

10 Growth Forecasts

Based on historic and current trends, projections can be built regarding population and housing units. The projections are used to estimate growth rates and land demand projections in the town, and how the land use plan can best accommodate anticipated residential and commercial growth.

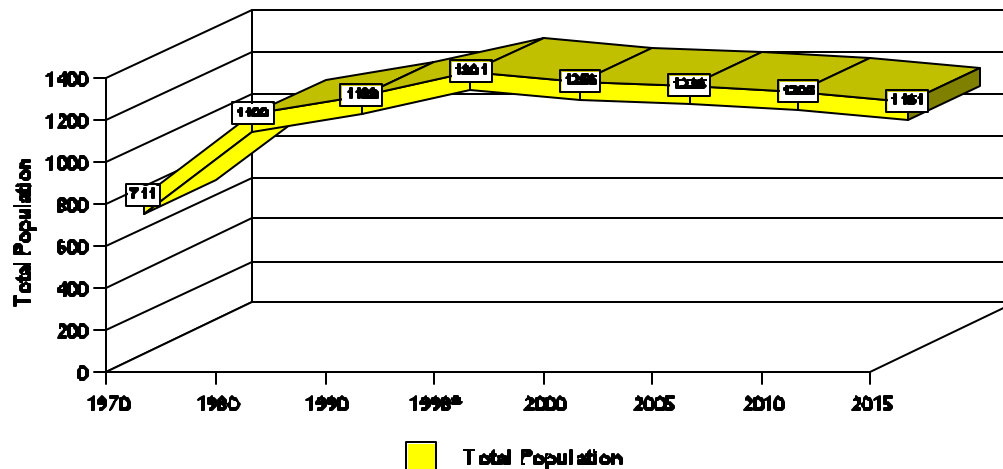
10.1 Population Trends and Projections

Wisconsin Department of Administration (WDOA) Projections

In 1993 the Wisconsin Department of Administration's (WDOA) Demographic Services Center prepared baseline population projections to the year 2015 for communities and counties of the state. The WDOA utilized a projection formula that calculates the annual numerical population change (yearly population estimates), and which estimated extended community population projections.

The projections prepared by the WDOA are presented in Figure 10-1. The WDOA projections predict the Town of Washington will experience a population decline of 10.8% from the 1998 population estimated to the year 2015. The decline is anticipated due to an aging population and lack of an economic base that sustains younger populations.

Figure 10-1
Population Trends and Projections
Town of Washington
1970 - 2015

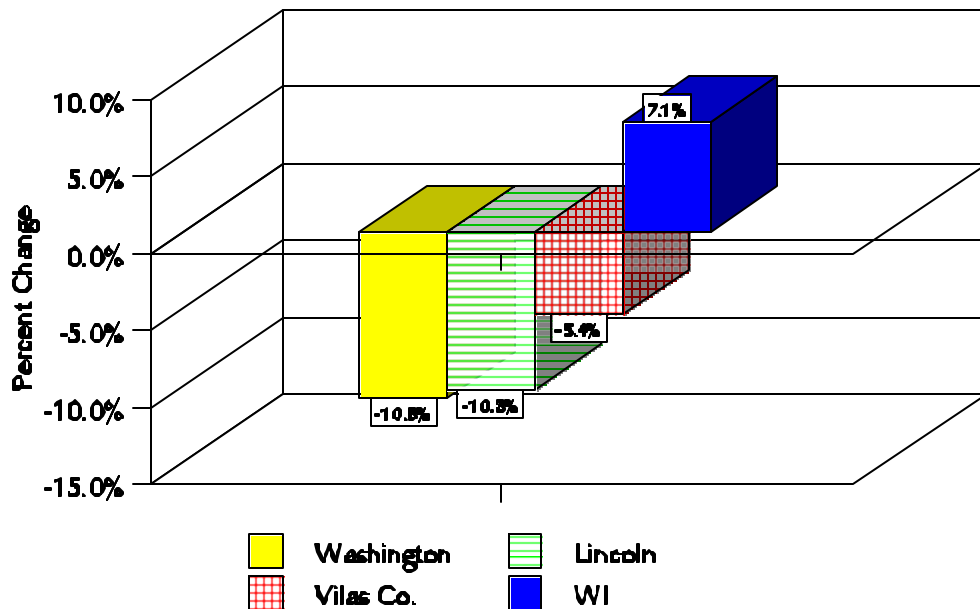


Source: Wisconsin Demographic Services Center *Official Municipal Population Projections 1990 - 2015*.

*Wisconsin Department of Administration Official Population Estimate 1998.

Figure 10-2 presents a comparison of the projected percent change in population from the 1998 population estimate to the 2015 population projection for the Towns of Washington and Lincoln, Vilas County, and the State of Wisconsin.

**Figure 10-2
Comparative Population Projections
Town of Washington and Selected Areas
1998-2015**



The comparison of the population projections from 1998 to 2015 presents some interesting information for the planning area. The populations of the Town of Washington, Town of Lincoln, and Vilas County are all projected to decrease from 1998 to 2015. The actual population change for these areas through 2015 will likely be different than the projections. 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 and the ability of commerce and freedom of location afforded through the Internet will likely contradict these projections. The town 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 continue to discover the abundance of recreational opportunities and natural beauty in the area.

Population Projections Based on Recent Building Permit Data

A comparative method of projecting population growth (1998 to 2015) is based on building permit activity trends. The Town of Washington's 19-year average of 27 building permits per year for residential development was used to calculate the straight-line housing projection from 1998 to 2015. The population projections were derived by using the projected number of total housing units based on the 19-year permit trend and calculating the total number of occupied units, which was 32% in 1990 for the Town of Washington. The number of occupied units were then multiplied by the projected number of persons per household to establish the projected population. The results of these calculations is presented in Table 10-1 and compared to the WDOA forecast in Figure 10-3.

Table 10-1
Population Projections Based on Total Number of Housing Units as
Projected Using Recent Building Permit Activity Data
Town of Washington
1990-2015

	1990	1998	2000	2005	2010	2015
Total Housing Units	1,501	1,799	1,853	1,988	2,123	2,258
Occupied Units (32% of total units)	480	575	593	636	679	722
Persons Per Household	2.48	2.26	2.18	2.30	2.21	2.14
Total Population	1,189	1,301	1,293	1,462	1,500	1,545

Source: 1990 U.S. Census Data; WDOA Wisconsin Household Projections by Household Types 1990-2015, whereby the increments used to obtain the projected number of persons per household for the Town of Washington were based on Vilas County's projection increments; Vilas County Zoning Office, Building Statistics, 1991-1997; Foth & Van Dyke, 1998.

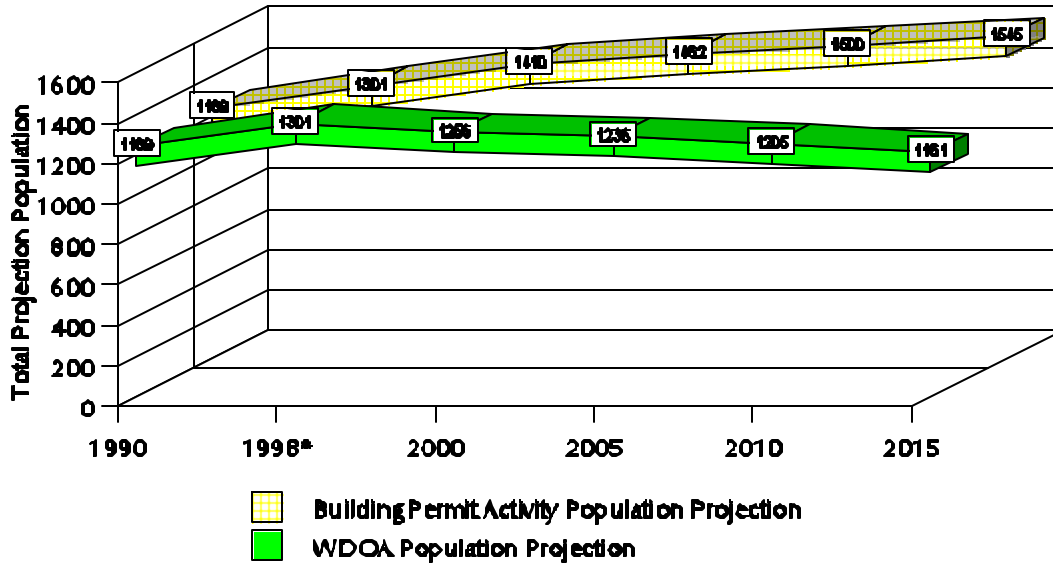
Based on the derived projection presented in Table 10-1, the Town of Washington's population is projected to increase by 244 people between 1998 and 2015, from an estimated 1,301 persons to 1,545 persons, respectively. This is an 18.8% increase for the 17-year period.

Comparative Population Projections

For comparison purposes, Figure 10-3 presents the WDOA population projections and the derived population projection based on the building permit activity trend. The figure depicts the

differences between projections which should be used as parameters for the actual population growth in the Town of Washington by 2015.

**Figure 10-3
Comparative Population Projections
Town of Washington
1990-2015**



Source: WDOA *Official Municipal Population Projections*, Vilas County Annual Zoning Report 1990-1998, Foth & Van Dyke derived population projections 1999; *Official Population Estimates, WDOA Demographic Services Center, 1998.

Summary of Population Projections

The population projections calculated by the WDOA, and those derived by Foth & Van Dyke based on building permit activity, create a range which the Town of Washington can use as a guide for future development needs and services. The WDOA population projection for the Town of Washington projects a population *decline* of 10.8% between the 1998 estimate and the year 2015, while Foth & Van Dyke’s building permit-based projection anticipates an 18.8% *increase* over the same planning period. This comparative trend analysis creates a range for which to plan.

In comparison, the town’s population increased by 388 persons between 1990 and 2000, representing a growth rate of 32.6%. Overall, the 2000 population of 1,577 persons already exceeds the Foth & Van Dyke population projections through the planning period which predicted a significant population increase. It is anticipated that the town’s actual population level will continue to increase throughout the planning period at a rate above to that projected based on

building permit activity trends, however will likely not be as high above as the 1990-2000 growth rate.

10.2 Housing Unit Projections

In conjunction with population projections, housing units projections are calculated to determine future land use needs and acreage demands as well as future demands on the town’s public facilities and services. To begin the housing unit projections, a review of the average Town of Washington household size was completed relative to change in the projected persons per household. As presented in Table 10-2, the number of persons per occupied housing unit is projected to decline between the year 1990 and 2015 for the Town of Washington, as well as throughout the county and state.

**Table 10-2
Projected Persons Per Household
Town of Washington, Vilas County and Wisconsin
1990 - 2015**

Year	1990	1995	2000	2005	2010	2015
Town of Washington	2.48	2.46	2.38	2.3	2.21	2.14
Vilas County	2.40	2.38	2.30	2.22	2.13	2.06
State of Wisconsin	2.61	2.59	2.55	2.51	2.46	2.41

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, 1990 Census of Population and Housing, STF3A.

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

Housing Unit Projections Based on WDOA Data

Housing unit projections are an important element to understanding potential land demands. Specifically, the projections are used to allocate required acreage to accommodate the expected increase in residential development, and to some degree the commercial development need, throughout the planning period.

The projections in Table 10-3 are based on the number of year-round housing units, which includes all occupied units and vacant units which are either for sale, for rent, or rented or sold but not yet occupied. It does not include vacant units which are used for seasonal, recreational, occasional, or other use. The projections for seasonal housing units are be presented following the year-round

housing unit projections. Table 10-3 provides the total year-round WDOA housing unit projections for the Town of Washington.

Table 10-3
Projected Number of Year Round Housing Units
Town of Washington
1990-2015

Characteristics	1990	1998	2000	2005	2010	2015
Population	1189	1301	1256	1236	1205	1161
Person Per Household	2.48	2.26	2.18	2.30	2.21	2.14
Occupied Units (@89.6)	480	575	528	537	545	543
Vacant Year Round Units (@10.4)	56	67	62	63	64	63
Total Year Round Units	536	642	590	600	609	606

Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, STF1A; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

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

Using WDOA population projections, it is predicted that the town will experience a decrease of approximately 36 year-round housing units between the estimated number of year-round housing units in the town in 1998 and the year 2015, representing a decline of 5.6% overall.

Projected Seasonal and Recreational Housing Growth

Utilizing the year-round housing unit projections for the Town of Washington from 1998 to 2015, projections for the number of seasonal housing units were calculated for the same period. These projections were presented in Table 10-4.

Table 10-4
Projected Number of Seasonal Housing Units
Town of Washington
1990-2015

Housing Units	1990	1998	2000	2005	2010	2015
Year Round Units (@35.7%)	536	642	590	600	609	606
Occupied Units	480	575	528	537	545	543
Vacant Year Round Units	56	67	62	63	64	63
Seasonal Units (@64.3%)	965	1,157	1,061	1,081	1,097	1,091

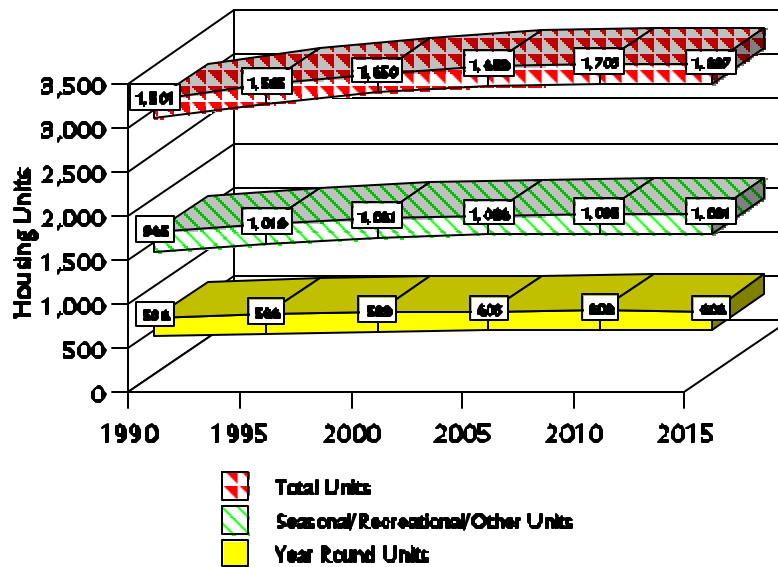
Housing Units	1990	1998	2000	2005	2010	2015
Total Housing Units	1,501	1,799	1,651	1,681	1,706	1,697

Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, STF1A; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

Note: Projections based on actual 1990 census data where occupied units accounted for 32 percent, vacant year round 3.7 percent, and vacant other 64.3 percent of the total housing units in the Town of Washington.

Similar to the year-round housing unit projections, seasonal housing units are projected to decrease by 15.7% for an decline of 66 units by 2015. Overall, the Town of Washington can expect the total number of housing units to decline from an estimated 1,799 units in 1998 to 1,697 total housing units in 2015 based on the WDOA data. This projection indicates that the town will experience significantly less growth through the planning period than was experienced more recently between 1990 and 1998 whereby an estimated 298 housing units were *added* in the town, resulting in a 20% increase in housing units during this eight-year time period. These projections are presented graphically in Figure 10-4.

**Figure 10-4
Projected Number of Housing Units by
Year-Round, Seasonal, and Total Units
Town of Washington
1990-2015**



Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, STF1A; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

Housing Unit Projections Based on Recent Housing Development Activity

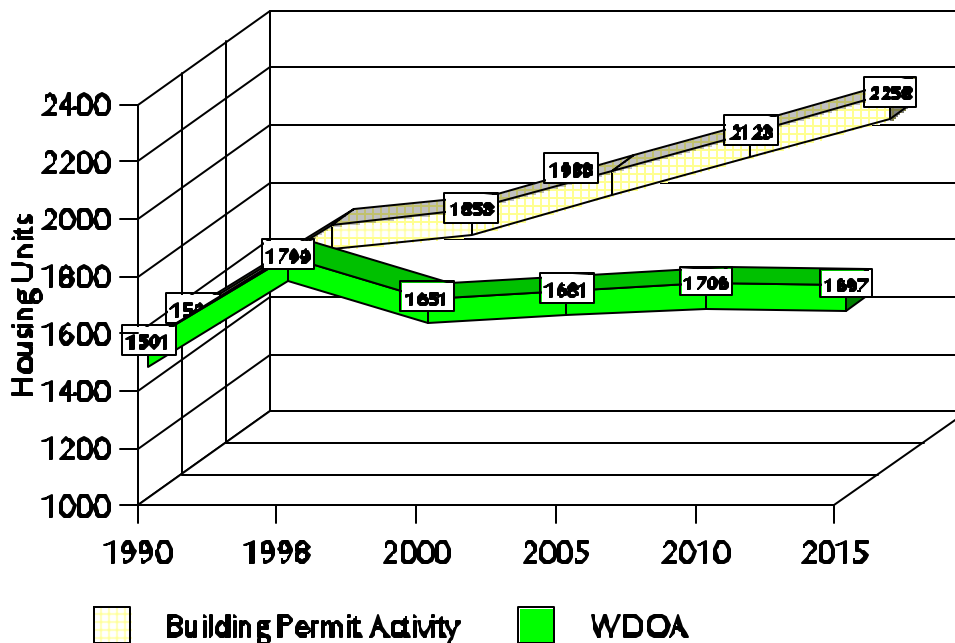
An additional measure that assists in the illustration of the growth in residential housing units for the Town of Washington is analysis of the building permit activity trends. Table 9-4, shown previously in Section 9, displays the housing development activity from 1980 to 1998 which includes single-family units, multi-family units, and mobile homes or trailers. The 19-year average of 27 building permits issued annually for residential development in the Town of Washington was used to calculate the number of additional housing units from 1998 to 2015.

The total number of housing units for the Town of Washington is projected to reach 2,258 by 2015, which is 561 more units than the projections based on the WDOA data. The housing unit projection based on building permit activity represents a 50.4% growth rate between 1990 and 2015.

Comparative Housing Projections

Figure 10-5 illustrates both the WDOA housing unit projections and the projection prepared based on recent building permit activity data. The figure depicts the differences between projections which should be used as parameters for the anticipated growth in housing units in the Town of Washington through the year 2015.

**Figure 10-5
Comparative Housing Unit Projections
Town of Washington
1990-2015**



Source: Vilas County Zoning Office Annual Reports, 1990 - 1998. U.S. Bureau of the Census, 1990 Census of Population and Housing, STF1A; WDOA Demographic Service Center, Official Municipal Population Projections 1990-2015.

The WDOA and building permit projections were then divided into the different types of housing units, including single-family units, multi-family units, and other units based on the 1990 Census percentages of housing types.

**Table 10-5
Projected Housing Units by Type
Town of Washington
1990 - 2015**

Type of Housing Units	WDOA						Building Permits				
	1990	1998	2000	2005	2010	2015	1998	2000	2005	2010	2015
Single Family* (96.1%)	1,443	1,731	1,588	1,617	1,641	1,633	1,731	1,782	1,912	2,042	2,172
Multi-Family (1.5%)	23	27	25	25	26	25	27	28	30	32	34
Other** (2.3%)	35	41	38	39	39	39	41	43	46	49	52
Total Units	1,501	1,799	1,651	1,681	1,706	1,697	1,799	1,853	1,988	2,123	2,258

*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: U.S. 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 96.1% of all housing units.

Summary of Housing Unit Projections

The housing unit projections prepared using building permit trends from 1990 to 1998 are aggressive when compared to the projections prepared utilizing WDOA data. Utilizing the building permit activity trends, it is projected that the Town of Washington will have 2,258 total housing units by the year 2015, an *increase* of 459 units (25.5%) from the estimated number of housing units in the town in 1998 (1,799). In contrast, the WDOA data projects the town will have 1,697 total housing units, a *decrease* of 102 units (5.7%) over the same planning period. The projections vary by 561 housing units.

The U.S. Census Bureau indicates that there were 1,501 total housing units in the Town of Washington in 1990. Based on the 2000 Census data, the town had 1,706 total housing units, a 13.7% growth rate since 1990. The 298 building permits issued for new residential development between 1991 and 1998 resulted in the 1,799 unit estimate in 1998 when the calculations were completed. This indicates that the town has already surpassed the housing unit projections prepared using WDOA data through the year 2015. Therefore, it is likely that the projected number of housing units for the town is tracking about midway between the two projections demonstrated on Figure 10-5.

10.3 Residential Land Use Acreage Needs

Projections of future land use types are a fundamental element in the development of the Year 2020 Preferred Land Use Map. To achieve "managed growth", demands for acreage to accommodate different land use types must be forecasted and ultimately determined.

In the Town of Washington, adequate acreage for planned residential is required to accommodate foreseeable needs and react to anticipated demands.

To accomplish this task, housing unit projections were utilized to develop Table 10-6. The table compares anticipated residential acreage demands based on WDOA and building permit projections. The comparison timeline covers a 17-year period from 1998-2015 and is based on the composition of 100% single family units, which includes mobile homes. As a percentage of land use, single family residential occupies over 96.1 percent of the existing residential land use in the town. The densities of the unit projections were based on input from the Town of Washington Land Use Planning Forum and assumptions relative to the location and density of the anticipated development. The building permit forecast was based on the average number of building permits for residential housing units (27 new units) that were permitted in the Town of Washington over the last 19 years (1980-1998). The WDOA projection was based on official census projections.

**Table 10-6
Residential Acreage Projections 1998-2015**

Parcel Size	Estimated % of Developments	WDOA		Building Permit	
		Potential Dwelling Units	Acreage Requirements	Potential Dwelling Units	Acreage Requirements
10 acres or more	5%	0.0	0.0	23.0	230.0
5.0 acres	10%	0.0	0.0	46.0	230.0
2.5 acres	35%	0.0	0.0	160.0	400.0
1.5 acres	30%	0.0	0.0	138.0	207.0
1.0 acre or less	20%	0.0	0.0	92.0	92.0
Total	100%	(102.0)	0.0	459.0	1,159.0

Source: WDOA U.S. Bureau of the Census, 1990 Census of Population and Housing, STF1A; WDOA Demographic Service Center, Official Municipal Housing Unit Projections 1990-2015. Foth & Van Dyke Estimates and Projections
 * Required units 1990-2015.

Based on Table 10-6, the Town of Washington could see a residential acreage need range of between 0 acres and 1,159 acres from 1998-2015. The town had 2,686 acres of residentially developed land in 1999. The acreage associated with residential need is based on assumptions of continued growth and development occurring in accordance with the percentages allocated in Table 10-6. It is likely that the projected number of housing units for the town is closer to that identified based on building permit activity trends, however most likely will not be as high. The impact will be high based on percentage growth.

10.4 Commercial Land Use Acreage Needs

The Town of Washington has a relatively low commercial base in the town, with 360.3 acres used in some commercial capacity. Although the Town of Washington is second among Vilas County towns in commercial land use, commercial use is only one percent of the town. Because the commercial acreage is so low, future need is difficult to forecast. To that end, two different forecasting methods were used to calculate potential acreage demands. The first option calculated a percentage of commercial land use to total land use to develop a commercial (business) development ratio. The development ratio option anticipates a direct relationship to service demands and population levels. The second option for forecasting commercial land demands consisted of analyzing the average number of commercial building permits issued over the last 19 years (1980-1998). The average number of permits were straight-line forecasted throughout 2015, with each permit attributed a land acreage to calculate demands and potential property conversions to commercial use.

**Table 10-7
 Commercial Acreage Projections
 1998-2015**

Option 1: Acreage - Population Ratio¹					
Existing Commercial ² Acreage - 1998	Existing Population 1998	WDOA Population Projection		Building Permit Population Projection	
		Projected Commercial Acreage 2015	Projected Population 2015	Projected Commercial Acreage 2015	Projected Population 2015
360.3	1,301	325.1 (-35.2)	1,161	427.9 (+67.6)	1,545

¹Ratio = Acreage divided by population.

²Includes home based business.

Option 2: Commercial Permit Forecast

Total Commercial Building Permits 1980-1998	Potential Commercial Building Permits 1999-2015	Acreage Required 2.0 Ac/Permit
23	21	42.0

The acreage-population ratio (Option 1) anticipates a loss of 35.2 acres of commercial use based on the WDOA population forecast, because the WDOA anticipates a loss in total population. In converse, up to 67.6 acres of commercial land may be needed if the population increases in accord with Table 10-7. Option 2, based on commercial permits, anticipates 42 acres of commercial land may be needed if future permit activity mirrors past volume. In accord with section 10.1, the town has surpassed the WDOA population projections for the year 2015 and will most likely see an increase in commercial acreage demand. According to Table 10-7, the approximate acreage could range from 42 to 67.6 acres.

The plan acknowledges continued commercial growth in the Town of Washington could be tourism-related, home-based, and service related business. The town's proximity to Eagle River will typically preclude community commercial uses such as banks or grocery stores, as people's needs are being met.