

10. Growth Forecasts

Based on historic and current trends, projections can be made regarding population and housing units. These projections are used to estimate growth potential and associated land demands which the land use plan must seek to accommodate.

Two different types of projections for both population and housing are provided in this section. Population projections include the projections made by the Wisconsin Department of Administration (WDOA), and a projection prepared utilizing the projected number of housing units based on recent building permit activity trends. Similarly, the housing unit projections prepared include the WDOA population projections, and projections based on recent residential housing development trends according to building permit data.

10.1 Population Trends and Projections

Accurately projecting population change is often a difficult task, as population change is subject to many unpredictable variables. Therefore, providing several population projections will provide a range of possible population scenarios for which the county can best be prepared to plan. In addition, it is important to note that these projections are based on past and current population trends, and therefore should only be used as baseline information. Actual population levels are subject to the county's economic conditions, taxation, and other political policies which influence business and personal location decisions.

Wisconsin Department of Administration (WDOA) Projections

In 1993 the WDOA's Demographic Services Center prepared baseline population projections to the year 2015 for minor civil divisions (MCD's), and to the year 2020 for counties of Wisconsin. The WDOA utilized a projection formula that calculates the annual numerical population change over three varying time spans. From this formula, the average annual numerical population change is calculated providing communities with preliminary population projections. Table 10-1 identifies the population projections for the county and its respective municipalities.

- ◆ Largely due to the age structure of the existing population, the WDOA projects that Vilas County will experience a gradual population decline between the 2000 population count and the year 2015, declining by 12.6%.
- ◆ Thirteen of the 15 municipalities in the county are projected to experience population declines between the 2000 census count and the year 2015, ranging from declines of 3.3% in Plum Lake to 26.4% in Washington.
- ◆ A slight population increase is projected for one municipality in the county, Presque Isle's population is projected to increase 3.7%.

Table 10-1 WDOA Population Projections by Municipality Vilas County 1990-2015

Municipality	1990	2000	2000	2005	2010	2015	# Change	% Change
	Census	Census					2000	2000
Arbor Vitae	2,531	3,153	2,859	2,890	2,876	2,836	-317	-10.1%
Boulder Junction	884	958	925	905	879	843	-115	-12.0%
Cloverland	768	919	880	893	892	882	-37	-4.0%
Conover	932	1,137	1,080	1,095	1,093	1,080	-57	-5.0%
Lac du Flambeau	2,433	3,004	2,723	2,724	2,691	2,632	-372	-12.4%
Land O' Lakes	839	882	884	866	842	808	-74	-8.4%
Lincoln	2,310	2,579	2,409	2,357	2,290	2,195	-384	-14.9%
Manitowish Waters	651	646	698	687	670	646	0	0.0%
Phelps	1,187	1,350	1,263	1,241	1,210	1,165	-185	-13.7%
Plum Lake	465	486	503	497	486	470	-16	-3.3%
Presque Isle	471	513	539	544	541	532	19	3.7%
St. Germain	1,319	1,932	1,521	1,548	1,548	1,535	-397	-20.5%
Washington	1,189	1,577	1,256	1,236	1,205	1,161	-416	-26.4%
Winchester	354	454	388	386	379	369	-85	-18.7%
C. Eagle River	1,374	1,443	1,404	1,355	1,303	1,234	-209	-14.5%
Vilas County Total	17,707	21,033	19,332	19,224	18,905	18,388	-2,645	-12.6%

Source: U.S. Census Bureau, 1990 and 2000; Wisconsin Demographic Services Center Official Municipal Population Projections 1990 - 2015.

- While the projections by the WDOA are based on sophisticated modeling using population trends and economic conditions, the attractiveness of the area for year-round recreational opportunities, the commerce ability and associated freedom of location afforded through use of the Internet, and the increasing presence of retirees will likely result in population growth which contradicts these projections. The county can expect, as the regional trends have identified, that many of the seasonal/recreational homes will be converted to year-round retirement homes while new families will continue to discover the abundance of recreational opportunities and natural beauty in the area. Therefore, an alternative method of projecting population is also presented.

Population Projections Based on Recent Building Permit Data

A comparative method of projecting population growth is one which is based on recent building permit activity trends. To make this projection, the average number of residential building permits issued annually (See Section 4, Housing) in each municipality was used to calculate a consistent, straight-line housing unit projection for each municipality from 2000 to 2020. Population projections for each municipality were then derived from the straight-line housing unit projection. The sum of all the municipality population projections for each specified year equals the projected population for Vilas County. Table 10-2 displays the final population projections based on building permit activity data for Vilas County, by municipality. Appendix A contains the actual calculations which were completed for each municipality to arrive at the population projections, along with a description of the methodology used to derive at the projections.

Table 10-2 Vilas County Population Projections by Municipality Based on Recent Building Permit Activity 2000-2020

Municipality	2000 Census	2005	2010	2015	2020	# Change 2000-2020	% Change 2000-2020
Arbor Vitae	3,153	3,246	3,306	3,383	3,429	276	8.8%
Boulder Junction	958	967	968	976	975	17	1.8%
Cloverland	919	961	993	1,028	1,055	136	14.8%
Conover	1,137	1,165	1,184	1,209	1,224	87	7.7%
Lac du Flambeau	3,004	3,023	3,052	3,095	3,120	116	3.9%
Land O' Lakes	882	884	879	880	874	-8	-0.9%
Lincoln	2,579	2,668	2,733	2,810	2,862	283	11.0%
Manitowish Waters	646	656	661	669	672	26	4.0%
Phelps	1,350	1,324	1,350	1,384	1,407	57	4.2%
Plum Lake	486	498	508	517	525	39	8.0%
Presque Isle	513	533	545	561	572	59	11.5%
St. Germain	1,932	2,024	2,092	2,169	2,225	293	15.2%
Washington	1,577	1,637	1,682	1,735	1,771	194	12.3%
Winchester	454	469	480	494	502	48	10.6%
C. Eagle River	1,443	1,241	1,214	1,200	1,175	-268	-18.6%
Vilas County Total	21,033	21,296	21,647	22,110	22,388	1,355	6.4%

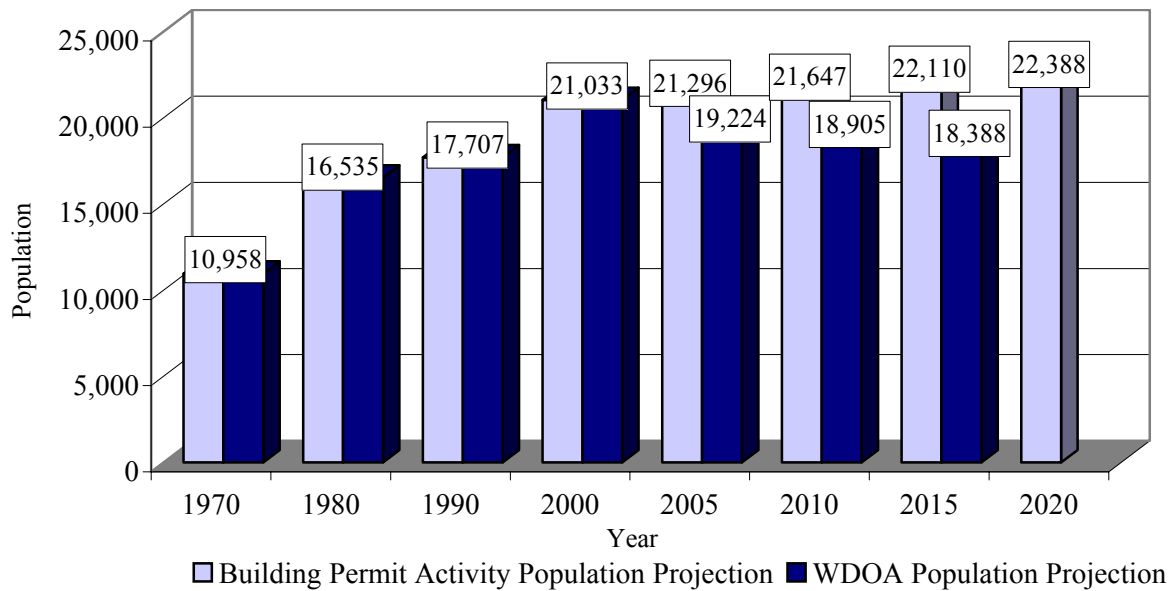
Source: U.S. Bureau of the Census, 2000 Census of Population and Housing; Recent permit activity (see individual tables); Vilas County Zoning Office, Building Statistics, 1980-1999; Foth & Van Dyke, 2001.

- The population projections based on the housing unit/building permit projections contrast with the WDOA's population projections by projecting the county to experience an overall increase in population of 6.4% between the 2000 census count and the year 2020.
- Based on this method of projecting population, all towns within Vilas County are projected to experience population increases, except for Land O' Lakes, ranging from 1.8% in Boulder Junction to 15.2% in St. Germain, while the City of Eagle River's population is projected to decline by 18.6%.

Comparative Population Projections

Figure 10-1 illustrates the population trends of Vilas County, along with a comparison of the WDOA population projections and the derived population projection based on the building permit activity trend. The figure depicts the disparity between the two projections which should be used as parameters for the anticipated population change in Vilas County through the year 2020. Figure 10-2 provides a comparison of the projected percent change in population between 2000 and 2015 for each of the two projections, by municipality.

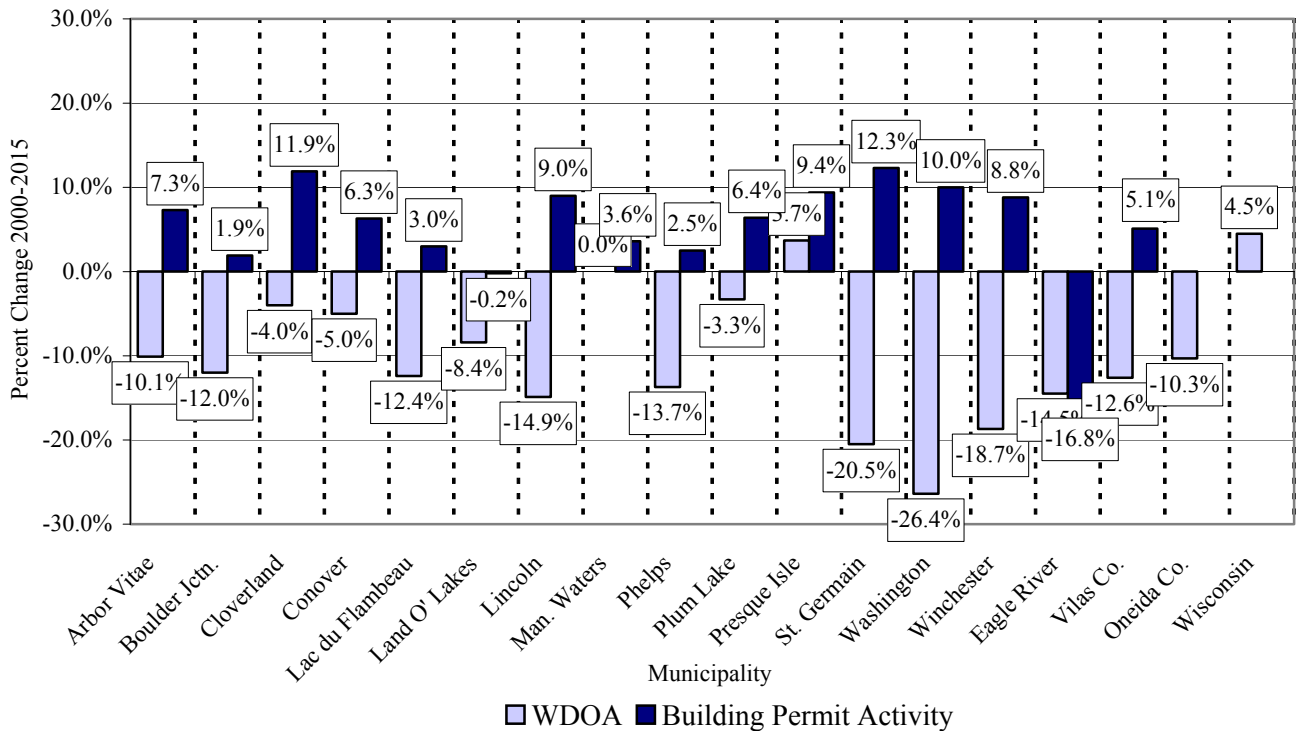
Figure 10-1 Comparative Population Projections Vilas County 1970-2020



Source: WDOA Official Municipal Population Projections, Vilas County Annual Zoning Reports 1980 - 2000, Foth & Van Dyke derived population projections 2001.

- ◆ The projection prepared by the WDOA indicates that the county will experience a gradual population decline from the 2000 census count of 21,033 persons to 18,388 in the year 2015, declining 12.6% overall during this time period. This projection is considered the conservative projection.
- ◆ The projection prepared using the annual average number of building permits granted in the county between 1980 and 1999 projects the county will experience a slight, gradual increase in population of 6.4% from the 2000 census count of 21,033 persons to approximately 22,388 persons in the year 2020. This projection is considered the optimistic projection.
- ◆ The population projections developed by the WDOA, and those prepared by Foth & Van Dyke which are based on building permit activity, create a range which Vilas County can use as a guide for future development needs and services. The range of population identified for the county in the year 2015 is 18,388 persons to 22,110 persons, or ranging from a decline of 12.6% to an increase of 5.1% based on the 2000 population count. The comparative analysis creates a range to project acreage needs as a result of population increases.
- ◆ Foth & Van Dyke predicts that Vilas County's population will fall between the two projection scenarios, experiencing a modest increase in population throughout the planning period. A population decline is not anticipated, as it is likely that seasonal housing units will continue to be converted to year-round units for permanent residency.

Figure 10-2 Comparative Projected Percent Change in Population Vilas County and Selected Areas 2000-2015



Source: WDOA Official Municipal Population Projections; Vilas County Annual Zoning Reports 1980 - 2000; U.S. Bureau of the Census, 2000 Census of Population and Housing; Foth & Van Dyke derived population projections 2001.

Recent Revisions to WDOA Population Projections

The Wisconsin Department of Administration, Demographic Services Center, recently released revised population projections for Wisconsin municipalities for 2000-2020. Due to the timing of the release (October 21, 2003) and impact to the data found in this document, the revised population projections are not included in this section. However, The year 2020 projected population for Vilas County is 22,271 persons. The estimated population levels using building permit activity as displayed in Table 10-2 and Figure 10-1 show the year 2020 population estimates to be 22,388, very similar to the revised WDOA projections. The estimated population using the building permits as a baseline in the projection method is validated by the recent WDOA projection. In addition, the estimated population using the building permits was also validated as a baseline for determining estimated housing projections in section 10.2.

10.2 Housing Unit Projections

Housing unit projections are an important element in preparing a land use plan. Specifically, these projections are used to allocate adequate acreage to accommodate future residential development, as well as to prepare for the future demands growth may have on public facilities and services throughout the planning period.

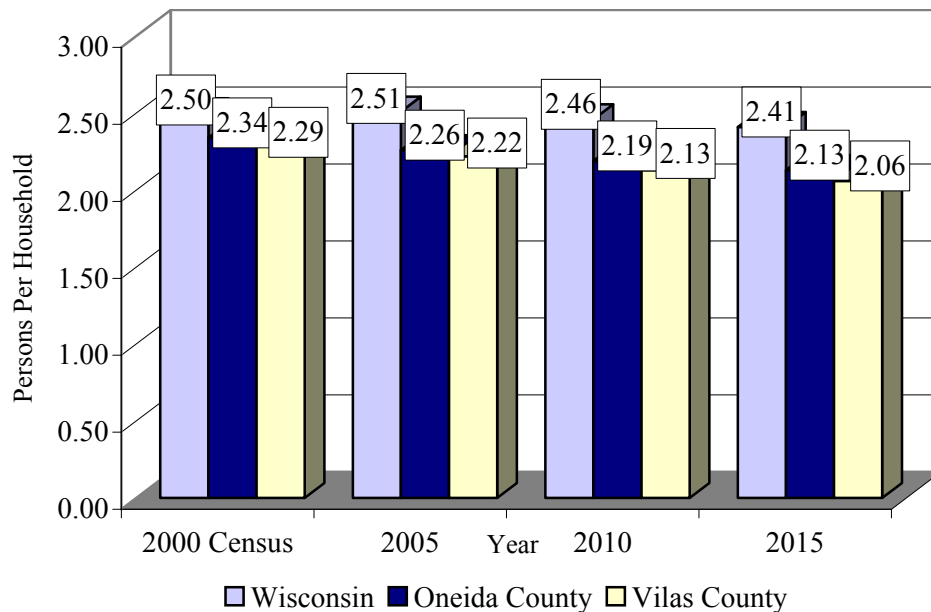
Two housing units projections are presented in this plan, including housing unit projections based on WDOA population projections, and projections based on building permit activity trends experienced in the county between 1980 and 1999. The methodology of the development of each projection is presented separately in Appendix A, while the resultant projections are shown comparatively in Figure 10-4.

Persons Per Household

Figure 10-3 illustrates the projected number of persons per household in the county in comparison with that of Oneida County and Wisconsin, from 2005 through the year 2015. Year 2000 persons per household is from the 2000 census. This information is needed to complete the housing unit projections.

- ◆ The projected number of persons per household for the county is projected to decline between 2000 and 2015 from 2.29 persons per household to 2.06. Oneida County and Wisconsin are also projected to experience declines in the number of persons per household. The gradual decline in the number of persons per household is a nationwide trend which is expected to continue as family sizes continue to decline.
- ◆ The planning impact of persons per household data relates to the population increases and the associated increase in housing demand. The decreased number of persons per housing unit then relates to the greater acreage demands due to volume.
- ◆ The projected number of persons per household for the county is projected to decline between 2000 and 2015 from 2.29 persons per household to 2.06. Oneida County and Wisconsin are also projected to experience declines in the number of persons per household. The gradual decline in the number of persons per household is a nationwide trend which is expected to continue as family sizes continue to decline.
- ◆ The planning impact of persons per household data relates to the population increases and the associated increase in housing demand. The decreased number of persons per housing unit then relates to the greater acreage demands due to volume.

Figure 10-3 Projected Persons Per Household Vilas County, Oneida County, and Wisconsin 2000 - 2015



Source: Department of Administration, Division of Energy and Demographic Services, Demographic Services Center, Wisconsin Household Projections by Household Type 1990-2015, December 1993; U.S. Bureau of the Census, 2000 Census of Population and Housing.

Note: The increments used to obtain the projected household size for Vilas County were taken from Vilas County's projection increments according to the Demographic Services Center.

Housing Unit Projections Based on WDOA Data

The housing unit projections for Vilas County are based on the sum of the housing unit projections prepared for the individual municipalities. The method used to prepare the individual housing unit projections is described in Appendix A, along with the actual projection calculations for each municipality. Table 10-3 identifies the resultant housing unit projections for Vilas County by municipality. The projected percent change in the number of housing units based on WDOA data, by municipality, is presented in Figure 10-4, in comparison with the percent change in housing units projected using recent building permit activity trends.

- ◆ Based on the WDOA population projections, Vilas County is expected to experience a slight decrease in the number of housing units in the county between 2000 and the year 2015, decreasing by 0.3% or a 66 housing unit decrease.
- ◆ The Towns of Presque Isle and Manitowish Waters, and the City of Eagle River are expected to experience the greatest percentage increases in housing units within their jurisdictions and should prepare for increases in housing units of 16.7%, 12.2% and 11.4%, respectively.

Table 10-3 Projected Number of Housing Units Using WDOA Data Vilas County 2000-2015

	2000 Census	2005	2010	2015	# Change 2000-2015	% Change 2000-2015
Arbor Vitae	2,442	2,315	2,402	2,450	8	0.3%
Boulder Junction	1,407	1,383	1,405	1,396	-11	-0.8%
Cloverland	936	944	984	1,009	73	7.8%
Conover	1,440	1,439	1,496	1,528	88	6.1%
Lac du Flambeau	2,981	2,812	2,875	2,891	-90	-3.0%
Land O' Lakes	1,337	1,396	1,386	1,380	43	3.2%
Lincoln	1,873	1,774	1,796	1,779	-94	-5.0%
Manitowish Waters	1,103	1,216	1,238	1,238	135	12.2%
Phelps	1,605	1,610	1,636	1,628	23	1.4%
Plum Lake	762	807	824	828	66	8.7%
Presque Isle	1,216	1,338	1,394	1,419	203	16.7%
St. Germain	2,067	1,718	1,795	1,844	-223	-10.8%
Washington	1,706	1,385	1,408	1,403	-303	-17.8%
Winchester	796	703	721	729	-67	-8.4%
Eagle River	726	814	821	809	83	11.4%
Vilas County Total	22,397	21,654	22,181	22,331	-66	-0.3%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

Housing Unit Projections Based on Recent Building Permit Activity

An additional measure which can be used to illustrate the projected growth in residential housing units is an analysis of building permit activity trends. Section 4 of this plan (Demographic Profile) displays the amount of residential building permit activity which has occurred in the county between 1980 and 1999, by municipality. The annual average number of new residential housing units based on the number of building permits issued annually between 1980 and 1999 in each municipality was used to calculate a straight-line projected number of housing units from 2000 through the year 2015 for the county. The results of this calculation are displayed in Table 10-4. The sum of the projections, by year, of all municipalities equals the total housing unit projection for the county. Figure 10-4 illustrates a comparison of both housing unit projections prepared for Vilas County.

- ◆ Based on building permit data in the county from 1980 through 1999, Vilas County is expected to experience a rather significant increase in the number of housing units in the county between 2000 and the year 2015, increasing by 19.2% or an additional 4,305 housing units.
- ◆ Based on this method of projecting housing units, all towns within the county are expected to experience rather similar increases in housing units within their jurisdictions, ranging from increases of 12.3% in Land O' Lakes to 26.1% in St. Germain. The City of Eagle River, however, is projected to experience less housing growth than the towns within the county, having a projected increase of 8.3% in its housing stock.

Table 10-4 Residential Housing Unit Projections Based on Recent Building Permit Activity Vilas County by Municipality 2000-2015

Municipality	Permit Ave.*	2000 Census	2005	2010	2015	# Change 2000-2015	% Change 2000-2015
Arbor Vitae	32	2,442	2,602	2,762	2,922	480	19.7%
Boulder Junction	14	1,407	1,477	1,547	1,617	210	14.9%
Cloverland	16	936	1,016	1,096	1,176	240	25.6%
Conover	18	1,440	1,530	1,620	1,710	270	18.8%
Lac du Flambeau	28	2,981	3,121	3,261	3,401	420	14.1%
Land O' Lakes	11	1,337	1,392	1,447	1,502	165	12.3%
Lincoln	27	1,873	2,008	2,143	2,278	405	21.6%
Manitowish Waters	12	1,103	1,163	1,223	1,283	180	16.3%
Phelps	22	1,605	1,715	1,825	1,935	330	20.6%
Plum Lake	10	762	812	862	912	150	19.7%
Presque Isle	19	1,216	1,311	1,406	1,501	285	23.4%
St. Germain	36	2,067	2,247	2,427	2,607	540	26.1%
Washington	26	1,706	1,836	1,966	2,096	390	22.9%
Winchester	12	796	856	916	976	180	22.6%
Eagle River	4	726	746	766	786	60	8.3%
Vilas County Total	266	22,397	23,832	25,267	26,702	4,305	19.2%

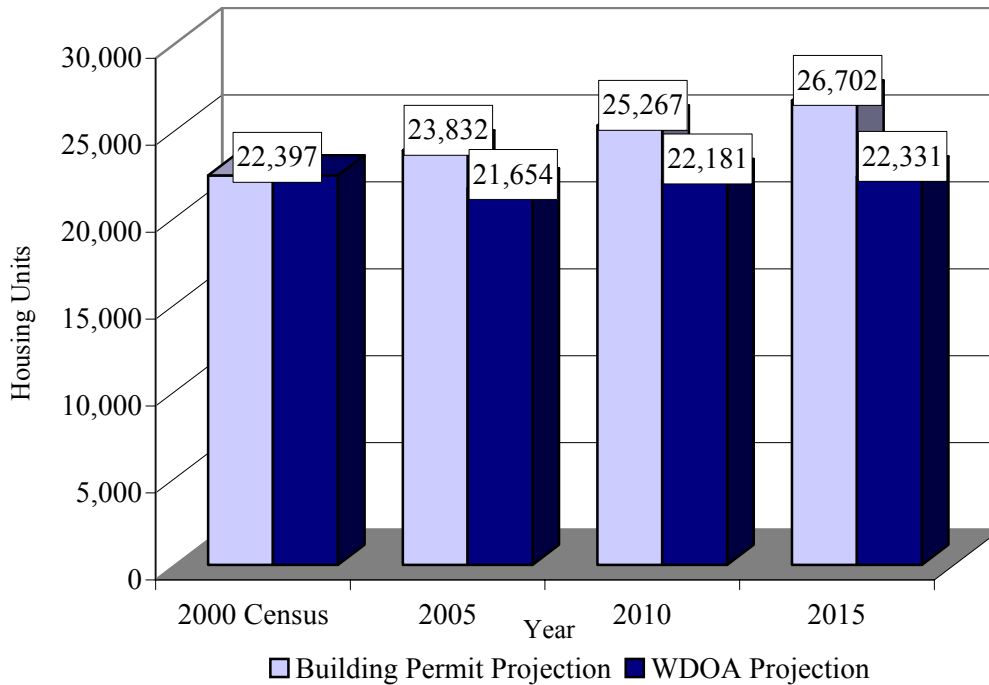
* Based on 20-year permit average from 1980-1999. Source: U.S. Bureau of the Census, 2000; Vilas County Zoning Department, 1999; City of Eagle River Zoning Department, 1999; Foth & Van Dyke, 2001.

Comparative Housing Projections

Figure 10-4 illustrates a comparison of the WDOA housing unit projections and the projection prepared based on recent building permit activity data for Vilas County from 2000-2015. The figure depicts the disparity between the two projections, which should be used as outside parameters for the anticipated housing change in Vilas County through the year 2015. Figure 10-5 provides a comparison of the projected percent change in the number of housing units between 2000 and 2015 for each of the two projections, by municipality.

- ♦ The total number of housing units in the county which were counted by the U.S. Census in 2000 was 22,397 units. This estimated number of housing units appears to be rather accurate as the WDOA Demographic Services Center also completes an estimated number of housing units in the state by county on an annual basis. The WDOA estimated that there was approximately 23,158 housing units in Vilas County as of April 1, 1999. This is only eight housing units less than the estimated number of housing units in the town determined using building permit activity data which is based on the number of units as of December 31, 1998.

Figure 10-4 Comparative Housing Unit Projections Vilas County 2000-2015

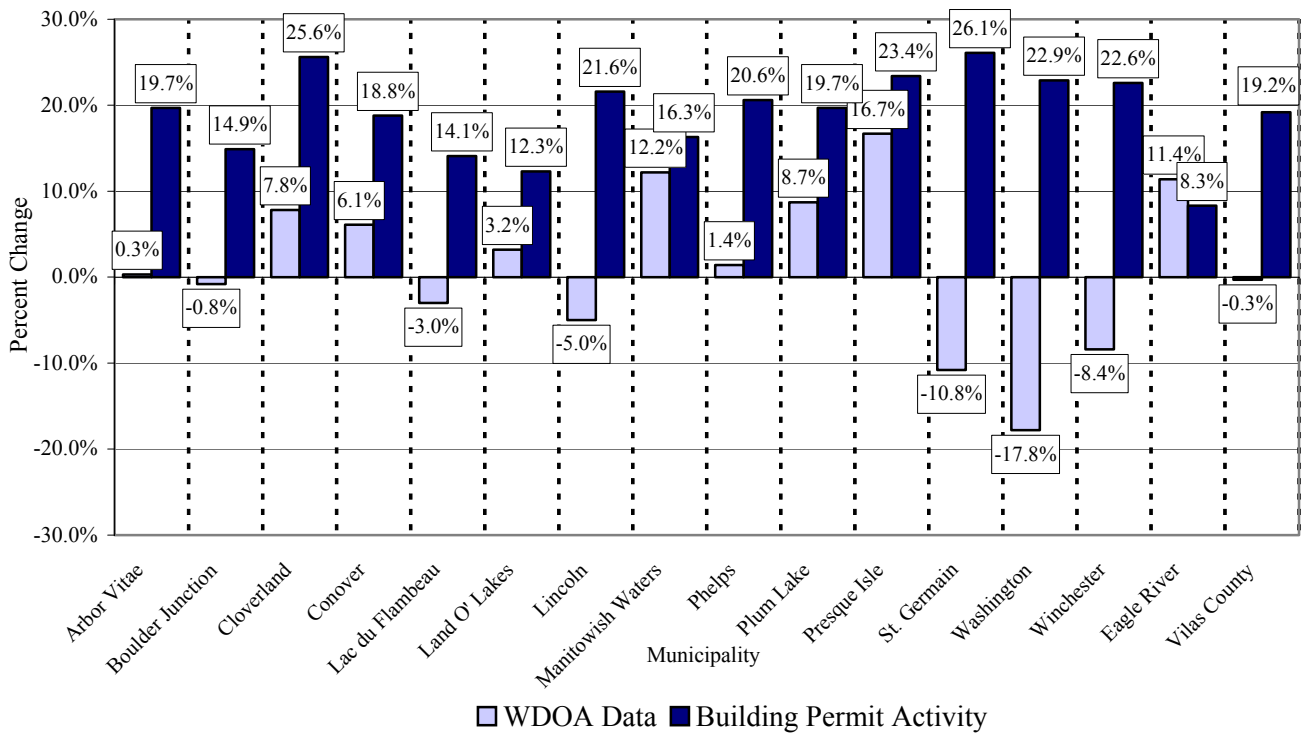


Source: Vilas County Zoning Office Annual Reports, 1990 - 2000. U.S. Bureau of the Census, 2000 Census of Population and Housing; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

- ◆ Projections based on building permit activity indicate the county will experience continued growth in the number of housing units through the year 2015. Projections based on WDOA population projections estimate a decrease in the number of housing units from 2000. This scenario will most likely not occur and should be considered extremely conservative. The projection developed from building permit activity data is more optimistic, projecting a 19.2% increase in housing units (4,305 units).
- ◆ Based on the projections, the county can anticipate a range of 22,331 to 26,702 housing units in the year 2015, or approximately -66 to 4,305 additional units based on the 2000 housing unit count (22,397).

The WDOA and building permit projections were then divided into single-family units, multi-family units, and other units. This division of the total housing unit projections by housing types uses the year 2000 percentages of housing types provided in the 2000 Census of Population and Housing for Vilas County.

Figure 10-5 Comparative Projected Percent Change in Housing Units Vilas County 2000-2015



Source: Vilas County Zoning Office Annual Reports, 1990 - 2000. U.S. Bureau of the Census, 2000 Census of Population and Housing; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015. Projected Housing Units by Structural Type.

Table 10-5 Projected Housing Units by Type Vilas County 2000- 2015

Type of Housing Units	WDOA				Building Permit Activity			
	2000	2005	2010	2015	2000	2005	2010	2015
Single Family*: 95.5%	21,389	20,680	21,183	21,326	21,389	22,760	24,130	25,500
Multi-Family: 2.8%	627	606	621	625	627	667	707	748
Other**: 1.7%	380	368	377	380	381	405	430	454
Total Units	22,397	21,654	22,181	22,331	22,397	23,832	25,267	26,702

*Single family includes attached units, detached units, and mobile homes or trailers.

**Other housing units refers to living quarters that are occupied, or could be occupied, which do not fall into any of the other categories. Examples include houseboats, railroad cars, campers, vans, etc.

Source: Census of Population and Housing 1990, STF 1 Table H41; Foth & Van Dyke housing unit projections calculated from Wisconsin Department of Administration population data.

The projection of total housing units by type of housing assumes the 1990 percent of housing units by type will remain the same until 2015. Single-family units account for the largest share of housing units with 95.7% of all housing units.

