

SAN JUAN COUNTY  
DEPARTMENT OF COMMUNITY DEVELOPMENT

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**STAFF REPORT**

**TO:** San Juan County Council  
San Juan County Planning Commission

**VIA:** Erika Shook, AICP, Director, DCD  
Linda Kuller, AICP, Deputy Director, DCD *ES*

**CC:** Mike Thomas, County Manager  
Amy Vira, Esq. Deputy Prosecuting Attorney

**FROM:** Colin Maycock, AICP, Planner IV *CM*

**SUBJECT:** 2036 Comprehensive Plan Update Population Projections  
April 17, 2017 County Council briefing  
April 21, 2017 Planning Commission briefing

**DATE:** April 11, 2017

**ATTACHMENT:** Population projection technical memorandum

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**ISSUE:** Selecting a population projection for the San Juan County Comprehensive Plan (Plan) update. The planning horizon is from 2016 - 2036.

**BACKGROUND:** RCW 36.70A.115 requires that the County's population projection be consistent with the Washington State Office of Financial Management (OFM) twenty year population forecast. The Growth Management Act (GMA) requires the County to plan for a population that is consistent with the range of the OFM population projections (low, medium and high). It does not require the population projection to be exactly the same as one of the OFM options. However, it must be consistent with the OFM provided range.

The projected population used in the Plan update will influence other aspects of the planning process such as identifying and prioritizing capital improvements, assessing housing needs, and developing Urban Growth Area (UGA) boundaries and transportation models.

**RECOMMENDATION:** Adopt a County population projection of 19,423 for 2036. This represents an increase of 3,109 people over the OFM's 2016 population estimate of 16,314. This recommendation is based upon data analysis of the OFM projections and County's percentage of the Washington State population over time. The recommendation is based on the historically reliable trend for the County to maintain a consistent percentage of the State's population. It falls between the OFM medium and high population projections.

**POPULATION ANALYSIS SUMMARY:** The following bullets provide a summary of some of the highlights of the population projection analysis:

- For the past thirty-six years, despite swings in the average annual growth rate and immigration rates, the County has maintained a consistent, albeit small, proportionate share of the State's population of between 0.21-0.24. The County's share of the State's population has been on average 0.23 percent since 1980. The recommended projection is based on this historic trend. When tested, this projection was found to possess the highest statistical measure of data consistency with the regression line as opposed to the low, medium and high projections offered by the OFM.
- The low projection predicts a declining population that is inconsistent with annual population estimates and pegs the County population in 2036 as 12,870, a decline of 3,444 people from the 2016 population of 16,314.
- The medium projection predicts a slowly increasing population that is inconsistent with recent growth and the County's historic proportionate share of the State's population. The medium projection forecasts the County population in 2036 as 17,264, an increase of 950 people over the 2016 population.
- The high projection would entail a population growth rate that diverges from the patterns of the past thirty-six years and forecasts the County's population in 2036 as 24,303, an increase of 7,989 people over the 2016 population.

**TREND SUMMARY:**

1. Migration drives population growth in San Juan County, not natural increase. Every year since 1999, the number of deaths has exceeded births in the County (*See Figure 2 and Table 4 of the Technical Memorandum*).
2. Migration rates rise and fall consistent with expansions and contractions in the national economy. (*See Figure 4 of the Technical Memorandum.*)
3. Economic and social changes at the State and national level affect the migration rate, making future predictions difficult. (*See Section 2.B of the Technical Memorandum.*)
4. Levels of migration vary widely from year to year which means that the County's average annual growth rates are not the best means of predicting future population. (*See Table 4 and Section 3.B of the Technical Memorandum.*)
5. The County's population, as a percentage of the State population, has varied between 0.21 percent and 0.24 percent and maintained an average of 0.23 percent for the last thirty-six years. (*See Table 5 of the Technical Memorandum.*)
6. The current Plan includes the OFM's 2002 medium projection which forecasted a significantly higher County population than has materialized. The 2002 medium projection was for 19,168 people in 2015. The actual annual estimated population for 2016 by the OFM was 16,314. (*See Tables 3 and 7 (a-d) of the Technical Memorandum.*)

7. The OFM projections are for the County as a whole. Population allocation by island is based on the historic distribution pattern as a percentage of the County's total population:
  - San Juan (unincorporated.) – 34%
  - San Juan (Friday Harbor) – 13.7%
  - Orcas Island – 33%
  - Lopez Island – 15%
  - Shaw – 1.5%
  - Non-ferry served islands – 2.5%

*(See Table 6 and Figure 6 of the Technical Memorandum.)*

8. The distribution of the County's population has maintained a uniform pattern. For the past twenty-six years, each of the ferry served islands maintained a consistent portion of the total County population. These population portions may be used to accurately distribute the future population growth. *(See Table 6 and Figure 6 of the Technical Memorandum.)*
9. Eastsound and Lopez Village UGAs have been growing at a faster rate than their respective islands. Over time, the Eastsound UGA is expected to have a greater share of Orcas Island's population while Lopez Village is expected to retain a proportionate share of Lopez Island's population. *(See Sections 5.C and 5.D of the Technical Memorandum.)*
10. Forty percent of the County's population are baby boomers, ranging between 53 and 71 years old. This group makes up twenty-four percent of the national population.
11. The County's median age has changed from forty-seven in 2000 to fifty-four in 2015. The State's median age is thirty-seven.
12. The County's average household size 2.04 (American Community Survey).

**NEXT STEPS:**

- Public hearing
- Council adopts population projection by resolution



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**TECHNICAL MEMORANDUM**

**TO:** San Juan County Council  
San Juan Planning Commission

**VIA:** Erika Shook, AICP, Director, DCD  
Linda Kuller, AICP, Deputy Director, DCD *ES*

**CC:** Mike Thomas; County Manager  
Amy Vira, Esq. Deputy Prosecuting Attorney

**FROM:** Colin Maycock, AICP, Planner IV *CM*

**DATE:** April 11, 2017

**SUBJECT:** Population Projection for 2036 Comprehensive Plan Update

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**1.A Purpose:**

This technical report provides the data to inform the County's adoption of a 20-year population projection. Once selected, the County will allocate the projected population growth to the County's rural areas, UGAs and activity centers for the twenty year planning horizon.

As required by the Growth Management Act (GMA), San Juan County Department of Community Development, in coordination with the Town of Friday Harbor, is updating the Comprehensive Plan (Plan). The twenty year planning period is from 2016 -2036. Identifying the County's 2036 population is a key component of correctly assessing the community's future housing and transportation needs, sizing the County's Urban Growth Areas (UGAs), and identifying and establishing priorities for capital improvement projects.

The specific elements documented in this technical report include:

- Population projection background;
- Population projection methodology;
- County demographic profile;
- Annual population estimates;
- Population distribution;
- Population projections by island;
- Allocations of population to UGA territories;
- Housing; and

- Annual number of visitors.

**1.B Population Projection Background:**

The County is required by the GMA to use a population projection that is consistent with the projections of the Washington Office of Financial Management (OFM) as the basis for its land use planning. RCW 36.70A.115 states:

“Counties and cities that are required or choose to plan under RCW 36.70A.040 shall ensure that, taken collectively, adoption of and amendments to their comprehensive plans and/or development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable countywide planning policies and consistent with the twenty-year population forecast from the office of financial management.”

RCW 43.62.035 authorizes the OFM:

“At least once every five years or upon the availability of decennial census data, whichever is later, the office of financial management shall prepare twenty-year growth management planning population projections required by RCW 36.70A.110 for each county that adopts a comprehensive plan under RCW 36.70A.040 and shall review these projections with such counties and the cities in those counties before final adoption. The county and its cities may provide to the office such information as they deem relevant to the office's projection, and the office shall consider and comment on such information before adoption. Each projection shall be expressed as a reasonable range developed within the standard state high and low projection. The middle range shall represent the office's estimate of the most likely population projection for the county. If any city or county believes that a projection will not accurately reflect actual population growth in a county, it may petition the office to revise the projection accordingly. The office shall complete the first set of ranges for every county by December 31, 1995.

The most recent GMA population projections issued by the OFM were dated May, 2012. The OFM GMA projections are for the County as whole and are not segregated by island. The next set of GMA projections are due in September, 2017.

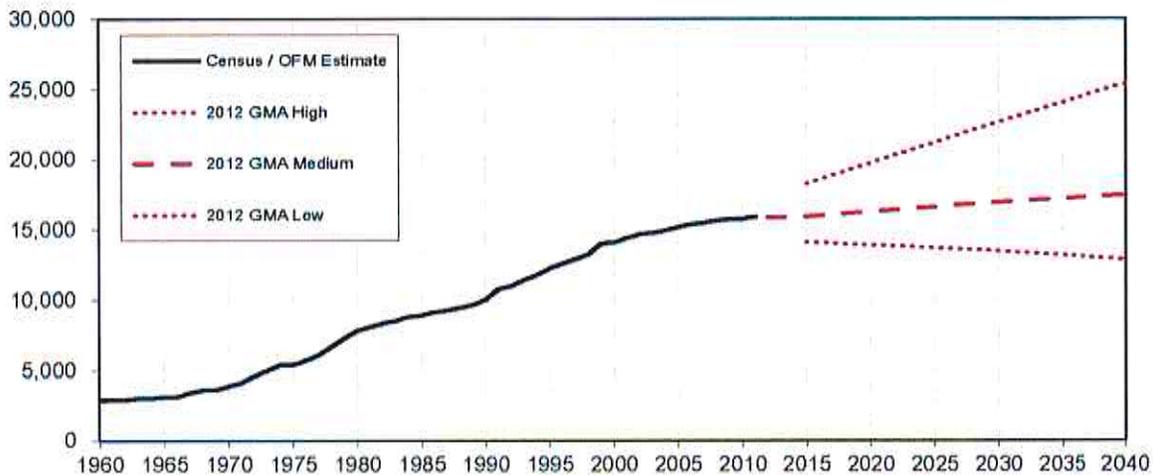
**Table 1. OFM 2012 San Juan County GMA Population Forecast.**

San Juan	2010	2015	2020	2025	2030	2035	2036	2040
High	15,769	18,270	19,736	21,204	22,654	24,043	24,303	25,378
Medium	15,769	15,907	16,256	16,606	16,939	17,216	17,264	17,443
Low	15,769	14,104	13,896	13,688	13,464	13,189	13,123	12,868

Source: OFM GMA May 2012 projections.

**Figure 1. May 2012 OFM Population Projections.**

### **San Juan County**



Source: OFM GMA County population projection, May 2012.

The GMA does not specify which projection the County must adopt. The OFM presents a range of possible populations. The County must select a population that is consistent with the range provided by the OFM.

The OFM's high projection establishes a final population that is thirty-three percent higher than the medium projection.

The OFM GMA low projection predicts a long-term population decline in the County.

The OFM considers the medium GMA projection of a County population of 17,264 people in 2036 the most likely because it is based on assumptions that validated with past and current information.

#### **1.C OFM Methodology:**

Population change is primarily driven by two factors:

1. Natural increase (births minus deaths); and
2. Net migration (in-migration minus out-migration).

The difference between births and deaths is considered the natural component of population change. The difference between in-migration and out-migration is considered the migration component of population change.

Both the natural and migration components of population change are tied to the community's demographic profile. Internal factors or population characteristics, such as the gender and age distribution of the community directly impact the rates of natural increase. External or social

factors such as employment, housing, community facilities and education opportunities contribute to migration rates.

The OFM projections are derived from the ‘cohort-component’ technique. This methodology is described in the classic planning text book, *Urban Land Use Planning, 4<sup>th</sup> Ed.*, Kaiser, Edward J., Godschalk, David R., Chapin, F.Stuart. University of Illinois Press, Urbana and Chicago. 1995. P. 133 as:

“the most complicated and sophisticated approach to projecting population because of the subtleties and complexities in estimating parameters and calculating their impacts.”

The ‘cohort-component’ technique is captured in the following equation:

$$P_{t+n} = P_t + B - D + IM - OM$$

Where  $P_t$  = population of the study area at the beginning of some time period  $t$  to  $n$ ;

$P_{t+n}$  = population at the end of the period;

$B$  = number of births during the period;

$D$  = number of deaths during the period;

$IM$  = number of in-migrants to the study area during the period; and

$OM$  = number of out-migrants to the study area during the period.

Using the US Census as the baseline, the OFM splits population into five year cohorts. Birth and death rates, along with out- and in-migration are then factored in as the population is aged through the different intervals. The aging considerations include:

- How many people are likely to be born over the next five years;
- How many of the people of each age group are likely to die over the next five years;
- How many people of each age group are likely to move away from the County in the next five years; and
- How many people of each age group are likely to move into the County in the next five years.

### **1.D County Demographics:**

The OFM identifies the 5 year cohorts used in the medium projection in Table 2. This data shows that fifty-eight percent of the County population is over the age fifty. Conversely, OFM data shows that approximately thirty-four percent of the State’s population is over the age of fifty. Table 2 also shows the County has a diminished presence of people between the ages of twenty and forty. In Washington, twenty to forty year olds make up approximately twenty-eight percent of the population. In San Juan County they make up sixteen percent (OFM: Forecast of state population by age and sex; November, 2016).

**Table 2. San Juan County Population: Five Year Cohorts**

<b>2016 San Juan County Five Year Cohorts</b>			
<b>Age Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
0-4	218	241	459
5-9	275	305	580
10-14	344	367	710
15-19	350	348	697
20-24	309	318	627
25-29	265	287	552
30-34	308	344	653
35-39	375	368	743
40-44	410	401	812
45-49	478	483	961
50-54	558	612	1,170
55-59	709	788	1,497
60-64	842	939	1,781
65-69	899	950	1,848
70-74	675	673	1,349
75-79	424	418	842
80-84	256	261	517
85+	223	300	522
<b>Total</b>	<b>7,919</b>	<b>8,401</b>	<b>16,320</b>

Source: OFM County estimates.

Demographic data compiled from federal data sources including the Bureau of Economic Analysis, Bureau of the Census, American Community Survey office, U.S. Department of Commerce, Bureau of Labor Statistics and U.S. Department of Labor by the Economic Profile System reveal the following attributes of the County's population:

- The median age of the County's population changed from forty-seven in 2000 to fifty-four in 2015. Half of the County's population is now over fifty-four years old. The median age of the State is thirty-seven.
- There are approximately 9,522 people in the County between the ages of sixteen and sixty-four.
- The County's working population (over sixteen) is approximately 7,633.
- The primary economic activities as a percentage are:
  - Education, health care and social assistance (17.1 percent);
  - Arts, entertainment, recreation, accommodation, and food (15.4 percent);
  - Construction (11.9 percent);
  - Professional, scientific, management, administration and waste management (11.8 percent);
  - Retail trade (9.8 percent);
  - Finance and insurance and real estate (6.6 percent);

- Other services, except public administration (6 percent);
- Transportation, warehousing and utilities (5 percent);
- Manufacturing (4.5 percent)
- Public administration (4.3 percent); and
- Agriculture, forestry, fishing and hunting, mining (3.6 percent).
- The County’s population is highly educated. Approximately 46.6 percent of the population have attained a bachelor’s degree or higher. By contrast, approximately 32.9 percent of the State’s population have achieved the same level of education.
  - Data from the Office of the Superintendent for Public Instruction (OSPI), corrected to eliminate distortion by Orcas Island School District’s Oasis program, shows that enrollments in the school districts on San Juan, Orcas and Lopez Islands has declined at an annual average rate of -1.6, -2.6, and -0.45 respectively between 2005 and 2016. This is consistent with populations whose median age is increasing and negative natural increase.
- In 2015, there were approximately 13,756 housing units in the County.
- Approximately 4,808 or 35.3 percent were classified as seasonal, recreational or occasional use and 8,948 units or 64.7 percent were classified as residences.
- Average household size is 2.04 people.
- Approximately 40.1 percent of the County’s population are ‘baby boomers’ with ages ranging between fifty-three and seventy-one years old.

**2.A Adopted Comprehensive Plan Population Projection:**

In 2005, the County adopted the OFM 2002 medium GMA population projection for planning purposes.

**Table 3. San Juan County Population Forecast 2005-2025.**

<b>Current 2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>
15,500	17,316	19,168	20,877	22,534

Source: OFM 2002 medium projection, adopted by the County in 2005.

The projected growth rate of 2.2 percent per year was adopted following three decades of sustained population growth in the County. During the previous thirty years, the population growth rate never dropped below 2.5 percent per year.

In 2005, the County sized Eastsound and Lopez Village UGA’s to accommodate fifty percent of the expected population growth on Orcas and Lopez Islands. The slower population growth has been reflected in the development of the County’s UGAs. In the OFM publication, *County growth management population projections by age and sex: 2010 to 2040*; P. 1, the OFM indicates that the Great Recession delayed the previously expected population growth by approximately five years.

The 2010 Census revealed that the population Figures in the 2002 medium projection were nine percent higher than the actual population. The projected 2015 County population of 19,168 was

fifteen percent higher than the OFM’s 2015 annual estimate of 16,179. The inflated population projection had a direct impact on the size of the County’s non-municipal UGAs.

**2.B Historic Population Change:**

The County experienced significant and prolonged population growth in the last third of the 20<sup>th</sup> Century. In the decade between 1970 and 1980, the County population almost doubled. The eighties and nineties saw strong and continuous population growth at a rate about half that of the seventies. While still increasing, the annual rate of population growth in the County between 2010 and 2016 was approximately eight percent of its 1970-1980 peak.

Table 4 and Figure 3 show that since 1970 net migration dwarfs natural increase as a component of population growth in the County.

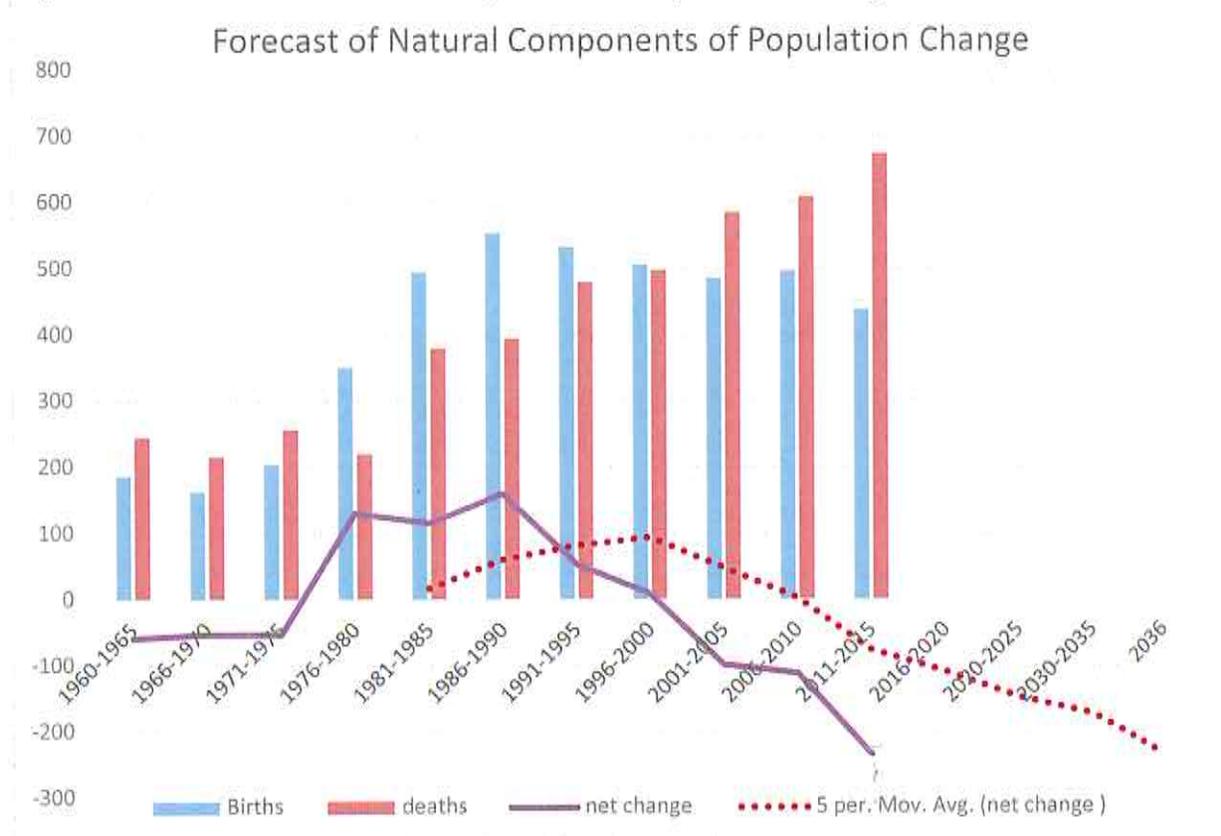
The migration component of population change is more volatile than the natural component. Major economic, social or national changes can generate spurts and slowdowns in migration that are difficult to predict. Uncertainty about the pace and nature of economic recovery, property costs, and the availability of medical services may affect County migration trends in the future.

**Table 4. San Juan County Population Change 1970-2016.**

<b>Decade</b>	<b>Initial Population</b>	<b>Births</b>	<b>Deaths</b>	<b>Net Migration</b>	<b>Population Change</b>	<b>Final Population</b>	<b>Average Annual Growth</b>
1970-1980	3,856	556	-536	3,962	3,982	7,838	7.4%
1980-1990	7,838	1,044	-742	1,895	2,197	10,035	2.51%
1990-2000	10,035	1,213	-1,178	4,007	4,042	14,077	3.47%
2000-2010	14,077	983	-1,192	1,901	1,692	15,769	1.15%
2010-2016	15,769	529	-823	845	551	16,320	0.58%

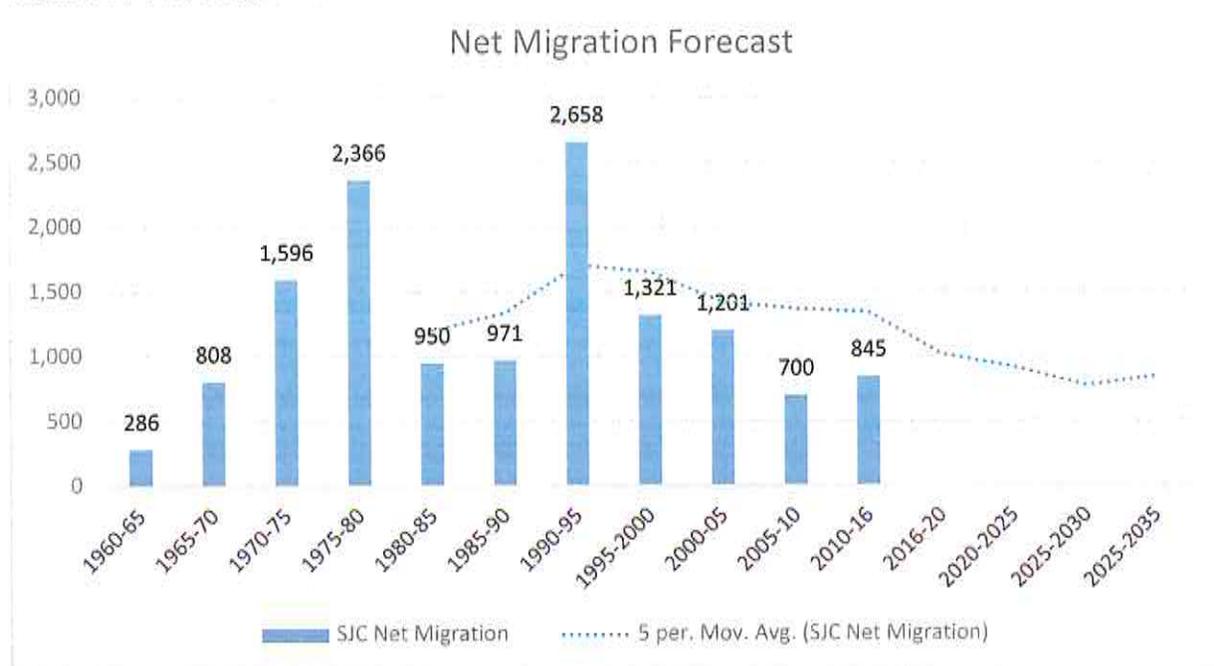
Source: OFM Annual Estimates.

**Figure 2. Forecast of Natural Components of Population Change.**



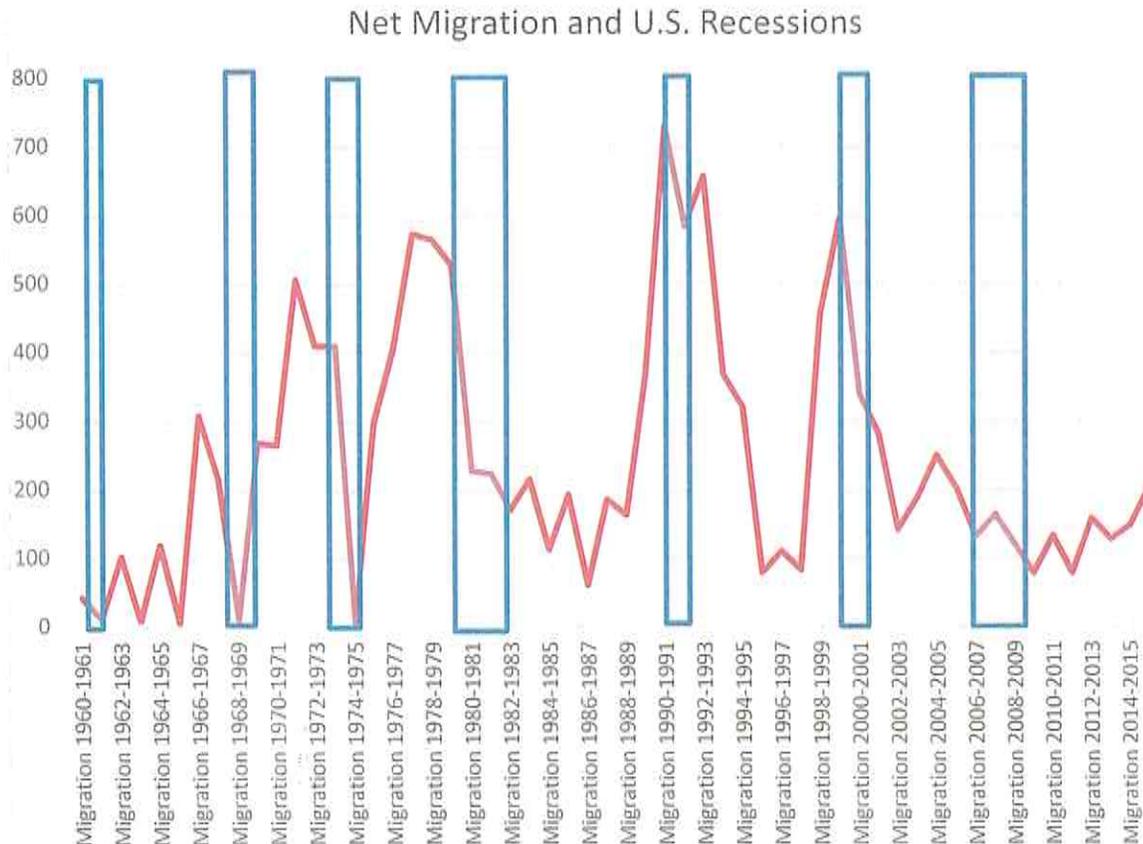
Source: OFM annual estimates.

**Figure 3. Net Migration Forecast.**



Source: OFM annual estimates.

**Figure 4. Net Migration and U.S. Recessions.**



Source: OFM annual estimates, Wikipedia list of recessions in the United States.

A closer examination of the migration patterns illustrated in Figure 4, reveals that migration decreases when the U.S. economy experiences a recession. A recession is where the national economy declines for six months straight. It is generally accepted that while a recession may be technically over when the national economy begins to grow again, the impacts of the recession ripple through subsequent years directly impacting people’s behavior.

The blue bands represent the following recessions:

- 1960-1961 recession coincided with rising interest rates by the Federal Reserve;
- 1969-1970 recession coincided with closing the Vietnam war budget deficits;
- 1973-1975 OPEC oil embargo;
- 1980-1982 two recessions coincided with the Iranian oil embargo;
- 1990-1991 recession coincided with rising interest rates by the Federal Reserve;
- 2001 brief eight month recession coincided with the burst of the dot com bubble; and
- 2007-2009 the Great Recession.

An apparent correlation does not indicate causality.

Key OFM presumptions from *2012 Projections, County Growth Management Population Projections by Age and Sex: 2010-2040*; P.11 regarding migration include:

- Areas that have sustained growth due to retirement and telecommuting migration will continue this pattern;
- With the increase of oldest old population, retirement migration to rural counties, for economic and quality of life reasons, may decline as the oldest old return to metro areas for better social and health services;
- The current recessionary environment has an inevitable impact on all counties' net migration. In general, it is expected that the 2007 migration expectations for counties will be pushed off for five years for the majority of the counties.

Assessing the push and pull factors that influence migration, the OFM balances both broad principles and a consideration of local conditions when evaluating the data. These presumptions inform the analysis rather than rigidly define it.

While unpredictable, it appears that recessions occur, with varying degrees of severity, every decade or so. When a recession occurs, migration to the County drops. This may be linked to a perceived absence of employment opportunities in the County. In some economic sectors; however, effective and reliable communications technology may reduce the need for specific business locations. Changes in the communications infrastructure in the County may enable telecommuting and the creation of businesses that do not require a specific location and reduce the migratory disruption that accompanies recessions in the future.

### **3.A Population Distribution, Census Tracts:**

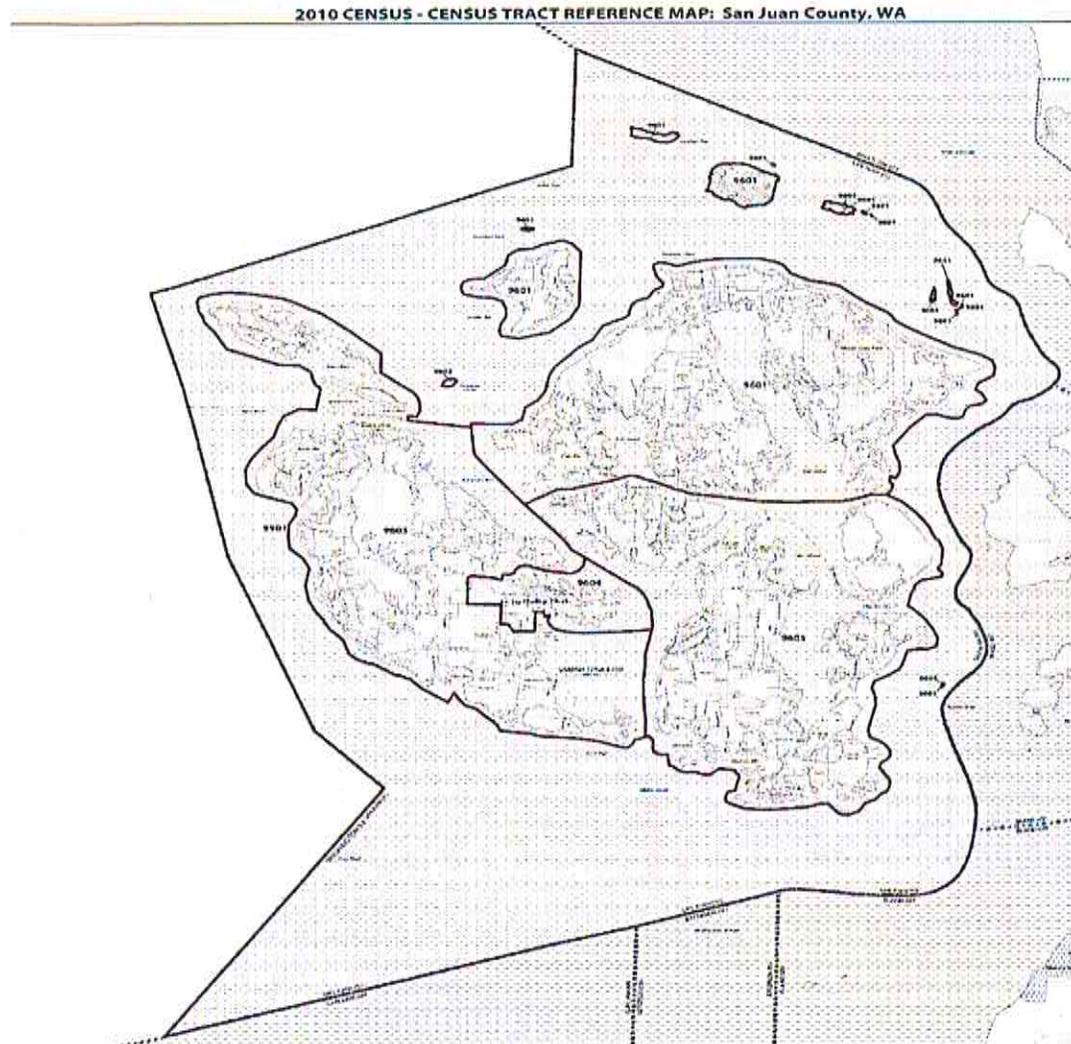
The U.S. Census is a physical count, rather than a statistical analysis, of every person in the United States of America. The first census in the United States of America was carried out in 1790 and has occurred every decade since. The American Community Survey (ACS) was initiated following the 2000 Census and is an ongoing statistical survey of American communities. The ACS distributes three million survey questionnaires each year.

The decennial (every ten years) census, divides the County into four census tracts. The first three tracts include either San Juan, Orcas or Lopez and their respective neighboring non ferry served islands. The fourth tract is the Town of Friday Harbor and some of the adjacent County territory. The decennial census provides the basis for the population distribution by island and informs the OFM's small island population estimates.

Historically, the ferry served islands have enjoyed greater popularity than non-ferry served islands reflecting the relative ease of access the State ferries provide. The Washington State ferry system is the dominant method by which County home owners (and tourists) travel to, from and between the different ferry-served islands. The majority of the County's economic activity occurs on the four ferry served islands. An increasingly sophisticated suite of medical services is becoming available in the County. Important services for an aging community, the medical facilities reduce the need to travel to the mainland for treatment. Fundamental to the projected

population distribution is the continuing provision of ferry service to the County through the planning horizon.

**Figure 5. San Juan County Census Tracts.**



Source: U.S. Census.

Figure 5 shows that while the County’s census tracts broadly correspond to the ferry served islands there is no direct correspondence. Using Census, ACS, County and other data sources, the OFM develops small area population estimates that provide approximate numbers for the County’s islands.

### **3.B County Population as Proportionate Share of the State Population:**

To identify a realistic population projection, staff compared the County’s average annual population change with changes in the County’s share of the State’s population. It is clear that for the past thirty-six years the County has retained a consistent share of the State population while the average annual increase rates are volatile and inconsistent from decade to decade.

Migration is the source of County population growth. The unpredictability of migration fosters variable average annual growth rates. Despite significant swings in migratory patterns, the County's population, as a share of the State's population has remained consistent since the 1980s. Additionally, each island's share of the County's population has been stable since the 1990 census; the first year that island specific estimates were available from the OFM. Based on these historic trends, staff developed a population projection consistent with this pattern. The projection presented below and provides a comparison to the OFM's low, medium and high projections in section 4.B.

**Table 5. Trend in County's Proportionate Share of the State Population.**

Year	SJC Population	Average annual increase	SJC Proportionate Share	Washington State Population
1970	3,856	10.33%	0.14%	2,853,214
1980	7,838	2.80%	0.23%	3,413,250
1990	10,035	4.03%	0.21%	4,866,663
2000	14,077	1.20%	0.24%	5,894,143
2010	15,769	0.35%	0.23%	6,724,540
2016	16,314	0.58%	0.23%	7,183,700
			<b>*Average = 0.23%</b>	

Source: U.S. Census, OFM annual estimates. \* 1970 has been excluded as a statistical outlier.

### 3.C Population Distribution, OFM Data:

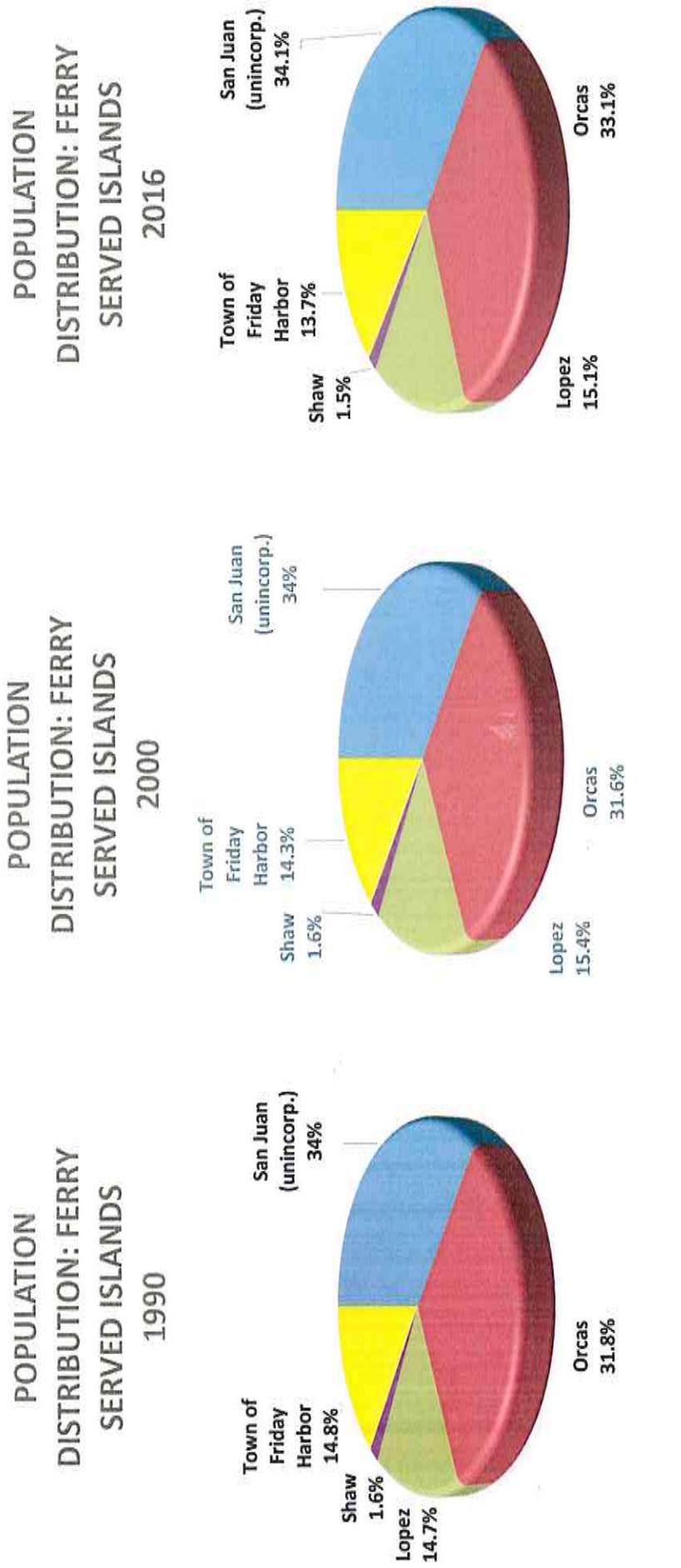
The OFM's small area population data was used to develop Table 6. Table 6 shows that the distribution of the County's population across the different islands remains consistent with the patterns identified in the 1990 census. In 2000, the ferry served islands made up approximately ninety-six percent of the population, in 2010, they made up almost ninety eight percent of the population. OFM population projections establish numbers for the entire County. While there are minor variations over time, the pattern of settlement in the County is well established and is reflected in the projections.

**Table 6. San Juan County Population Distribution 1990-2016.**

Island	1990		% by		2000		% by		2010		% by		2016		% by	
	Population	Island														
San Juan (unincorp.)	3,449	34%	4,783	34%	5,416	34%	5,566	34%	5,416	34%	5,566	34%	5,566	34%	5,566	34%
Orcas	3,195	32%	4,455	32%	5,220	32%	5,395	33%	5,220	33%	5,395	33%	5,395	33%	5,395	33%
Lopez	1,483	15%	2,176	15%	2,380	15%	2,466	15%	2,380	15%	2,466	15%	2,466	15%	2,466	15%
Shaw	163	2%	235	2%	238	2%	241	2%	238	2%	241	1%	241	1%	241	1%
Subtotal (unincorp.)	8,290	82.61%	11,649	82.7%	13,254	82.7%	13,668	84.1%	13,254	84.1%	13,668	83.8%	13,668	83.8%	13,668	83.8%
Town of Friday Harbor	1,492	14.9%	2,020	14.3%	2,162	14.3%	2,250	13.7%	2,162	13.7%	2,250	13.8%	2,250	13.8%	2,250	13.8%
Total Ferry Served Islands	9,782	97.5%	13,669	97.09%	15,416	97.76%	15,912	97.76%	15,416	97.76%	15,912	97.54%	15,912	97.54%	15,912	97.54%
Blakely	29	0.29%	56	0.40%	33	0.21%	42	0.26%	33	0.21%	42	0.26%	42	0.26%	42	0.26%
Brown	14	0.14%	13	0.09%	17	0.11%	21	0.13%	17	0.11%	21	0.13%	21	0.13%	21	0.13%
Center	14	0.14%	49	0.35%	16	0.10%	20	0.12%	16	0.10%	20	0.12%	20	0.12%	20	0.12%
Crane	11	0.11%	20	0.14%	8	0.05%	10	0.06%	8	0.05%	10	0.06%	10	0.06%	10	0.06%
Decatur	54	0.54%	71	0.50%	78	0.49%	89	0.55%	78	0.49%	89	0.55%	89	0.55%	89	0.55%
Johns	1	0.01%	5	0.04%	9	0.06%	9	0.06%	9	0.06%	9	0.06%	9	0.06%	9	0.06%
Pearl	NA	-	7	0.05%	8	0.05%	11	0.07%	8	0.05%	11	0.07%	11	0.07%	11	0.07%
Stuart	40	0.40%	47	0.33%	29	0.18%	33	0.20%	29	0.18%	33	0.20%	33	0.20%	33	0.20%
Waldron	70	0.70%	104	0.74%	106	0.67%	109	0.67%	106	0.67%	109	0.67%	109	0.67%	109	0.67%
Other Islands	20	0.20%	37	0.26%	43	0.27%	58	0.36%	43	0.27%	58	0.36%	58	0.36%	58	0.36%
<i>Total Non-Ferry-Served Islands</i>	253	2.60%	409	2.91%	347	2.20%	402	2.46%	347	2.20%	402	2.46%	402	2.46%	402	2.46%
<b>TOTAL</b>	<b>10,035</b>	<b>100%</b>	<b>14,078</b>	<b>100%</b>	<b>15,769</b>	<b>100%</b>	<b>16,320</b>	<b>100%</b>	<b>15,769</b>	<b>100%</b>	<b>16,320</b>	<b>100%</b>	<b>16,320</b>	<b>100%</b>	<b>16,320</b>	<b>100%</b>

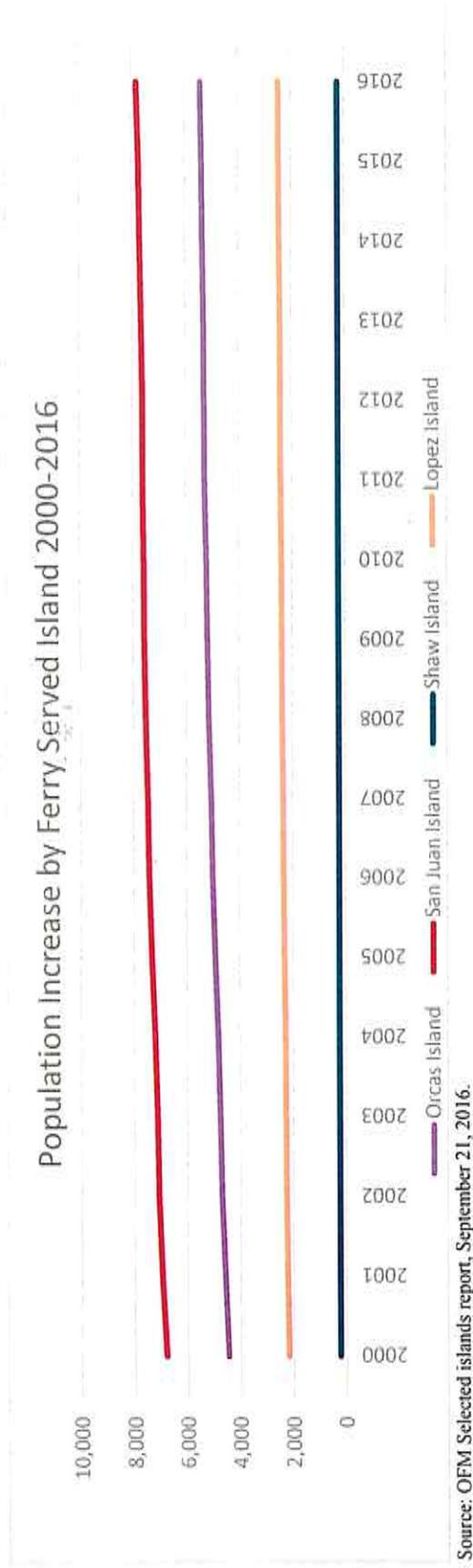
Source: OFM Selected Islands Report (County Parts) September 21, 2016. The data for 1990 came from a document prepared by the OFM for an internal study based on the 1990 U.S. census data.

Figure 6. Population Distribution on Ferry Served Islands for 1990, 2000 and 2016.



Source: OFM Selected Islands Report, September 21, 2016. 1990 data from internal document prepared by the OFM based on Census data.

**Figure 7. Population increase by Ferry Served Island 2000-2016.**



**Figure 8. Population Change on Non-Ferry Served Islands.**

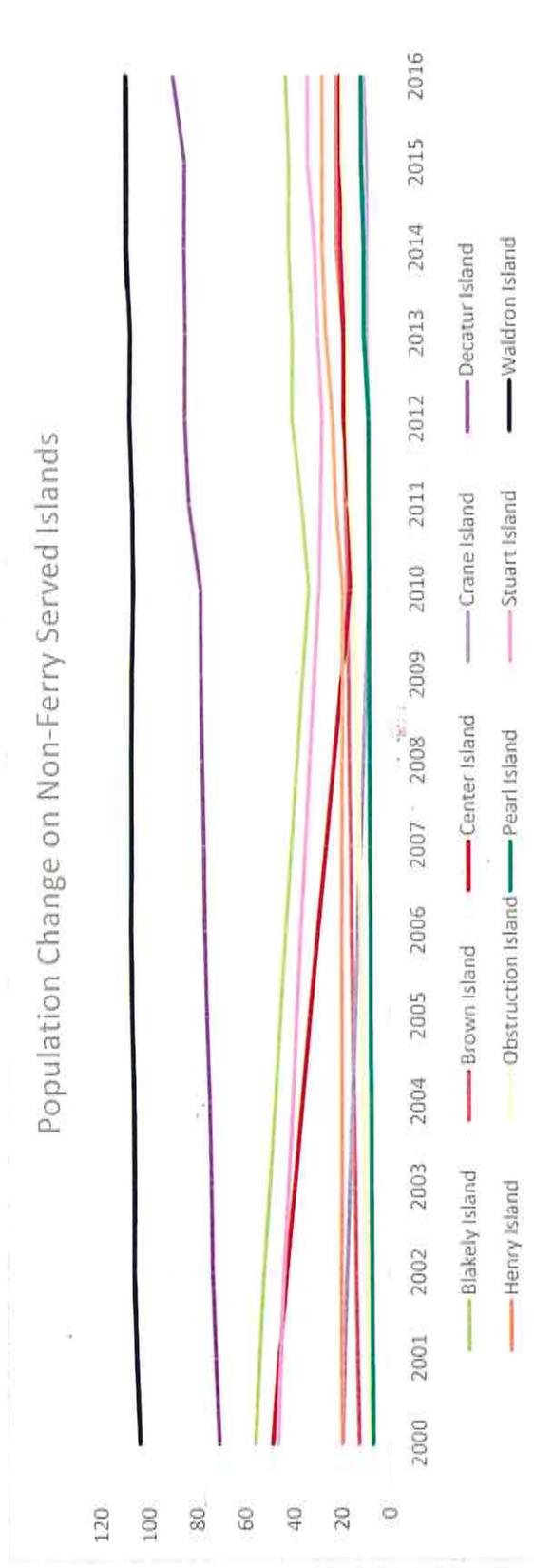


Figure 8 illustrates population changes on the non-ferry served islands over the past sixteen years. Only Waldron and Decatur had consistent growth across the period. The number of residents on Obstruction, Blakely and Waldron climbed steadily from eight, seventy-one and 104 respectively in 2000 to nineteen, eighty-nine and 109 respectively in 2016. On the less-populated non-ferry served islands there was a decline in population from 2000 to 2010. Post 2010, the populations on all the islands began to increase.

Figures 7 and 8 indicate that, contrary to the low GMA population projection, the County's population has been increasing since 2010.

#### **4.A OFM Annual Population Estimates:**

Alongside the quinquennial (every five years) GMA population projections, the OFM publishes annual population estimates for Washington counties and cities. Bookended by the decennial census, these estimates are compiled every year on the housing unit method. Each spring, the County provides the OFM data on the number and type of residential units built or demolished in the previous year. At its heart, the housing unit method assumes that the number of people in the County changes as the number of residential units change. In addition to tracking permits, the OFM uses demographic data such as average household size and vacancy rates to create accurate estimates. Migration patterns are verified through a variety of sources including school enrollment, Medicare and Medicaid records and generalized Internal Revenue Service data. As they are compiled yearly, the annual estimates are the most up to date County population count until the next census in 2020.

Comparing the 2009 annual estimate and 2010 census count indicates the accuracy of the annual estimates. The 2009 annual estimate pegged the County population as 15,738 and the 2010 Census counted a total population of 15,769. These estimates are used by the State to allocate funds to different jurisdictions.

#### **4.B OFM GMA Projections:**

The OFM GMA population projections were compiled in 2012 and start with the 2010 census number. As the projections were completed in 2012, the projections use 2015 as their starting point. The 2015 projections have been superseded and each of the following population projections uses the estimated 2016 population as the starting point. By beginning with the annual estimated population for 2016, the 2020 population in the low and high projections show significant changes rather than incremental ones.

Tables 7 (a, b, c and d) compare the low, medium and high GMA population projections with a population projection based on the County's proportionate share of the State population. If the County's proportionate share of the State population remains unchanged then the County population in 2036 will be 19,423. This number is 2,159 people above the medium GMA population projection for 2036 and 4,880 people below the high projection for 2036.

**Table 7 (a). County GMA Population Forecast 2016-2040: Low Projection.**

Island	OFM April 1, 2016 Population Estimate	2016 Population by Island (%)	Population Projections					
			2020	2025	2030	2035	2036	2040
San Juan (unincorp.)	5,560	34%	4,247	3,935	3,597	3,214	3,130	2,789
Orcas	5,395	33%	4,597	4,527	4,453	4,361	4,340	4,256
Lopez	2,466	15%	2,101	2,069	2,035	1,993	1,984	1,945
Shaw	241	1%	206	202	199	195	194	190
Subtotal (unincorp.)	13,662	84%	11,150	10,733	10,285	9,763	9,648	9,181
<hr/>								
Town of Friday Harbor ( <i>x1.7 percent per year</i> )	2,250	13.8%	2,407	2,619	2,849	3,099	3,152	3,372
Percentage of County Population			17%	19%	21%	24%	24%	26%
Total Ferry Served Islands	15,912		13,557	13,352	13,134	12,862	12,800	12,553
<hr/>								
Blakely	42	0.26%	36	35	35	34	34	33
Brown	21	0.13%	18	18	17	17	17	17
Center	20	0.12%	17	17	17	16	16	16
Crane	10	0.06%	9	8	8	8	8	8
Decatur	89	0.55%	76	75	73	72	72	70
Henry	27	0.17%	23	23	22	22	22	21
Pearl	11	0.07%	9	9	9	9	9	9
Stuart	33	0.20%	28	28	27	27	27	26
Waldron	109	0.67%	93	91	90	88	88	86
Other Islands	40	0.25%	34	34	33	32	32	32
<hr/>								
Total Non- Ferry-Served Islands	402	2.46%	342	337	332	325	323	317
<b>TOTAL</b>	<b>16,314</b>	<b>100.00%</b>	<b>13,899</b>	<b>13,689</b>	<b>13,465</b>	<b>13,187</b>	<b>13,123</b>	<b>12,870</b>

Source: OFM GMA Population Projections: Low.

For planning purposes, the Town of Friday Harbor has selected an annual population growth rate of 1.7 percent per year. The OFM's low projection shows a decline in the County's population. In deference to the Town's selected growth rate, this projection shows the Town's population increasing.

**Table 7 (b). County GMA Population Forecast 2016-2040: Medium Projection.**

	OFM April 1, 2016 Population Estimate	2016 Population by Island (%)	Population Projections					
			2020	2025	2030	2035	2036	2040
San Juan (unincorp.)*	5,560	34%	5,375	5,331	5,260	5,142	5,113	4,979
Orcas	5,395	33%	5,376	5,492	5,602	5,693	5,709	5,768
Lopez	2,466	15%	2,457	2,510	2,560	2,602	2,610	2,637
Shaw	241	1%	240	245	250	254	255	258
Subtotal (unincorp.)	13,662	84%	13,448	13,578	13,673	13,692	13,686	13,641
<b>Town of Friday Harbor</b>								
Town of Friday Harbor ( <i>x1.7 percent per year</i> )	2,250	13.8%	2,407	2,619	2,849	3,099	3,152	3,372
Percentage of County population			15%	16%	17%	18%	18%	19%
Total Ferry Served Islands	15,912	97.5%	15,855	16,197	16,522	16,792	16,839	17,013
<b>Other Islands</b>								
Blakely	42	0.26%	42	43	44	44	44	45
Brown	21	0.13%	21	21	22	22	22	22
Center	20	0.12%	20	20	21	21	21	21
Crane	10	0.06%	10	10	10	11	11	11
Decatur	89	0.55%	89	91	92	94	94	95
Henry	27	0.17%	27	27	28	28	29	29
Pearl	11	0.07%	11	11	11	12	12	12
Stuart	33	0.20%	33	34	34	35	35	35
Waldron	109	0.67%	109	111	113	115	115	117
Other Islands	40	0.25%	40	41	42	42	42	43
<b>Total Non-Ferry-Served Islands</b>								
Total Non-Ferry- Served Islands	402		401	409	417	424	425	430
<b>TOTAL</b>	<b>16,314</b>	<b>100.00%</b>	<b>16,256</b>	<b>16,606</b>	<b>16,939</b>	<b>17,216</b>	<b>17,264</b>	<b>17,443</b>

Source: OFM GMA Population Projections: Medium, 1.7 percent annual population growth rate attributed to the Town of Friday Harbor from personal correspondence with the Town of Friday Harbor's Land Use Administrator, Mike Bertrand, on March 9, 2017. \* As the Town of Friday Harbor grows, the population allocation for the unincorporated area of San Juan Island decreases.

**Table 7 (c). County GMA Population Forecast 2016-2040: High Projection.**

Island	2016 Population Estimate	Population by Island (%)	Population Projections					
			2020	2025	2030	2035	2036	2040
San Juan (unincorp.)	5,560	34%	7,040	7,532	7,996	8,410	8,482	8,776
Orcas	5,395	33%	6,527	7,012	7,492	7,951	8,037	8,393
Lopez	2,466	15%	2,983	3,205	3,424	3,634	3,673	3,836
Shaw	241	1%	292	314	335	356	359	375
Subtotal (unincorp.)	13,662	84%	16,842	18,063	19,248	20,350	20,552	21,380
<b>Town of Friday Harbor</b>								
Town of Friday Harbor ( <i>x1.7 percent per year</i> )	2,250	13.8%	2,407	2,619	2,849	3,099	3,152	3,372
Percentage of County population			12%	12%	13%	13%	13%	13%
Total Ferry Served Islands	15,912	97.54%	19,249	20,682	22,097	23,450	23,704	24,752
<b>Other Islands</b>								
Blakely	42	0.26%	51	55	58	62	63	65
Brown	21	0.13%	25	27	29	31	31	33
Center	20	0.12%	24	26	28	29	30	31
Crane	10	0.06%	12	13	14	15	15	16
Decatur	89	0.55%	108	116	124	131	133	138
Johns	27	0.17%	33	35	37	40	40	42
Pearl	11	0.07%	13	14	15	16	16	17
Stuart	33	0.20%	40	43	46	49	49	51
Waldron	109	0.67%	132	142	151	161	162	170
Other Islands	40	0.25%	48	52	56	59	60	62
<b>Total Non-Ferry-Served Islands</b>								
Total Non-Ferry- Served Islands	402	2.46%	486	522	558	592	599	625
<b>TOTAL</b>	<b>16,314</b>	<b>100.00%</b>	<b>19,735</b>	<b>21,204</b>	<b>22,655</b>	<b>24,042</b>	<b>24,303</b>	<b>25,377</b>

Source: OFM GMA Projections: High. 1.7 percent annual population growth rate attributed to the Town of Friday Harbor from personal correspondence with the Town of Friday Harbor's Land Use Administrator, Mike Bertrand, on March 9, 2017. \* As the Town of Friday Harbor grows, the population allocation for the unincorporated area of San Juan Island decreases.

**Table 7 (d). County Population Projection Based on Proportional Share of the State's Population.**

Island	OFM April 1, 2016 Population Estimate	2016 Population by Island (%)	Population Projections					
			2020	2025	2030	2035	2036	2040
San Juan (unincorp.)*	5,560	34%	5,657	5,860	6,023	6,131	6,146	6,193
Orcas	5,395	33%	5,571	5,857	6,128	6,376	6,423	6,607
Lopez	2,466	15%	2,546	2,677	2,801	2,914	2,936	3,020
Shaw	241	1%	249	262	274	285	287	295
Subtotal (unincorp.)	13,662	84%	14,023	14,656	15,226	15,706	15,792	16,115
<b>Town of Friday Harbor</b>								
Town of Friday Harbor ( <i>x1.7 percent per year</i> )	2,250	13.8%	2,407	2,619	2,849	3,099	3,152	3,372
Percentage of County Population			14%	15%	15%	16%	16%	17%
Total Ferry Served Islands	15,912	97.5%	16,430	17,275	18,075	18,806	18,944	19,487
<b>Other Islands</b>								
Blakeley	42	0.26%	43	46	48	50	50	51
Brown	21	0.13%	22	23	24	25	25	26
Center	20	0.12%	21	22	23	24	24	24
Crane	10	0.06%	10	11	11	12	12	12
Decatur	89	0.55%	92	97	101	105	106	109
Henry	27	0.17%	28	29	31	32	32	33
Pearl	11	0.07%	11	12	12	13	13	13
Stuart	33	0.20%	34	36	37	39	39	40
Waldron	109	0.67%	113	118	124	129	130	133
Other Islands	40	0.25%	41	43	45	47	48	49
<b>Total Non-Ferry-Served Islands</b>								
Total Non-Ferry-Served Islands	402	2.46%	415	436	457	475	479	492
<b>TOTAL</b>	<b>16,314</b>	<b>100.00%</b>	<b>16,845</b>	<b>17,711</b>	<b>18,532</b>	<b>19,281</b>	<b>19,423</b>	<b>19,979</b>

Source: U.S. Census, OFM annual estimate. 1.7 percent annual population growth rate attributed to the Town of Friday Harbor from personal correspondence with the Town of Friday Harbor's Land Use Administrator, Mike Bertrand, on March 9, 2017. \* As the Town of Friday Harbor grows, the population allocation for the unincorporated area of San Juan Island decreases

The GMA high projection indicates the County's population will increase by 7,989 people.

The GMA medium population projection indicates the County's population will increase by approximately 950 people by 2036.

The GMA low population projection indicates the County's population will decrease by 3,127 people by 2036.

In comparison, the projection based on the County's proportionate share of the State population indicates an increase of 3,109 residents by 2036.

The OFM's 2012 high projection is consistent with neither the County's historic population trends nor the County's proportionate share of the State's population. To reach the high projection number, a population growth rate similar to that of the 1970's would be necessary. The social and economic context that led to the explosive growth of the County population in the 1970's no longer pertains.

The OFM's 2012 medium projection lags behind the OFM's annual population estimates. The lag indicates that in-migration is increasing at a higher rate than expected.

The prevailing social and economic trends (isolation, low wages, high costs) that mark the County as a preferred destination for older, affluent people may point either high or low growth rates in the future.

As noted above, thirty-five percent of the residential units in the County are considered seasonal or recreational homes, one potential source of population increase are new retirees who shift their primary residence from elsewhere to their house in the County. Equally, the high rate of seasonal residences may indicate the growth of seasonal or recreational residential units used as a source of investment income for non-resident owners. An intensifying seasonal home market may indicate a gradual 'hollowing out' of the County's population as more residential units convert from full-time residences to part-time residences or vacation rentals.

#### **4.C Recommendation:**

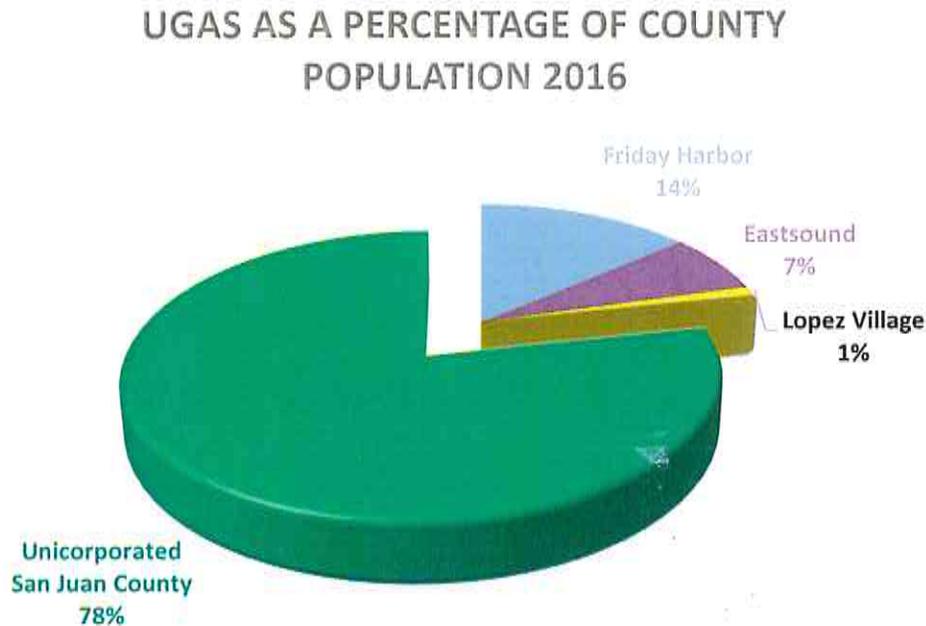
Staff recommends the 2036 County population projection of 19,423. This projection is based on the maintenance of the County's proportionate share of the State's population. Falling between the OFM's medium and high projections, this projection is consistent with historic trend of the past thirty-six years. With an average household size of 2.04, a population increase of 3,109 people will require the development of approximately 1,524 housing units countywide.

#### **5.A Urban Growth Areas:**

The County's island geography led to the development of small villages as service centers. Unlike other counties where UGA's concentrate both population and economic activity, in San Juan County, UGA's house a relatively low proportion of each island's population. In 2010, Friday Harbor accounted for twenty-eight percent of the population of San Juan Island,

Eastsound housed twenty percent of the Orcas Island population, and Lopez Village housed seven percent of the Lopez Island population. Approximately seventy-two percent, eighty percent and ninety-three percent of the population of San Juan, Orcas and Lopez Islands live in areas beyond the UGAs. All together the County's UGA's, including the Town of Friday Harbor, account for approximately twenty-two percent of the County's population. In contrast, 68 percent of neighboring Whatcom County's population lives in UGAs. (*Whatcom County population and employment projections and urban growth area allocations*, July 2013.)

**Figure 9. UGAs as a Percentage of County Population.**



Source: OFM Small Area Estimates-Unincorporated UGAs-September 2016.

The GMA requires the County reduce sprawl and “Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner” (RCW 36.70A.020 (1)). The GMA does not; however, identify a specific percentage of projected growth that is required to be allocated to the County's UGAs. In the past, the County developed the UGA boundaries on the premise that fifty percent of future development on Orcas and Lopez Islands would occur within the respective UGAs.

The methods used for developing the population projections for Eastsound and Lopez UGA's are as follows:

1. The allocation of the population by island follows the established pattern in Figure 6 and Table 6;
2. The UGAs populations between 2000 and 2016 were tabulated from the OFM's Small areas report;

3. The island population forecasts for the low, medium, high and proportionate share projections were tabulated from Tables 7 (a-d);
4. The UGA populations were projected in two ways:
  - a. First as proportionate share of the island population. In which case the UGA population remains as a stable percentage of the island's changing population, or;
  - b. As compounding growth, in which the UGA takes up an increasing proportion of the island's changing population.
5. Both methods were tested. The UGA projections which showed the highest statistical measure of data consistency with the regression line were selected for recommendation.

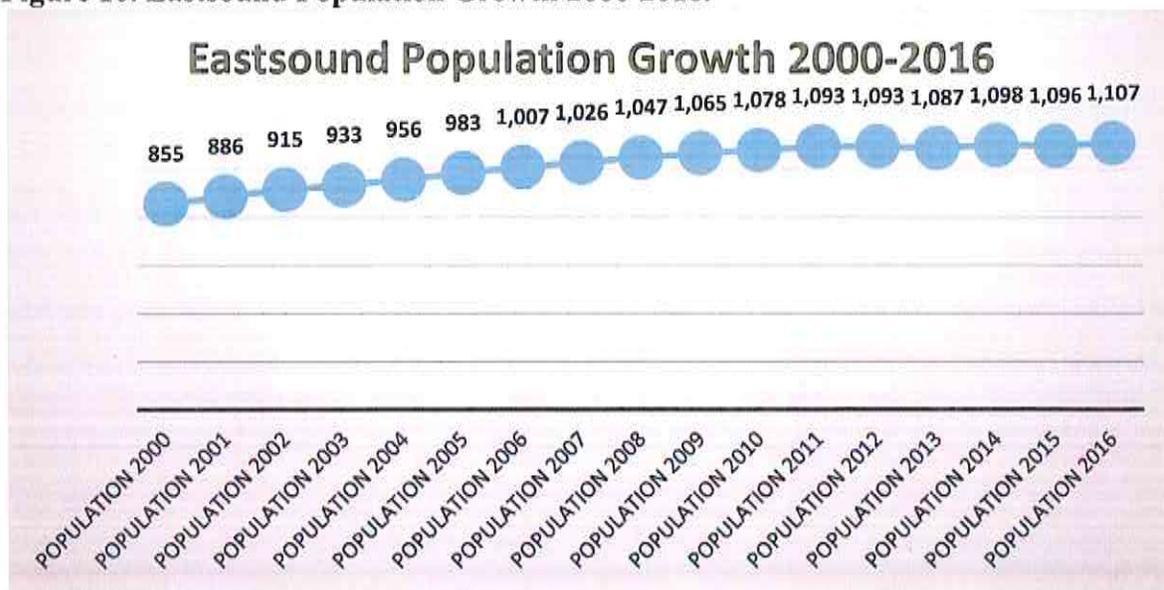
The method for developing the low population projections for Eastsound and Lopez UGAs is as follows:

1. The OFM low projection shows the County's population in overall decline. In a scenario where the County's population is declining, the allocation of growth to the UGA would be inconsistent with the general trend.
2. The presumption is that although the population of the County would be declining overall, the UGA would retain sufficient housing and employment opportunities sufficient to retain the current ratio of the islands population.

### 5.B Urban Growth Area Projections:

1. **Friday Harbor:** The Town of Friday Harbor has selected a growth rate of 1.7 percent. Amendments to the Town's UGA are subject to established procedures and negotiations with the Town. At this time, an expansion of the Town's UGA is not expected.
2. **Eastsound UGA:**

**Figure 10. Eastsound Population Growth 2000-2016.**



Source: OFM Small Area Estimates-Unincorporated UGAs-September 2016.

If the growth expected in 2005 had occurred, the population of Eastsound in 2016 would have been approximately 1,605 rather than 1,107.

The non-municipal UGA, Eastsound, is the commercial and social hub of Orcas Island. The original UGA was established in 1998 and was subsequently revised. The current UGA boundary was established in 2005. Between 2000 and 2016, the population in Eastsound grew by 29 percent or approximately 252 people. An average annual increase of approximately 1.84 percent. Conversely, over the same period the Orcas Island population increased by 21 percent (940 people), an average annual increase of 1.31 percent. Between 2000 and 2016, approximately twenty-six percent of the total population increase on Orcas Island occurred within the UGA, instead of the projected fifty percent. Sixteen years is a small sample size; however, comparable data for earlier decades is not available. Using the available data, staff developed two distinct projections:

1. A projection based on Eastsound maintaining a percentage share of the Orcas Island population; or
2. A projection as a linear population growth with Eastsound increasing its' share of the Orcas Island population.

### 5.C Eastsound UGA Projections:

**Table 8 (a). Eastsound UGA GMA Population Forecast 2016-2040: Low Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	4601	4531	4457	4365	4344	4260
Eastsound UGA ( <i>stable proportionate share of island population</i> )	855	950	1,078	1,107	944	930	915	896	891	874
Percentage of Island Population	19.19%	19.31%	20.65%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast- May, 2012.

**Table 8 (b). Eastsound UGA GMA Population Forecast 2016-2040: Medium Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	5376	5492	5602	5693	5709	5768
Eastsound UGA ( <i>stable proportionate share of island population</i> )	855	950	1,078	1,107	1,103	1,127	1,149	1,168	1,171	1,184
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast- May, 2012.

**Table 8 (c). Eastsound UGA GMA Population Forecast 2016-2040: High Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	6513	6997	7476	7934	8020	8374
Eastsound UGA ( <i>stable proportionate share of island population</i> )	855	950	1,078	1,107	1,336	1,436	1,534	1,628	1,646	1,718
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast- May, 2012.

**Table 8 (d). Eastsound UGA 2016-2040 Population Forecast based on County Population as Proportionate Share of State and with Eastsound as Proportionate Share of Island Population.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	5571	5857	6128	6376	6423	6607
Eastsound UGA ( <i>stable proportionate share of island population</i> )	855	950	1,078	1,107	1,143	1,202	1,258	1,308	1,318	1,356
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%	20.52%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and U.S. Census.

Tables 8 a, b, c, and d, forecast the growth or decline of population in Eastsound as a proportionate share of the Orcas Island population. As the Orcas Island population rises, so does the population allocated to Eastsound. This forecast method is consistent with the method used to develop the recommended County population projection. Table 8 (d) establishes the expected development of Eastsound within the context of the preferred County population projection.

With the exception of the low projection, which identifies a decline in population, the medium, high and proportionate share projections suggest that over the next 20 years, the population of Eastsound may increase by sixty-four people, 539 people or 211 people, respectively. Population increases that will require approximately thirty-one, 264 or 103 residential units respectively. This model is limited by the expectation that, as the village grows, its relative weight to the island's population will remain the same.

The following series of tables presents the projected growth of Eastsound based on the village's annual growth rate between 2000 and 2016. Sixteen years is a small sample to extrapolate from. In this case, the population growth is compounded, increasing the village's share of the Orcas island population. This model presumes that as the village grows, its relative weight to the island's population will change. The suggestion is that as the village becomes more populated, the increased activity will attract more people. As the low projection identifies a declining population, there would be no difference from Table 8 (a), and so that projection is not repeated.

**Table 9 (a). Eastsound UGA GMA Population Forecast 2016-2040: Medium Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	5376	5492	5602	5693	5709	5768
Eastsound UGA ( <i>x1.84 percent per year</i> )	855	950	1,078	1,107	1,191	1,304	1,429	1,565	1,594	1,715
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	22.15%	23.75%	25.51%	27.49%	27.92%	29.73%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast- May, 2012.

**Table 9 (b). Eastsound UGA GMA Population Forecast 2016-2040: High Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	6513	6997	7476	7934	8020	8374
Eastsound UGA ( <i>x1.84 percent per year</i> )	855	950	1,078	1,107	1,191	1,304	1,429	1,565	1,594	1,715
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	18.28%	18.64%	19.11%	19.73%	19.87%	20.47%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast- May, 2012.

**Table 9 (c). Eastsound UGA Population Projection Forecast Based on Proportionate Share of State Population.**

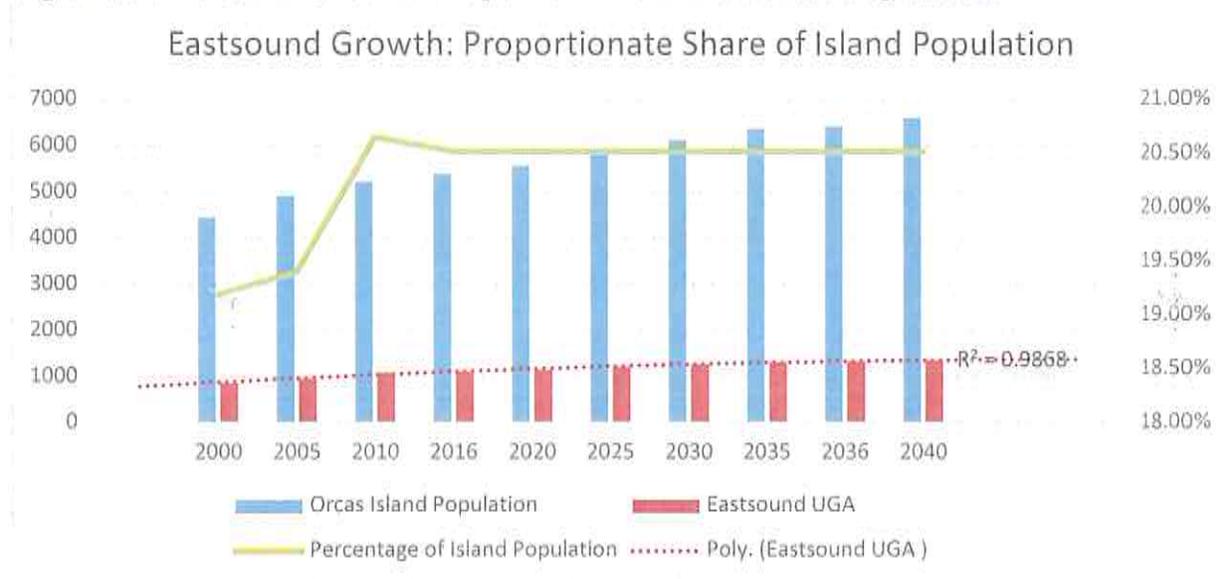
Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Orcas Island Population	4455	4921	5220	5395	5571	5857	6128	6376	6423	6607
Eastsound UGA ( <i>x1.84 percent per year</i> )	855	950	1,078	1,107	1,191	1,304	1,429	1,565	1,594	1,715
Percentage of Island Population	19.19%	19.40%	20.65%	20.52%	21.38%	22.27%	23.32%	24.55%	24.82%	25.95%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and U.S. Census.

As the forecast is a linear progression, Tables 9 a, b, and c indicate that over the next twenty years the population of Eastsound will increase by approximately 487 people and approximately 239 residential units. This is the equivalent of approximately twenty-four people per year or eleven average households per year.

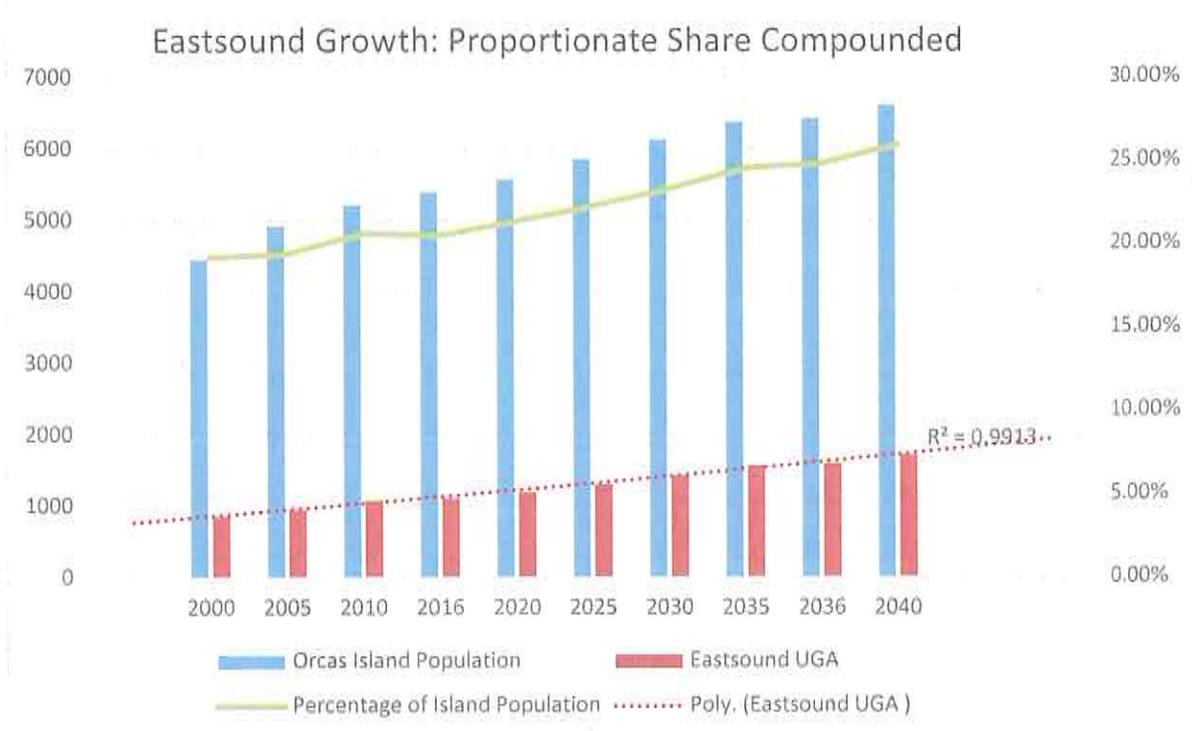
Migration drives the County’s population changes, and the historic period covered by the available data includes the Great Recession which slowed migration to the County. Assuming the Great Recession is not repeated during the planning period, then a population increase of approximately 487 people is consistent with historic trends that showed a population increase in Eastsound of 252 over sixteen years, rather than the 211 projected in Table 8 (d). Model testing indicates that the projection in Table 9 (c) is statistically more consistent with the available data than Table 8 (d).

**Figure 11. Eastsound Growth: Proportionate Share of Island Population.**



Source: OFM Small Area Estimates- Unincorporated UGAs September, 2016 and U.S. Census.

**Figure12. Eastsound Growth: Proportionate Share Compounded.**



Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and U.S. Census.

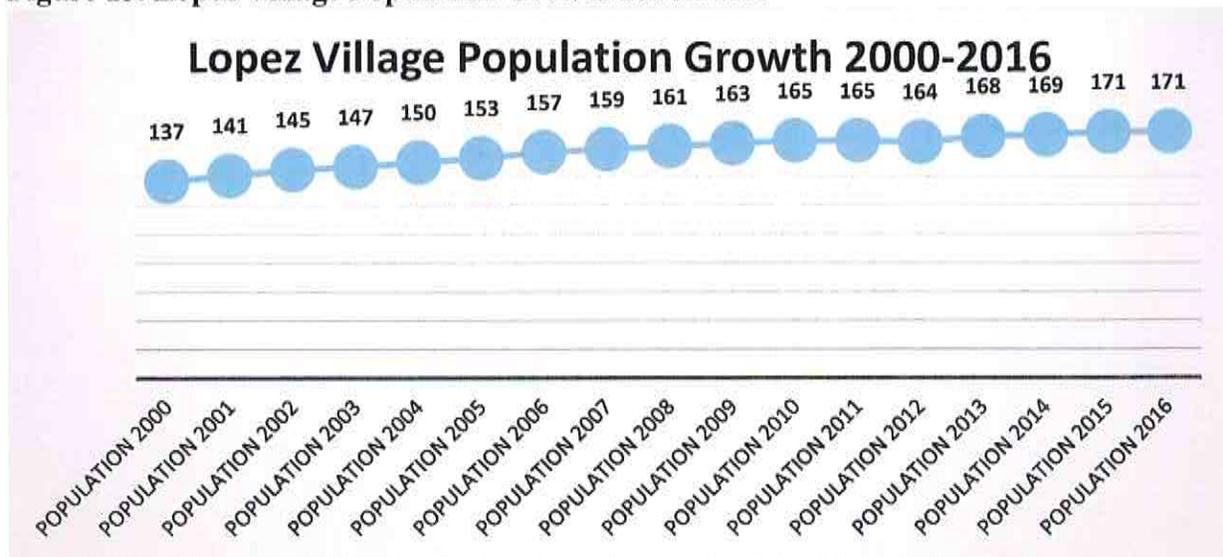
The recommended projection shows that, over time, Eastsound will account for a larger proportion of Orcas Island’s total population, eventually housing approximately twenty four percent of the island’s population in 2036 and accommodating almost fifty percent of Orcas Island’s projected growth.

**5.D Eastsound UGA Recommendation:**

Staff recommends the projection in Table 9 (c) which establishes an Eastsound population in 2036 as 1,594, an increase of 487 people and approximately 239 housing units.

## 5.E Lopez Village UGA:

Figure 13. Lopez Village Population Growth 2000-2016.



Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast 2012.

If the growth projected in 2005 had occurred, the population of Lopez Village in 2016 would have been 485.

The non-municipal UGA, Lopez Village, is the commercial and social hub of Lopez Island. The original UGA boundary was established in 1998 and was subsequently revised in 2005. Between 2000 and 2016, the population in Lopez Village grew by 25 percent or approximately 34 residents. This represents an average annual increase of approximately 1.55 percent. Conversely, over the same period the Lopez Island population increased by thirteen percent (290 people), an average annual increase of 0.83 percent. Between 2000 and 2016 approximately 11.72 percent of the total population increase occurred within the UGA rather than the projected fifty percent. Sixteen years is a small sample size; however, comparable data for earlier decades is not available. Using the available data, staff has developed two distinct projections:

1. A projection based on Lopez Village maintaining a percentage share of the Lopez Island population: or
2. A projection as a linear population growth with Lopez Village increasing its share of the Lopez Island population.

**Table 10 (a). Lopez Village UGA GMA Population Forecast 2016-2040: Low Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Lopez Island Population	2176	2317	2380	2466	2099	2067	2033	1991	1982	1943
Lopez Village UGA (stable proportionate share of island population).	137	150	159	171	146	143	141	138	137	135
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast-May, 2012.

**Table 10 (b). Lopez Village UGA-GMA Population Forecast 2016-2040: Medium Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Lopez Island Population	2176	2317	2380	2466	2457	2510	2560	2602	2610	2637
Lopez Village UGA (stable proportionate share of island population).	137	150	159	171	170	174	178	180	181	183
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast-May, 2012.

**Table 10 (c). Lopez Village UGA-GMA Population Forecast 2016-2040: High Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Lopez Island Population	2176	2317	2380	2466	2,960	3,181	3,398	3,606	3,645	3,807
Lopez Village UGA (stable proportionate share of island population).	137	150	159	171	205	221	236	250	253	264
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast-May, 2012.

**Table 10 (d). Lopez Village UGA 2016-2040 Population Forecast Based on Proportionate Share of State Population.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2036	2040
Lopez Island Population	2176	2317	2380	2466	2546	2677	2801	2914	2936	3020
Lopez Village UGA (stable proportionate share of island population).	137	150	159	171	177	186	194	202	204	209
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%

Source: OFM Small areas unincorporated UGA's September, 2016 and U.S. Census.

Tables 10 a, b, c, and d, forecast the growth or decline of population in Lopez Village as a proportionate share of the Lopez Island population. As the Lopez Island population rises, so does the population allocated to Lopez Village. This forecast method is consistent with the method used to develop the recommended County population projection. Table 10 (d) projects the expected development of Lopez Village within the context of the recommended projection. With the exception of the low projection, which identifies a decline in population, the medium, high and proportionate share projections suggest that over the next 20 years, the population of Lopez Village may increase by twelve, ninety-three or thirty-three people, respectively. Population increases that will require approximately six, forty-five, or sixteen residential units respectively. This model is limited by the expectation that, as the village grows, its relative weight to the island's population will remain the same.

The following series of tables presents the projected growth of Lopez Village based on the village's annual growth rate between 2000 and 2016, (1.55 percent). Sixteen years is a small sample to extrapolate from. In this case, the population growth is compounded, increasing the village's share of the Lopez Island population. This model presumes that as the village grows, its relative weight to the island's population will change. The suggestion is that as the village becomes more populated, the increased activity will attract more people. As the low projection identifies a declining population, there would be no difference from Table 10 (a), and so that projection is not repeated.

**Table 11 (a). Lopez Village UGA-GMA Population Forecast 2016-2040: Medium Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2040
Lopez Island Population	2176	2317	2380	2466	2457	2510	2560	2602	2637
Lopez Village UGA (x1.55 percent per year).	137	150	159	171	182	196	212	229	247
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	7.40%	7.82%	8.28%	8.80%	9.38%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast-May, 2012.

**Table 11 (b). Lopez Village UGA-GMA Population Forecast 2016-2040: High Projection.**

Year	2000	2005	2010	2016	2020	2025	2030	2035	2040
Lopez Island Population	2176	2317	2380	2466	2,960	3,181	3,398	3,606	3,807
Lopez Village UGA (x1.55 percent per year).	137	150	159	171	205	221	236	250	264
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	6.93%	6.93%	6.93%	6.93%	6.93%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and OFM County GMA Population forecast-May, 2012.

**Table 11 (c). Lopez Village UGA Population Forecast 2016-2040 based on the County Population as Proportionate Share of State Compounded.**

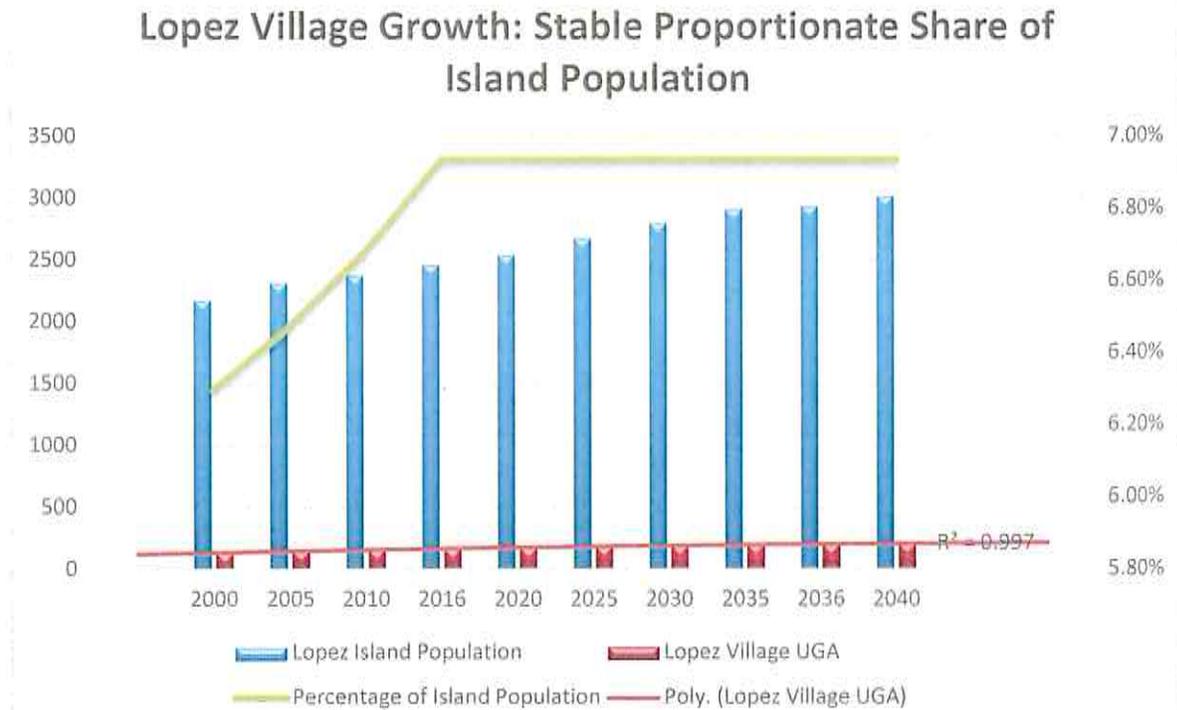
Year	2000	2005	2010	2016	2020	2025	2030	2035	2040
Lopez Island Population	2176	2317	2380	2466	2546	2677	2801	2914	3020
Lopez Village UGA (x1.55 percent per year).	137	150	159	171	182	196	212	229	247
Percentage of Island Population	6.30%	6.47%	6.68%	6.93%	7.14%	7.34%	7.57%	7.86%	8.19%

Source: OFM Small Areas Estimates-Unincorporated UGAs Sept. 2016 and U.S. Census.

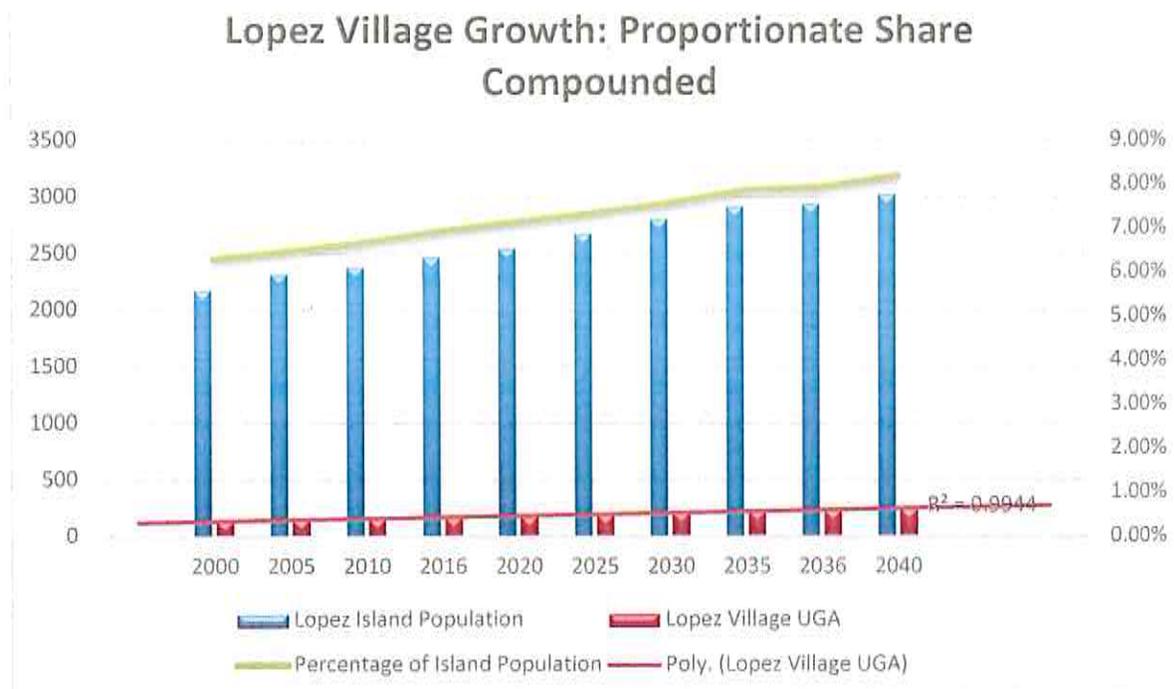
As the forecast is a linear progression, Tables 11 a, b, and c indicate that over the next twenty years the population of Lopez Village will increase by approximately sixty-two people and approximately 30 residential units.

Unlike the recommended projection for Eastsound, Tables 11 a, b, and c indicate that the projections for Lopez Village indicates that the projection based on the UGA maintaining a consistent percentage of Lopez Island population in Table 11 (c) is more statistically consistent with the available data.

**Figure 14. Lopez Village Growth: Stable Proportionate Share of Island Population.**



**Figure 15. Lopez Village Growth: Proportionate Share Compounded.**



## 5.F Lopez Village UGA Recommendation:

Staff recommends the projection in Table 10 (d) which establishes a Lopez Village UGA population of 204 people in 2036, an increase of thirty-three people and approximately sixteen households.

## 6.A Housing:

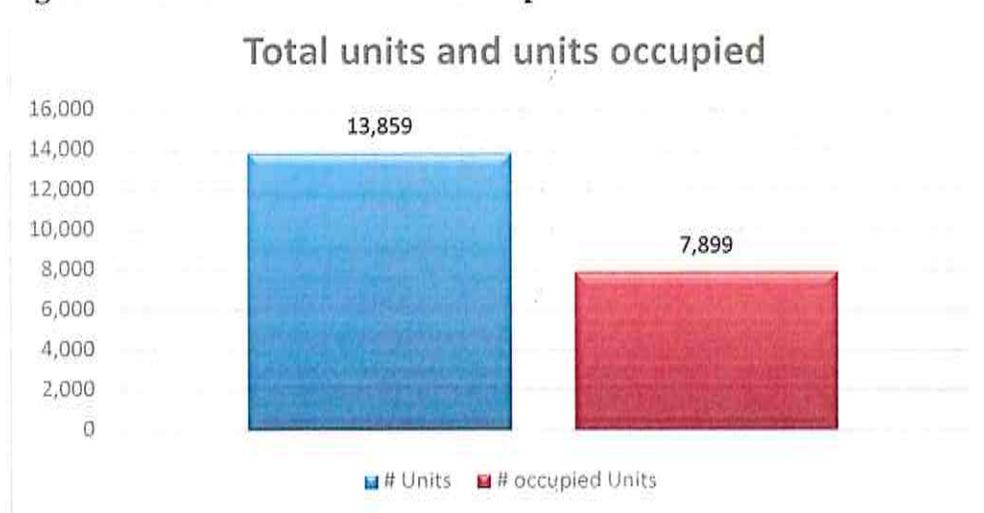
While net migration and natural increase drive actual population change, housing and employment opportunities, are key variables influencing migration. Traditionally, employment stimulates the demand for housing; however, over the past forty years, San Juan County has followed a different path by becoming an affluent retirement community with low wage employment options.

The combination of low wage employment in the seasonal service, construction and recreation sectors, a lack of affordable housing and a high cost of living weighs against the in-migration of younger people with limited personal capital and favors affluent older people with greater personal capital. This is reflected in the age of the County's population. Sixty-three percent is over the age of forty-five and median age is fifty-four.

Current research by the University of Washington Real Estate Commission in the Runstad Center for Real Estate Studies, *Housing Market Summary, Q4, 2016*, University of Washington, Page 3, shows that, "The least affordable County [in Washington] for both average and first time homebuyers is San Juan." The scenic amenities of the islands foster the proliferation of second or seasonally occupied homes.

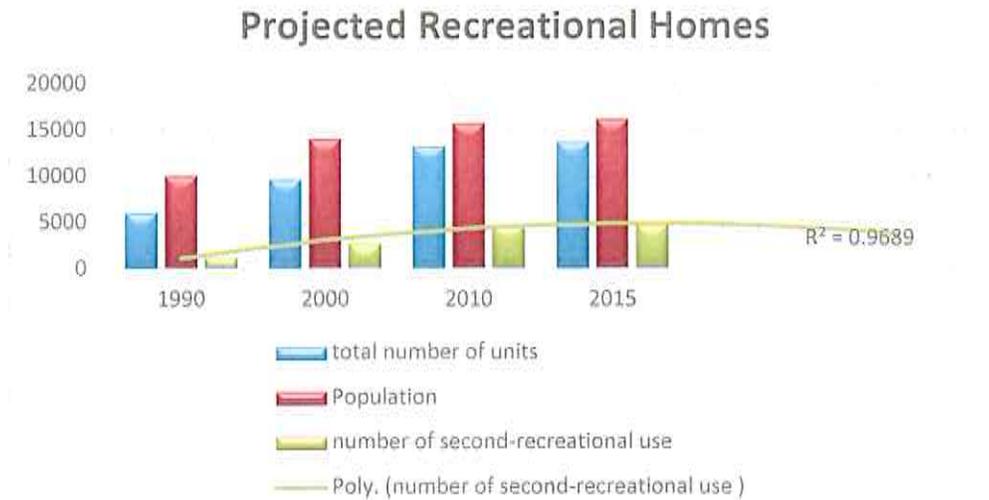
ACS studies show approximately 35.3 percent of the County's housing stock is used for seasonal, recreational, or occasional use. In comparison, the same study shows that approximately 3.2 percent of the State's housing stock falls into the same category.

**Figure 16. Total Units and Units Occupied.**



Source: OFM annual estimates

**Figure 17. Projected Recreational Homes.**



The high proportion of seasonal units impacts the calculations of average household size and house cost, which, in turn, shapes the number of residential units projected to house the future population. If the percentage of seasonal units remains constant, then for every three full time residences, an additional seasonal unit will be developed.

The recommended population projection indicates a population increase of 3,109 people and the development of approximately 1,524 housing units. If the rate of seasonal units remains unchanged then, the same population increase will entail an additional 533 seasonal housing units.

The current data suggests that the number of seasonal units will plateau and decline over the near future. Data from the 2020 census may substantiate this projection.

**7.A Overnight Population:**

San Juan County is a tourist destination. The overnight population peaks sharply in the summer months between Memorial Day and Labor Day. There is no irrefutable method for determining the number of overnight visitors who come to the islands during the summer months. Anecdotal evidence suggests the summer population peaks around the fourth of July weekend, with similar peaks for Memorial and Labor Day weekends.

Dean Runyan Associates regularly issues reports for the Washington Tourism Alliance examining the travel impacts and visitor volumes for each of Washington’s counties. Dean Runyan Associates have developed a sophisticated model for analyzing the economic impacts of the travel industry. This model uses data sources such as unit inventories, visitor surveys, room demand, campsite use, and the number of second homes and visitor air arrivals to calculate visitor volumes.

The model indicates that the County had 813,000 visitors who spent approximately \$203 million in 2015. The report shows that approximately 125,000 visitors stay with resident friends or relatives.

**Table 12. Visitor Volume.**

	<b>Persons (Thousands)</b>		<b>Parties (Thousands)</b>		<b>Party Size</b>	<b>Length of Stay</b>
	Trips	Nights	Trips	Nights	(Persons)	Nights
<b>San Juan</b>	813	1,485	322	584	2.5	1.8

Source: Dean Runyan, Washington State County Travel Impacts and Visitor Volume 2000-2015. April 2016.

Notes: Visitor-trips is the number of trips to the destination by visitors. Visitor nights is the number of nights or days that visitors stayed at the destination. Visitor nights are equal to the number of visitor trips multiplied by the average length of stay.