</sup> class cities extends 3 miles beyond corporate limits. The limit for 4<sup>th</sup> class cities (such as Sturgeon Bay) and villages is 1½ miles beyond corporate limits. They can review plats for compliance with municipal ordinances, local master or comprehensive plans, and official maps. They cannot require public improvements within the subdivision. This helps cities or villages protect land uses near their boundaries from potentially conflicting uses and plan for potential extension of municipal services.

Extra-territorial plat review applies automatically if a city or village adopts a subdivision ordinance or an official map. Towns do not have approval authority over these ordinances. Cities and villages may waive their right to approve plats within any portion of extra-territorial plat approval jurisdiction. This is done by filing a resolution with the Register of Deeds incorporating a map or metes and bounds description of the area outside its corporate boundaries within which it has authority to approve plats. The municipality may rescind this waiver at any time by resolution filed with the Register of Deeds. Neither the city nor the villages in Door County have waived extra-territorial subdivision authority.

### **EXTRA-TERRITORIAL ZONING**

Section 62.23(7a), Wis. Stats. allows an incorporated village or city to extend limited zoning authority 1½ to 3 miles beyond its borders into surrounding unincorporated areas (towns). The extra-territorial zoning jurisdiction for 1<sup>st</sup> through 3<sup>rd</sup> class cities extends 3 miles beyond corporate limits. The limit for 4<sup>th</sup> class cities and villages is 1½ miles. In order to exercise their extra-territorial zoning powers, a city or village must have created a plan commission and adopted a zoning ordinance for the land within its corporate limits.

Three major steps are involved in the adoption of an extra-territorial zoning ordinance. First, the governing body of the city or village adopts and publicizes a resolution which establishes its intent to exercise its zoning authority within all or part of its extra-territorial jurisdiction. Second, the governing body directs its plan commission to formulate tentative recommendations for the extra-territorial district plan and regulations. Actual hearings, recommendations, and decisions regarding the final zoning plan are made and conducted by a joint extra-territorial zoning committee. The joint extra-territorial zoning committee is composed of three city or village representatives and three members from each of the towns included within the area proposed to be zoned. Finally, once it has received the extra-territorial zoning plan as approved by the joint committee, the governing body of the city or

village may adopt the final plan.

As of 2013, in Door County only the Village of Egg Harbor has exercised extra-territorial zoning authority over portions of the Town of Egg Harbor.

### **COOPERATIVE BOUNDARY AGREEMENTS**

Sections 66.0301 and 66.0307, Wis. Stats. allow municipalities to enter into agreements regarding changing or maintaining municipal boundaries for a period of 10 years or more. The Cooperative Boundary Plan is established by any combination of cities, villages, and towns and determines the boundary lines between their municipalities, with the plan then approved by the Wisconsin Department of Administration. The plan should have the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the territory covered by the plan. The cooperative plan must include provisions for the physical development of the territory covered by the plan; identify existing boundaries that will not change and conditions for any boundary changes; evaluate any significant adverse environmental consequences; and address the need for safe and affordable housing to meet the needs of diverse social and income groups in each community. The plan and agreement should strive to provide long-term certainty for all participating local governments, developers, and landowners. If boundaries are going to change, they will do so only according to the criteria specified in the agreement. Currently, there are no cooperative boundary agreements in Door County.

## **OTHER INTERGOVERNMENTAL COOPERATIVE RELATIONSHIPS**

A variety of other cooperative relationships exist between Door County, local municipalities and other governments, and non-governmental agencies. The alphabetical listing below provides an idea as to programs and services encompassed by many of these relationships. Note that state and federal agencies with which Door County interacts are listed under "state" and "federal."

- City of Sturgeon Bay
  - City-owned fiber optic system services county buildings
  - City-owned main library building houses the main County of Door library
  - Sturgeon Bay Utilities provides services to almost every municipality
- Door County Emergency Services Department (see also Chapter 9, Community Facilities and Utilities)
  - County leases land from Village of Sister Bay for Northern Door Emergency Center
  - Critical communication coordination (i.e., 911 dispatch, fire departments, etc.)
- Door Highway Department (see also Chapter 8, Transportation and Chapter 9, Community Facilities and Utilities)
  - Contracts with both state and towns to do road repair, maintenance, and plowing on state highways and town roads
  - Pursues federal and state funding for solid waste management efforts (i.e., municipal recycling programs and county-wide electronics and prescription clean sweeps)
  - Washington Island Ferry (Door County owns a portion of the Washington Island Ferry dock, an extension of STH 42)
- Door County Information Systems Department (IS)
  - IS contracts with the city to provide data and phone service (IT support and phone network)
  - Telecommunication towers shared with state and other private providers

- Door County Parks Department (see also Chapter 6, Natural Resources and Chapter 9, Community Facilities and Utilities)
  - Partners with DNR and non-profits to acquire land using DNR stewardship funds
  - Park maintenance agreements with the state (i.e., Ahnapee Trail) and the towns
  - Snowmobile Coordinator for the State of Wisconsin Snowmobile Program
- Door County Public Health Department
  - School health programs for hearing and vision screening
  - Preschool and kindergarten health screenings at schools
  - Professional nursing services to school districts
  - Beach Contamination Reduction Project - testing and monitoring of 33 public beaches (collaboratively with UW-Oshkosh, DNR, and SWCD)
- Door County Sheriff's Department (see also Chapter 9, Community Facilities and Utilities)
  - Law enforcement sharing with city state; assists with coordinating law enforcement activities across the county
  - Eligible city residents in jail go to Southern Door School
  - D.A.R.E. - Drug Abuse Resistance Education
  - Door County juveniles are jailed at Brown County
  - Kewaunee County has a contract with the Door County jail to house adult male and female Kewaunee County inmates
  - Door/Kewaunee Drug Task Force
- County of Door Human Services Department
  - Annual funding for non-profit HELP line
  - Consultation to local schools regarding suicide prevention
  - Collaboration for Crisis Training with the Sheriff's and Sturgeon Bay Police Departments
  - Jointly planning family care in a multi-county arrangement
  - Juvenile Restitution and Community Service Program
  - Independent Living Skills Program - provides education and training in necessary life skills to youth who have been in the Door County Department of Social Services Foster Care Program
- Door County Soil and Water Conservation Department (see also Chapter 6, Natural Resources)
  - Provides assistance to the Village of Ephraim with their Stormwater/Construction Site Erosion Control Ordinance
  - Beach Contamination Reduction Project - testing and monitoring of 33 public beaches (collaboratively with UW-Oshkosh, DNR, and Public Health)
  - Wellhead protection - SWCD helped the Village of Sister Bay and City of Sturgeon Bay map area "zones of contribution"
- Door County Economic Development Corporation (see also Chapter 6, Economic Development)
  - Administers the county's revolving loan fund for new businesses and business expansions that create jobs
  - Coordinates the Technology Council
  - Helps coordinate Door County Legislative days in partnership with UW-Extension
  - Door-Kewaunee County Business Education Partnership
- Door County Tourism Zone Commission (see also Chapter 5, Economic Development)
  - Oversees implementation and distribution of room tax funds
- Door-Tran (see Chapter 8, Transportation). Over 43 members, including non-profit providers, for-profit providers, other non-profits, businesses, and government agencies

- Federal Agencies
  - Environmental Protection Agency
  - Federal Emergency Management Association (FEMA)
  - United States Coast Guard
  - Federal Aviation Administration
  - United States Department of Agriculture/Farm Services Agency
  - Civil Air Patrol (military organization operating out of Cherryland Airport; coordinates with Door County Emergency Services)
  - Veteran's Office
- State of Wisconsin Departments
  - Administration - energy assistance programs
  - Agriculture, Trade, and Consumer Protection - farmland preservation agreements
  - Children and Families - Safe & Stable Families, Independent Living, Kinship Care, foster care, other child placements, W-2, child care
  - Commerce
  - Corrections
  - Health Services - Medicaid, Long Term Care, Aging Programs, Income Maintenance, Integrated Services Project, Elder Abuse
  - Justice
  - Nicolet Federated Library System
  - Public Service Commission of Wisconsin – wind energy
  - Transportation
  - Workforce Development
  - University of Wisconsin - Extension
    - Joint employment agreements between UW - Extension and Door County for the employment of County Agricultural Agent, County Community Development Educator, County Family Living Agent, and County 4H and Youth Development Agent
    - Cooperates with other county departments and other local agencies on programs considered important to the environment and economy of Door County
    - Door County Legislative Days - In partnership with the Door County Economic Development Corporation, UW - Extension, and Kewaunee County coordinates this county-wide effort to lobby state government on economic development and quality of life issues for Door County
- Wisconsin Towns Association (WTA), Door County Chapter
  - Representatives from the 14 towns meet on a regular basis to discuss issues of interest or concern amongst themselves, with local and state-level elected officials, and WTA staff

### **ADJACENT COUNTIES**

The only county unit of government adjacent to Door County is Kewaunee County, located immediately south of Door County. Kewaunee County has 14 municipalities: two cities, two villages, and ten towns. Brown County, separated from Door County by only a small corner of Kewaunee County, is located less than three miles south of Door County. Brown County contains 24 municipalities: two cities, nine villages, and thirteen towns.

Brown County adopted its comprehensive plan in 2004 and Kewaunee County adopted its in 2007. Intergovernmental cooperation and coordination between Door and the other two counties is not deemed to be a major concern: the Brown County comprehensive plan does not mention Door County at all with regard to intergovernmental cooperation, and the Kewaunee County plan mentions Door County only in relation to the jailing of their inmates in the Door County jail.

## RESOURCES AND FURTHER INFORMATION

### **Door County (<http://www.co.door.wi.gov>)**

Door County Government, established in 1851, provides services to the county's year-round residents as well as a seasonal population whose size fluctuates throughout the year. The county seat is the City of Sturgeon Bay. The county consists of the city, 14 towns, and four villages covering 492 square miles. See the Web site listed above for county department contact information.

**Door County Municipality Contact Information.** See the Door County Web site listed above for a list of Door County municipalities and their Web site addresses, if applicable. The County Clerk's office can be contacted for telephone and mailing address information for those municipalities without Web site addresses.

### **Bay-Lake Regional Planning Commission (<http://www.baylakerpc.org>)**

The Bay-Lake Regional Planning Commission was created in 1972 by Governor Lucey under s. 66.945, Wis. Stats. as the official area-wide planning agency for northeastern Wisconsin. It currently encompasses eight counties: Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan. Bay-Lake provides planning services on area-wide issues, represents local interests on state and federal planning program activities, and provides local planning assistance to communities in the Bay-Lake Region.

### **State of Wisconsin (<http://www.wisconsin.gov>).**

See Web site for further information regarding the Department of Administration-Division of Intergovernmental Relations and the Department of Natural Resources, as well as other state agencies referenced in this chapter.