2014

Housing Needs Assessment

PLANNING & LAND USE DEPARTMENT
MATANUSKA-SUSITNA BOROUGH

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How Did We Get Here?

During the summer of 2014 the Valley Board of Realtors (VBR) noticed a trend occurring within our community. If left unchecked the occurrence may go beyond their profession and have serious effects to the borough's economy. They brought it to the Matanuska-Susitna Borough Planning Department with a hope to address a critical issue within our community: Housing

The result was the 2014 MSB Housing Needs Assessment which was released by the Borough in January 2015. The next month a Housing Summit was held with a diverse group of community stakeholders. From this effort sprung a partnership of private, nonprofit, and governmental organizations as the Housing Forum that split into three Working Groups.

In April the Working Groups met to identify objectives and tasks for next steps of action. The Working Groups recombined during the June Action Planning Workshop and selected a number of projects that need to be accomplished over the next year.

The Housing Forum

The following organizations are actively involved:

- Alaska Housing Finance Corporation
- City of Palmer Planning Department
- Cook Inlet Housing Authority
- Habitat for Humanity
- Hall Quality Homes
- Knik Tribal Council
- Mat-Su Builders Association
- Mat-Su Coalition on Housing and Homelessness
- Mat-Su Senior Services
- Meadow Lakes Seniors
- MSB Planning Department
- MSB School District
- MyHouse
- Neighborworks
- Private appraisers, realtors, brokers & developers
- Valley Board of Realtors
- Valley Charities
- Valley Residential Services
- Wasilla Senior Center

Key Dates

- June 27, 2014: VBR met with MSB Planning
- June to August 2014: MSB Planning Staff researched issue
- August 2014: Further VBR discussion led to formal analysis
- January 5, 2015: MSB Housing Needs Assessment released
- February 5, 2015: Housing Summit
- April 2-3, 2015: Working Groups met
- June 19, 2015: Housing Forum Workshop
- Over the next year: Housing Forum Projects

Housing Forum Projects

- MSB Housing Market Analysis
- MSB Housing Choice & Preference Survey
- Developer Toolbox
- Marketing and Advocacy Campaign
- Senior Housing Needs Awareness

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Objective

This housing needs assessment is based upon a guidebook provided by the Alaska Housing Financial Corporation (AHFC). The purpose of the assessment is to determine if there is an affordable housing issue within the Matanuska-Susitna Borough (MSB). Factors assessed include demographic changes, income distribution, housing stock, and affordability of housing across a broad range of households for the entire MSB.

According to U.S. Department of Housing and Urban Development (HUD) and AHFC, housing costs that require a household to expend over 30% of their income is a burden economically to the household and the community. The determination that housing is affordable is based upon the housing cost burden of median and less than median income levels. This assessment is a socioeconomic analysis of the MSB population and housing stock to assess whether the populace is able to afford to live here. It is based upon past performance and extends that trend into the future to project possible outcomes. If all things remain the same then that forecast may be true.

Application

This document is a quantitative analysis of MSB socioeconomic data. As such, it is a research paper assessing numerical quantities of interrelated datasets to determine if there is a problem. Data used to ascertain analysis conclusions come from a variety of sources including the U.S. Census, HUD, Alaska Department of Labor, AHFC, MSB Parcel Data, and the Alaska Multiple Listing Service (MLS).

Each section of the assessment has tables and figures associated with the analysis. This information builds upon itself as it is used in following sections to determine societal and economic trends. It is also meant to inform the reader about the topic at a glance while showing the range of results for a better understanding of conclusions made. General housing unit information for cities and communities is provided at the end of the document as appendices.

The assessment is not a qualitative analysis of housing stock suitability or an objective housing plan. Instead, it is intended to inform and begin a dialogue amongst stakeholders, should the analysis determine that there is a housing affordability issue in the MSB.

Research Synopsis

The assessment has seven sections of datasets. These include a population profile, household characteristics, household income, housing unit supply, housing cost trends, unmet housing needs, and rental affordability. What follows are a summary of the main points of each section.

Population Profile

Since its incorporation the MSB has been experiencing exponential growth. This growth has not been caused by local births as is typical, rather it is due to in-migration. This type of growth, primarily based on people relocating to the borough, has had a significant effect on the population's demographics. Growth will continue for the MSB, but may slow down, relative to the rate of past change.

Baby Boomers, who drove the housing market to current levels, are approaching retirement, and what percentage will retire in place is unknown. The future number of seniors is dependent upon their retirement plans, rising life expectancies, and the number of retirees that relocate to Alaska. The MSB is on track for moderate population growth, if all conditions remain the same, though seniors that retire in place or migrate into the area may change the forecast.

- There are 89,319 people that reside in the MSB, with a median age of 34.8 years, and there are 107 males per 100 females.
- The population has been predominately white since Census records began in 1960 with a major demographic shift in diversity starting in 2000. Minorities currently make up 18% of the population.
- The generation groupings of the population in the MSB from largest to smallest are Millenials (28.8%), Generation X (27.9%), Baby Boomers (23.2%), Generation Z (14.8%), and the Silent Generation (5%).
- From 1960 to 1970 there was negligible change in the population. This changed between 1980 and 1990 with a phenomenal growth increase of 2.5 times in population size from the previous decade. The growth pattern slowed down between 1990 and 2000 to the population doubling in size every 20 years.
- If the population growth pattern remains the same there may be 125,000 people in the MSB by 2020 representing a 40% change from 2010. Then by 2030 there may be 165,000 people representing a 24% change in population.
- Children in the MSB should continue to represent 28% of the population in the future with 35,000 in 2020 and 45,000 in 2030.
- Seniors could be account for 10,500 to 16,000 of the MSB population by 2020 and 15,000 to 35,000 by 2030.
- Single mothers with children are less than 2% of the population due to a high marriage rate and low birth rate, which is not forecasted to change in the future. Women between the ages of 18 to 19 are most at risk of becoming single mothers due to a high birth rate of 85.4 births per 1,000 people.

Household Characteristics

Although the MSB has been and is forecasted to continue growing its population - the size of households are deceasing. Small households are the norm in the MSB and may become more prevalent. In the future, it appears that there may be less people per housing unit which will require more housing per person than in the past. The reason this is occurring is due to growth in married couple families without children and nonfamily households consisting of an individual

living alone. One factor behind this trend is the number of senior households in the MSB has consistently doubled every decade and may continue to do so in the future.

- In 1960 there were 1,499 households which increased 2,025% to 31,864 households by 2010. In that time frame the number of people living in a household has decreased by almost one person.
- By 2030 the number of households may double to 62,000, yet the size of households may continue decreasing, and may require more units with fewer rooms than in the past.
- 56% of households consist of one person (22%) or two persons (34%). This smaller household trend may continue to 59% by 2020 and 62% by 2030 with the two household types gaining a 1% increase each decade.
- Nonfamily households, which represent slightly less than a third of all households, are growing faster than family households, with 77% consisting of a single person. Nonfamily households may fully represent a third of all households by 2030.
- Married couples make up approximately 40% of family households. Three and four person family households are each only half the number of married couple households. Five person family households amount to a quarter of the number of married couple households.
- Currently 50% of the 22,579 family households have children. 74% of family households with children are in a married couple family. Of all family households with children, 17% are headed by a single mother, and 9% by a single father.
- Family households with children may decline significantly from a 50% to 37% representation in the future. Family households may consist of 58% married couples without children by 2020 and 60% by 2030.
- Children in single mother households may be at risk of being poor due to women making on average 67% of the income levels of men in Alaska.
- Of the current 9,245 nonfamily households, 58.5% are men, and 77% live alone.
- A third of MSB seniors live in a nonfamily household, comprising a quarter of this household type, and 90.5% of them live alone.
- By 2030 a quarter of all MSB households may be headed by seniors over 65 years of age.

Household Income

Being poor and in poverty are two different economic classifications. A household that is in poverty is impoverished to the point that the necessities of life are severely limited. A household that is poor is one that makes less than the median income level and is economically struggling. Median income is determined by the federal government for each state and its counties for the development of poverty and housing assistance programs.

There are households in the MSB who are economically limited. A nonfamily household is more likely to be struggling than a family household although, the amount of nonfamily and family households with less than median income is similar. The extent that people from these households struggle is different. Overall, almost 23,000 people, including children, in the MSB live in a household that makes less than the median, which is approximately a quarter of the population.

- The household poverty level in the MSB and extremely low income level are similar. In the MSB, 17% of nonfamily and 10% of family households are in poverty.
- Median household income for a nonfamily of one is $55,000 and $70,700 for a family of three. Approximately 52% of nonfamily and 22% of family households make less than the median income.
- Over half of nonfamily households make less than the median income level; 36% make less than $44,000, 30% make less than $27,500, and 33% make less than $16,500.
- 20% of family households make less than the median income; 55% make less than $44,000, 22% make less than $27,500, and 23% make less than $16,500.

Housing Unit Supply

The MSB barely has enough housing units for its residents. Within the MSB a tight housing market exists with limited availability approaching that of Anchorage. An overwhelming majority of units are large lot single family homes sprawled out in suburban subdivisions located in a major residential area bounded by Big Lake, Houston, Sutton, and Butte.

There are very low percentages of other housing options such as multifamily or small starter homes in planned unit mixed use walkable neighborhoods. This limits affordable housing availability and increases transportation costs for the individual and community. The results may indicate a need for additional housing to be built targeting affordable housing options in order to keep up with population increases and employment growth while stimulating the local housing market.

- Overall in the MSB, there are 45,553 housing units. 85% are single family, 3.5% mobile homes, 2.8% duplexes, 7.4% multifamily, 0.3% group quarters, and 1% in mobile home parks.
- 26% of housing units are in the Core Area and 77% are within the major residential area.
- Approximately 93% of units and parcels are owned by Alaskans.
- With a population of 89,319 in an average household size of 2.84 persons, there is a need of 31,450 units to adequately house everyone, which does not account for seasonal or recreational use units and a healthy stock of vacancies.
- The vacancy rate in the MSB for renter occupied is 5% and 2.3% for homeowner occupied. In Anchorage this rate is 3.9% and 1% respectively.
- In order to meet the projected unit demands in the future there may be a need of 12,215 additional units by 2020, and by 2030 another 33,691 units than are currently available.
- If all things remain the same with population growth and development, it's projected that there may be built an additional 7,000 units by 2020 and 25,000 units by 2030; meaning there may be a potential for a housing shortage.
- Vacant housing units total 12,299 and are 27% of the entire housing stock. Approximately 69% of vacant housing, totaling 8,486 units, is used for seasonal or recreational use. The total percentage of seasonal or recreational housing market share has been steadily declining and being replaced with faster growth in rental units.
- The market for rental units may increase significantly in demand compared with both owner occupied and seasonal/recreational housing.

- The number of housing units existing is close to meet current requirements but is not enough supply for a healthy and competitive housing market.

Housing Cost Trends

The cost of living within the MSB is on the rise, especially the cost of rent, which is increasing faster than the yearly rate of inflation. Yet median income levels are falling. The cost of rentals may be too high, as it is comparable to and in some cases surpasses, the cost of a mortgage.

- The cost of housing is increasing while incomes are stagnating.
- Since 2009, the cost of owning an average cost home has increased on average 2% per year. Median rental costs have increased on average 5% per year. Income has increased on average 1.9% yearly.
- In 2014, the average selling price for a home was $235,000 and average rent was $1,000 per month.
- Median income rose drastically by 18% in 2011 and leveled out 1% higher in 2012. In 2013 median income dropped by 8% and continued to drop another 5% in 2014. It is forecasted that the median income will continue to fall to the ten year running average next year.
- Median rental costs may have hit a plateau and remain at $1,000 for the next two years.
- The average cost of a home is forecasted to increase 3% to 5% in the next two years.
- Median rental costs for 2 and 3 bedroom rentals may increase and all other rentals may decrease due to demand in the next couple of years.
- To afford the median rental cost of $1,000 a month at 30% income, a household would have to make $40,000 a year or $19.23 an hour. To afford a $1,500 median cost 3 bedroom unit at 30% income, a household would have to make $30.77 an hour or $64,000 a year.
- The cost of renting a 3 bedroom unit is equal to, if not slightly more than, the mortgage costs of owning the average home. Most 20 to 30 year mortgage options, including 0% down with a PMI payment, are more affordable than paying rent in the MSB.

Unmet Housing Need

There is definitely an unmet need for affordable housing. Current and past market conditions have produced too few homes to meet the demand of the population thus artificially raising prices and removing affordability from the market. 40% of all MSB households are struggling with housing costs and have an unmet affordability need.

- Affordable housing targeting low income households account for 1% of all housing units in the MSB. AHFC estimates that there are 511 of these housing units.
- There are 4,807 nonfamily and 4,967 family low income households, of which, there are 511 low income housing units available. This leaves approximately 4,659 nonfamily and 4,604 family low income households in need of affordable housing.

- It is estimated that 25,500 people equal to 29% of the population, including children, have an unmet housing need, with over half of nonfamilies and a fifth of families experiencing affordability issues.

Rental Affordability

Affordable housing, which includes rent and utilities, should be 30% or less of a household's income. A limited housing market increases rent and limits choices for households. It also profoundly affects society and the economy in negative ways. There is a sizable market for affordable housing for the growing population and economy of the MSB which are not being met under the current economic model.

- Households that have median income or higher can afford rental costs. Though the cost of a rental is closely approaching price levels that could make it unaffordable for households that barely exceed median income levels.
- Low income households with 80% of the median income can barely afford rent. In some cases, the median rental cost is more than their income, and they are paying more than 30% of their income on housing.
- Very low and extremely low incomes, 50% and 30% of median incomes respectively, are definitely struggling to pay rent. Median rental costs are grossly unaffordable for these households.
- Almost a third of the population, including children, struggle with the negative effects caused by a lack of affordable housing.

Chapter 1: Introduction

The American Dream. This single phrase brings to mind the belief that if one simply works hard enough then it is possible to be a success while prospering through upward social mobility. It also exemplifies that such success will bring about a three bedroom home on a large lot with a white picket fence.

Within the Matanuska-Susitna Borough (MSB) is the American Dream possible? Is it possible for those who make the median income? What about those who are either just starting to climb the socio-economic ladder, or, are stuck in a situation to which there is no opportunity to raise their economic situation?

When discussing housing, typically what is considered affordable falls within the 30% rule. A household is considered burdened by housing costs if their spending ratio for a domicile is higher than 30% of their income. The 30% rule, however, can be subjective (Schwartz et al 2008).

Affluent households whose income is above the median may choose to spend more than 30% due to a quality of life choice. Yet they are not burdened by this increased cost in their discretionary spending habits. Therefore, households that make considerably more than median income while spending over 30% of their income on housing by choice is not an indicator of affordability (Schwartz et al 2008).

In contrast, affordable housing is signified by the cost burden on modest and low income households who are already economically limited. With limited economic resources to draw from these types of households may spend more than 30% of their income, not out of a desire to live comfortably, but rather because they have no choice in their local housing market. In a tight and unaffordable housing market lower income households may approach 50% or more in housing costs. Such a severe burden for housing reduces household related spending on food, clothing, healthcare, education, transportation, and entertainment (Harvard 2013, Schwartz et al 2008).

The cost of providing a domicile not only affects personal finances - but also the community at large. When the cost of a residence is high the amount of funds that can be discretionally spent locally within the community is reduced. In essence, a lack of income combined with a lack of affordable housing equals an opportunity cost to the economy (Harvard University 2013).

The State of Alaska and the Nation have both seen an uptick in the cost of housing and rentals related due to the housing bubble. There is also a demographic shift in renters, with older households doing so, and a greater portion of the population moving away from home ownership. The MSB differs in this regard, in that a higher ratio of homes, specifically single family residences, are occupied by owners compared to the State or Nation, and has weathered the housing bubble quite well (Governor of Alaska 2014A, Harvard University 2013).

The purpose of this document is to assess the housing needs of the current and potential future population. Factors assessed include demographic changes, income distribution, housing stock, and affordability of domiciles across a broad range of households. This is the first time the MSB has undertaken an assessment of the housing needs of its citizenry which is based upon the AFHC guidebook.

Many of the assumptions in the assessment are based upon statistical trend projections of past performance. Much like the stock market, future performance that may occur can be forecasted by looking at the past, and then applying a trend analysis of a number of potential scenarios. The likelihood that performance will continue is based upon the probability that it may occur in the future. The caveat being, that any major event may cause the probability of the trend to increase or decrease, and these random events are unknowns which cannot be accounted for beforehand. Instead models are developed using different trend factors which result in a high to low range estimate.

For instance, the State of Alaska and the MSB have experienced mass migrations and development in the past which could not have been forecasted due to economic and sociological factors. The illustration below exemplifies this change:

Figure 1: Alaska's Population Changes 1947 to 2012
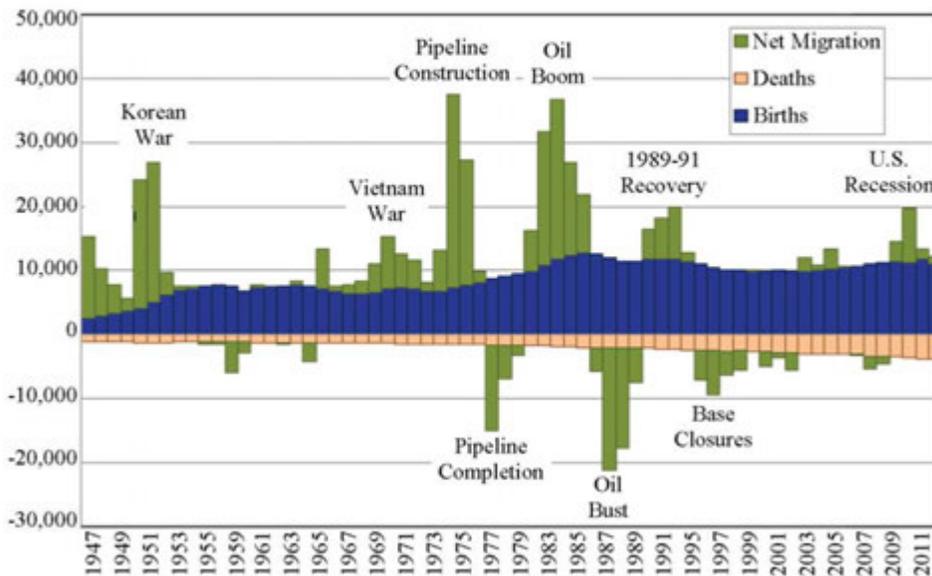
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

The economic and sociological factors which influence people to reside in any area also have an impact on the cost of local housing. The factors that affect housing costs include:
- Demographic shifts; such as a decline in household size, urbanization, migration, population growth, and buyer desires (Harvard 2014).
- Supply and demand; such as a decline in household size or increased desire for home ownership within the community (Merrill 2014).

- Economic shifts; such as increased investment in housing due to a weak profits elsewhere, availability of loans, interest rates, changes to mortgage rules, and changes to spending habits (Merrill 2014).
- Public policy, reduced supply due to deregulation allowing complete control of development to private interests without governmental or community input or incentives to build differently, or in contrast, overly constrictive land use zoning also reducing supply (Mallach 1986, Schill 2005).

These four factors are interrelated to economics of tenure. A household, or even large segments of the population, may make their decision to live in one place or another due to:
- Employment.
    - High employment increases demand for ownership, though, slowly erodes the labor market through "not in my backyard" politics caused by overdevelopment (Norris 2013).
    - Low employment increasing rental demand and vacancies while driving the local economy down (Harvard University 2013).
- Household incomes.
    - Stagnant incomes not keeping up with inflationary increases (Harvard University 2013).
- The affordability difference between owning a home and renting (Harvard University 2013).
- Availability and cost of a mortgage, including interest rates and down payment requirements (Wikipedia 2014).
- Levels of confidence in the local, state, or larger economy, the housing market, and political climate (Shiller 2013).

While these factors cannot be accounted for in a projection of the future there are actions which can be taken to ensure the desired outcome. The first step is to do an assessment of the current situation and show the potential range of results that may occur to determine if there is a housing problem requiring proactive action. If there is, the next step is to better understand stakeholder needs or desires to assist with planning and policy development.

Chapter 2: Assessment Area

The study area for the housing needs assessment covers the entire MSB including the cities of Palmer, Wasilla, and Houston. The MSB and its Community Councils plan for future development with comprehensive plans. Comprehensive plans consist of topics called elements which provide goals and policies to guide development. Community plans are included as individual parts of the Borough Wide Comprehensive Plan.

Table 1: MSB Community Councils

Name	Date of Comp Plan	Comprehensive Plan Elements
Big Lake	2009	Land Use and Environment, Parks/Rec/Open Space, Transportation, Public Facilities and Services, Economic Development, and Implementation
Buffalo Mine – Soapstone	2005	Economy, Public Facilities, Transportation, Hazards, Land Use, Park and Open Space, Community Quality, and Implementation
Butte	2005	Economy, Public Facilities, Transportation, Hazards, Land Use, Park and Open Space, Community Quality, and Implementation
Chase	1993	Population, Economy, Climate, Geology, Soils, Ownership and Existing Land Use, Planning Issue and Overall Goal, and Recommendations
Chickaloon	2008	Land Uses, Transportation, Economic Development, Rec/Park/Trails, Public Facilities, Utilities, Watersheds, Cultural Resources, Natural Hazards/Emergencies, and Open Space/Natural Areas
Farm Loop	2007	Core Area Comprehensive Plan
Fishhook	2005/2014	Economy, Public Facilities, Transportation, Hazards, Land Use, Park and Open Space, Community Quality, and Implementation. Currently undergoing updating.
Gateway	2007	Core Area Comprehensive Plan
Glacier View	2008	Cultural Resources, Population and Economy, Economy, Occupation, Industry, Land Ownership, Existing Land Use, Natural Setting, and Goals
Knik-Fairview	1997	Inventory and Analysis, Land Use, Transportation, and Public Facilities/Services
Lake Louise	1998/2014	Currently undergoing updating.
Lazy Mountain	2008	Land Use, Transportation, Public Facilities, Green Infrastructure, Environmental Quality, Open Space/Rec, Public Lands, Public Right-of-Way, Public Safety and Health, Community Governance and Education, and Implementation
Meadow Lakes	2005	Land Use, Open Space & Recreation, Circulation, Public Service & Facilities, economic Development, and Community Governance & Identity
North Lakes	2007	Core Area Comprehensive Plan
Petersville	2005	Economy, Public Facilities, Transportation, Hazards, Land Use, Park and Open Space, Community Quality, and Implementation
Point MacKenzie	2011	Land Use, Hazard Mitigation, Recreation, Watershed Protection, Economic Development, Transportation, Public Services/Facilities, and Implementation
Skwentna	2005	Economy, Public Facilities, Transportation, Hazards, Land Use, Park and Open Space, Community Quality, and Implementation
South Knik River	2014	Land Use, Land Ownership and Development, Public Facilities, Parks/Rec/Green Infrastructure, Transportation, and Natural Hazard Mitigation
South Lakes	2007	Core Area Comprehensive Plan
Susitna	2005	Land Use, Open Space/Rec, Circulation, Public Spaces/Facilities, Economic Development, and Leadership and Communication
Sutton	2009	Land Use, Public Facilities, Parks/Rec/Green Infrastructure, Transportation, Natural Hazard Mitigation, and Implementation
Talkeetna	1998	Land Use, Transportation, Public Facilities/Services, and Implementation
Tanaina	2007	Core Area Comprehensive Plan
Trapper Creek	N/A	N/A
Willow	2013	Land Use, Hazard Mitigation, Recreation, Water Quality, Economic Development, Transportation, Aviation, and Implementation

Figure 2: MSB Communities Map
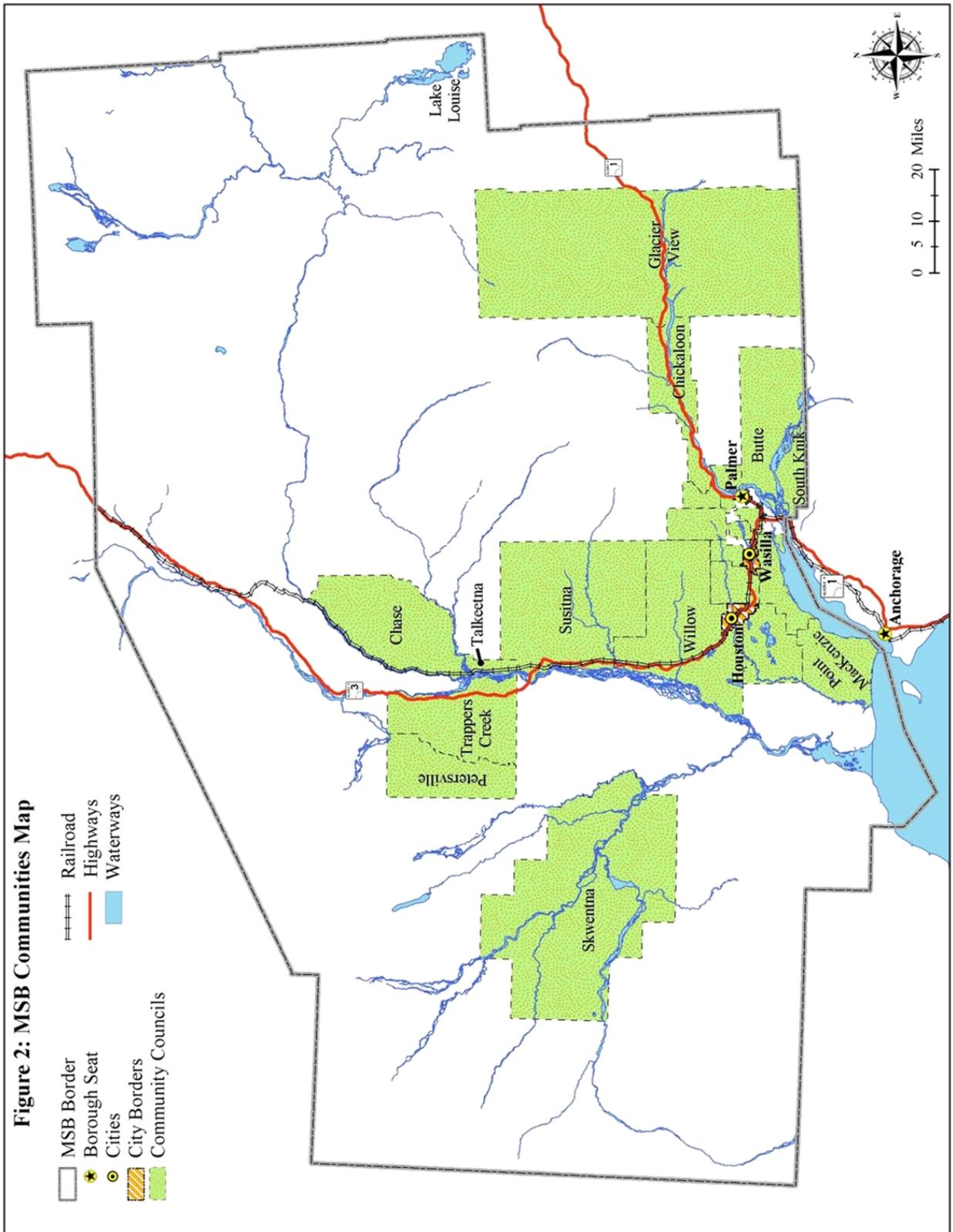
The following map illustrates the assessment area and Community Councils:

The Borough Wide Comprehenive Plan was last updated in 2005. Its elements include goals and recommendations regarding planning methods, the economy public facilities, transportation, hazards, land use, parks and open space, community quality, and implementation. It does not specifically address housing, future population growth, or identify specific development areas. Instead those topics can be found within various documents such as the Community Comprehensive Plans, Southwest Borough 2060 Futures Study, and the Core Area Plan.

Within the Borough Wide Comprehenive Plan area there are 45,553 residential housing units on 179,590 acres with a total assessed value of $7,115,933,753. The vast majority of housing units are single family residences. Housing units are spread unevenly throughout the MSB (see Figure 55), however, most units are concentrated in the southern portion of the borough.

In 1993 the "Core Planning Area" (Core) was identified as part of the southern portion of the borough that required its own comprehensive plan (see Figure 3). The Core encompasses 91 square miles of unincorporated land between Palmer and Wasilla. This area had been one of the fastest growing regions in Alaska due to Anchorage commuters seeking affordable housing options.

The Core Area Plan underwent an update in 2007 and included the elements of people, economy, land use, residential density, forecasts, transportation, green infrastructure, utilities, community services, local government, and goals and policies. It also included potential development scenarios about how unplanned build out would occur compared with alternatives such as cluster residential development and nodal development.

The 2007 update noted the Core had 8,104 housing units in 2000 and 10,400 in 2007. Currently the Core has 12,100 housing units which are half of the units forecasted to be built by 2025 in this area. Approximately 26% of all available residential housing is in the Core.

Residential housing growth has spread to areas outside of the Core (see Figure 4). Approximately 77% of all MSB homes totaling 35,021 units are in this area. By far Knik-Fairview has grown the fastest and has the most housing units than any other area in the MSB. Meadow Lakes and Big Lake also have a substantial stock of residences each equal to the amount of units available in Wasilla. Growth seems to be focused in this area, though as development continues in its current pattern, land will be quickly consumed requiring housing to be placed in outlying areas thus increasing transportation related costs.

Although the assessment is focused upon the entire borough, adjustments have been made, which account for population and housing outside the major residential areas of the MSB. Assessment of each area would be infeasible in a general document, due to the minute details and amount of data to analyze, and would be more appropriate for targeted areas in Comprehensive Plans. Though the information for each area listed on these maps has been determined and is provided at the end of this assessment for reference.
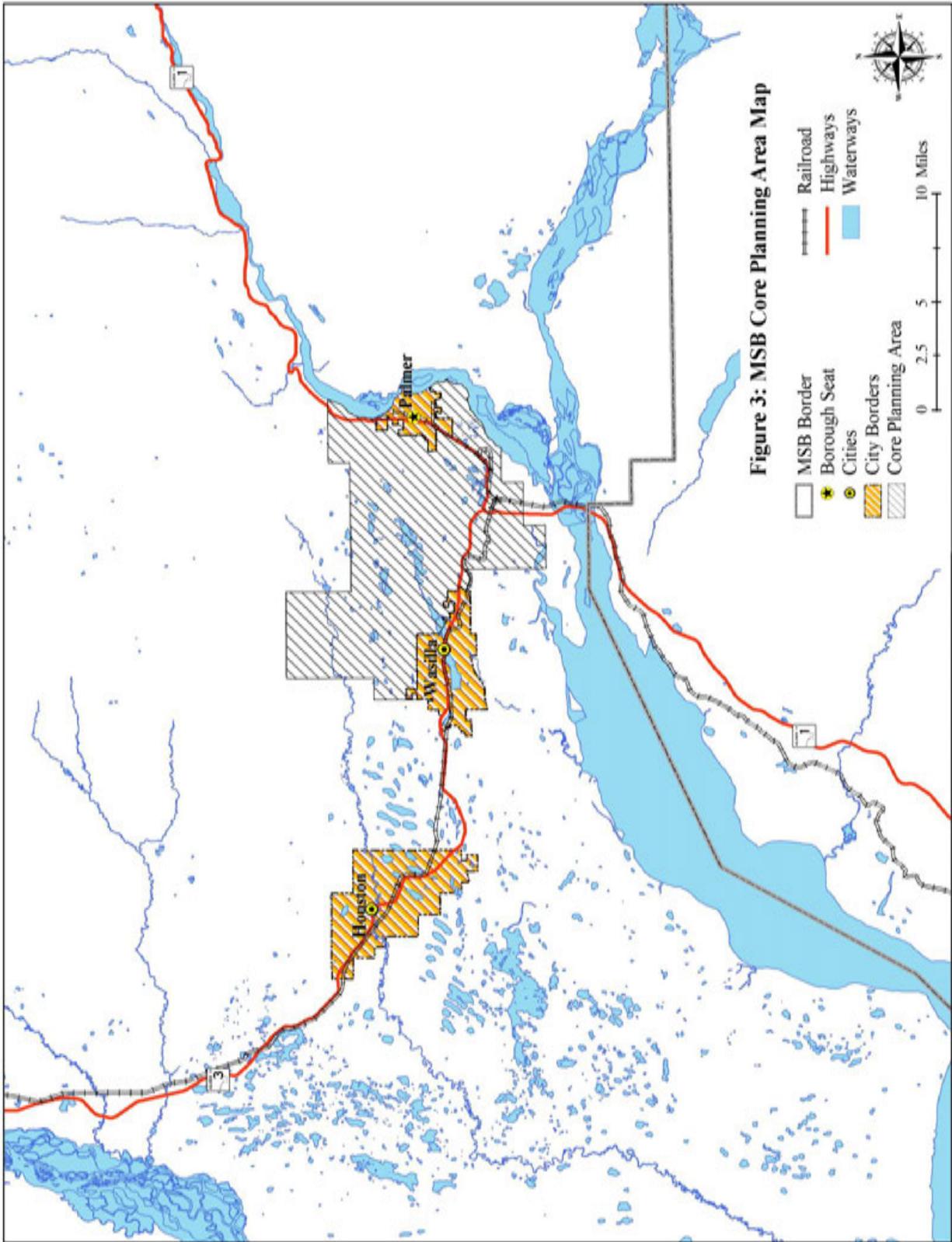
Figure 3: MSB Core Planning Area Map

Legend:
- Railroad
- Highways
- Waterways

- MSB Border
- ★ Borough Seat
- ⊙ Cities
- City Borders
- Core Planning Area

0 2.5 5 10 Miles

Figure 4: MSB Major Residential Area Map
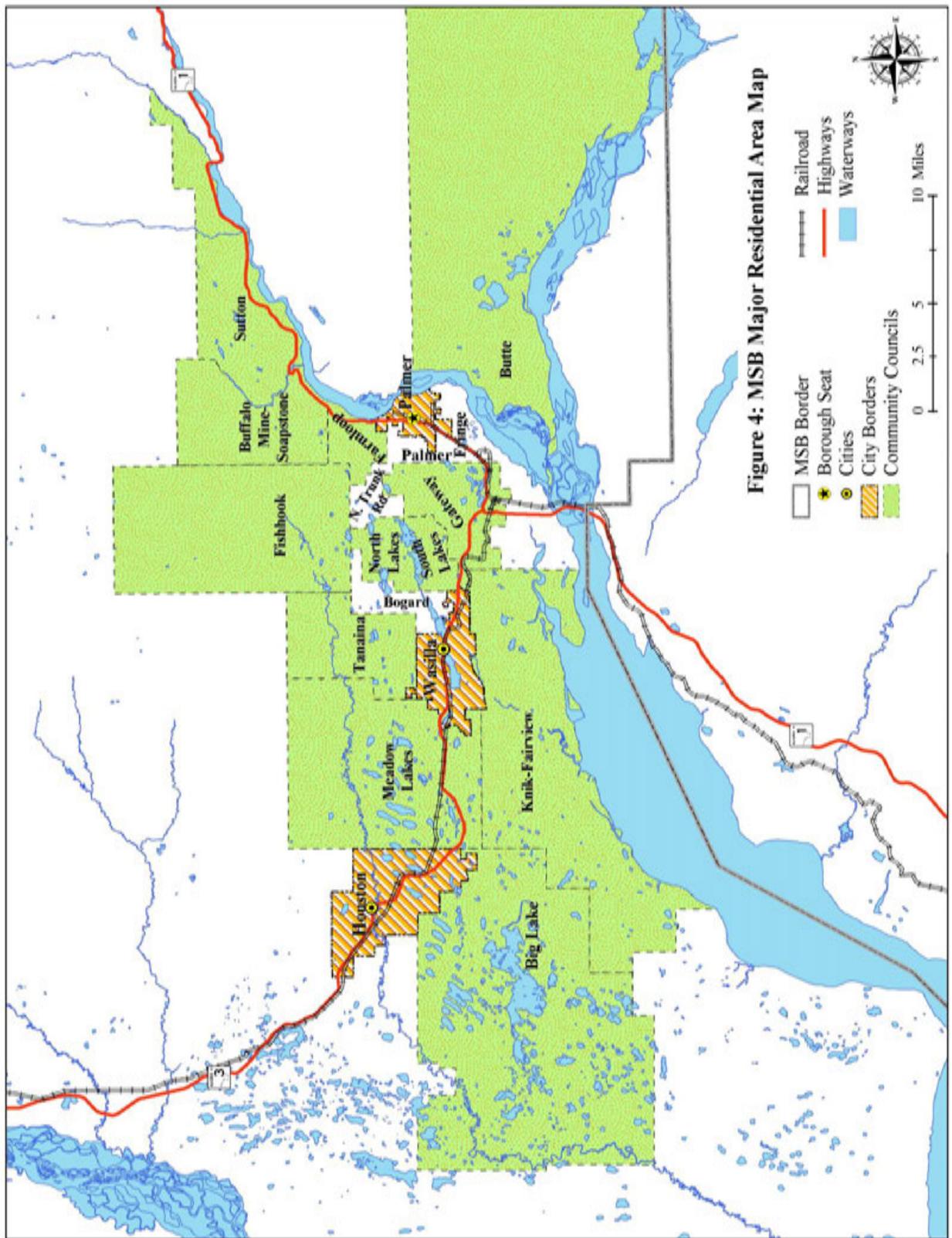
Chapter 3: Population Profile

A. Past and Current Population

The MSB has been experiencing decades of phenomenal growth. Information concerning the MSB population has been recorded by the U.S. Census Bureau since 1960. This information can be used to gain a better understanding of the past and present while allowing for a 20 year projection into the future for long-range planning purposes.

Table 2: MSB Population, Sex, and Age Changes by Decade

	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Population	5,188	6,509	25.5%	17,816	173.7%	39,683	122.7%	59,322	49.5%	88,995	50.0%
Median Age	24.3	25.80	6.2%	27.10	5.0%	31.1	14.8%	34.1	9.7%	34.8	2.1%
Male	2,817	3,470	23.2%	9,242	166.3%	20,593	122.8%	30,831	49.7%	46,040	49.3%
Median Age Male	25.4	27.0	6.3%	27.5	1.9%	31.6	14.9%	34.3	8.5%	34.7	1.2%
Female	2,371	3,039	28.2%	8,574	182.1%	19,090	122.7%	28,491	49.3%	42,955	50.8%
Median Age Female	23.1	24.5	6.1%	26.6	8.6%	30.5	14.7%	33.8	10.8%	34.8	3.0%
Males per 100 Females	118.8	114.2	-3.9%	107.8	-5.6%	107.9	0.1%	108.2	0.3%	107.2	-0.9%

Source: U.S. Census

The U.S. Census estimates that there are currently 89,319 persons living within the MSB comprised of 46,172 males and 43,147 females. With a median age of 34.8 years for both sexes, the MSB population is slightly older than the State of Alaska's population whose median age is 34.1 years, and somewhat less than the national median of 37.2 years. There are approximately 107 males for every 100 females, which is slightly better than the State of Alaska's average of 109 males, and somewhat higher than the national average of 97 males.

B. Racial Characteristics

The MSB has been predominately white since records have been kept. Over the last two decades the percentage of whites has decreased significantly while minorities have seen modest gains. Racial diversity may change in the future due to a significantly lower replacement rate of whites compared to other ethnicities and continued migration related to economic growth.

Table 3: MSB Racial Demographic by Decade

	1960 Census	%	1970 Census	%	1980 Census	%	1990 Census	%	2000 Census	%	2010 Census	%
White	4,945	95.3%	6,189	95.1%	16,816	94.4%	36,915	93%	54,521	91.9%	73,676	82.8%
Hispanic	0	0%	0	0%	224	1.3%	779	2%	1,485	2.5%	3,301	3.7%
African American	0	0%	12	0.2%	90	0.5%	249	0.6%	660	1.1%	817	0.9%
Alaska Native	112	2.2%	138	2.1%	688	3.9%	1945	4.9%	5,108	8.6%	4,735	5.3%
Asian	6	0.1%	8	0.1%	15	0.1%	320	0.8%	846	1.4%	1,075	1.2%
Pacific Islander	0	0%	0	0%	0	0%	24	0.1%	215	0.4%	214	0.2%
Other race	132	2.5%	162	2.5%	133	7.5%	230	0.6%	889	1.5%	5,177	5.8%

Source: U.S. Census

Table 4: MSB Racial Demographic Change by Decade

	1960 – 1970 % Change	1970 - 1980 % Change	1980 - 1990 % Change	1990 - 2000 % Change	2000 - 2010 % Change
White	25.16%	171.71%	119.52%	47.69%	35.13%
Hispanic or Latino	0.0%	22400%	247.8%	90.6%	122.29%
Black or African American	0.0%	650%	176.7%	165.1%	23.79%
American Indian or Alaska Native	23.2%	398.6%	182.7%	162.6%	-7.30%
Asian	33.3%	87.5%	2033.3%	164.4%	27.07%
Native Hawaiian or Pacific Islander	0.0%	0.0%	2400%	795.8%	-0.47%
Other race	22.7%	-17.9%	72.9%	286.5%	482.34%

Source: U.S. Census

A comparison of racial diversity between the State of Alaska and the United States shows that diversity is lower in the MSB (see Figure 5). Both the state and nation have a similar rate of diversity. The MSB has a higher percentage of white populace while also falling behind the state in terms of Native Alaskan representation.

Figure 5: MSB, Alaska, and USA Racial Demographic Comparison
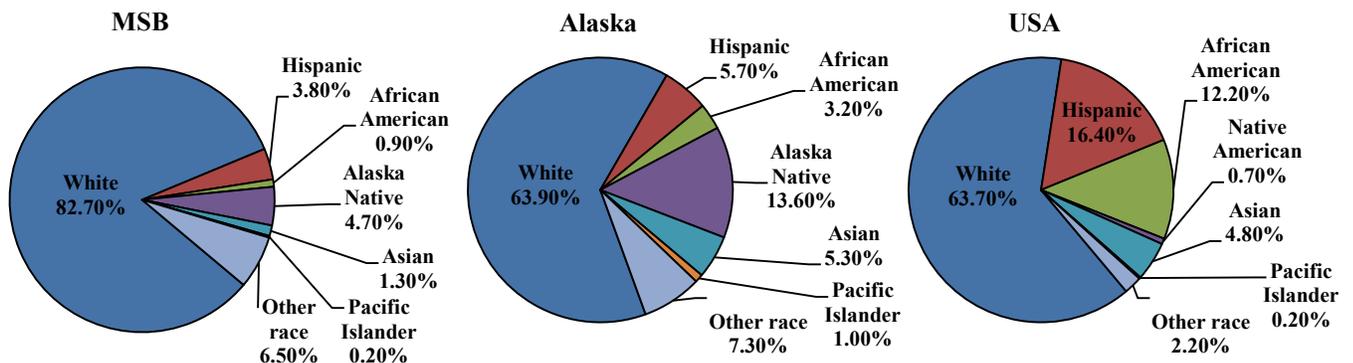
Source: U.S. Census 2012 American Community Survey 5-year Estimate

C. Population Pyramids

Insights about MSB growth can be determined through a breakdown of the population into 5-year groupings by sex into a pyramid. Typically a population will go through multiple stages. The first two stages, which 1960 and 1970 approximate, see expansive growth with high birth and death rates and a steep tapering curve in age range. In the next stage the pyramid becomes stationary, which occurred in 1980, with declining birth and death rates with more people living into old age. The final stage, seen in 1990 and 2000, is a contraction of population growth as birth and death rates both become low, dependency is increased on working age adults to fund essential services, and life expectancy increased significantly. Recently the MSB has reversed the trend into a third stage stationary population growth pattern.

Figure 6: MSB Population Pryamid Change by Decade
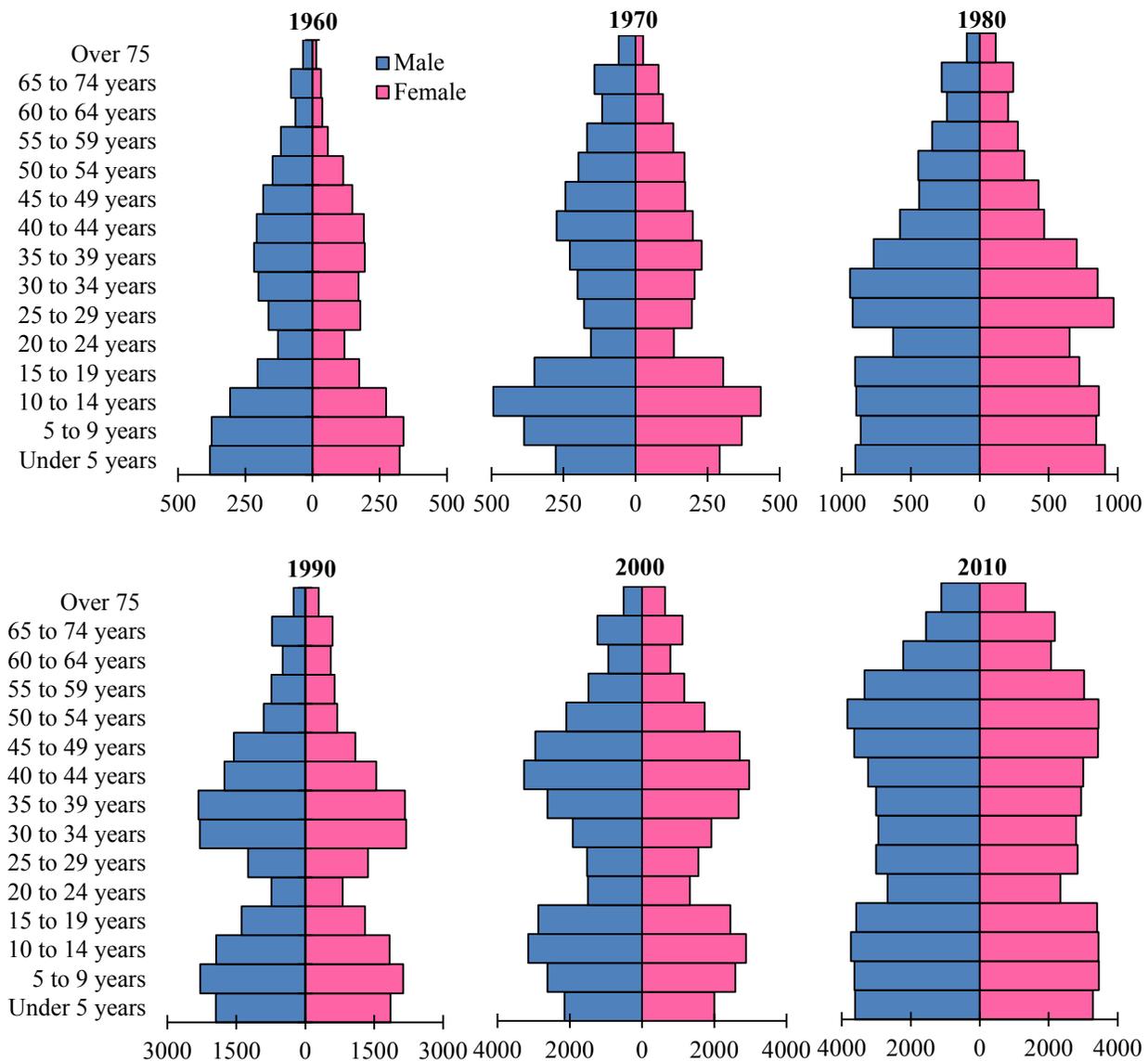
Source: U.S. Census

The MSB population pyramid for each decade back to 1970 shows a pattern of rapid growth. From 1960 to 1970 there was negligible change in the population. This changed with 1980 and 1990 seeing a phenomenal growth increase with population doubling each decade. Between 1990 and 2000 the growth pattern slowed down significantly that the population is on track to double in size every 20 years instead of each decade.

Population growth has not been determined by local births. Instead the population has been bolstered by working age adults with children migrating into the MSB. Migration to the MSB by different population groups has occurred periodically directly related to statehood, the oil market, Slavic immigration, Anchorage flight, and continual economic growth.

Today's population is fairly symmetrical in distribution of the sexes and closely approximates Alaska's pyramid pattern (see Figure 7). There is a tapering off into senior years, which may be assumed as a combination of leaving for retirement and a low death rate. After the age of 70 women become a larger percentage of seniors due to their tendency to outlive males.

Figure 7: MSB and Alaska 2012 Population Pyramid Comparison

Age	MSB Male	MSB Female	Generation	Alaska Male	Alaska Female
85 & Over	152	308	Silent Generation 1925-1942	1,523	2,898
80 to 84	314	447		2,704	3,682
75 to 79	660	601		4,385	4,731
70 to 74	1,016	1,012		7,445	7,299
65 to 69	1,447	1,224	Baby Boomers 1943-1962	11,220	9,885
60 to 64	2,316	2,132		18,563	16,653
55 to 59	3,362	2,991		27,221	23,956
50 to 54	3,768	3,496		29,057	26,934
45 to 49	3,645	3,395		27,606	25,683
40 to 44	2,999	3,015	Gen X 1963-1982	25,801	23,003
35 to 39	3,238	2,928		22,650	22,109
30 to 34	2,908	2,866		24,771	22,956
25 to 29	3,053	2,784		28,740	26,068
20 to 24	2,701	2,461	Millennial 1983-2002	30,914	25,588
15 to 19	3,621	3,383		27,542	24,707
10 to 14	4,153	3,647		26,565	24,637
5 to 9	3,225	3,244	Gen Z 2003-Present	25,610	24,532
Under 5	3,594	3,213		27,900	25,691

■ Male ■ Female

Source: U.S. Census 2012 American Community Survey 5-year Estimate

Baby Boomers, who drove the housing market to its current levels, while determining land use policy, are nearing retirement and appear to be migrating out of the MSB. Their legacy will be left to be dealt with by Generation X who are maturing into late adulthood and

Millennials who are entering early to mid-adult life. Both of the younger generations have had to deal with economic stagnation and are not as financially secure as the Boomers (Harvard University 2013). In particular, Millennials are not able to afford, nor do they particularly care for, the suburban lifestyle favored by previous generations, and instead share the desire of active Boomers for a small town walkable lifestyle (American Planning Association 2014).

Table 5: MSB Population by Generation

Silent Generation (70yrs or older)	Baby Boomers (50-69yrs)	Gen X (30-49yrs)	Millennial (10-29yrs)	Gen Z (9yrs or younger)
4,510 (5%)	20,736 (23.2%)	24,994 (27.9%)	25,803 (28.8%)	13,276 (14.8%)

Source: U.S. Census 2012 American Community Survey 5-year Estimate

D. Future Population

The current population appears to be in a stable growth pattern with more people living into old age. The retirement plans of Baby Boomers, as to whether they will stay in place or go elsewhere, are an unknown. The numbers of retirees that intend to relocate to Alaska are also an unknown. Research into the subject of Baby Boomer retirement lends credence that most are unlikely to move, as they would prefer to stay within the communities in their elder years, and if they do move are likely to be able to sell their homes within Alaska to younger buyers (American Planning Association 2014, Pendall et al 2012, Burbank et al 2013). The political, economic, and physical landscape this generation leaves behind will have lasting ramifications necessitating solutions within their communities by the future population. So how large will the future population of the MSB grow to be?

1. Understanding a Future Trend Analysis

To realize the potential range of growth which may occur within twenty years requires linear, polynomial, and exponential statistical analysis. A reliable dataset with regular intervals, such as the U.S. Census, will allow for such analysis. More data point intervals provide closer accuracy of the probabilities. Determining which probability is most likely accurate requires an assessment of two factors:

A. An R-squared confidence value above 90%, meaning that there is a high likelihood it may occur in the future; though, a value closer to equaling 100% is most likely correct.

B. A trend line projection that most closely approximates the past trend line is most likely to be correct.

Therefore, the trend line that meets those two factors can safely be assumed to be an accurate projection into the future.

$f_{(x)}=50x$ Linear Growth
$f_{(x)}=x^3$ Polynomial Growth
$f_{(x)}=2^x$ Exponential Growth

The adjacent illustration demonstrates the three ranges of potential future population growth. Growth rates of each type will be labeled and colored as follows for ease of interpretation:

- Exponential growth (green) = Fast growth
- Polynomial growth (blue) = Moderate growth
- Linear growth (red) = Slow growth
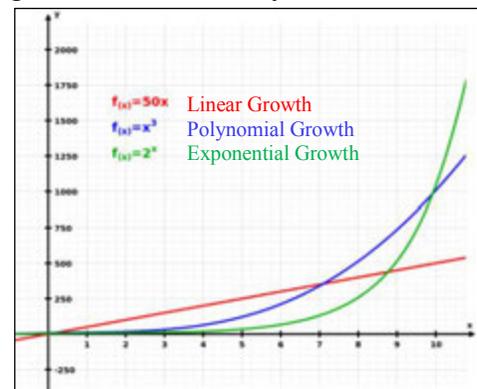
Figure 8: Trend Analysis Example

Analysis of the datasets were undertaken using Microsoft Excel 2007 exponential, polynomial (2nd level unless noted), and linear trendline functions. A future trend analysis will be provided if there are at least three decades of data, though preferably five, as more datasets provide more precision of results. Values given for projections will be rounded to the closest whole value.

Prior to the 1964 MSB incorporation the Census only collected basic information. In 1960 the MSB was listed as the Palmer-Wasilla-Talkeetna elections district with basic population information. From 1970 to the present, MSB socioeconomic data was collected each decade with delineation of data becoming greater as time progressed, which allows for more depth of analysis.

This assessment is a quantitative socioeconomic analysis of the MSB population and housing stock to assess whether the populace is able to afford to live here. It is baseline analysis of past performance and extends that trend into the future to project possible outcomes. If all things remain the same for the baseline then that forecast may be true.

2. MSB Population Projection

The population has been and may continue to grow moderately according to the analysis. To assist in better understanding how to read the trend analyses undertaken, which are shown as graphs, the following is a walk-through of the MSB population projection:

- Slow growth (linear) bisects the population line underestimating the current population and has a low confidence value. It's highly unlikely to occur, but could, if something drastic took place like a statewide recession.
- Fast growth (exponential) has a trend that approximates the past dataset, though bisects the population line underestimating the past while overestimating the present, and yet has high confidence value. It may happen, but is unlikely, as it is unrealistic growth that would require an extreme influx of new residents or births.
- Moderate growth (polynomial) appears to be a better approximation of past growth, is on target with the present, and has the highest confidence value closest to 100%. This is most likely to occur in the future if there are no major future events that happen to slow down or accelerate growth.

Doubling of the population occurred between the decades of 1970 to 1980 and 1980 to 1990. This growth pattern has slowed to the population doubling roughly every 20 years. If this is likely to continue, it is safe to assume that the future MSB population may be approximately 125,000 by 2020 and 165,000 by 2030, when taken in consideration of other projections (see Table 6).

Figure 9: MSB Population Projection

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Population	5188	6,509	17,816	39,683	59,322	88,995	125,000	165,000
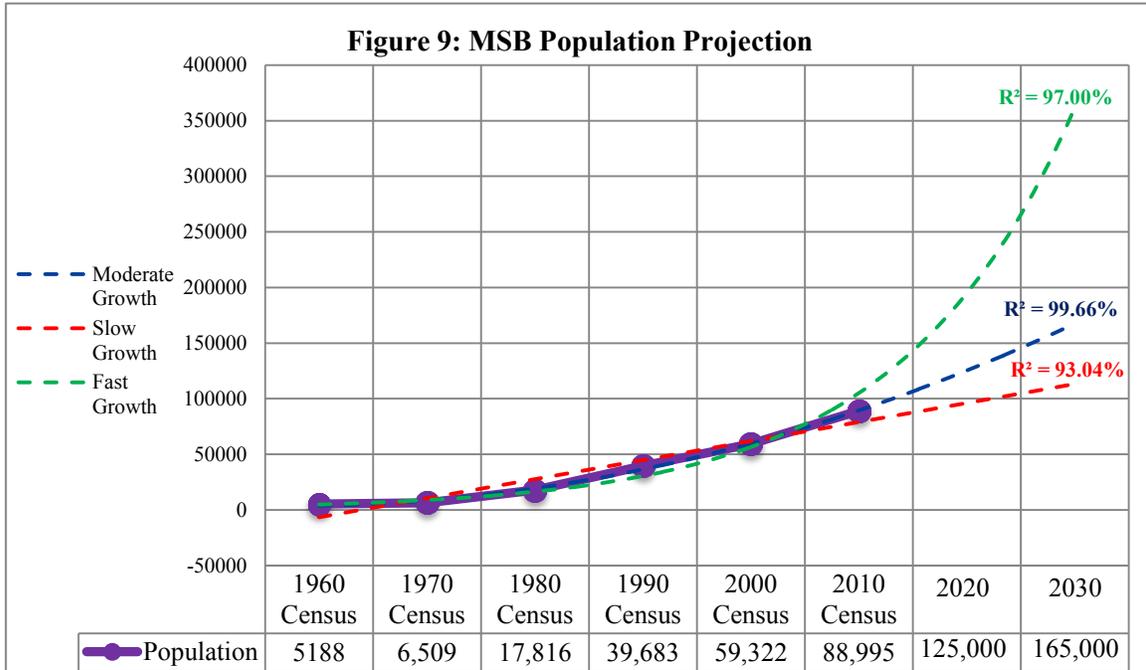
Source: U.S. Census

Table 6: MSB Population Projections from Other Organizations

	2010	2014/ 2015	2020	2025	2030	2035
Alaska Dept. of Labor (2012 Press Release)	89,721	103,070	117,222	131,764	146,328	160,693
MSB Southwest 2060 Future Study	N/A	N/A	120,300	N/A	162,618	N/A
Knik Arm Crossing Forecast w/o Bridge (ISER 2005)	92,100	119,000	136,900	161,900	187,500	N/A
Knik Arm Crossing Forecast w/Bridge (ISER 2005)	96,000	120,000	144,800	174,000	204,400	N/A
Knik Arm Crossing Forecast w/Bridge (ISER 2009)	N/A	95,400	117,200	153,600	169,000	170,800
ISER 2014 Land Use Scenarios (Base)	N/A	97,591	109,903	N/A	133,971	N/A
Cardo/Agnew::Beck 2014 Forecast w/o Bridge	N/A	99,212	116,670	137,178	161,372	196,873
Cardno/Agnew::Beck 2014 Forecast w/Bridge	N/A	99,212	118,518	143,183	168,627	186,754

Source: AK Dept. Labor, Cardno/Agnew::Beck, ISER, MSB, and HDR Alaska

E. Children

Planning is about taking into account potential outcomes with current desires and deciding which policies would best bring about the preferred result. When thinking about the future, planning for the needs of younger generations should seriously be considered, since most do not currently exist, but will by the time capital projects are required. Current desires are important but come at a cost in the future if needs are not anticipated (Colt 2014).

Table 7: MSB Child Population Change by Decade

	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Under 5	707	569	-19.52%	1,811	218.28%	3,805	110.10%	4,147	8.99%	6,900	66.39%
5 to 9	714	756	5.88%	1,707	125.79%	4,420	158.93%	5,202	17.69%	7,082	36.14%
10 to 14	581	928	59.72%	1,758	89.44%	3,780	115.02%	6,034	59.63%	7,189	19.14%
15 to 19	378	656	73.54%	1,626	147.87%	2,689	65.38%	5,317	97.73%	6,985	31.37%
Under 18	2,287	2,747	20.11%	6,418	133.64%	13,771	114.57%	19,110	38.77%	25,719	34.58%

Source: U.S. Census

The population of the MSB consists of a "parents plus children" structure (Colt 2014). This means that the growth of the population hasn't been due to local births and instead is from working adults who bring their children to the MSB for a variety of economic reasons. Each new household in the MSB may bring about positive fiscal impacts by increasing the tax base. Yet, these same households may also bring about negative fiscal impacts due to schooling costs, transportation expenses related to sprawl, and lack of planning that anticipates infrastructure needs that could efficiently increase population and density (Colt 2014).

Unplanned growth within the MSB has created a situation where the borough is backfilling the educational needs of today's children. According to MSB Manager John Moosey,

> "MatSu Schools-the second largest district with 18,000 students-took in 300 more students than expected. Home sales are up 18 percent, and we here at the Borough are running to catch up like a polar bear chasing dinner. Newly built are Valley Pathways School and the Day School, the start of $214 million in school bond projects. Redington Jr/Sr High School off Knik Goose Bay Road is going up. We are prepping for construction of Iditarod Elementary, Dena'ina Elementary, and the expansion of Mat-Su Career & Tech is nearly complete (MSB 2014)."

Had the number of potential children been anticipated, schools could have been built earlier to reduce the likelihood of overcrowding, and development stimulated in advantageous locations. With this is mind, the MSB will continue to grow, and will have more children to

provide educational services. How many children could be planned for with the projected population increase by 2020 and 2030?

Figure 10: MSB Child Population Projection

R² = 96.34%
R² = 98.85%
R² = 95.17%

Legend:
- Slow Growth (red dashed)
- Moderate Growth (blue dashed)
- Fast Growth (green dashed)

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Under 18	2,287	2,747	6,418	13,771	19,110	25,719	35,000	45,000
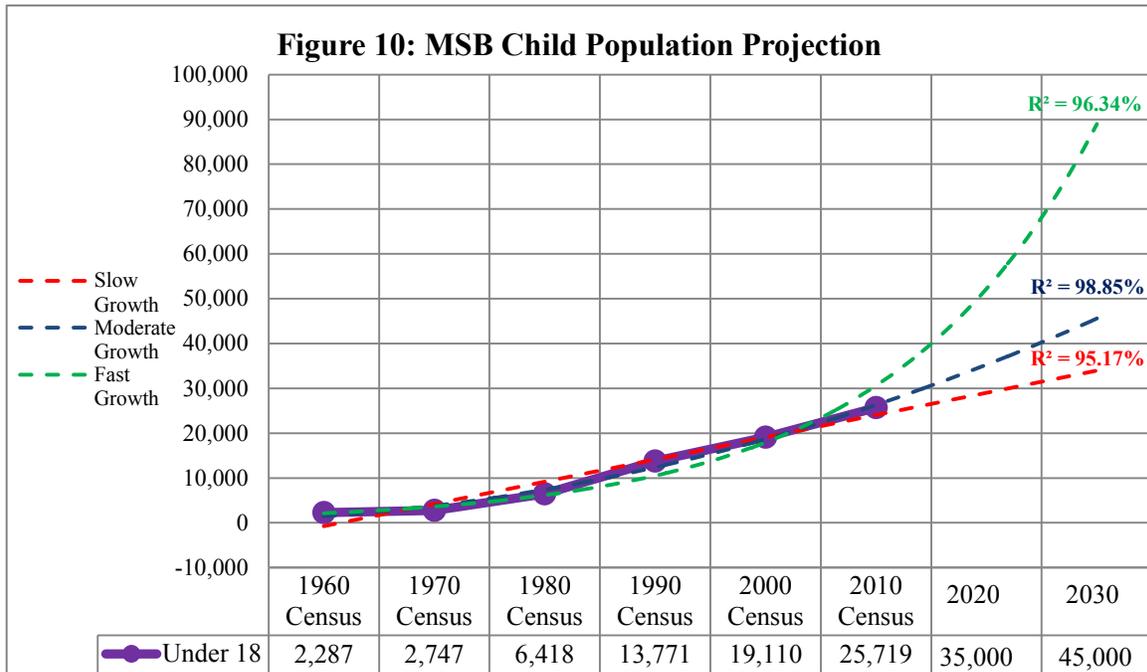
Source: U.S. Census

The analysis shows that the population of children will maintain to be 28% of the population in the upcoming decades. If the past is a good indicator of the future, then it is safe to assume that most of these children will move into the MSB with their parents for economic reasons. What this means is that the MSB should anticipate the housing and educational needs of approximately 35,000 children by 2020 and 45,000 children by 2030.

Figure 11: MSB Child Population Projection by Age Class

R² = 98.99%
R² = 97.90%
R² = 96.43%
R² = 96.37%

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Under 5 years	707	569	1,811	3,805	4,147	6,900	9,200	12,000
5 to 9 years	714	756	1,707	4,420	5,202	7,082	9,600	12,000
10 to 14 years	581	928	1,758	3,780	6,034	7,189	10,000	12,800
15 to 19 years	378	656	1,626	2,689	5,317	6,985	10,000	13,200

Source: U.S. Census

Further breakdown of children by age classification reveals the approximate number to expect for educational purposes. In the past and present the distribution of children by age class is fairly even and appears it may remain so in the future. By 2020 there may be 29,600 school aged children with an equal distribution of 9,800 on average in elementary, middle, and high schools. The following decade there may be 38,000 school age children with a distribution of 12,600 on average in each level of primary schooling. This means that beyond today's educational needs there may be an additional 10,000 students in five years and 20,000 students in fifteen years if growth continues as it has in the past.

F. Seniors

Seniors are a group that have different housing needs and tend to live on a smaller limited budget after retirement. This issue is particularly relevant being that a generational cohort, Baby Boomers, are approaching retirement in what has been described as the "Silver Tsunami". Compounded with the 2008 Recession that affected the retirement plans of this generation the demand for more affordable housing options may become greater.

Determining how much growth to expect in the senior population will be crucial. Especially if the past is any indicator of the future as the senior population has essentially doubled every decade. This doubling could be considered exponential growth. Therefore, determining precisely how many seniors will be in the MSB by 2020 or 2030 is not limited to a polynomial moderate growth pattern.

Table 8: MSB Senior Population Change by Decade

	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
65 years and over	161	308	91.30%	730	137.01%	1,860	154.79%	3,500	88.17%	7,069	101.97%
Male	115	201	74.78%	371	84.58%	977	163.34%	1,747	78.81%	3,566	104.12%
Female	46	107	132.61%	359	235.51%	883	145.96%	1,753	98.53%	3,503	99.83%
65 to 74 years	112	223	99.11%	519	132.74%	1,314	153.18%	2,351	78.92%	4,625	96.72%
75 years and over	49	85	73.47%	211	148.24%	546	158.77%	951	74.18%	2,444	156.99%

Source: U.S. Census

The State of Alaska has tracked the net migration of seniors over 65 years of age using Permanent Fund Dividend data. The data has shown that the rate for senior in-migration is 3% compared to 4% for out-migration and that during retirement they tend to leave rural areas in favor of an urban lifestyle (Governor of Alaska 2012). Nationwide net senior migration is 3% which means Alaska experiences more seniors leaving to retire than the national average.

Figure 12: MSB Senior Population Projection

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Moderate Growth								
Slow Growth								
Fast Growth								
R² = 99.65%								
R² = 98.92%								
R² = 82.66%								
65 years and over	161	308	730	1,860	3,500	7,069	10.5-16K	15-35K
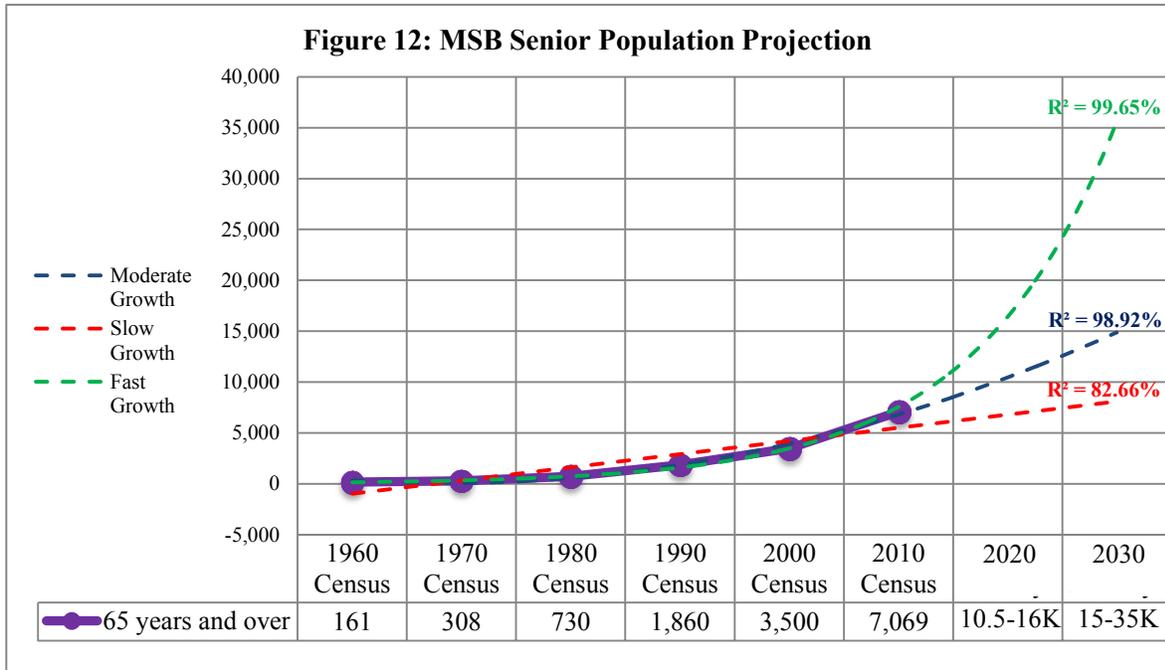
Source: U.S. Census

The analysis of MSB senior population data is interesting. Unlike the other analysis where the moderate growth (polynomial) trend line is a best fit, that is not the case with the senior data, as the fast growth (exponential) trend line also fits. The confidence rate, although close, is in favor of fast growth. A breakdown by age class produces nearly the same results.

Figure 13: MSB Senior Population by Age Class Projection

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Moderate Growth								
Fast Growth								
R² = 99.56%								
R² = 99.44%								
R² = 99.06%								
R² = 96.33%								
65 to 74 years	112	223	519	1,314	2,351	4,625	7-10.5K	9.5-22.5K
75 years and over	49	85	211	546	951	2,444	3.5-5K	5-12.5K
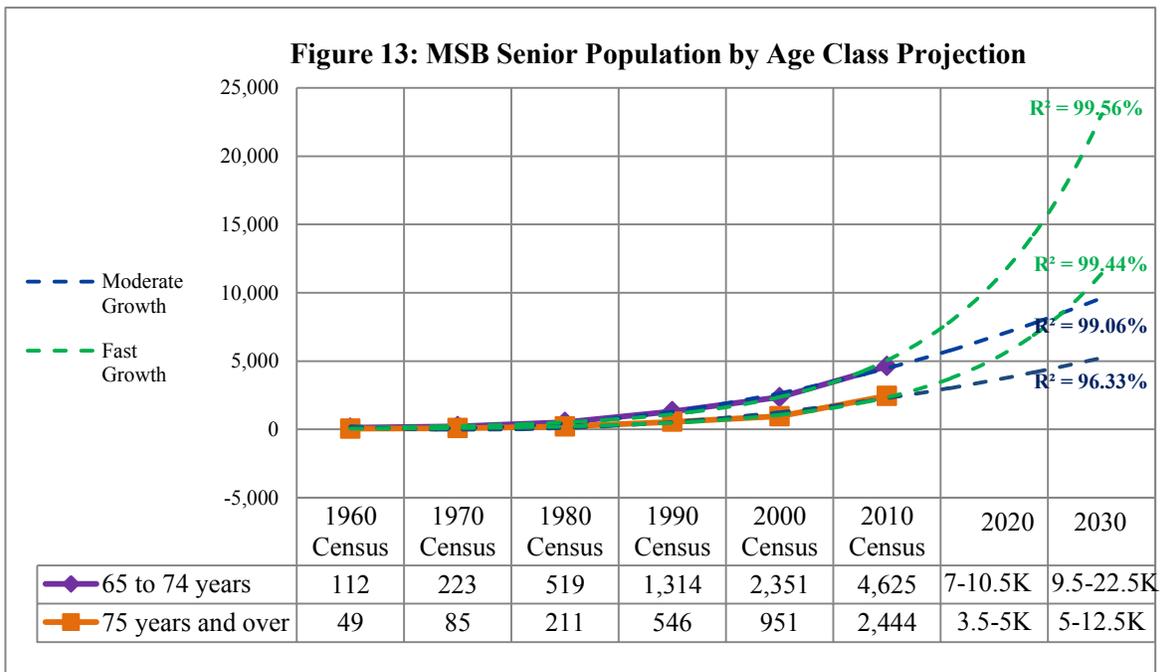
Source: U.S. Census

Unless seniors flock to the MSB en masse for retirement, it may be safe to assume that the growth of seniors may be somewhere in between the fast and moderate growth projections. The State projects that there may be slightly over 22,000 seniors within the MSB by 2032 (Governor of Alaska 2014C). Regardless, the number of seniors in the MSB will be greater than past decades, with the population somewhere within the range of 10,500 to 16,000 by 2020, and 15,000 to 35,000 by 2030. Determining a target for the future senior population is in essence speculative, compared with other segments of the population. The number of seniors should be monitored over time for unanticipated demographic change and possibly surveyed to better understand local retirement plans.

G. Single Mothers with Children

Single mothers with children are particularly vulnerable to poverty and require affordable housing due to less financial resources. Fortunately the MSB has a high marriage rate of 57.6% and overall a low birth rate of 15.2 births per 1,000 people. Unfortunately, the MSB has an extremely high rate for women between the ages of 18-19, who have 85.4 births per 1,000 people, and are at risk of becoming single mothers. For comparison, the country of Niger in Africa has the highest birth rate in the world at 51.26 births per 1,000 people. Therefore it is safe to assume that the single mothers will more than likely be composed of mostly young women.

Figure 14: MSB Single Mothers with Children Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
With own children under 18 years	85	305	913	1,409	1,783	2,300	2,900
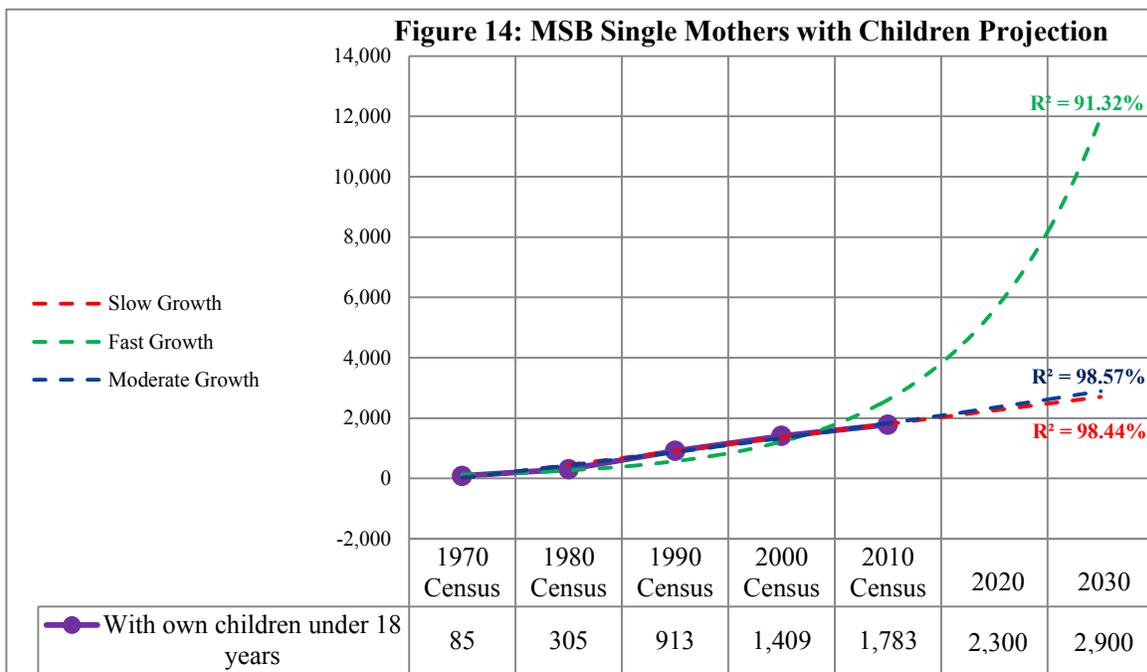
Source: U.S. Census

Growth within this cohort may occur gradually. Both the polynomial and linear forecast follow the same trendline with a similar confidence value. This can be assumed to be a correct population projection.

H. Population Growth Conclusion

In conclusion, the analysis shows that the MSB population will more than likely experience polynomial growth that roughly doubles in size every other decade. There is the question of the growing senior population as the Baby Boomer generation enters retirement. Therefore, the MSB may potentially face two differing population futures depending on the influx and outflow of retiring seniors.

Table 9: MSB Population Projection Scenarios

	Moderate Population Growth		Moderate Population Growth with Fast Growth of Seniors	
	2020	2030	2020	2030
Children	35,000	45,000	35,000	45,000
Adults	80,000	105,000	80,000	105,000
Seniors	10,000	15,000	16,000	36,000
Total	125,000	165,000	131,000	186,000

The MSB is on track for moderate population growth. That is, if all conditions remain the same. Seniors that retire in place, leave, or migrate into the area may drastically change the population forecast.

Chapter 4: Household Characteristics

A. Households and Rate of Growth

A household is a family that lives within a single residential unit and is directly correlated with the population. Over the last five decades households have significantly grown within the MSB. During this time the average household size has also steadily declined as families get smaller. This means that over time there have been less people living within a home.

Table 10: MSB Household Change by Decade

	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Population	5,188	6,509	25.46%	17,816	173.71%	39,683	122.74%	59,322	49.49%	88,995	50.02%
Group Quarters	121	255	110.74%	378	48.24%	528	39.68%	985	86.55%	1,370	39.09%
Adjusted Population	5,067	6,254	23.43%	17,438	178.83%	39,155	124.54%	58,337	48.99%	87,625	50.20%
Average Household Size	3.38	3.4	0.59%	3.06	-10.00%	2.9	-5.23%	2.84	-2.07%	2.75	-3.17%
Total Households	1,499	1,839	22.70%	5,699	209.81%	13,502	136.93%	20,541	52.14%	31,864	55.12%

Total Households = (Population – Group Quarters)/Average Household Size
Source: U.S. Census

Much like population growth, the projected number of households within the MSB seems to follow a moderate growth pattern. Increased number of households will bring about the need for more housing units in the future. A decline in household size means there will be a need for more housing units for smaller households.

Figure 15: MSB Households Projection

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Total Households	1,499	1,839	5,699	13,502	20,541	31,864	44,000	62,000

R² = 96.61%
R² = 99.69%
R² = 92.14%
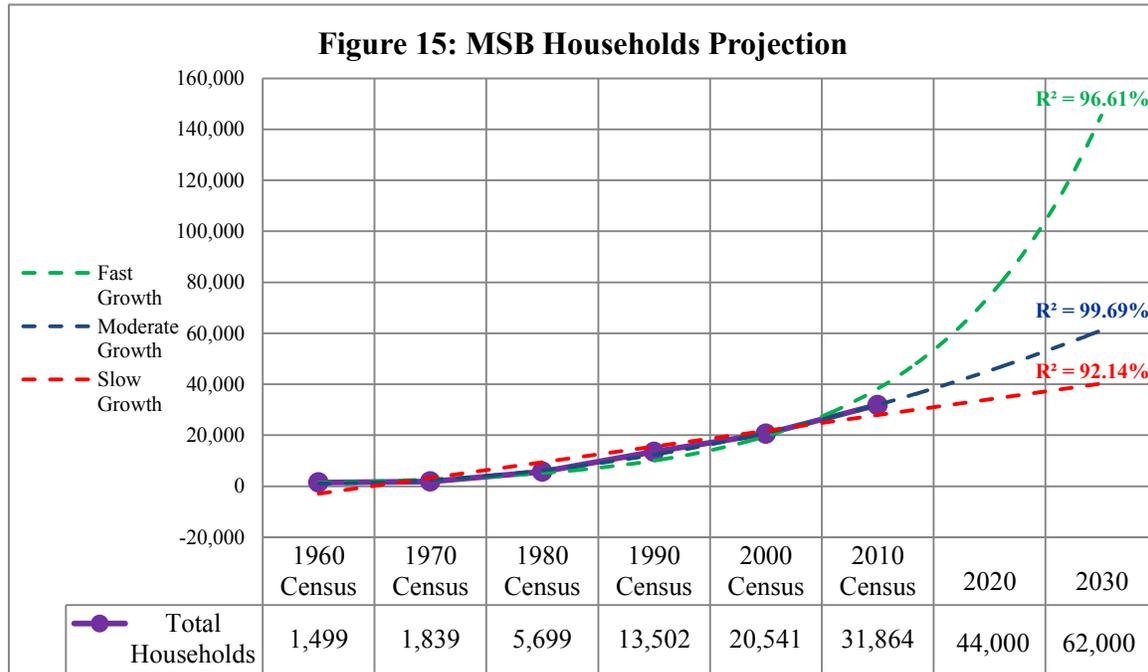
Source: U.S. Census

Should the average size of households continue to become smaller, as has occurred and is projected to do in the future, there will be a need to provide more housing units for the population. For instance, back at the turn of the century 100 units housed approximately 284 people. Ten years later, those same units were housing nine less people, and would require three additional units to account for the decline in household size. By 2020 those same 100 units may provide housing to 265 people and ten years later 255 people.

Figure 16: MSB Household Size Projection

$R^2 = 92.69\%$
$R^2 = 92.68\%$
$R^2 = 91.69\%$

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Ave. Household Size	3.38	3.4	3.06	2.9	2.84	2.75	2.65	2.55
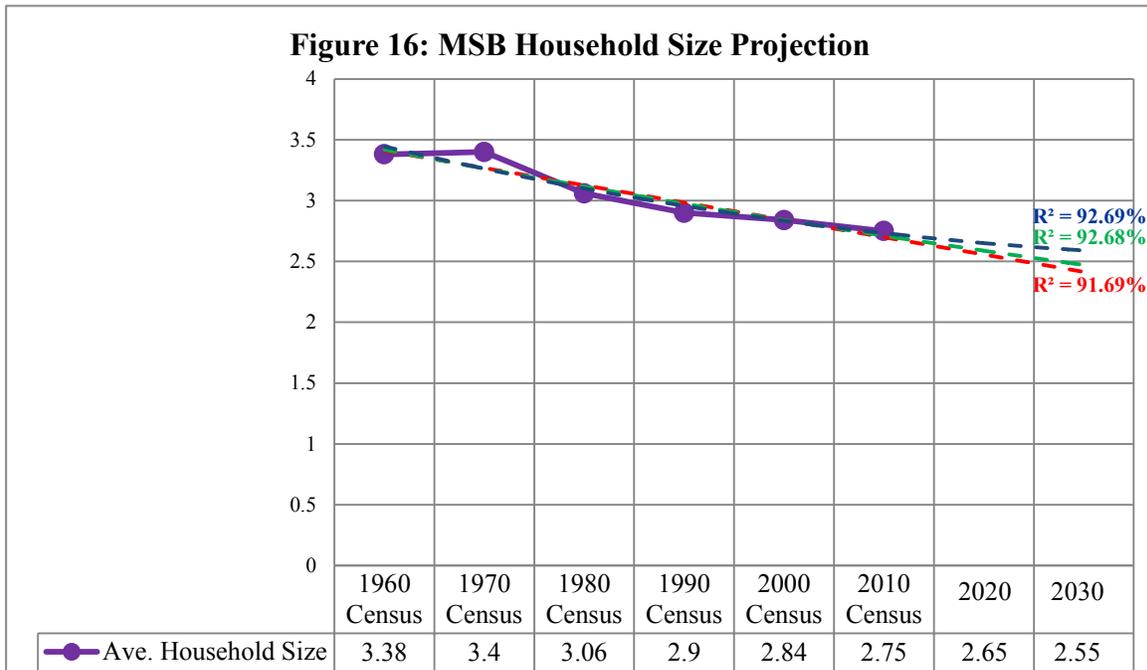
Source: U.S. Census

Therefore, in a 30 year time span population density in those 100 units may become 10% less than what it had been. To adjust for household size decline will require planning for additional housing beyond the traditional three to four family household. In other words, by 2030 for every 100 units built, an additional 11 units would be required to be built more than would be needed in the present, just to house the same number of people.

B. Household Sizes

From 1960 to 1990 the MSB had phenomenal growth in the population from increases in family households. By the 2000 Census this trend changed drastically and continued into the 2010 Census. It appears that the trend in the MSB is towards smaller households.

Figure 17: MSB 2010 Household Sizes

3 Persons 16.46%
4 Persons 13.96%
5 Persons 7.53%
6 Persons 3.49%
2 Persons 33.49%
7 or more persons 2.73%
1 Person 22.33%

Source: U.S. Census
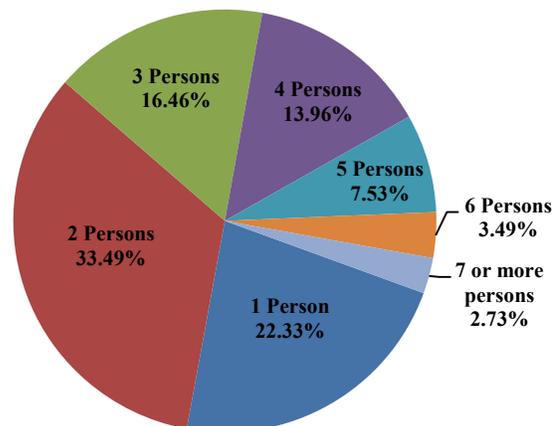
Table 11: MSB Household Size Change by Decade

	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Households	1,499	1,841	22.82%	5,699	209.56%	13,501	136.90%	20,541	52.14%	31,864	55.12%
1 Person	-	316	-	917	190.19%	2,539	176.88%	4,183	64.75%	7,106	69.88%
2 Persons	-	476	-	1,573	230.46%	3,888	147.17%	6,486	66.82%	10,659	64.34%
3 Persons	-	260	-	1,115	328.85%	2,365	112.11%	3,479	47.10%	5,238	50.56%
4 Persons	-	240	-	1,104	360.00%	2,515	127.81%	3,463	37.69%	4,444	28.33%
5 Persons	-	237	-	574	142.19%	1,287	124.22%	1,710	32.87%	2,396	40.12%
6 Persons	-	162	-	258	59.26%	514	99.22%	715	39.11%	1,112	55.52%
7 or more persons	-	138	-	170	23.19%	286	68.24%	520	81.82%	869	67.12%

Source: U.S. Census

A moderate growth analysis of the dataset projects the smaller household size trend to continue. Large households of five or more persons have grown slowly which currently represent 14% of households by 2030 may drop to 13%. Family sized households with three or four people also grew moderately at the same rate and then three person households broke away the last decade, and is projected to continue. Currently family sized households are 30% of all MSB households, which may decrease to 28% by 2020, and to 25% by 2030.

Figure 18: MSB Household Size Moderate Growth Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
1 Person	316	917	2,539	4,183	7,106	10,500	14,500
2 Persons	476	1573	3,888	6,486	10,659	15,500	21,000
3 Persons	260	1115	2,365	3,479	5,238	7,000	8,000
4 Persons	240	1104	2,515	3,463	4,444	5,500	6,500
5 Persons	237	574	1,287	1,710	2,396	3,000	3,800
6 Persons	162	258	514	715	1,112	1,500	2,000
7 or more persons	138	170	286	520	869	1,250	1,800

$R^2 = 99.88\%$
$R^2 = 99.74\%$
$R^2 = 99.80\%$
$R^2 = 99.50\%$
$R^2 = 99.25\%$
$R^2 = 99.44\%$
$R^2 = 99.97\%$

Source: U.S. Census

Smaller households have been and continue to increase in number. These households currently represent 56% of all MSB households, which may increase to 59% by 2020, and to 62% by 2030. Therefore, single and double occupancy households may become the prevalent living situation in the MSB in the near future.

Within these smaller households, two persons living together may be the most prevalent form of household in the MSB. Currently two person households represent 33% of all MSB households and make up 22% of single family households. By 2020 two person households may be 35% and in 2030 up to 37% of all MSB households. In contrast, single person households may be 24% by 2020 and 25% by 2030 of all MSB households. Combined, single and two person households may increase to be 59% of all MSB households by 2020 and 62% by 2030.

C. Household Type and Size Comparison

Household size is becoming smaller. This may be related to a decline of large family households and an increase of single and two person households. These two household sizes are found in either family or nonfamily households.

Table 12: MSB Household Type Change by Decade

Households and Type	1960 Census	1970 Census	% Change	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Households	1,499	1,841	22.82%	5,699	209.56%	13,501	136.90%	20,541	52.14%	31,864	55.12%
Family Households	N/A	1,469	N/A	4,495	205.99%	10,301	129.17%	15,057	46.17%	22,579	49.96%
Nonfamily Households	N/A	372	N/A	1,204	223.66%	3,200	165.78%	5,499	71.84%	9,245	68.12%

Source: U.S. Census

A family is determined by the U.S. Census as a household that is a married opposite sex couple with or without children, single parents, and same sex couples if they have a related child in the household. A nonfamily is a household of a single person, same sex couples without related children, non-married cohabitants, and nonrelated persons sharing a housing unit as roommates.
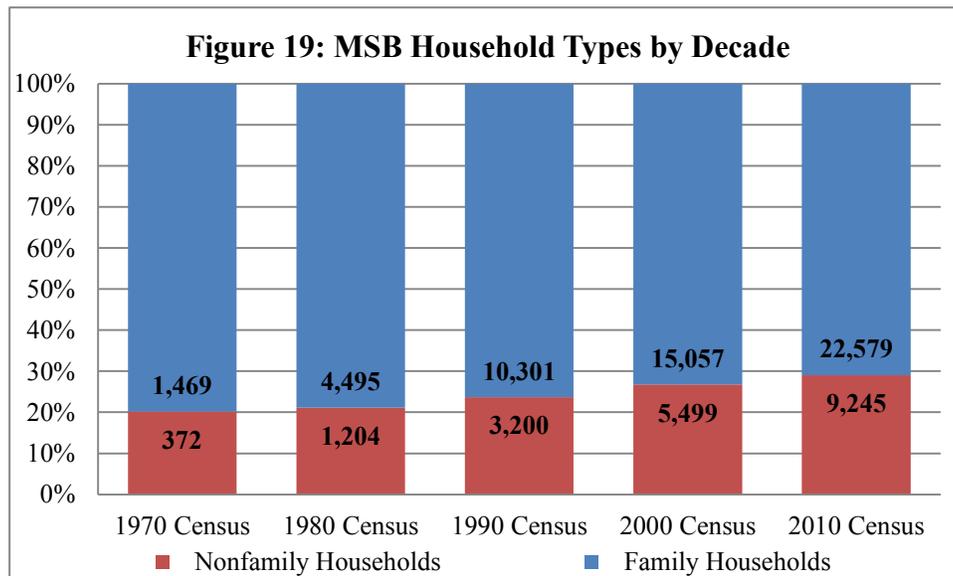
Source: U.S. Census

Over five decades the MSB population has been increasing, though the size of households has been decreasing, and there has been a shift in household type. Family households

are being supplanted by nonfamily households. Nonfamilies in 1970 were 20% of all MSB households. Today they have grown to be 29% of household types. This household type shift has contributed to a reduction in household size and may continue into the future.

Figure 20: MSB Family and Nonfamily Moderate Growth Projection

	1960 Census	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2030
Family Households	1,469	4,495	10,301	15,057	22,579	30,500	40,000
Nonfamily Households	372	1,204	3,200	5,499	9,245	13,500	19,000
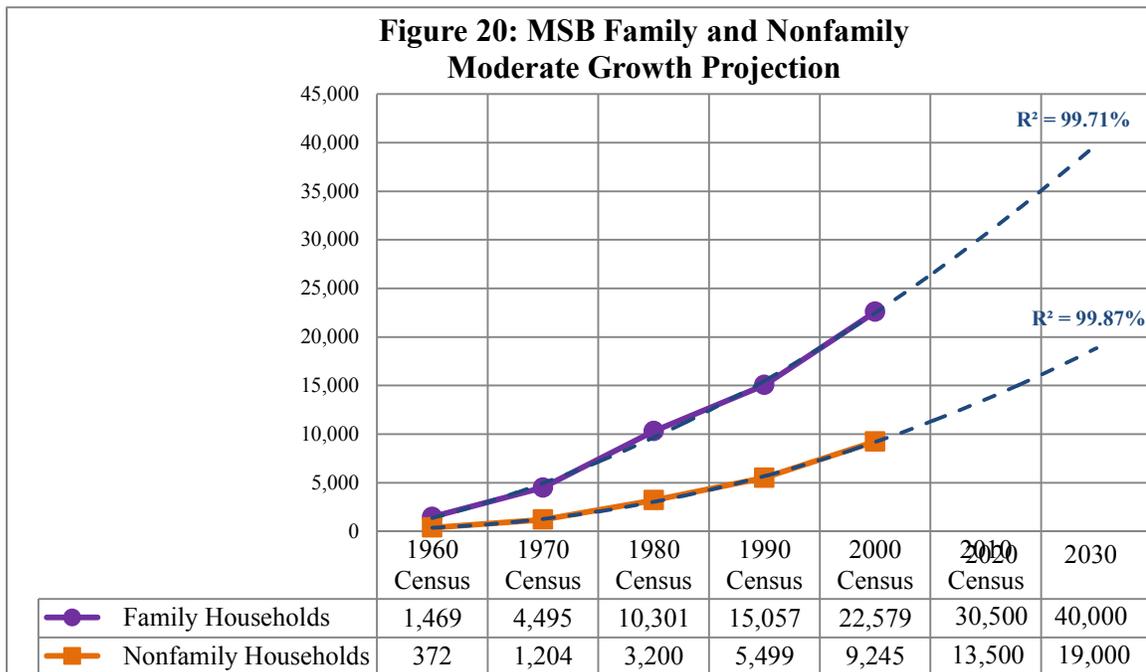
Source: U.S. Census

Having established that the MSB population is growing moderately, following a polynomial trend, this analysis was applied to family and nonfamily households. The results are that by 2020 nonfamilies may constitute up to 31% of 44,000 households and by 2030 may be 32% of 59,000 households in the MSB. (Note: The analysis of overall households provided a

Table 13: MSB 2000 and 2010 Family and Nonfamily Size Change Comparison

Household Type By Household Size	2000 Census	%	2010 Census	%	2000 to 2010 % Change
Family Households	15,057	73.30%	22,579	70.86%	49.96%
2 Persons	5,420	26.39%	8,884	27.88%	63.91%
3 Persons	3,316	16.14%	5,012	15.73%	51.15%
4 Persons	3,398	16.54%	4,363	13.69%	28.40%
5 Persons	1,697	8.26%	2,365	7.42%	39.36%
6 Persons	709	3.45%	1,102	3.46%	55.43%
7 or more persons	517	2.52%	853	2.68%	64.99%
Nonfamily Households	5,499	26.77%	9,245	29.01%	68.12%
1 Person	4,183	20.36%	7,106	22.30%	69.88%
2 Persons	1,066	5.19%	1,775	5.57%	66.51%
3 Persons	163	0.79%	226	0.71%	38.65%
4 Persons	65	0.32%	81	0.25%	24.62%
5 Persons	13	0.06%	31	0.10%	138.46%
6 Persons	6	0.03%	10	0.03%	66.67%
7 or more persons	3	0.01%	16	0.05%	433.33%

Source: U.S. Census

forecast of 62,000 at 2030. A separation in the analysis of family and nonfamily households provides a different result of 59,000 households. This may be assumed as a result of more precision at a smaller scale.)

The U.S. Census has only recently broken down household type by the number of persons living in the household which does not allow for a projection due to a limited dataset. Within the last decade both family and nonfamily households have continued to grow. Though, family growth has been moderate, whereas nonfamilies almost doubled in size.

Figure 21: MSB 2010 Family and Nonfamily Comparison
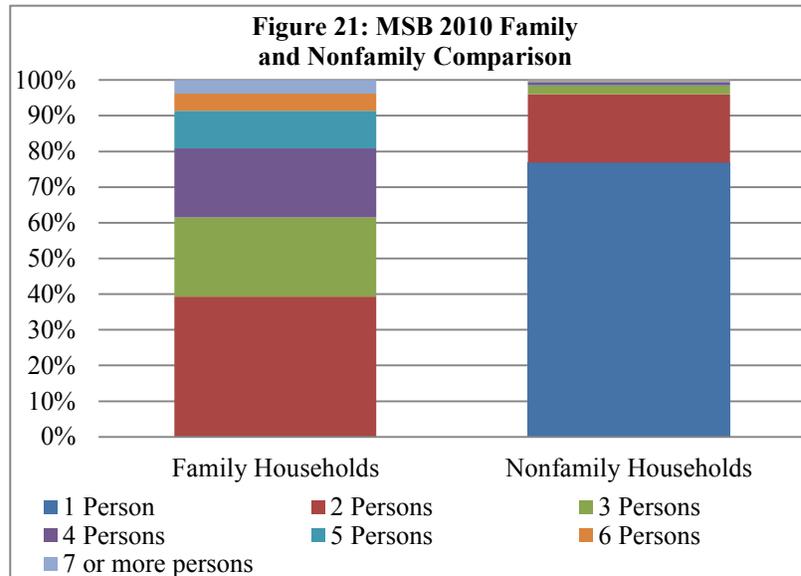
Source: U.S. Census

In the MSB there are two significantly different household types. A nonfamily is more than likely a single person household. Whereas, a family household is more than likely a married couple who may have a child. Overall 62% of all households consist of two persons and large households are a minority.

D. Family Households

Families are the dominant households within the MSB. They will probably continue to be the largest household type should the growth rate be maintained. The majority of these households are small families which are growing faster than large families.

Table 14: MSB Family Household Change by Decade

	1970 Census	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Family households	1,469	4,495	205.99%	10,301	129.17%	15,057	46.17%	22,579	33.31%
Family with own children under 18 years	936	2,922	212.18%	6,474	121.56%	8,693	34.28%	11,247	22.71%
Married couple family	1,335	3,924	193.93%	8,709	121.94%	12,109	39.04%	18,003	32.74%
Married couple with own children under 18 years	831	2,474	197.71%	5,251	112.25%	6,508	23.94%	8,336	21.93%
Male householder, no wife present	36*	208*	477.78%	551*	164.90%	1,072	94.56%	1,798	40.38%
Male single parent with own children under 18 years	N/A	N/A	N/A	N/A	N/A	785	N/A	1,128	30.41%
Female householder, no husband present	98	363	270.41%	1,041	186.78%	1,868	79.44%	2,778	32.76%
Female single parent with own children under 18 years	85	305	258.82%	875	186.89%	1,409	61.03%	1,783	20.98%

* Values not given by 1970 to 1990 Census for Male householder = Family Households - (Married Family + Female Householder)
Source: U.S. Census

Figure 22: MSB Family Households by Decade
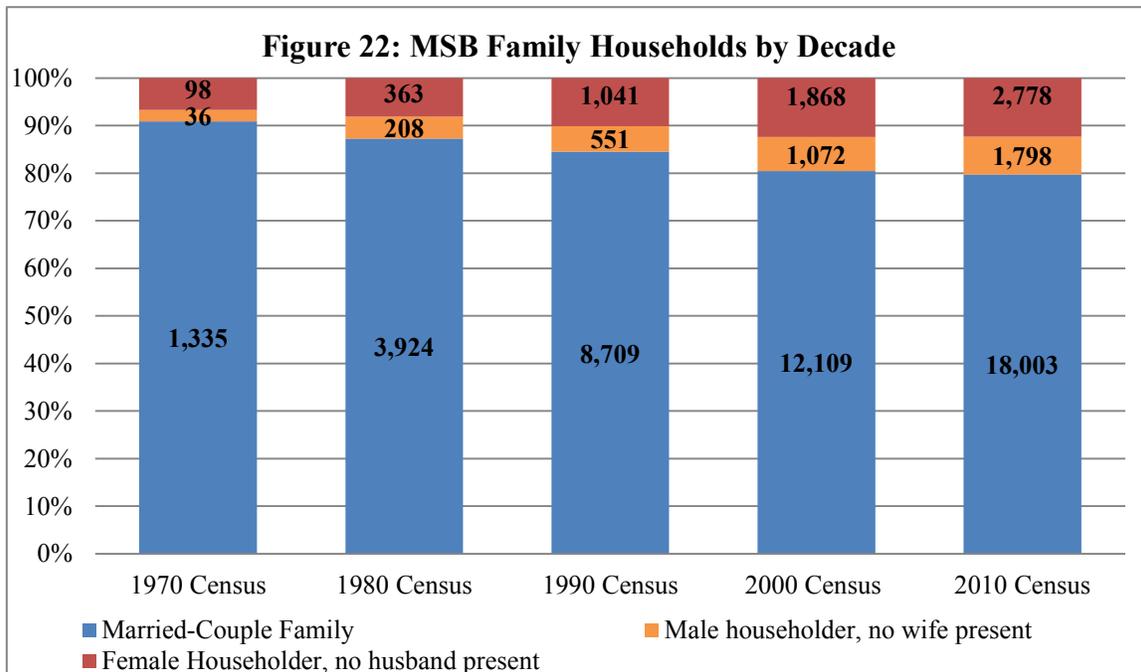
Source: U.S. Census

On average in the MSB, family households are not married couple families with children in the traditional sense. 40% of family households consist of only two persons. Seniors over the

age of 65 are 14% of family households. 20% are single parent families with children, with 12% headed by women, and 8% by men.

Figure 23: MSB Family Households in 2010

Source: U.S. Census
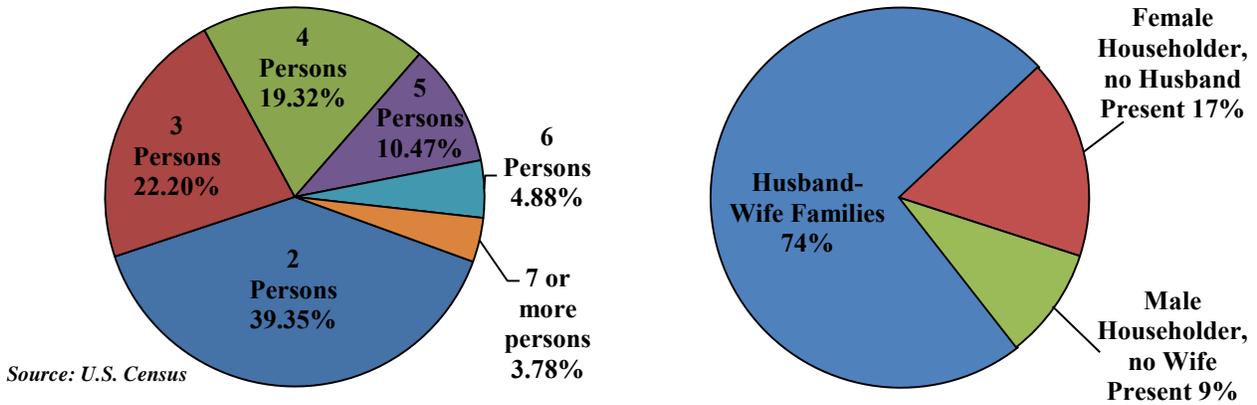
Half of all family households have children under the age of 18 years. Less than half of married couples have children, though, 74% of all children living in a household reside with this family type. 26% of children in a family household are cared for by single parent with a majority in a single mother household.

Source: U.S. Census
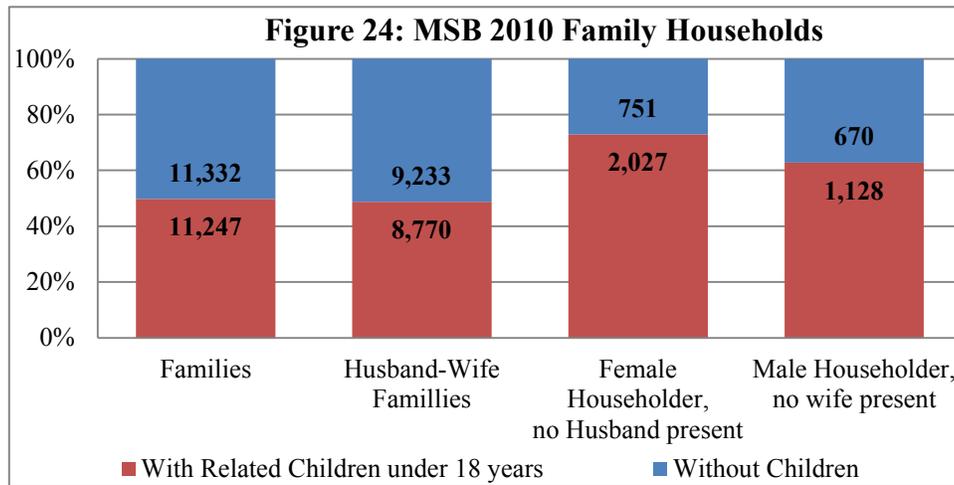
This is important to note that women generally earn less than men, which makes children living in this family type more likely to experience poverty. This does not necessarily diminish the fact that single fathers raising children may also experience poverty, as any single parent household with children may be at risk. However, a woman in Alaska earns on average 67% of the income that a man brings home (Governor of Alaska 2011).

Figure 25: MSB Family Households Moderate Growth Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Married-Couple Family	1,335	3,924	8,709	12,109	18,003	24,000	31,000
Married Couple With Own Children Under 18 Years	831	2,474	5,251	6,508	8,336	10,000	11,000
Female Householder, no husband present	98	1,041	363	1,868	2,778	4,000	6,000
Female Single Parent With Own Children Under 18 Years	85	305	875	1,409	1,783	2,500	3,000
Male householder, no wife present	36	208	551	1,072	1,798	2,750	4,000

$R^2 = 99.54\%$
$R^2 = 99.04\%$
$R^2 = 85.14\%$
$R^2 = 99.99\%$
$R^2 = 98.69\%$

Source: U.S. Census

In the future, married couples without children may become more prevalent. If a change to societal trends does not occur, by 2020 married couples with children may account for only 42% of married households, and continue to decline to 37% by 2030. Single parent households may both see a slight 1% increase every decade. Generally speaking, by 2030 family households may consist of significantly less married couples with children.

E. Nonfamily Households

Nonfamilies are a growing demographic within the MSB and have experienced greater change than family households. This segment of the population may continue to grow and in the future represent a third of MSB households. The majority of nonfamilies may continue to be single persons living alone.

Table 15: MSB Nonfamily Household Change by Decade

	1970 Census	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Nonfamily Households	372	1,204	223.66%	3,200	165.78%	5,499	71.84%	9,245	68.12%

Source: U.S. Census

A future projection of nonfamily household types cannot be undertaken due to a lack of a consistent dataset. It can be assumed that single person nonfamilies may represent 24% of 2020 households and 25% of 2030 households based upon the overall household type analysis. Beyond that projection, determining how two or more person households may increase in this demographic cannot be determined.

Figure 26: MSB 2010 Nonfamily Household Size and Occupancy

Source: U.S. Census

Figure 27: MSB 2010 Nonfamily Household Comparison
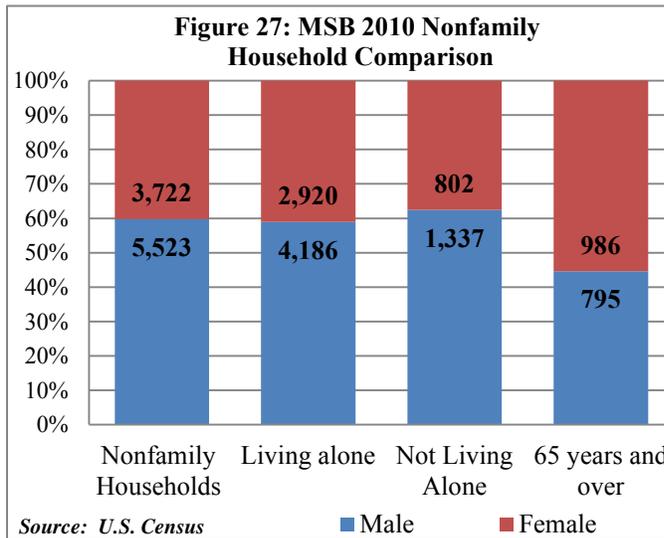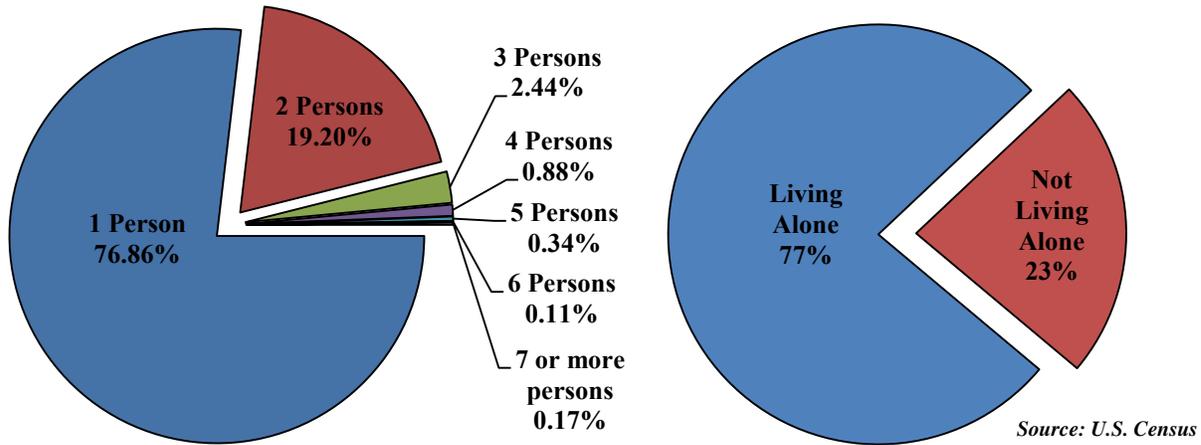
Over the course of two decades the living situation of nonfamilies has not changed much. There was some shifting around of households with four or more persons. One to three person nonfamily households have remained fairly constant.

The majority of nonfamily households are men living alone. Sharing a residence with roommates is not common. Approximately a quarter of nonfamily households are seniors, 90% live alone, and the majority are women.

F. Senior (65+) Households

The population of seniors over the age of 65 in the MSB has consistently doubled every decade in an exponential manner and extends to their households. This growth doesn't appear that it may slow down anytime soon. A whole cohort, Baby Boomers, are nearing retirement, and will be larger in number than any generation before or after them.

Table 16: MSB Family and Nonfamily Senior Household Change by Decade

	1970 Census	1980 Census	% Change	1990 Census	% Change	2000 Census	% Change	2010 Census	% Change
Senior (65+) Households	189	552	192.06%	1,160	110.14%	2,587	123.02%	5,287	104.37%
In a family household	91	392	330.77%	689	75.77%	1,627	136.14%	3,257	100.18%
In a nonfamily household	98	160	63.27%	471	194.38%	960	103.82%	2,030	111.46%
Living alone	N/A	141	N/A	438	210.64%	846	93.15%	1,781	110.52%

Source: U.S. Census

Figure 28: MSB Senior Household Types

Census	Nonfamily household	Family household
1970 Census	98	91
1980 Census	160	392
1990 Census	471	689
2000 Census	960	1,627
2010 Census	2,030	3,257

Source: U.S. Census

Figure 29: MSB Seniors Living Situation by Decade

Census	Living alone	Not living alone
1980 Census	141	411
1990 Census	438	722
2000 Census	846	1,741
2010 Census	1,781	3,506

Source: U.S. Census

Figure 30: MSB 2010 Senior Households

	Nonfamily Household	Family household
All Senior Households	1,968	2,572
Male	903	2,119
Female	1,065	453

Source: U.S. Census

Figure 31: MSB 2010 Senior Nonfamily Households

	Living Alone	Not Living Alone
All	1,781	187
Male	795	108
Female	986	79

Source: U.S. Census

Over the past few decades the household situations of seniors has stabilized with a majority living in family households. It cannot be determined how large these households are in size. Though based upon prevalent household types in the MSB it can be assumed they more than likely are a married couple household without children.

The percentage of seniors living alone has also stabilized over the last few decades. About a third of seniors live alone. The remainder lives in either nonfamily or family households with others.

In 2010 there were 5,287 households with people over the age of 65. The majority of these households, 4,540 (86%), were headed by a senior. The remaining 747 (14%) households had seniors who were not living alone nor were they heads of a household.

The majority of seniors are in family households. Males are more likely to head a family household. In contrast, a female is more likely to head a nonfamily household.

Seniors in a nonfamily household are overwhelming living alone. The rates of living alone for seniors in a nonfamily are about equal for the sexes. There are more women than men living alone which may be a result of their longer life expectancies.

Figure 32: MSB Senior Household Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Senior Households	189	552	1,160	2,587	5,287	8.5-13K	12.5-30K

R² = 99.40%
R² = 99.39%
R² = 86.87%
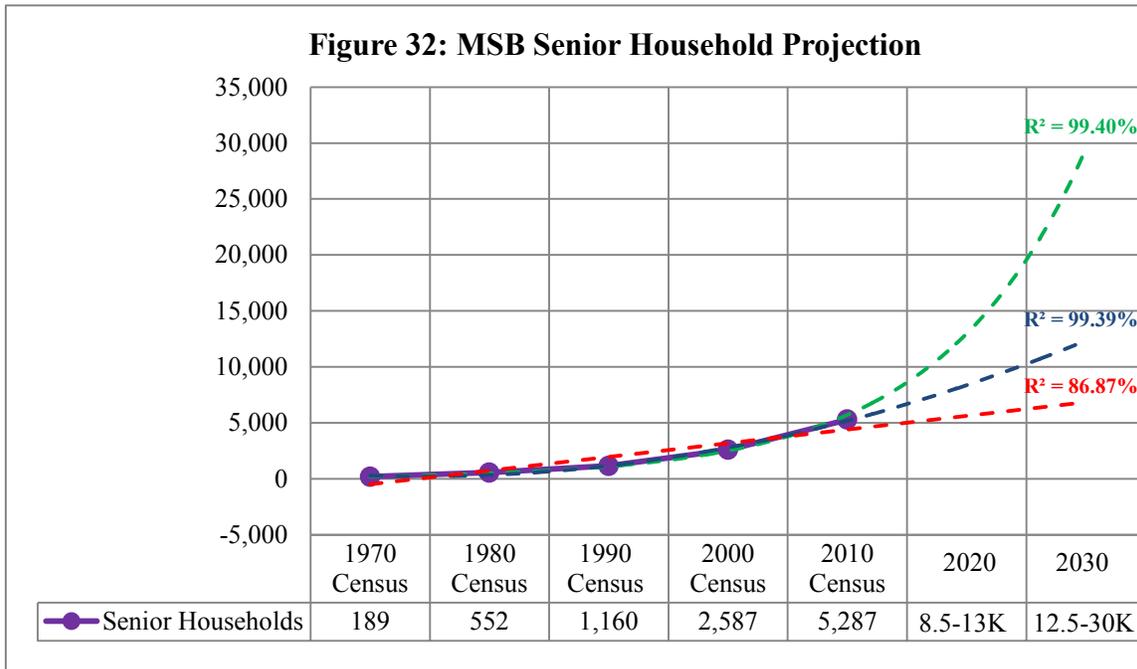
Source: U.S. Census

Determining how many senior households there may be, much like senior population growth, appears again to be speculative. These households may follow a fast or moderate growth pattern depending on their retirement plans. Further refinement of the senior household projection, interestingly enough, is slightly different in its results.

Figure 33: MSB Senior Household Types Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Family household	91	392	689	1627	3257	5-8.5K	7.5-20K
Nonfamily household	98	160	471	960	2030	3-4.5K	5-10K

R² = 97.33%
R² = 99.06%
R² = 99.18%
R² = 99.44%
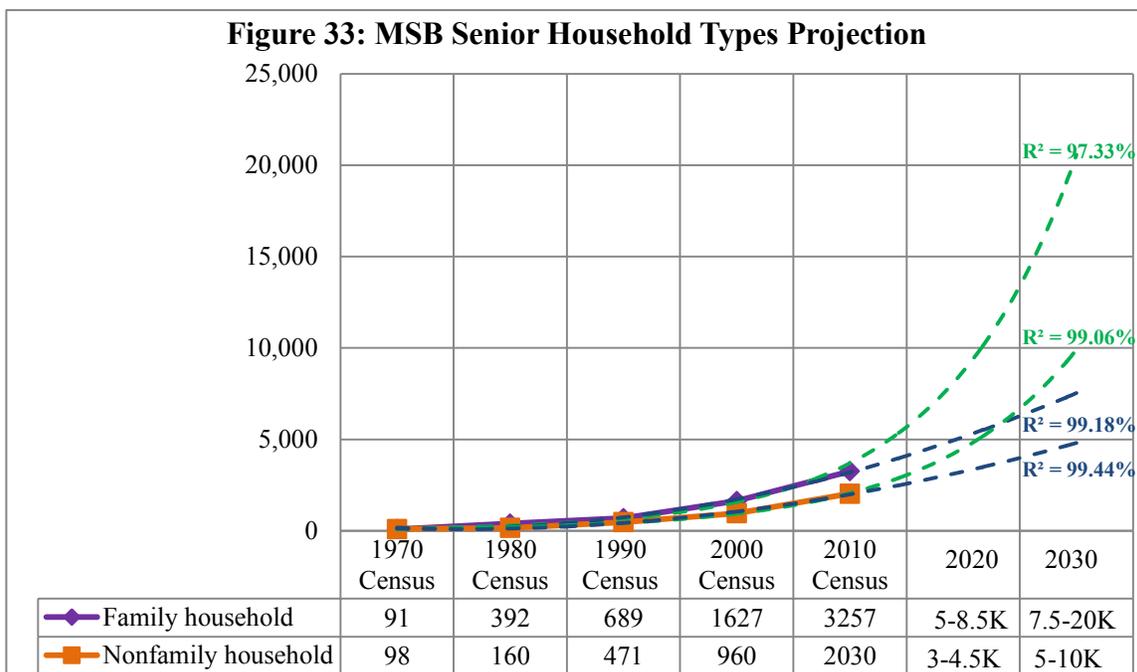
Source: U.S. Census

When senior households are separated out by household type the analysis is slightly in favor of a moderate growth rate. Both growth rate trend lines are close approximations of the past trend and have high probability values that are similar. Based upon this analysis, the moderate growth rate seems it may be a better fit when taken in account with 4% outmigration of seniors for retirement compared with the 3% gain of immigration. How Baby Boomers retire will need to be closely monitored as they may drastically affect the local housing market.

Analysis of seniors living alone provides more insight into this statistical quandary. Although the number of seniors living alone was not stated in the 1970 Census a number was assumed for analysis purposes. The running average of seniors living alone compared to those not living alone in a nonfamily household from 1980 to 2010 was 89% which was inputted to allow for a projection. In this case, a moderate growth pattern is definitely the best fit.

Figure 34: MSB Seniors Living Alone Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Living alone	87	141	438	846	1,781	2,800	4,200

$R^2 = 98.82\%$
$R^2 = 99.36\%$
$R^2 = 86.43\%$
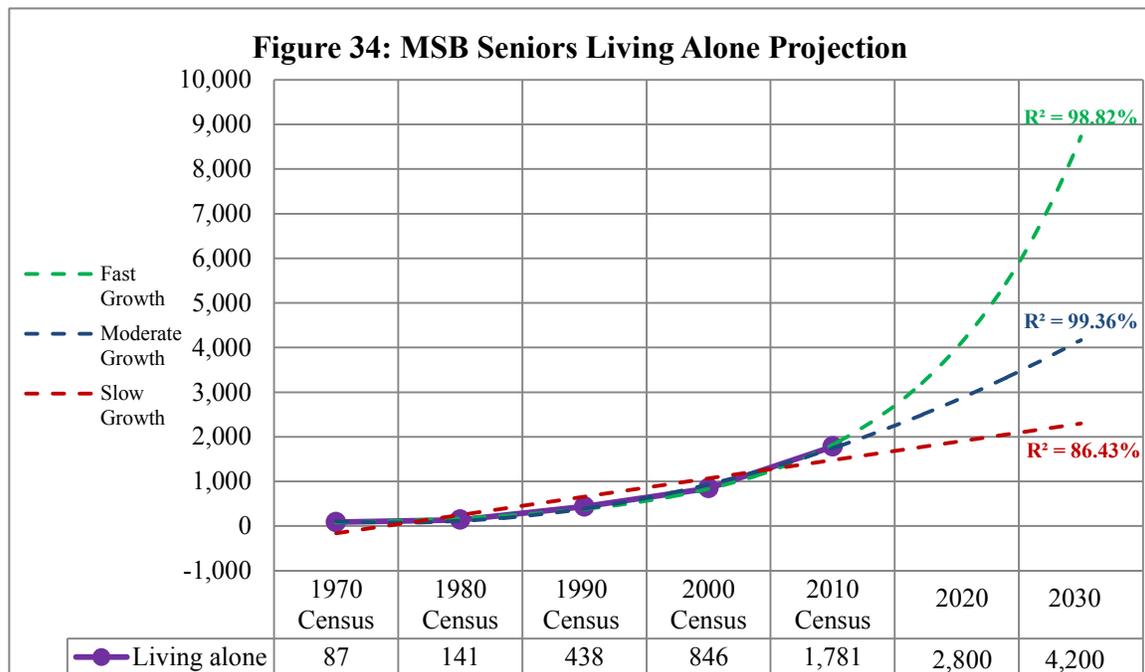
Source: U.S. Census

Based upon the analysis of seniors living alone it may be safe to assume that the potential future of senior family and nonfamily households may be closer to moderate growth. As previously discussed, the State of Alaska provided a forecast that was on the low end of the range of potentials between the fast and moderate growth trend. It may be safe to assume the senior demographic in general may grow slightly faster than moderate growth.

Any major change to the influx and departure of seniors in the near future may change the results. Determining the future plans of Baby Boomers in the MSB will be important in order to plan correctly. It may be prudent to survey with questions targeted at senior demographic topics such as whether they plan to retire in place, snowbird, downsize, or move.

G. Household Characteristics Conclusion

Although the MSB population has increased, households have become smaller, and may continue to decline in size in the future. Smaller households of one to two people are the most prevalent type in the MSB which may become more so in coming decades. Nonfamily households are also becoming a larger segment of MSB demographics. The number of future senior households is open to discussion, though, the analysis results demonstrate that their population cohort may grow slightly larger than the moderate projection.

Chapter 5: Household Income

There are two very different household types with divergent demographics in the MSB. As such, it is appropriate to separate nonfamilies from families for further analysis. The AFHC assessment guidebook suggests analyzing households in general using the average overall household size and HUD income limits for a family of four.

There are on average 1.3 persons in a nonfamily household and 3.3 persons in a family household. These numbers will be rounded down to the closest whole number for analysis. Income is also separated out by household type.

The purpose for a separation of household types is to provide a closer representation of actual MSB households. A general household analysis provides a broader result during analysis compared with the accuracy provided by separating the household cohorts. The analysis will show the results for nonfamily, family, and all households in the MSB to illustrate this difference.

The household income analysis was undertaken using US Census Data from the 2012 ACS 5 year estimate and the most recent federal income guidelines. Due to the way Census data is broken down, households within an income group based upon HUD limits was limited to the closest Census grouping. Several households were missed by placing them in a higher income bracket due to limits on income delineation. Therefore the analysis should be considered a slightly low estimate.

Another consideration when reviewing this analysis is the difference between "poverty" and "low income". Poverty is a guideline used for federal administrative purposes to determine eligibility for certain programs and is considered the lowest income amount needed to meet hardship levels of basic needs. Whereas, HUD considers any income below 80% of the median as "low income", and the further separate income levels for housing assistance programs as such:

- Median Income
- Low Income (80% of Median)
- Very Low Income (50% of Median)
- Extremely Low Income (30% of Median)

Regardless of the term, those with low income or less are economically struggling. Those in poverty are in severe need. Both are at economic risk of experiencing housing affordability issues.

The analysis shows that breaking down households by type provides dramatically different results which occur due to averaging. If all MSB households were analyzed as one type it appears that poverty and low income amongst households is fairly high. When separated out by household type, poverty and low income rates drop, and are probably more characteristic of actual households in the MSB.

Table 17: MSB Household Income Characteristics

	Nonfamily Household (HUD 1 Person Limit)	Family Household (HUD 3 Persons Limit)	All Households (HUD 4 Persons Limit)
Census 2012 ACS 5yr Mean (Average) Income	$51,858	$92,335	$82,598
Census 2012 ACS 5yr Median Income	$37,267	$80,865	$70,728
HUD 2014 Median Income Limit for MSB	$55,000	$70,700	$78,500
Federal 2014 Poverty Level for Alaska	$14,580	$24,740	$29,820
Number of Households at Poverty Level	1,582	2,263	6,468
Percentage of Households at Poverty Level	17.11%	10.02%	20.78%
Population at Poverty Level	2,057	7,468	18,562
HUD 2014 Extremely Low (30%) Income	$16,500	$24,740	$29,820
Number of Households Extremely Low Income	1,582	1,135	6,468
Percentage of Households Extremely Low Income	17.11%	5.03%	5.03%
Population at Extremely Low Income	2,057	3,746	18,562
HUD 2014 Very Low (50%) Income	$27,500	$35,350	$39,250
Number of Households Very Low Income	1,455	1,128	2,208
Percentage of Households Very Low Income	15.74%	5.00%	7.09%
Population at Very Low Income	1,892	3,722	6,337
HUD 2014 Low Income (80%) Household	$44,000	$56,550	$62,800
Number of Households Low Income	1,730	2,712	4,634
Percentage of Households Low Income	18.71%	12.01%	14.89%
Population at Low Income	2,249	8,950	13,299
Total Households Low Income or Less	4,767	4,975	13,310
Percentage of Households Low Income or Less	51.56%	22.03%	42.77%
Population at Low Income or Less	6,197	16,418	38,198

Source: U.S. Census and HUD

Figure 35: MSB Low Income or Less Comparison by Household Type
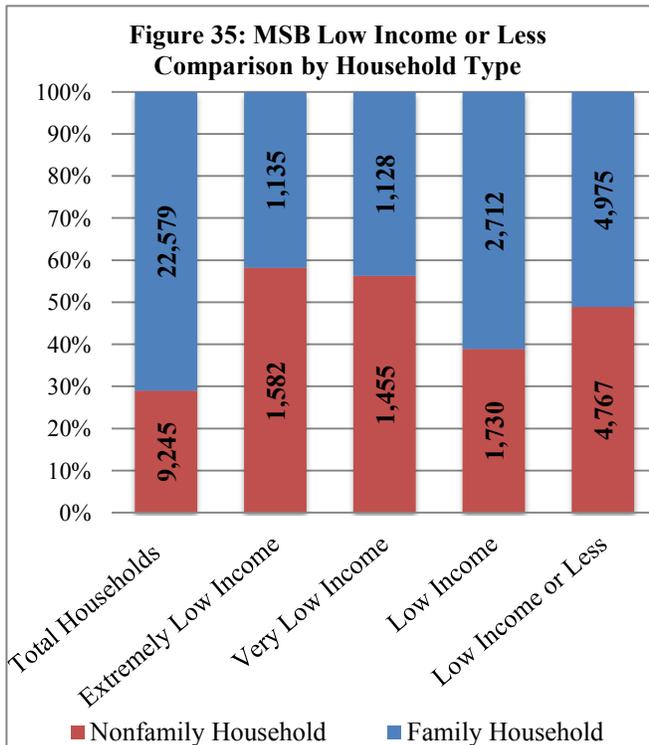
Source: U.S. Census & HUD

The number of family and nonfamily households and their incomes vary greatly. Overall 31% of MSB households could qualify as low income or less. The numbers of family and nonfamily households that are economically struggling are similar. Though, a nonfamily is more likely than a family household to be at economic risk.

A nonfamily is more likely to be at economic risk due to being a single person household. They make up close to a third of all MSB households and over half of nonfamily households have low income. Nearly a quarter of this demographic are seniors over the age of 65. The distribution of nonfamily households experiencing low income levels is fairly similar which may indicate a lack of gainful employment opportunities for younger individuals and seniors on an extremely limited income.

Figure 36: MSB Low Income Family and Nonfamily Comparison
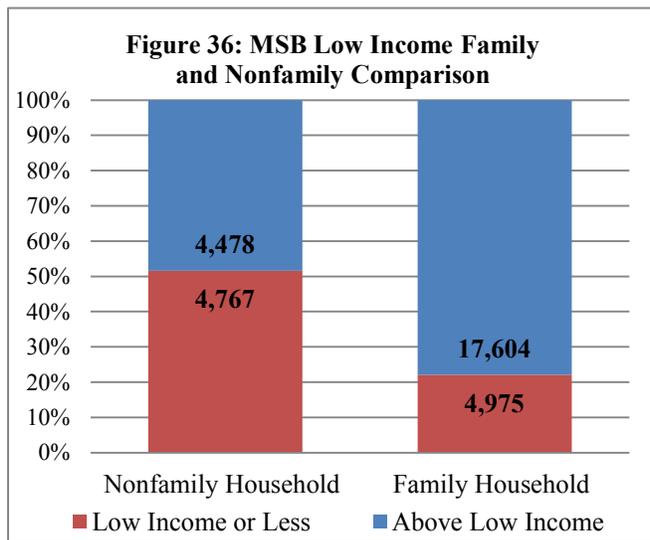
In contrast, a family household is more than likely to be better off economically. Approximately 26% are households headed by an adult as a single parent or elder caregiver. Interestingly, 22% of families are economically limited with low income or less. This does not necessarily mean a correlation can be determined that a family household headed by a single person experiences low income levels in the MSB.

Source: U.S. Census & HUD

Figure 37: Family and Nonfamily Household Income Level Percentages

Nonfamily Households
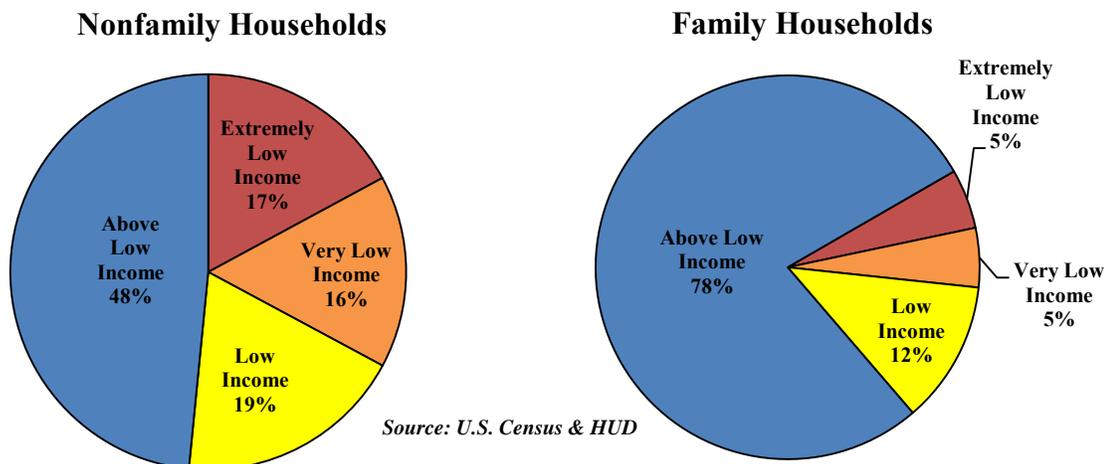
Family Households

Source: U.S. Census & HUD

In the MSB there are a fairly significant portion of households who are economically struggling with low income levels. A large number of nonfamily households are struggling with the high cost of living in Alaska. In contrast, most family households in the MSB make the median income level and appear better off, which can be misleading. Even though a family household is less likely to have low income compared with a nonfamily household, the number of people affected is greater by 10,000, due to children in the family households. Overall over 22,500 people in the MSB live in households that make less than the median income level.

Chapter 6: Housing Unit Supply

In terms of housing data, the MSB has limited sources to draw from for detailed information. Typically in the United States, local governments have economic indicators through the permitting process for new housing starts which provides information about the housing supply. A building permit is a statistic about economic activity which allows for the analysis of local economic performance and to predict future business cycle trends (Indiana University 2014).

Permit information is useful beyond local government. Several entities including the federal government, the state, real estate business, investors, and nonprofits consume this information. In essence, a building permit is one of the eleven important components of global and national economic indicators for market tracking and planning purposes (Forex 2013, Indiana University 2001, New York University 2014).

According to the Foreign Exchange Market Realm,

> "Housing, or most precisely building permits serve as a reliable economy marker due to its sensitivity to interest rate, which is another leading economic indicator in its own right. Almost all building projects require advance applications of building permits. In this sense, the volume of building permits can forecast the housing performance in near future. Such are the reason why experts regard homebuilding as one of the most accurate leading indicators of economy direction.

> Keeping tab on building permits can serve as an early indicator of economic flow by one to three months. This is because housing is a sector that creates bigger ripples in the economy canvas since its outcomes effect other sectors such as steel, timber, employment, manufacturing and so on, which Baumohl called 'the multiplier effects'. He went on to illustrate this scenario, "by one estimate, for every 1,000 single-family homes under construction, some 2,500 full-time jobs and nearly $100 million in wages are generated." On a further level, the housing industry also effects retail growth for household goods such as electronics and furnitures. This is why the home construction industry can be a powerful sign of economic health although it only made up about 5% of the total GDP.

> A consistent decline in the housing sector and issuance of building permits is a strong sign of a weakening economy, and possibly a recession. During better times, the opposite is true as the economy is booming and people are willing to spend money in upgrading their homes and purchase new properties." (Forex 2013)

Figure 38: MSB All Residential Parcels

Single Family: 38,704 Units 84.96%

Mobile Home 1,618 Units 3.55%

Duplex 1,268 Units 2.78%

Multifamily 3,378 Units 7.42%

Group Quarters 150 Units 0.33%

Mobile Home Park 435 Units 0.95%

Total Units: 45,553
Total Parcels: 38,665
Total Acerage: 179, 694
Average Acreage: 4.65
Unit Density Per Acre: 0.25
Average Units Per Parcel: 1.18
Average Acres Per Unit: 3.94
Source: MSB Parcel Data (Sept. 2014)

Figure 39: MSB Major Residential Area Parcels

Single Family 28,650 Units 81.81%

Mobile Home 1,339 Units 3.82%

Duplex 1,222 Units 3.49%

Multifamily 3,344 Units 9.55%

Group Quarters 113 Units 0.32%

Mobile Home Park 353 Units 1.01%

Total Units: 35,021
Total Parcels: 29,924
Total Acres: 81,092
Average Acreage: 2.71
Unit Density Per Acre: 0.43
Average Units Per Parcel: 1.17
Average Acreage Per Unit: 2.32
Source: MSB Parcel Data (Sept. 2014)

Figure 40: MSB Major Residential Area & Rural Comparison

Major Housing Area 35,021 Units 76.88%

Rural 10,532 Units 23.12%

Source: MSB Parcel Data (Sept. 2014)

Unlike other local governments, the MSB neither tracks nor issues economic indicators such as permits for most development. Therefore the information concerning housing supply will have to come from another source. The U.S. Census provides estimates of housing units which are an anecdotal soft number. Another source of housing unit information are MSB assessment records which are hard numbers that provide location, acreage, appraised and assessed values, and what type of building use are on the lot.

The MSB assessment record is limited regarding residential housing units. There is not any differentiation between size and quality of established units, only the nominal amount that exists by category. Housing unit categories include:

- Single Family Units
- Mobile Home Units
- Duplex Units
- Multifamily Units
- Group Quarters Units
- Mobile Home Park Units

The numbers provided by the assessment parcel data are hard numbers and not an estimate like the U.S. Census. Parcel data is updated on a regular basis in the MSB, at least three times a year, if not quarterly. The data used for a baseline was captured towards the end of September 2014 prior to the latest update.

There are a total of 45,553 housing units according to the MSB parcel data. Most homes are within the major residential area. By far the largest majority of housing unit type is a single family residence. Most housing units are owned by Alaskans.

Figure 41: MSB Residential Unit and Parcel Ownership Comparison

MSB Residential Unit Ownership

Alaskans
41,992 Units
92.18%

Non-Alaskans
3,561 Units
7.82%

Source:
*MSB Parcel
Data (Sept. 2014)*

MSB Residential Parcel Ownership

Alaskans
36,263 Units
93.79%

Non-Alaskans
2,402 Units
6.21%
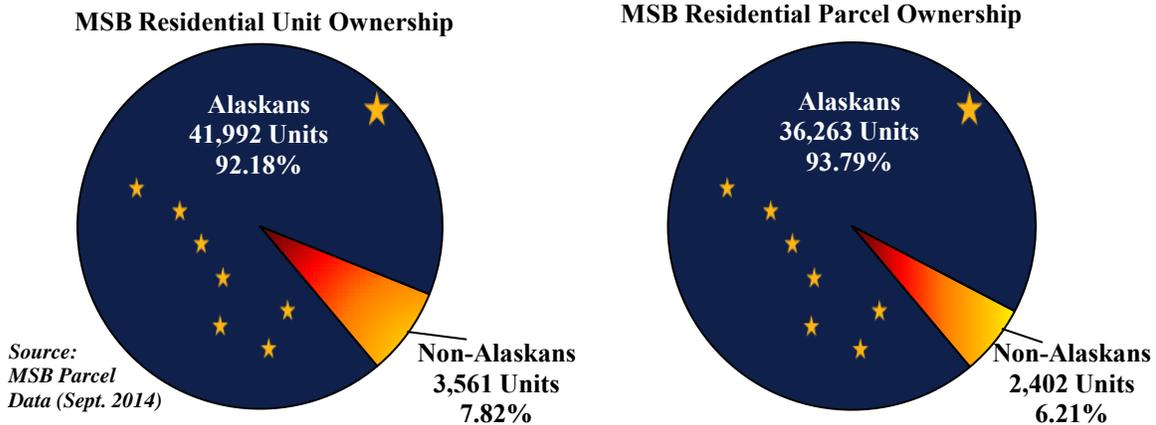
In terms of analyzing housing supply, the information provided by the MSB parcel data is lacking the necessary information required to thoroughly investigate housing units. An analysis of housing units requires dividing residential units further than available using MSB parcel data. Therefore, the default source of data will be the U.S. Census.

It should be noted that U.S. Census data may underestimate the number of MSB residential units. For instance, MSB parcel data provides an exact figure of 45,553 units, the 2012 American Community Survey (ACS) 5-year estimates that there are 40,578 units, and the 2010 Decennial Census enumerated 41,329 units. The issue is that the Census Bureau switched to the short form survey for 2010 and only counted units without differentiation of housing type. The ACS was instituted in 2005 to replace the long form survey that differentiated housing by type.

There are also data quality issues with the ACS data due to the mail sampling method it uses which surveys 5% of the population. In order to receive the survey a recipient must have a home mailing address at their residence and not a post office box. The ACS is weighted for non-respondents. The ACS is also a 5-year rolling sample that yields standard errors in the range of 15% to 25% due to this enumeration difference. In comparison, the Decennial Census long form survey provided estimates based upon a sample of in-person interviews of 17% of the population.

The sample error is larger in rural areas like the MSB. Potential respondents without a residential mailing address do not receive the opportunity to participate. In the MSB the ACS appears to possibly be skewed by 10% to 15%. Therefore, any analysis using ACS data should be considered a potentially low estimate and this information has not been nor will be used for a trend analysis. The ACS figures given are so the reader can see how this survey differs from Decennial Census results.

Census information regarding housing type is only available from the 1990 Census to the present. Since that time, on average, single family units have been the majority of available housing and there have been limited other options. Less expensive housing, such as mobile homes, has been declining significantly compared to other housing types. Overall, the MSB has a

limited housing market with available options compared to the nation, which in turn leads to a low vacancy rate, and a high cost of housing.

Table 18: MSB Housing Units by Type and Tenure

Housing Units by Type and Tenure	1970 Census	1980 Census	1990 Census	%	2000 Census	%	2010 Census	%	2012 ACS 5yr	%
Total Housing Units	4,221	10,098	20,953	100%	27,329	100%	41,329	100%	40,578	100%
1-unit, detached	-	-	16,523	78.86%	22,228	81.33%	-	-	33,630	82.88%
1-unit, attached	-	-	171	0.82%	332	1.21%	-	-	626	1.54%
2 to 4 units	-	-	1,528	7.29%	1,847	6.76%	-	-	2,996	7.38%
5 to 9 units	-	-	384	1.83%	517	1.89%	-	-	743	1.83%
10 to 19 units	-	-	188	0.90%	142	0.52%	-	-	380	0.94%
20 or more units	-	-	57	0.27%	206	0.75%	-	-	411	1.01%
Mobile home	-	-	1,849	8.82%	1,812	6.63%	-	-	1,731	4.27%
Boat, RV, van, etc.	-	-	253	1.21%	245	0.90%	-	-	61	0.15%
Tenure of Occupied Units	-	-	13,394	63.92%	20,556	75.22%	31,824	77.00%	30,923	76.21%
Owner Occupied	-	-	9,821	46.87%	16,218	59.34%	24,181	58.51%	23,989	59.12%
Renter Occupied	-	-	3,573	17.05%	4,338	15.87%	7,643	18.49%	6,934	17.09%
Vacant: All	-	-	7,559	36.08%	6,773	24.78%	9,505	23.00%	9,655	23.79%
Vacant: Seasonal/ Recreational	-	-	4,479	21.38%	5,244	19.19%	6,823	16.51%	6,478	15.96%
Homeowner Vacancy Rate	-	-	-	-	-	1.9%	-	2.1%	-	2.3%
Renter Vacancy Rate	-	-	-	-	-	7.0%	-	7.1%	-	5.0%

Source: U.S. Census Decennial Census and 2012 American Community Survey 5-year Estimate

The State of Alaska Department of Labor tracks the vacancy rate of boroughs through the Annual Rental Market Survey. This year's survey indicates a 5.3% for rentals in the MSB which is slightly higher than the Census estimation. Relatively speaking, the MSB has a tight housing market with limited availability, which is only slightly better than Anchorage.

Table 19: Comparison of MSB, Anchorage, State, and National Vacancy Rates

	MSB	Anchorage	Alaska	USA
Renters	5.0%	3.9%	5.4%	7.5%
Homeowners	2.3%	1%	1.4%	2.3%

Source: U.S. Census 2012 American Community Survey 5-year Estimate

In general, the potential number of housing units projected in the future may fall short of the units needed. Interestingly, the projection of housing units using the Decennial Census figures shows that there are currently 44,000 units which are 1,553 units less than reality. This is a difference of 3.5%. Using this figure to adjust the future potential need provides an estimate closer to the projection although still falls short of the potential housing availability need.

Figure 42: MSB Housing Units Projection

	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2020	2030
Total Housing Units	4,221	10,098	20,953	27,329	41,329	56,000	68,000
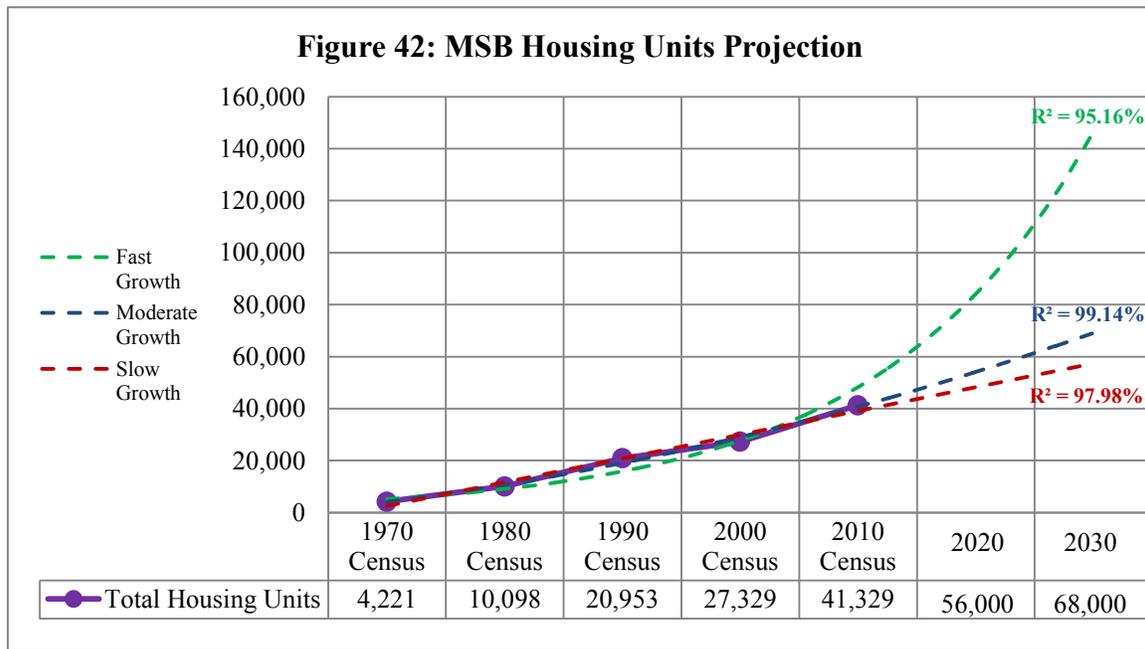
Source: U.S. Census

To determine the projected units needed in the future is a simple calculation. The projected population is divided by the projected occupancy rate, which provides a housing figure for the MSB population, and then is multiplied by the average MSB vacancy rate of 2.691% plus 100%. This provides an estimate for total units needed for an adequate housing supply of the entire population including seasonal or recreational homeowners.

Table 20: Future MSB Housing Needs

Year	Projected Population	Projected Occupancy Rate	Units Needed for Residents	Average Vacant Rate + 100%	Total Units Required Estimate	3.5% Adjusted Unit Estimate	Projected Units Built	Projected Units Shortage
2020	125,000	2.65	47,170	1.2691	59,863	57,768	~53,000	~5,000
2030	165,000	2.55	64,706	1.2691	82,118	79,244	~70,000	~9,000

Source: U.S. Census

Figure 43: MSB Housing Stock by Decade
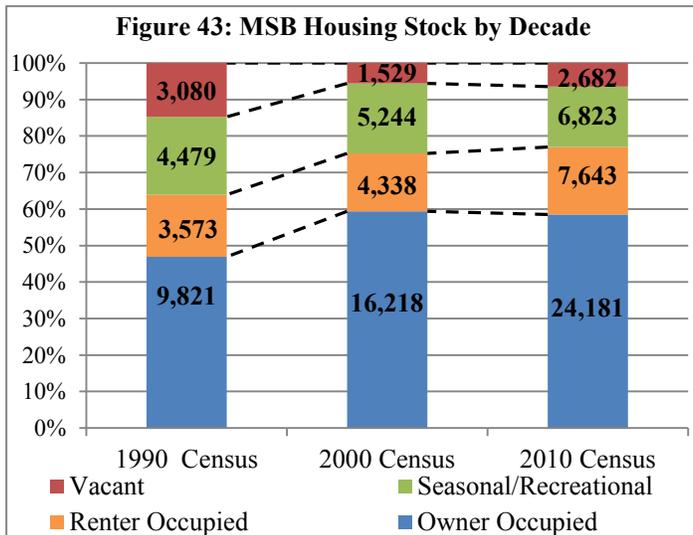
A quarter of MSB housing stock is vacant. The majority is used seasonally or recreationally. The total percentage of vacant units used for seasonal or recreational housing has been steadily declining. These units are being replaced with faster growth in occupied rental units.

The U.S. Census provided occupation data beginning in 1990. Although this is a dataset consisting of three decades, a projection was made, for a better understanding of the potential future occupancy of units. More datasets would provide better accuracy which would

Source: U.S. Census

provide a unit total closer to the general housing unit projection. Yet, due to the nature of this data, understanding how occupancy may change could be useful for planning purposes.

Figure 44: MSB Owner Occupied Projection

	1990 Census	2000 Census	2010 Census	2020	2030
Owner Occupied	9,821	16,218	24,181	34,000	45,000
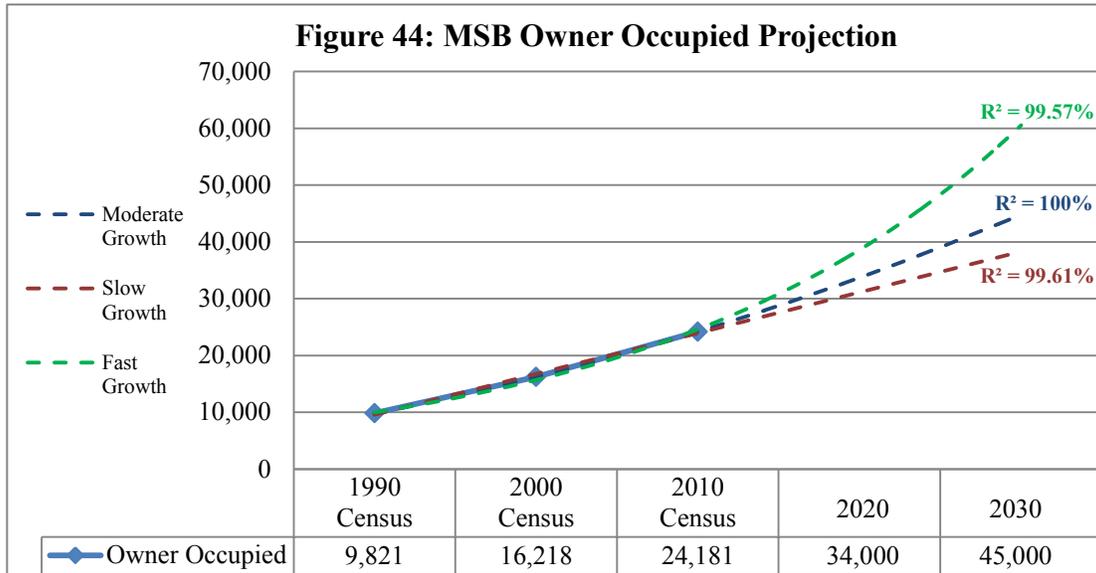
Source: U.S. Census

A majority of MSB households are owner occupied. Since 1990 owner occupation has increased significantly. This growth appears that it may continue moderately into the future.

Figure 45: MSB Renter Occupied Projection

	1990 Census	2000 Census	2010 Census	2020	2030
Renter Occupied	3,573	4,338	7,643	13,500	22,000
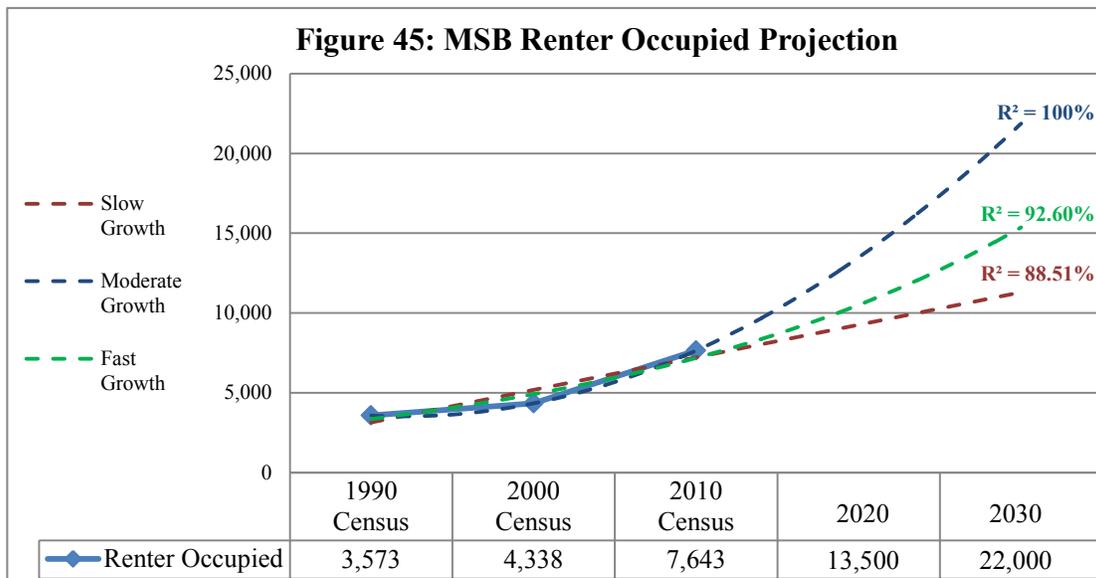
Source: U.S. Census

The occupation of rental units appears that it may see phenomenal market share growth. This is in line with occupied rental units surpassing the number of seasonal/recreational units between 2000 and 2010. Based upon the projection, demand for rental units in the future may be greater than it is today, and may be a significant portion of the MSB real estate market.

Figure 46: MSB Seasonal/Recreational Projection

	1990 Census	2000 Census	2010 Census	2020	2030
Seasonal/Recreational	4,479	5,244	6,823	9,200	12,400
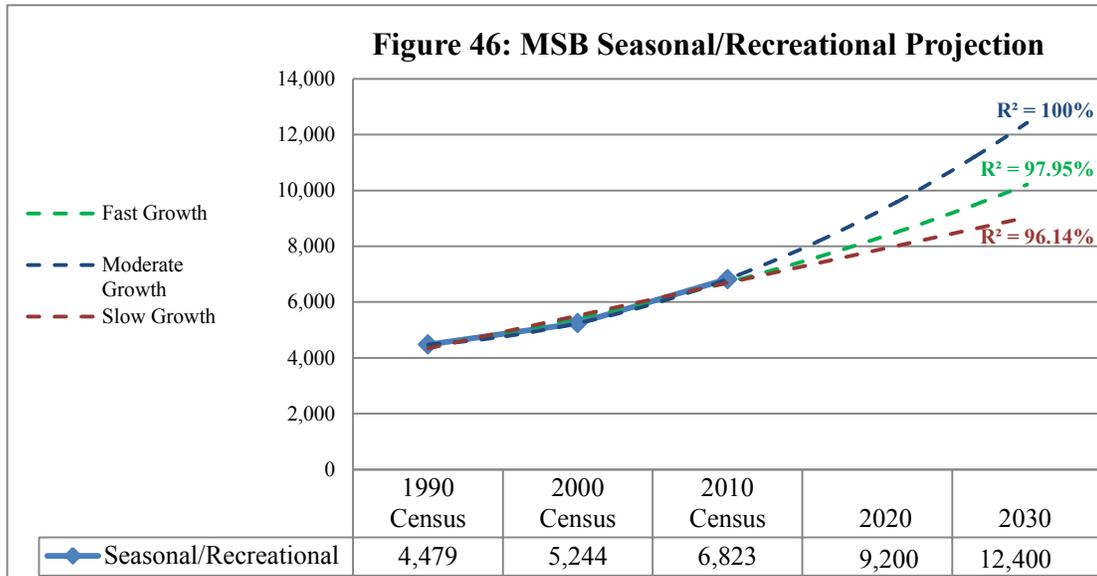
Source: U.S. Census

Housing units for seasonal and recreational uses may continue to see development of more units but proportionally may be a reduced sector of overall housing. Growth appears that it may be slower than rental units due to reduced demand and population demographic changes. As the population grows larger, units closer to populated areas may be converted to full time use, and recreational/seasonal use homes may be pushed further to the remote fringe.

Figure 47: MSB Past and Future Housing Market Sectors
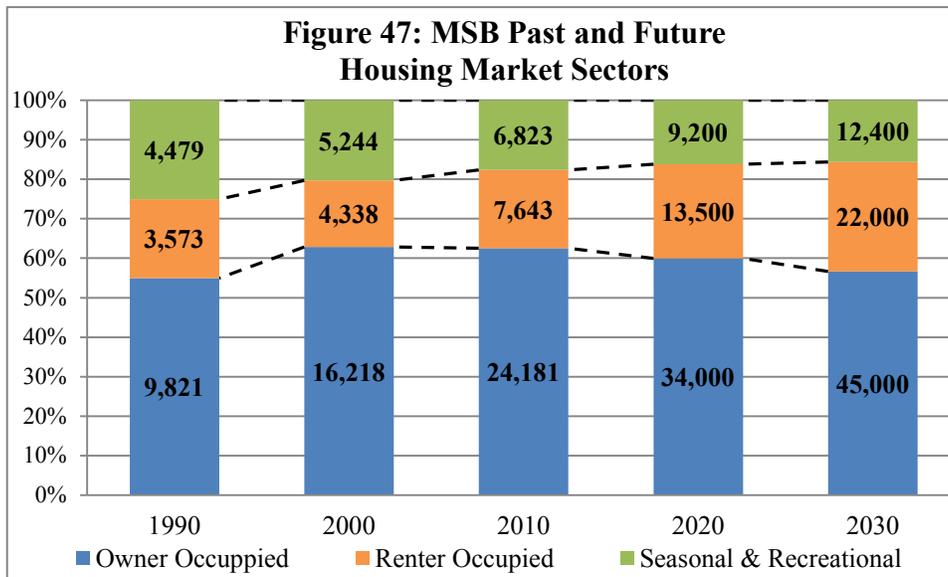
Source: U.S. Census

Using the figures provided by the projection it becomes evident how the three housing market sectors have changed and may potentially transform in the future. It appears that the rental market may see significant gains in the future with reductions in owner occupied and seasonal/recreational housing. Rentals have been in demand and may continue to see even greater future demand.

The number of housing units existing are close to meeting current needs but fall short of demand. There is not enough supply for a healthy and competitive housing market. Lack of optimal housing options may raise the cost of housing in the MSB. In the future demand will be even greater in rentals than in seasonal/recreational or owner occupied housing further compounding market cost variables for housing if needs are not anticipated.

Chapter 7: Housing Cost Trends

The cost of housing, much like the population, has been increasing. High housing costs create a host of external negative outcomes for society whereas affordable housing creates positive benefits (Griggs et al 2008, Wardrip et al 2011). According to the Center for Housing Policy:

> "Households with modest means need safe, suitable housing that they can afford. When housing is affordable, low- and moderate-income families are able to put nutritious food on the table, receive necessary medical care, and provide reliable daycare for their children. Research has shown that the stability of an affordable mortgage or rent can have profound effects on childhood development and school performance (Lubell and Brennan 2007) and can improve health outcomes for families and individuals (Lubell, Crain, and Cohen 2007).
>
> But the benefits of affordable housing extend beyond its occupants to the community at large. The research reviewed in this brief demonstrates that the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers — and entire regional economies — can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers. In addition to these proven linkages between affordable housing and economic development, this review also discusses several promising hypotheses that have not yet been as well researched but that nonetheless suggest ways in which affordable housing can foster local economic growth." (Wardrip et al 2011)

Determining if housing is affordable requires information from a variety of sources. Variables include the average price of home sales, median gross rent, and median income. This information is inserted into a table to show the change which has occurred within a specified amount of time. For this analysis, information was extracted going back to 2009, though with further research, larger subset of data could be used for a longer term analysis.

It appears that a correction in household incomes is occurring. While all of the other market indicators have climbed, such as home sales prices and rent costs, incomes had risen sharply only to see a significant downfall to previous levels. What is occurring in the MSB is the cost of living is increasing while incomes are stagnating.

Table 21: 2009 to 2014 Housing Costs and Income Trends

	AK MLS Average Home Price	AHFC Median Gross Rent	Nonfamily Household HUD Median Income (1 Person)	Family Household HUD Median Income (3 Persons)	All Households HUD Median Income (4 Persons)
2009	$212,594	$806	$51,000	$65,600	$72,900
2010	$216,880	$865	$52,900	$68,000	$75,600
% Change	2.02%	7.32%	3.73%	3.66%	3.70%
2011	$213,569	$898	$62,600	$80,500	$89,400
% Change	-1.53%	3.82%	18.34%	18.38%	18.25%
2012	$221,607	$1,004	$63,400	$81,500	$90,600
% Change	3.76%	11.80%	1.28%	1.24%	1.34%
2013	$227,990	$940	$57,800	$74,300	$82,500
% Change	2.88%	-6.37%	-8.83%	-8.83%	-8.94%
2014	$234,437	$1,017	$55,000	$70,700	$78,500
% Change	2.83%	8.19%	-4.84%	-4.85%	-4.85%

Source: Alaska MLS 2014 and 2015, AHFC, and U.S. HUD

The cost of housing continues to rise even though incomes are stagnant and may be headed towards a decline. Sales prices for homes have been increasing on average 2% annually and are not as out of reach economically as they were five years ago. In contrast, rent has significantly increased on average about 5% per year, and may be unaffordable.

Figure 48: MSB Household Median Income Projection

$R^2 = 92.35\%$

$R^2 = 92.27\%$

$R^2 = 92.38\%$
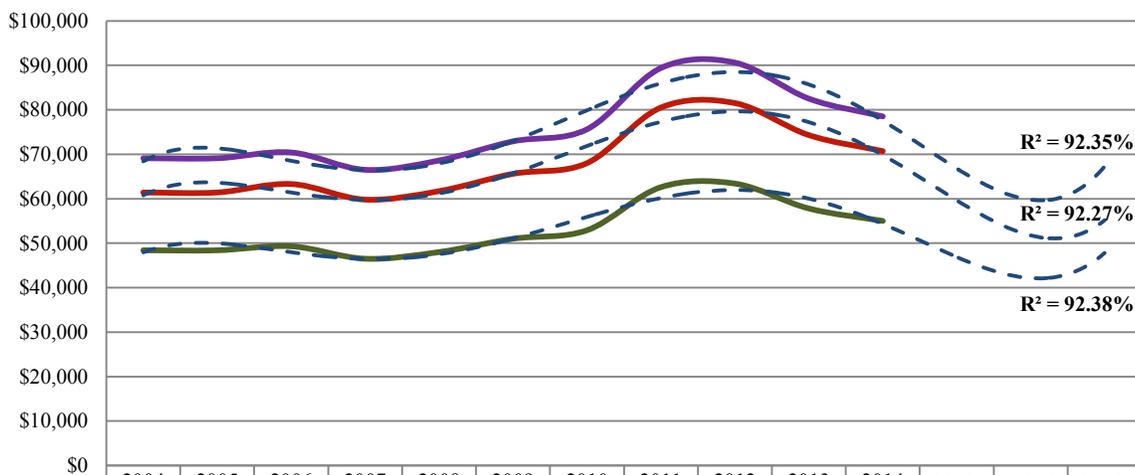
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All Households	$69,100	$69,100	$70,400	$66,500	$68,600	$72,900	$75,600	$89,400	$90,600	$82,500	$78,500	???	???	???
Family Household	$61,400	$61,400	$63,300	$59,800	$61,700	$65,600	$68,000	$80,500	$81,500	$74,300	$70,700	???	???	???
Nonfamily Household	$48,400	$48,400	$49,300	$46,500	$48,000	$51,000	$52,900	$62,600	$63,400	$57,800	$55,000	???	???	???

Source: U.S. HUD

Household income in the MSB may continue its decline in the near future to pre-2008 levels. The closest projection that fits the income distribution is a fifth level polynomial trend. Although there is the probability median incomes will continue to decline it is questionable how

far that descent may be. The ten year running average of household median incomes in the MSB have been $53,000 for a nonfamily, $68,000 for a family, and $75,700 for all households. Median household incomes may descend to those averages in the next year.

Figure 49: MSB Average Home Sales Price Projection

R² = 94.83%
R² = 87.13%
R² = 86.97%

	2009	2010	2011	2012	2013	2014	2015	2016
Average Home Sales Price	$212,594	$216,880	$213,569	$221,607	$227,990	$234,437	$245K	$255K
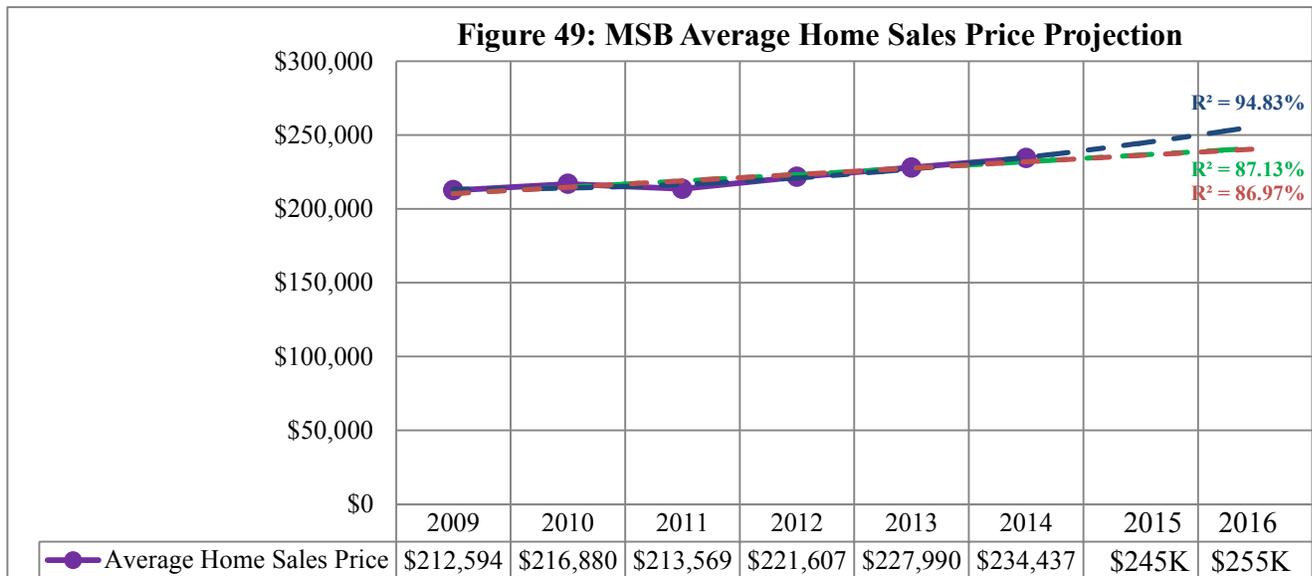
Source: Alaska MLS 2014 and 2015

The average cost of buying a home appears it may continue to gradually rise following past trends. As the average cost of home sales increases and incomes decrease there may soon come a time when the average household cannot afford to buy the average home. Those without the means to buy a home may be pushed further from being able to purchase due to being priced out of the market in the near future. Though due to a lack of long-term variables for analysis exactly how high the average sales price may increase is uncertain.

Figure 50: MSB Median Gross Rent Projection

R² = 89.09%
R² = 88.92%
R² = 91.61%

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Median Gross Rent	$750	$806	$865	$898	$1,004	$940	$1,017	$1,000	$1,000
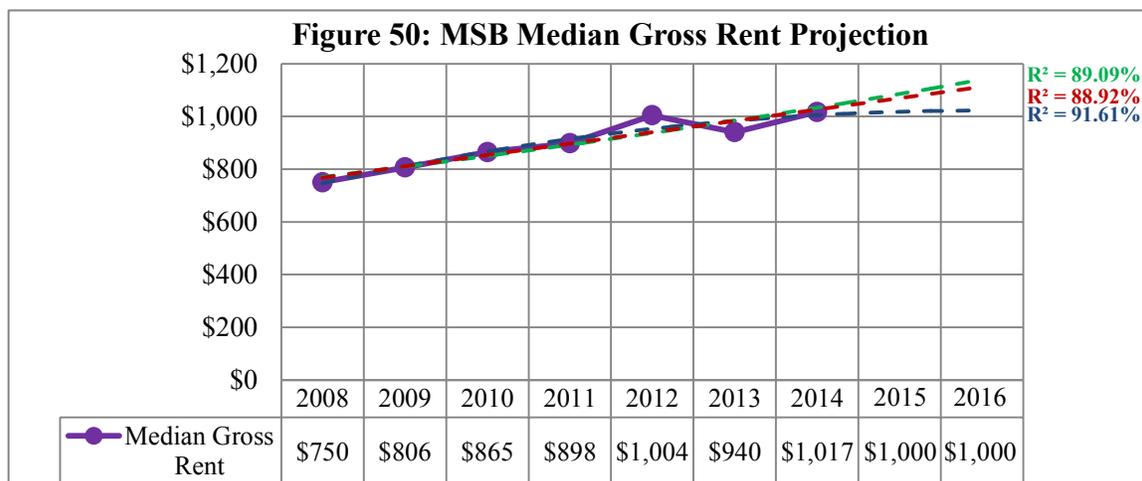
Source: AHFC

Uncertainty of outcomes extends into median rental costs. Rentals costs may plateau at $1,000 for the next two years or may continue to rise. This cost is dependent on what rates landlords can extract and what tenants can afford to pay in a limited rental market.

Table 22: 2009 to 2014 Average Rental Cost Trend

	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	Average Rent: All Types
2009	$609	$764	$916	$1,254	$1,441	$997
2010	$566	$812	$953	$1,312	$1,726	$1,074
% Change	-7.06%	6.35%	4.04%	4.67%	19.78%	7.75%
2011	$655	$837	$996	$1,359	$1,776	$1,125
% Change	15.72%	3.08%	4.57%	3.58%	2.90%	4.74%
2012	$535	$887	$999	$1,427	$1,809	$1,131
% Change	-18.32%	5.97%	0.25%	5.00%	1.86%	0.60%
2013	$538	$865	$1,074	$1,463	$1,854	$1,159
% Change	0.56%	-2.54%	7.56%	2.52%	2.49%	2.42%
2014	$557	$879	$1,116	$1,543	$1,936	$1,206
% Change	3.53%	1.62%	3.86%	5.47%	4.42%	4.08%

Source: AHFC

Further breakdown of the rental market lends credence that costs may plateau in the near future. There is a high confidence that over the next two years prices may stabilize in all rental types except studios. Two and three bedroom rentals are the exception to the price stabilization as both are increasing in cost and has a high confidence of continuing which may indicate a preference or need for this type of housing.

Figure 51: MSB Average Rent Trend Projection

	2009	2010	2011	2012	2013	2014	2015	2016
Studio	$609	$566	$655	$535	$538	$557	???	???
1 Bedroom	$764	$812	$837	$887	$865	$879	$850	$850
2 Bedroom	$916	$953	$996	$999	$1,074	$1,116	$1,180	$1,250
3 Bedroom	$1,254	$1,312	$1,359	$1,427	$1,463	$1,543	$1,600	$1,700
4 Bedroom	$1,441	$1,726	$1,776	$1,809	$1,854	$1,936	$1,900	$1,800
Average Rent: All Types	$997	$1,074	$1,125	$1,131	$1,159	$1,206	$1,100	$1,100

$R^2 = 90.99\%$
$R^2 = 99.41\%$
$R^2 = 95.80\%$
$R^2 = 97.07\%$
$R^2 = 94.29\%$
$R^2 = 28.31\%$

Source: AHFC

Table 23: Affordable Housing Costs at 30% of Income

Affordable Housing Cost	Hourly Wage	Yearly Income
$400	$7.75 (Minimum Wage)	$16,000
$500	$9.62	$20,000
$600	$11.54	$24,000
$700	$13.46	$28,000
$800	$15.38	$32,000
$900	$17.31	$36,000
$1,000	$19.23	$40,000
$1,100	$21.15	$44,000
$1,200	$23.08	$48,000
$1,300	$25.00	$52,000
$1,400	$26.92	$56,000
$1,500	$28.85	$60,000
$1,600	$30.77	$64,000
$1,700	$32.69	$68,000
$1,800	$34.62	$72,000
$1,900	$36.54	$76,000
$2,000	$38.46	$80,000

Source: National Low Income Housing Coalition
http://nlihc.org/library/wagecalc

Affordable housing costs are considered to be 30% of a household's income. Affording median rent in the MSB, equivalent to a one to two bedroom apartment, requires a household make approximately $19.23 an hour equal to $40,000 a year of income. To afford a 3 bedroom home would require income of $30.77 an hour or $64,000 a year. To put it bluntly, the cost of rent is high, and if a household does not have the means to provide a median income they will be relegated to either unsuitable housing or housing costs which reduce both nondiscretionary and discretionary spending. These costs and the reduction in household spending can have direct negative consequences to the local economy.

The cost of rent even appears higher when compared with the purchase price of a home. The cost of renting a 3 bedroom house for the average of $1,543 is comparable, if not more than, the payment of a mortgage on a home. An average priced home may be more affordable than rental costs in the MSB even if a household cannot make a 20% down payment and has to pay property mortgage insurance (PMI). The table below illustrates monthly mortgage costs which have been rounded to nearest $10 for ease of comparison.

Table 24: Mortgage Costs for a MSB 2014 Average Home Price of $228,000

	20 Year @ 4.5%	20 Year @ 5%	20 Year @ 5.5%	30 Year @ 4.5%	30 Year @ 5%	30 Year @ 5.5%	PMI (.05%)
20% down	$1,390	$1,440	$1,490	$1,160	$1,220	$1,270	$0
10% down	$1,540	$1,590	$1,650	$1,250	$1,310	$1,380	$85
5% down	$1,610	$1,670	$1,470	$1,340	$1,400	$1,470	$90
0% down	$1,680	$1,740	$1,810	$1,390	$1,460	$1,530	$95

Source: mortgagecalculator.org

When compared with the cost of renting a 3 bedroom home for $1,550 a month, even a 0% down with a PMI, a 30 year mortgage at high interest is a better use of a household's funds for shelter. This does not consider the other costs associated with home ownership such as maintenance, insurance, and property taxes. Compared to rent with these costs included, it may be better to make that investment, especially if a household intends on living in the MSB for the long-term. The issue with buying a home is credit and deposit requirements which many renters may not have the funds to save for a down payment, let alone pay for the other necessities of life.

Chapter 8: Unmet Housing Need

There may be a need for affordable housing in the MSB. This is based upon a significant portion of households having less than median income, general household earnings are declining, an increased demand for rentals, and the cost of housing is increasing. Yet even with these factors there is a lack of affordable housing.

Currently affordable housing targeting low income households account for 1% of all housing units in the MSB. The AHFC estimates there are 511 housing units available for low income households within the MSB. With such a small number of affordable housing units available compared with the results of declining incomes and rising housing costs it quickly becomes evident that a significant portion of MSB households are struggling.

The unmet housing need analysis provides results for nonfamily and family households. It also provides a comparison of all households grouped together to show the statistical difference that occurs from separating out the two households. There is improved accuracy when households are broken down by family and nonfamily due to significant demographic differences. Averaging these factors together wields a completely different estimate which may not be a reliable indicator of the economic reality within the MSB.

The number of affordable housing units available, 511 units, was split between family and nonfamily household along representative percentages. This household division consists of 71% for the former and 29% for the later. The reasoning behind this division is that both household types are in competition for affordable housing options and an unequal distribution seems likely. Therefore the analysis should be considered a conservative estimate based upon the unit division by household type, the low estimate given by AFHC for affordable housing options, and the households not counted due to delineation by the closest income grouping.

Table 25: MSB Unmet Housing Need Estimate

	Nonfamily Household	Family Household	All Households
Households	9,245	22,579	31,123
Percentage Low-Income	0.52	0.22	0.42
Low Income Households	4,807	4,967	13,072
Housing Units Targeted to Low-Income Households	148	363	511
Estimate of Households with Unmet Need	**4,659**	**4,604**	12,561
Percentage of Household with Unmet Need	**50.39%**	**20.39%**	39.73%
Average Household Size	1.32	3.30	2.84
Estimate of Persons with Unmet Need	**6,150**	**15,194**	35,672
Percentage of MSB Population with Unmet Need	**6.91%**	**17.07%**	40.08%

Data Source: U.S. Census 2012 American Community Survey 5-year Estimate

As previously demonstrated, nonfamilies are predominantly single persons, and families are more than likely a married couple with or without children. In general, the numbers of family and nonfamily households with unmet affordable housing needs are similar, though the numbers

of people affected are different. This is due to a higher number of people living in family households such as spouses and/or children.

In general, there is an affordable housing issue in the MSB affecting approximately 24% to 29% of the population. Approximately 9,000 households, conservatively between the numbers of 21,350 to 25,500 people, have an unmet housing need, with over half of nonfamilies and a fifth of families experiencing affordability issues. There are more people in families, including children, who have an unmet affordable housing need.

Chapter 9: Rental Affordability

Affordable housing is considered to be 30% of a household's income. Costs that exceed that limit are an indicator of a housing affordability problem. This percentage includes the cost of rent and utilities. Households that pay more than 30% of their disposable income for housing are considered economically burdened, whose nondiscretionary spending for necessities is impinged, and they do not have funds available for saving or discretionary spending (Schwartz et al 2008).

Granted, some households may choose to spend more than 30% of their income out of a lifestyle choice to keep up with the Joneses, which is economically unhealthy. But others may be stuck paying high rent without a choice in their spending due to a limited housing market which extracts higher rents. While a passive income windfall is good for landlords, the local economy is affected as households have less to spend on other sectors such as goods, services, or investments, and this generally leads to an overall economic recession.

Median gross rent in the MSB is $1,017 for 2014. Although this is the median, the cost of an average 1 bedroom rental is $879, and with the addition of utility costs this rent would approach the median amount. As the size of the household gets larger, there is a need for more rooms, which means increased rental costs, and fewer funds for other spending.

Median income households can afford the median rent with utility costs. For the 4,478 (48%) of nonfamily households that achieve median income or more, the amount of rent considered affordable is in the $1,375 to $1,575 range. Family households with median income or better, of which there were 17,604 (78%) households, their range of affordability is $1,575 to $2,000.

Table 26: Median Income Rental Affordability

Household Size	Median Income	Monthly Income	Rent Level + 30% Utilities
1 Person	$55,000	$4,583	$1,375
2 Person	$63,000	$5,250	$1,575
3 Person	$71,000	$5,917	$1,775
4 Person	$78,500	$6,542	$1,963
5 Person	$85,000	$7,083	$2,125
6 Person	$91,000	$7,583	$2,275

Data Source: AHFC and U.S. HUD

Low income households, which make 80% of the median, appear that they may be able to barely make the median rental cost. Though, when utilities are added in they may end up struggling to make nondiscretionary and discretionary purchases. There are 1,730 (17%) nonfamily households within this income grouping whose rental price range is $1,100 to $1,256. Families with low income, of which there are 2,712 (12%) households, have a rental range of $1,256 to $1,570. As more rooms are needed due to more household members the amount available to spend on the average rental may be strained.

Table 27: Low Income (80% of Median) Rental Affordability

Household Size	Median Family Income	Monthly Income	Rent Level + 30% Utilities
1 Person	$44,000	$3,667	$1,100
2 Person	$50,250	$4,188	$1,256
3 Person	$56,550	$4,713	$1,414
4 Person	$62,800	$5,233	$1,570
5 Person	$67,850	$5,654	$1,696
6 Person	$72,850	$6,071	$1,821

Data Source: AHFC and U.S. HUD

Households with very low income, of which there are 1,455 (16%) of nonfamilies and 1,128 (5%) of families, are struggling to meet median rent. Nonfamilies with this income level have a rental range of $688 to $785. Low income families can spend $785 to $981. At this income level, both household types are struggling to pay median rent, probably live in units with not enough room for all members, and may use up funds for rent that would otherwise be spent on nondiscretionary and discretionary items or saved for other purposes.

Table 28: Very Low Income (50% of Median) Rental Affordability

Household Size	Median Family Income	Monthly Income	Rent Level + Utilities (30%)
1 Person	$27,500	$2,292	$688
2 Person	$31,400	$2,617	$785
3 Person	$35,350	$2,946	$884
4 Person	$39,250	$3,271	$981
5 Person	$42,400	$3,533	$1,060
6 Person	$45,500	$3,792	$1,138

Source: AHFC and U.S. HUD

If very low income households are struggling - then extremely low income households that make 30% of the median income are doing worse. The 1,582 (17%) nonfamily households in this income group have a rental range is $688 to $785. Family households, who number 1,135 (5%), have a range of $492 to $746. Both nonfamilies and families cannot afford the median rental cost, let alone utilities, and probably limit nondiscretionary spending to make rent. More than likely they live in non-affordable units that are not suitable for their household needs.

Table 29: Extremely Low Income (30% of Median) Rental Affordability

Household Size	Median Family Income	Monthly Income	Rent Level + Utilities (30%)
1 Person	$16,500	$1,375	$413
2 Person	$19,660	$1,638	$492
3 Person	$24,740	$2,062	$619
4 Person	$29,820	$2,485	$746
5 Person	$34,900	$2,908	$873
6 Person	$39,980	$3,332	$1,000

Source: AHFC and U.S. HUD

In the MSB it appears that those who can afford to live here are households that make at least the median income. Over half of nonfamilies and almost a quarter of family households do not meet this threshold. They total almost a third of the population in households, including children, who struggle to pay rental costs in the MSB. There is a sizable market for affordable housing needs in the MSB which is not being met currently under the current economic model.

Chapter 10: Conclusion

A. Most Serious Problems:

- **Population Growth**: The MSB has had serious population growth within the last few decades, which may continue, and there is a significant portion set for retirement. Growth has not been due to local population expansion by births; instead, it's due to migration to the area for employment opportunities. This has created not only traffic, schooling, and societal issues but has also impacted the availability of housing greatly. If the population continues to grow without development areas and housing being planned, the MSB and local economy will always be trying to catch up to demand. The issue with this strategy is that unplanned growth with unaffordable housing options may curtail economic growth as the cost of living, urban sprawl development, and a requirement to extensively drive to societal needs may keep potential workers, such as Millennials, from moving to the MSB.

- **Housing Conditions**: This is a complete unknown. Although most housing was built in the last twenty years the suitability of housing units for domestic use in the MSB, number of rooms, percentage of units that have gas or water, are thoroughly winterized, or any number of conditions is a guess. The US Census provides an estimate, which as shown earlier in other datasets, is not very accurate, and would not be useful to analyze. Also, due to the MSB not having a requirement for a building permit this information cannot be tracked accurately by any interested party.

- **Housing Availability**: This also is a complete unknown. Based upon the analysis it appears that there is a lack of housing options. 60% of the MSB population consists of one or two person households. These households may be creating a high demand for two and three bedroom housing units which may be contributing to a rise in cost due to a lack of availability. There is also a need for studio and one bedroom rentals for nonfamily households who may be renting a larger home, due to the unavailability of anything smaller, thus placing more competition for homes needed by larger families. Smaller homes on small lots closer to amenities may create a new housing market demand for starter homes or seniors seeking to downsize which could free up family sized homes.

- **Overcrowding**: Again, this is a complete unknown as well. There is subjective evidence from organizations interested in MSB housing availability that overcrowding is occurring. Based upon the analysis, it could be surmised that households with less than median income levels more than likely experience overcrowding due to not being able to afford rent on larger units. Whereas, households with above median income have room to spare in larger houses they can afford. This may explain the rising costs for two and three bedroom units.

- **Housing Cost**: The simplest explanation is that it costs less to own a home than to rent in the MSB. The cost of rentals approaches, if not exceeds, the cost of a 20 or 30 year mortgage without a down payment. In essence, those without the means to buy a home must rent, and they are paying a high price for the privilege to live and work within the MSB without a way out. A large segment of the population, which includes children, is struggling and stuck in a cycle of depravation that affects their lives on many levels due to the cost of housing. The cost of housing may also affect the long-term economy as potential workers may not live in the MSB long enough to justify buying a home or can't find affordable housing and thus may choose to go elsewhere for employment.

B. Groups with the Highest Needs:

- **Renters**: Rent is too high in the MSB and approaches unaffordable prices beyond what renters can bear. While median income is in decline the cost of rent is inflating. With a tight rental market, approaching the limitations that is affecting Anchorage, options for rentals become competitive, and affordable ones even more so. Renters are workers, students, veterans, and others struggling to get by in a place with a high cost of living with no options for escape except to leave the MSB if they can afford to do so. When rent is high, the amount of money available for spending on nondiscretionary items like food and other discretionary items bought from local stores is limited, and affects the overall local economy. Societal issues such as crime, drugs, and alcoholism tend to increase when the least amongst us are struggling to get by. It is therefore in the best long term interest of communities to ensure that their local misery index is held in check by reducing rental inflation.

- **Single Parent Families:** 2,911 (26%) family households with approximately 9,600 people, of which there are about 6,090 children, are within this class. Interestingly, 22% of families have low income or less than the median. It could be surmised that a significant portion of this income group are single parent families, which makes sense, if it is considered that women on average make 70% of the income of men. More than likely a single mother is struggling to pay housing costs more than a single father. Either way, the ones who suffer the most and likely to carry this into their daily lives are children in single parent households who struggle with the effects of being poor.

- **Nonfamily Households:** A majority, 52%, of nonfamily households are struggling to pay rent because they do not have a median income. Nonfamilies tend to be singles, which includes young adults, but also includes almost half of the MSB senior population. They may also be migrant workers just establishing themselves in the MSB. This group requires smaller housing units for rentals, starter homes, or retirement downsizing.

- **Low Income:** Households with low income more than likely are struggling to pay rent. The low income group may be better off than their poorer counterparts, but only slightly, and may not have funds for nondiscretionary needs, discretionary purchases, or savings. In simplest terms, a low income household is on the verge of economic failure. 1,730 nonfamily (19% equal to 2,284 persons) and 2,712 family (12% equal to 8,950 persons) households are in this group. The low income group would be a good target for affordable housing options and it would benefit the overall local economy to bring all rentals down to a level this group could afford.

- **Less than Low Income or Extremely Low Income:** A household that make 50% or less of the median MSB income are definitely struggling to pay rent. They are experiencing poverty. 3,037 nonfamily (33% equal to 4,009 persons) and 2,263 family (10% equal to 7,468 persons) households are in this group. This group desperately needs assistance for affordable housing options.

- **Homeless:** The exact number of homeless in the MSB is an unknown. Though based upon the economic analysis, anyone who is making less than median income is at great risk of becoming homeless, due to the cost of living in the MSB. The University of Alaska Anchorage estimates of homelessness include:
  - A rate of 0.67% in Alaska, which is about 600 persons in the MSB including children.

- 93% were "sheltered," which includes living in emergency shelters, transitional shelters, with extended family and/or friends, or temporarily in motels.
- 7% were "unsheltered," which includes living in a place not meant for human habitation such as cars, parks, sidewalks, abandoned buildings, or on the street.
- Among the sheltered, 57.5% were households with children.
- Among the unsheltered, 23.5% were households with children.
- Almost 9% are chronically homeless.
- Nearly 14% have chronic substance abuse issues.
- Over 7% are victims of domestic violence.
- About 6% are veterans.
- Approximately 11% are severely mentally ill.
- Nearly 3% are unaccompanied youth under the age of 18.
- Less than 1% has HIV/AIDS (University of Alaska Anchorage 2009).

C. Location with the Greatest Need:

- **Residential Core Area**: 77% of the MSB population and residential units are located in this area. This area also has the major employment centers. Outside of this area are residential areas that are used more for seasonal or recreational use.

D. Housing Need Areas:

- **Homeownership**: There is a segment of nonfamily households who are making adequate income to afford home ownership. Though they cannot afford to buy a home due to the high cost of living in the MSB affecting savings, lack of a second income through a spouse, debt such as student loans, and difficulty getting a loan due to a lack of down payment. To a lot of people a house is not an investment, but rather, a place to live and raise a family while working. It would be in the best long term interests of the MSB to offer free to low interest loans or grants for down payment assistance on homes to those that can afford a mortgage but lack the resources for a down payment. Such a social investment would encourage stable communities, increase revenues, stimulate the local economy, and reduce societal issues related to poverty and economic struggle (National Association of Realtors 2012).
- **Rental Housing**: Affordable rental options, including multifamily located close to amenities and work locations which reduce the need to drive, should be a priority in the MSB. Rentals that target single parent families and nonfamilies that have an income less than the median are needed.

Figure 52: MSB Residential Comparisons

Total Parcels
38,665
29,924
10,483

Total Acreage
179,694
81,092
21,193

Total Residential Units
45,553
35,021
12,008

Single Family Unit
38,704
28,650
10,153

Mobile Home Unit
1,618
1,339
380

Duplex Unit
1,268
1,222
369

Multifamily Unit
3,378
3,344
1,002

Group Quarters Unit
MSB: 150
Res.: 113
Core: 29

Mobile Home Park Unit
MSB: 435
Res.: 353
Core: 75

■ MSB

■ Major Residential Area

■ Core Planning Area

Figure 53: MSB Residential Density Comparison

Unit Density Per Acre
- MSB: 0.25
- Major Residential Area: 0.43
- Core Planning Area: 0.57

Average Acreage Per Unit
- MSB: 3.94
- Major Residential Area: 2.32
- Core Planning Area: 1.76

Average Acreage Per Parcel
- MSB: 4.65
- Major Residential Area: 2.71
- Core Planning Area: 2.02

Average Units Per Parcel
- MSB: 1.18
- Major Residential Area: 1.17
- Core Planning Area: 1.15

Legend:
- MSB
- Major Residential Area
- Core Planning Area

Figure 54: MSB Residential Parcels & Units by Community

Community	Total Parcels	Total Residential Units
Big Lake	2,667	2,925
Bogard	1,152	1,441
Buffalo Mine - Soapstone	357	442
Butte	1,177	1,393
Chase	214	284
Chickaloon	283	352
Farm Loop	365	418
Fishhook	1,313	1,485
Gateway	1,795	2,071
Glacier View	307	460
Houston	876	994
Knik-Fairview	5,414	5,971
Lake Louise	367	453
Lazy Mtn.	549	660
Meadow Lakes	3,064	3,432
N. Trunk Rd.	124	127
North Lakes	1,706	1,812
Palmer	1,756	2,426
Palmer Fringe	1,463	1,663
Petersville	195	228
Pt. MacKenzie	234	292
Remote Parcels	1,016	1,341
Skwentna	465	589
S. Knik R.	317	347
South Lakes	1,263	1,449
Susitna	1,425	1,661
Sutton	449	528
Talkeetna	676	830
Tanaina	2,606	2,998
Trapper Cr.	523	596
Wasilla	2,374	3,443
Willow	2,170	2,439

Figure 55: MSB Single Family Units by Community

Community	Units
Big Lake	2,737
Bogard	970
Buffalo Mine - Soapstone	392
Butte	1,127
Chase	283
Chickaloon	342
Farm Loop	372
Fishhook	1,378
Gateway	1,739
Glacier View	438
Houston	840
Knik-Fairview	5,151
Lake Louise	451
Lazy Mtn.	583
Meadow Lakes	2,947
N. Trunk Rd.	121
North Lakes	1,626
Palmer	1,622
Palmer Fringe	1,429
Petersville	227
Pt. MacKenzie	278
Remote Parcels	1,297
Skwentna	588
S. Knik R.	317
South Lakes	1,221
Susitna	1,548
Sutton	541
Talkeetna	801
Tanaina	2,483
Trapper Cr.	575
Wasilla	2,041
Willow	2,326

Figure 56: MSB Multifamily & Duplex Units by Community

Community	Duplex Unit	Multifamily Unit
Big Lake	26	46
Bogard	56	263
Buffalo Mine - Soapstone	Duplex: 2	
Butte	60	31
Chase		
Chickaloon		
Farm Loop	Duplex:1	14
Fishhook	34	25
Gateway	44	274
Glacier View	6	
Houston	8	62
Knik-Fairview	199	426
Lake Louise		
Lazy Mtn.	10	8
Meadow Lakes	103	112
N. Trunk Rd.	6	
North Lakes	30	88
Palmer	38	564
Palmer Fringe	54	33
Petersville		
Pt. MacKenzie	Duplex: 2	
Remote Parcels		
Skwentna		
S. Knik R.		
South Lakes	30	169
Susitna	6	6
Sutton	12	10
Talkeetna	Multifamily: 4	
Tanaina	144	334
Trapper Cr.	Duplex: 6	
Wasilla	375	893
Willow	16	16

Figure 57: MSB Mobile Units and Group Quarters by Community

Community	Mobile Home Unit	Group Quarters Unit	Mobile Home Park Unit
Big Lake	100		16
Bogard	152		
Buffalo Mine - Soapstone	48		
Butte	107		68
Chase	Mobile Home Unit: 1		
Chickaloon	10		
Farm Loop	31		
Fishhook	48		
Gateway	14		
Glacier View	16		
Houston	83		Mobile Home Park: 1
Knik-Fairview	195		
Lake Louise	Mobile Home Unit: 2		
Lazy Mtn.	23	36	
Meadow Lakes	235		35
N. Trunk Rd.			
North Lakes	68		
Palmer	33	28	141
Palmer Fringe	43	29	75
Petersville	Mobile Home Unit: 1		
Pt. MacKenzie	12		
Remote Parcels	22	Group Quarters: 1	21
Skwentna	Mobile Home Unit: 1		
S. Knik R.	30		
South Lakes	29		
Susitna	56		45
Sutton	55		
Talkeetna	25		
Tanaina	37		
Trapper Cr.	15		
Wasilla	61	56	17
Willow	65		16

■ Mobile Home Unit
■ Group Quarters Unit
■ Mobile Home Park Unit

Figure 58: MSB Average Residential Units and Parcel Acreage by Community

Community	Average Acreage Per Parcel	Average Acreage Per Unit
Big Lake	3.79	3.46
Bogard	1.82	1.46
Buffalo Mine - Soapstone	5.94	4.80
Butte	4.29	3.63
Chase	47.73	35.97
Chickaloon	16.67	13.41
Farm Loop	6.20	5.42
Fishhook	5.53	4.89
Gateway	1.85	1.61
Glacier View	15.27	10.19
Houston	3.46	3.05
Knik-Fairview	2.73	2.47
Lake Louise	4.67	3.78
Lazy Mtn.	9.01	7.50
Meadow Lakes	3.26	2.91
N. Trunk Rd.	3.73	3.65
North Lakes	1.29	1.22
Palmer	0.40	0.29
Palmer Fringe	1.73	1.52
Petersville	5.17	4.43
Pt. MacKenzie	55.44	44.43
Remote Parcels	12.98	9.83
Skwentna	10.55	8.33
S. Knik R.	4.34	3.96
South Lakes	1.72	1.50
Susitna	11.31	9.70
Sutton	9.63	8.19
Talkeetna	5.55	4.52
Tanaina	2.23	1.94
Trapper Cr.	8.55	7.50
Wasilla	1.11	0.77
Willow	6.70	5.96

Figure 59: MSB Unit Density and Units Per Parcel by Community

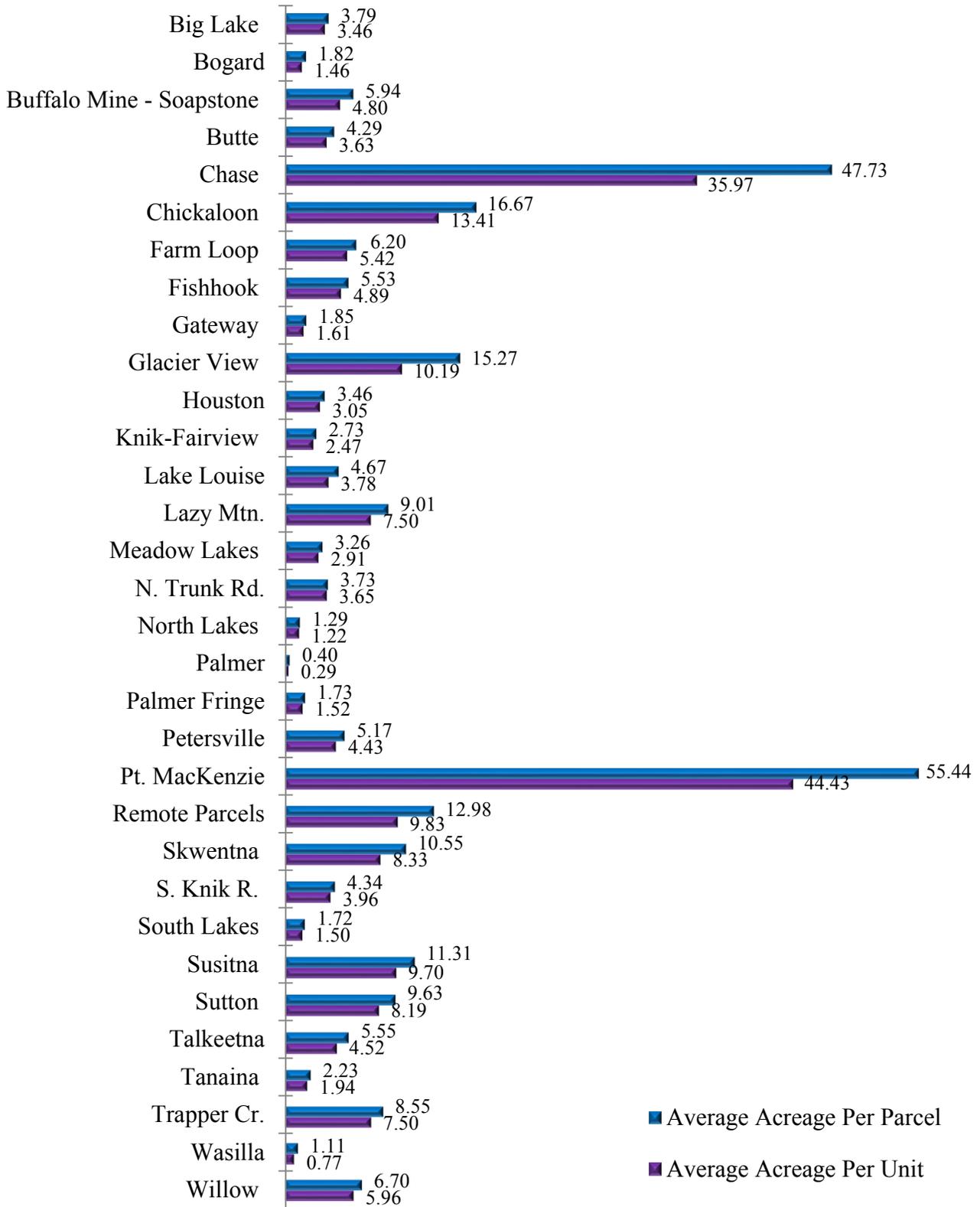| Community	Average Units Per Parcel	Unit Density Per Acre
Big Lake	1.10	0.29
Bogard	1.25	0.69
Buffalo Mine - Soapstone	1.24	0.21
Butte	1.18	0.28
Chase	1.33	0.03
Chickaloon	1.24	0.07
Farm Loop	1.15	0.18
Fishhook	1.13	0.20
Gateway	1.15	0.62
Glacier View	1.50	0.10
Houston	1.13	0.33
Knik-Fairview	1.10	0.40
Lake Louise	1.23	0.26
Lazy Mtn.	1.20	0.13
Meadow Lakes	1.12	0.34
N. Trunk Rd.	1.02	0.27
North Lakes	1.06	0.82
Palmer	1.38	3.48
Palmer Fringe	1.14	0.66
Petersville	1.17	0.23
Pt. MacKenzie	1.25	0.02
Remote Parcels	1.32	0.10
Skwentna	1.27	0.12
S. Knik R.	1.09	0.25
South Lakes	1.15	0.67
Susitna	1.17	0.10
Sutton	1.18	0.12
Talkeetna	1.23	0.22
Tanaina	1.15	0.52
Trapper Cr.	1.14	0.13
Wasilla	1.45	1.30
Willow	1.12	0.17

Figure 60: MSB Residential Average Acreage and Property Values Comparison

	Average Acreage Per Unit	Average Property Value
MSB	3.94	$184,111
Major Residential Area	2.32	$206,840
Core Planning Area	1.76	$238,429
Big Lake	3.46	$158,525
Bogard	1.46	$219,744
Buffalo Mine - Soapstone	4.80	$154,098
Butte	3.63	$223,185
Chase	35.97	$39,988
Chickaloon	13.41	$89,371
Farm Loop	5.42	$239,838
Fishhook	4.89	$234,750
Gateway	1.61	$269,096
Glacier View	10.19	$128,522
Houston	3.05	$119,579
Knik-Fairview	2.47	$208,786
Lake Louise	3.78	$56,050
Lazy Mtn.	7.50	$204,033
Meadow Lakes	2.91	$171,900
N. Trunk Rd.	3.65	$288,436
North Lakes	1.22	$217,505
Palmer	0.29	$185,935
Palmer Fringe	1.52	$252,398
Petersville	4.43	$43,247
Pt. MacKenzie	44.43	$168,054
Remote Parcels	9.83	$93,074
Skwentna	8.33	$52,984
S. Knik R.	3.96	$115,742
South Lakes	1.50	$257,891
Susitna	9.70	$90,441
Sutton	8.19	$122,508
Talkeetna	4.52	$112,801
Tanaina	1.94	$222,051
Trapper Cr.	7.50	$60,055
Wasilla	0.77	$226,035
Willow	5.96	$130,459

Legend:
— Average Property Value
— Average Acreage Per Unit

Figure 61: MSB Major Residential Area Housing Map

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