Growth Trends and Projections

Archuleta County Growing Water Smart

January 28, 2019

RPI
consulting

Archuleta County Housing Units & Population 1985 - 2017

13,316

9327

4847

3379

Population — Housing Units
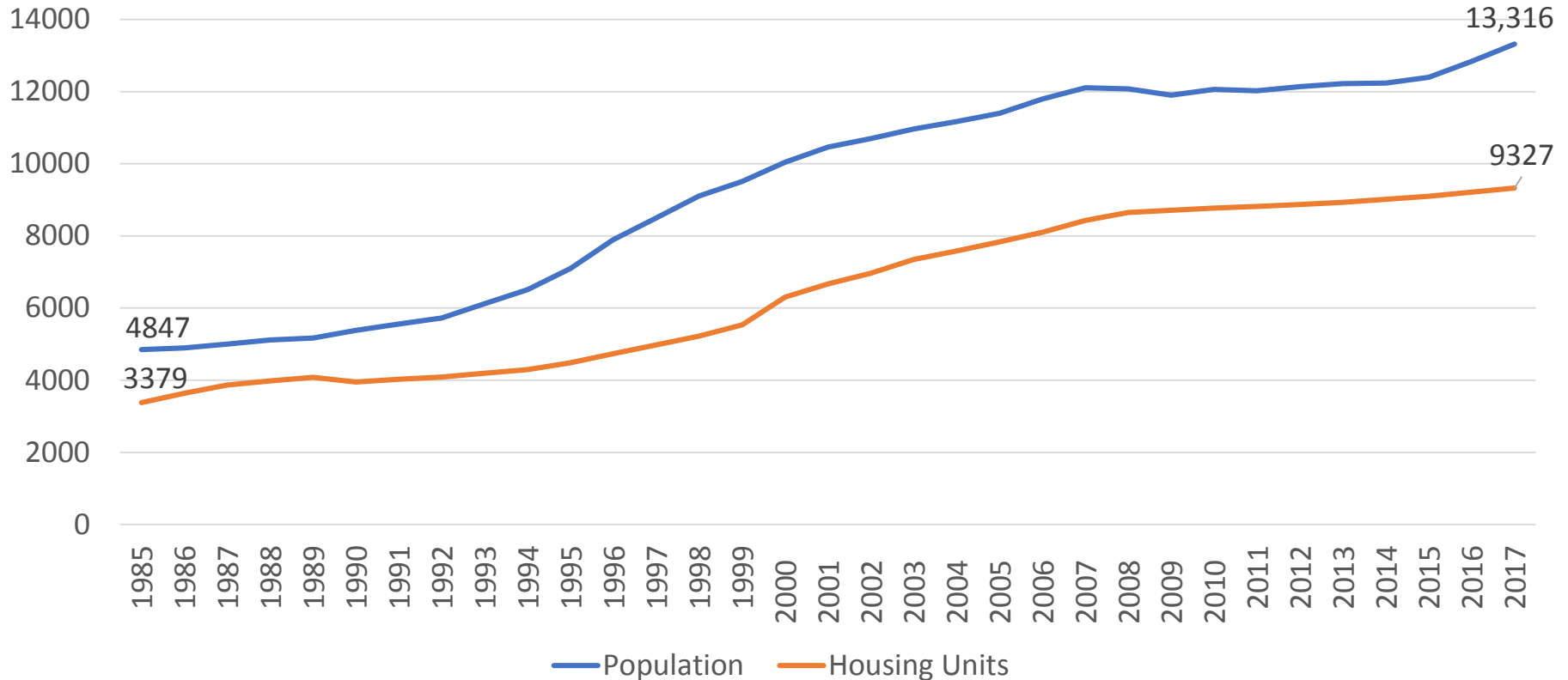
Sources: US Census, DOLA

- Housing unit trend mirrors population trend
- Two periods of slowed growth (late 80s and 2008-2012)
- Almost 2 decades of high growth (1991-2008)
- Steady moderate growth since 2013

Rate of Change – Archuleta Housing Units and Population

	1985	1990	1995	2000	2005	2010	2015	2017
Population	4,847	5,382	7,098	10,042	11,402	12,060	12,401	13,316
Average Annual Percent Change for 5 Year Period		2.21%	6.38%	8.30%	2.71%	1.15%	0.57%	3.69%
Housing Units	3,379	3,951	4,483	6,302	7,836	8,772	9,100	9,327
Average Annual Percent Change for 5 Year Period		3.39%	2.69%	8.12%	4.87%	2.39%	0.75%	1.25%

Sources: US Census, DOLA

- Housing units grew faster than population 85-90, 2000-05, 2005-10
- Population grew faster than housing units 1990-1995, 2015-2017
- Total growth for both housing units and population since 1985 = 175%
- Trends suggest a cycle of residential construction and absorption.

Archuleta County Historic Population and Future Population
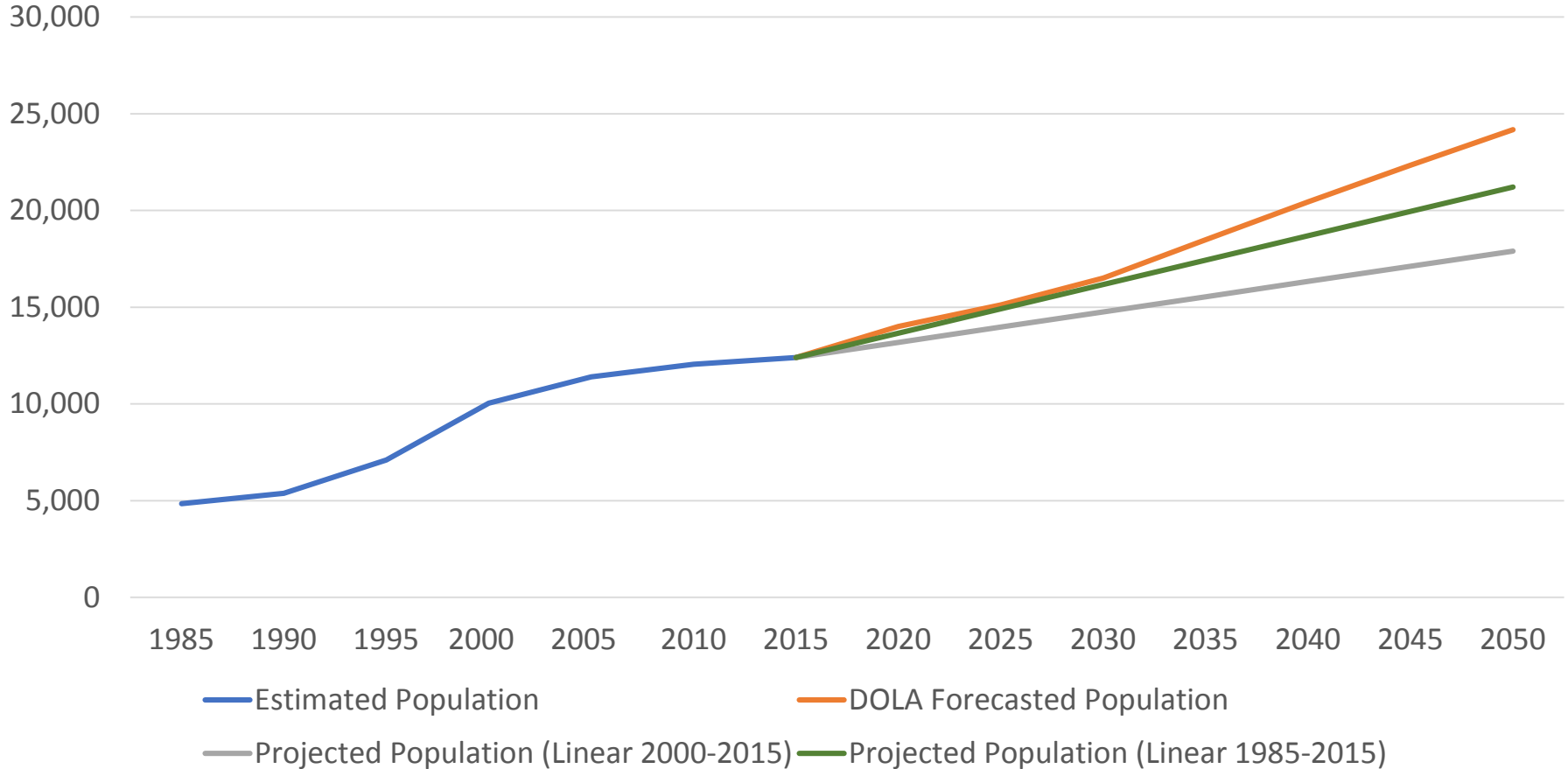
Sources: US Census, DOLA, RPI Projections

- DOLA forecasts exceed projected population based on 1985-2015, which include the unprecedented growth in the 1990s

# 2000 to Most Current: The Reference Period

- 2000 to current had all the ingredients:
  - Dot com bust (2001)
  - 2000s growth
  - Great Recession
  - Recovery
- Recent history matters when projecting forward
- Recent data is more complete and accurate

Archuleta County Housing Units & Population (2000 - 2017)
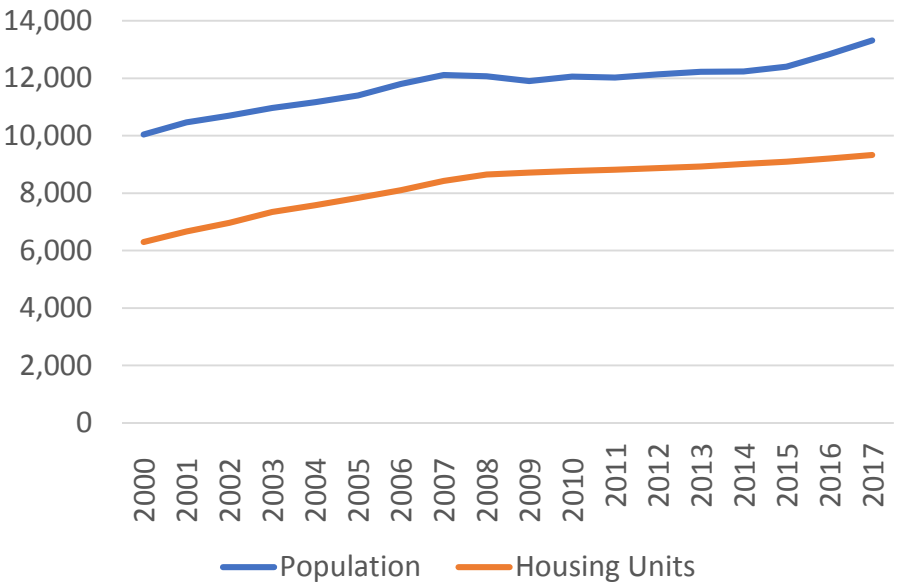
Town of Pagosa Springs (TOPS) Housing Units & Population (2000 - 2017)

Sources: US Census, DOLA
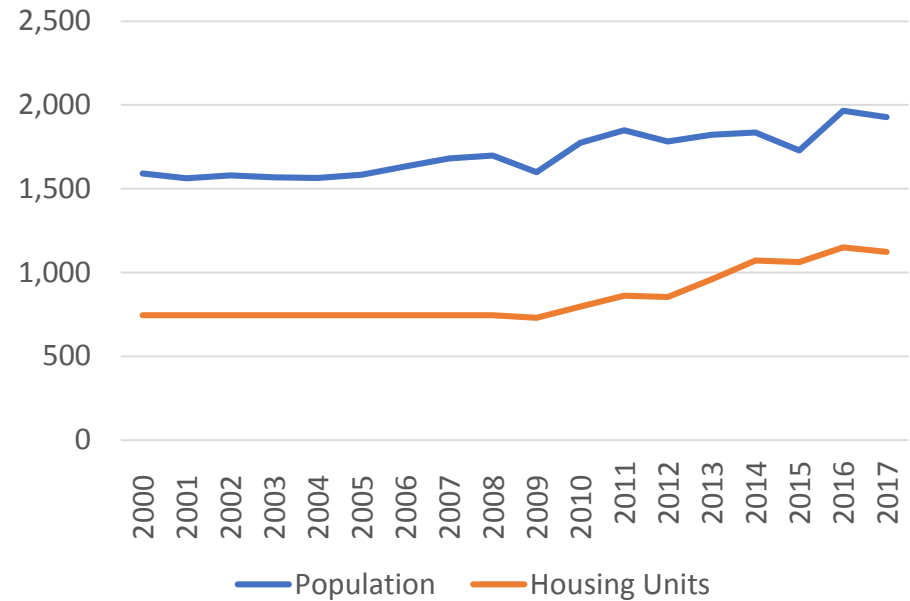
Indicator	Geography	Start Year	End Year	Start Value	End Value	Percent Change 2000 - 2017	Average New Annually	Average Annual Change
Housing Units	Archuleta County	2000	2017	6,302	9,327	48.00%	178	2.82%
Housing Units	Town of Pagosa Springs	2000	2017	746	1,124	50.67%	22	2.98%
Population	Archuleta County	2000	2017	10,042	13,316	32.60%	193	1.92%
Population	Town of Pagosa Springs	2000	2017	1,591	1,927	21.12%	20	1.24%

- Housing units grew more quickly than population 2000-2017 because of construction pace in 2000-2008.

Housing Occupancy Trends

Archuleta County Occupancy Status	2000	2010	2012	2017
Occupied	3,980	5,267	4,536	5,553
Vacant	2,232	3,495	4,206	3,568
Surveyed Housing Units	6,212	8,762	8,742	9,121
Percent Occupied	64.07%	60.11%	51.89%	60.88%

Archuleta County Average Household Size	2000	2010	2012	2017
Household Size (Total)	2.47	2.27	2.64	2.24

Source: US Census

- Vacancy hovers around 40%, includes vacation homes
- Tight housing market in 2017 points towards vacation homes as most of the vacant units.
- Household size fell between 2000-2010 (decennial census).
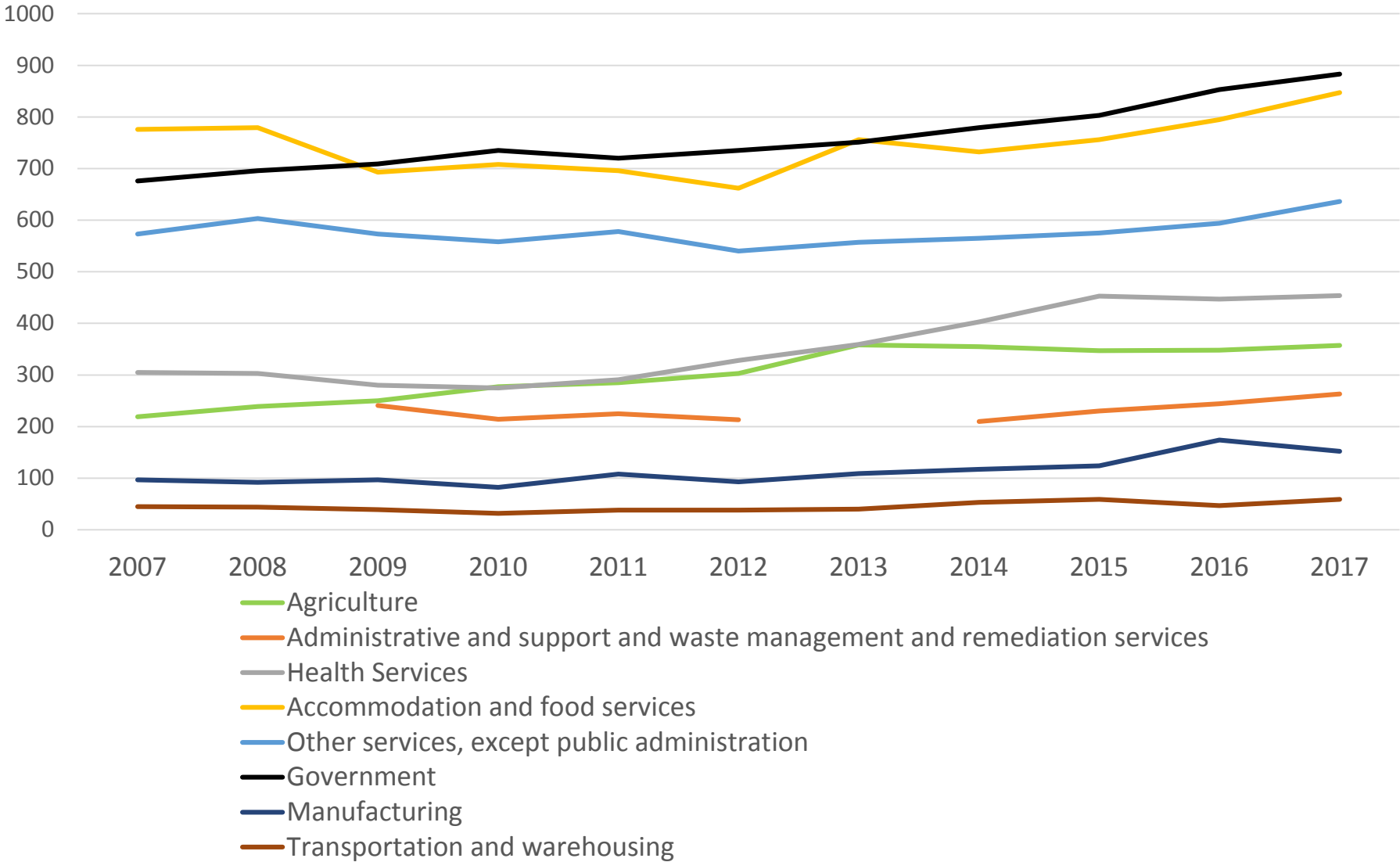
Archuleta County Total Jobs & Population (2007 - 2017)
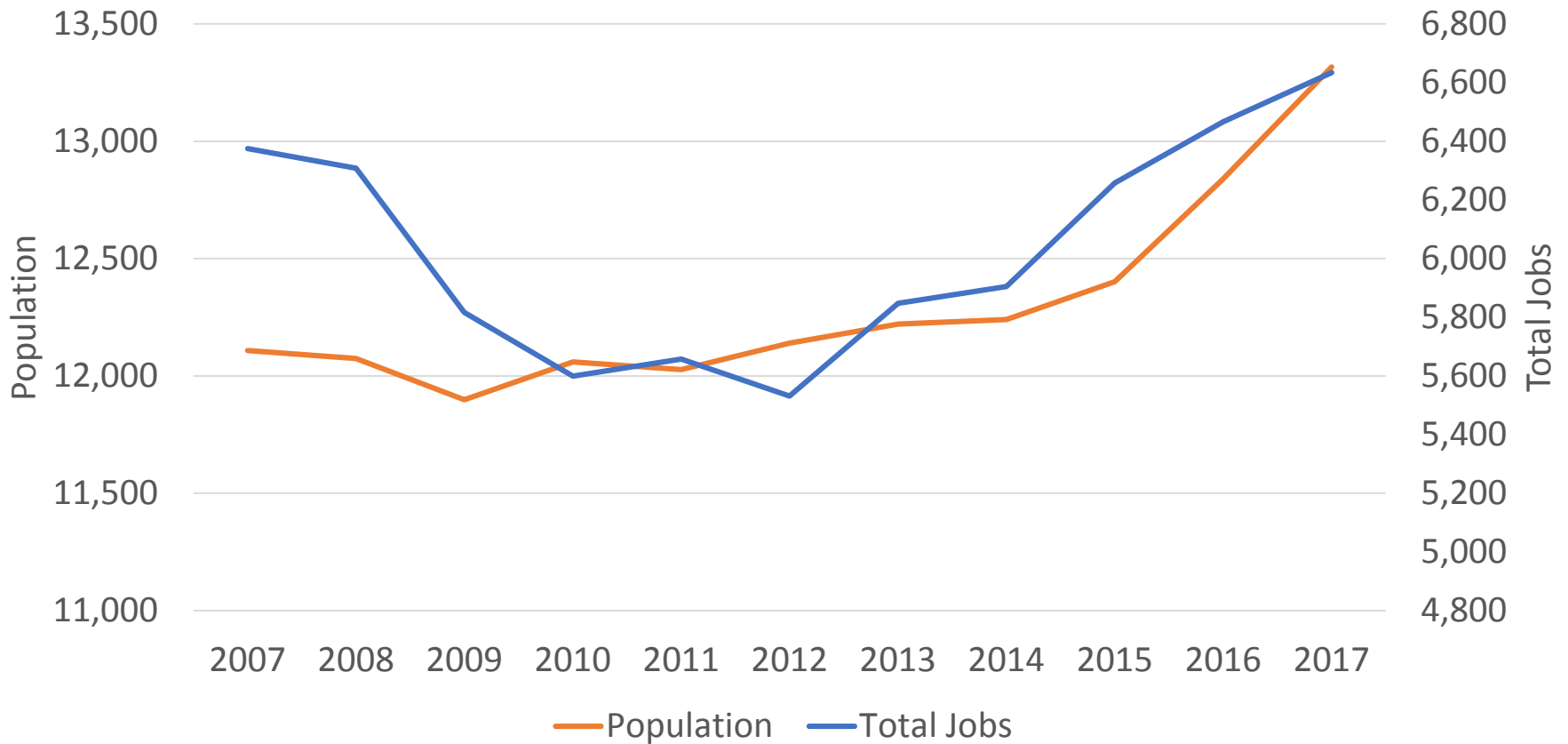
Source: DOLA

- Population has grown with jobs during recovery
- Population was in decline 2000-2011

Job Growth Prospects

Archuleta County Growing Sectors

Legend:
- Agriculture
- Administrative and support and waste management and remediation services
- Health Services
- Accommodation and food services
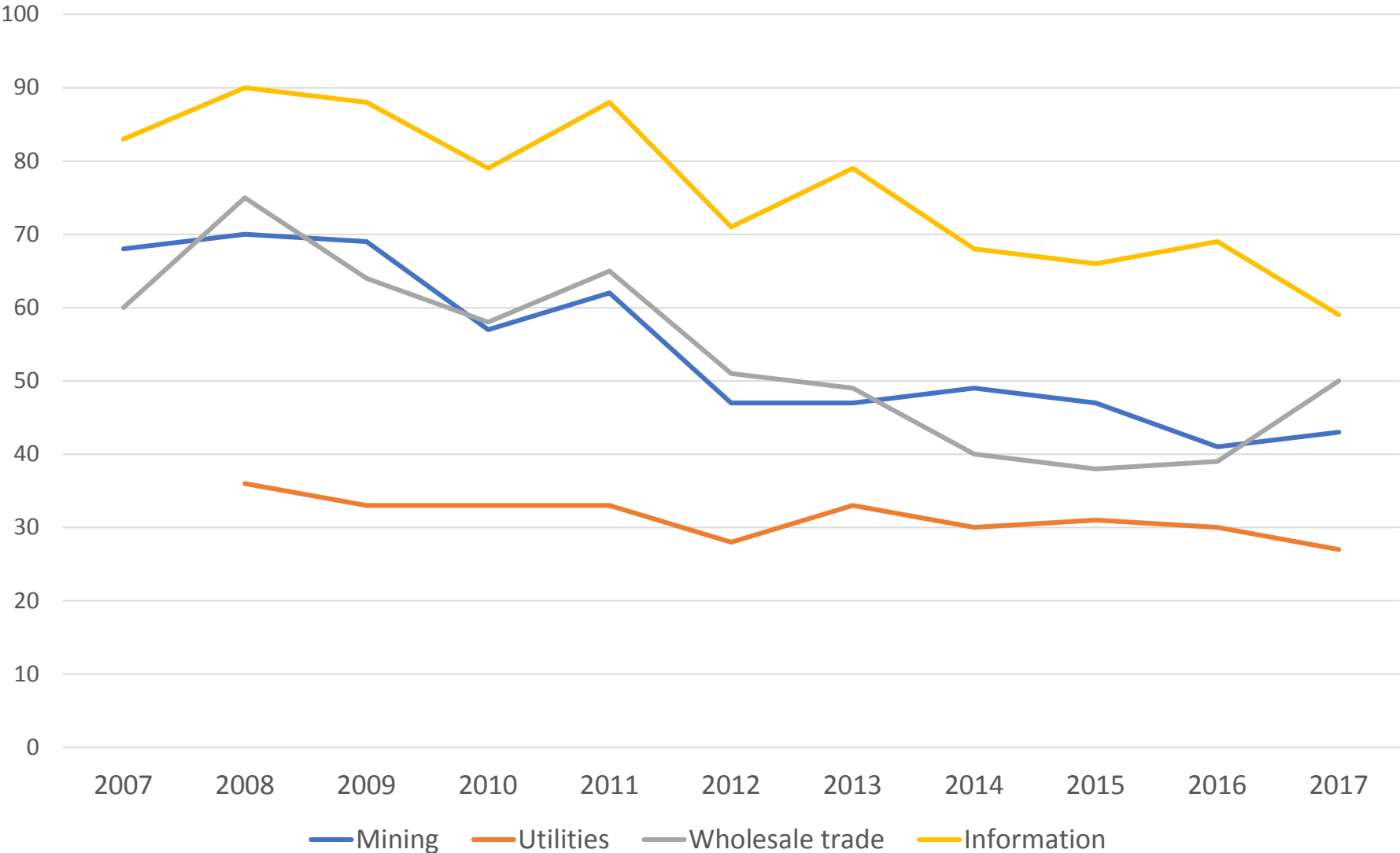- Other services, except public administration
- Government
- Manufacturing
- Transportation and warehousing

Source: US Bureau of Economic Analysis

Steady losses in smaller sectors

Archuleta County Declining Job Sectors

— Mining — Utilities — Wholesale trade — Information

Source: US Bureau of Economic Analysis

Some key sectors are flat

Archuleta County Stagnant Job Sectors

Legend:
- Finance activities
- Real estate
- Professional, scientific and technical services
- Management of companies and enterprises
- Education
- Construction
- Retail Trade
- Arts, entertainment and recreation
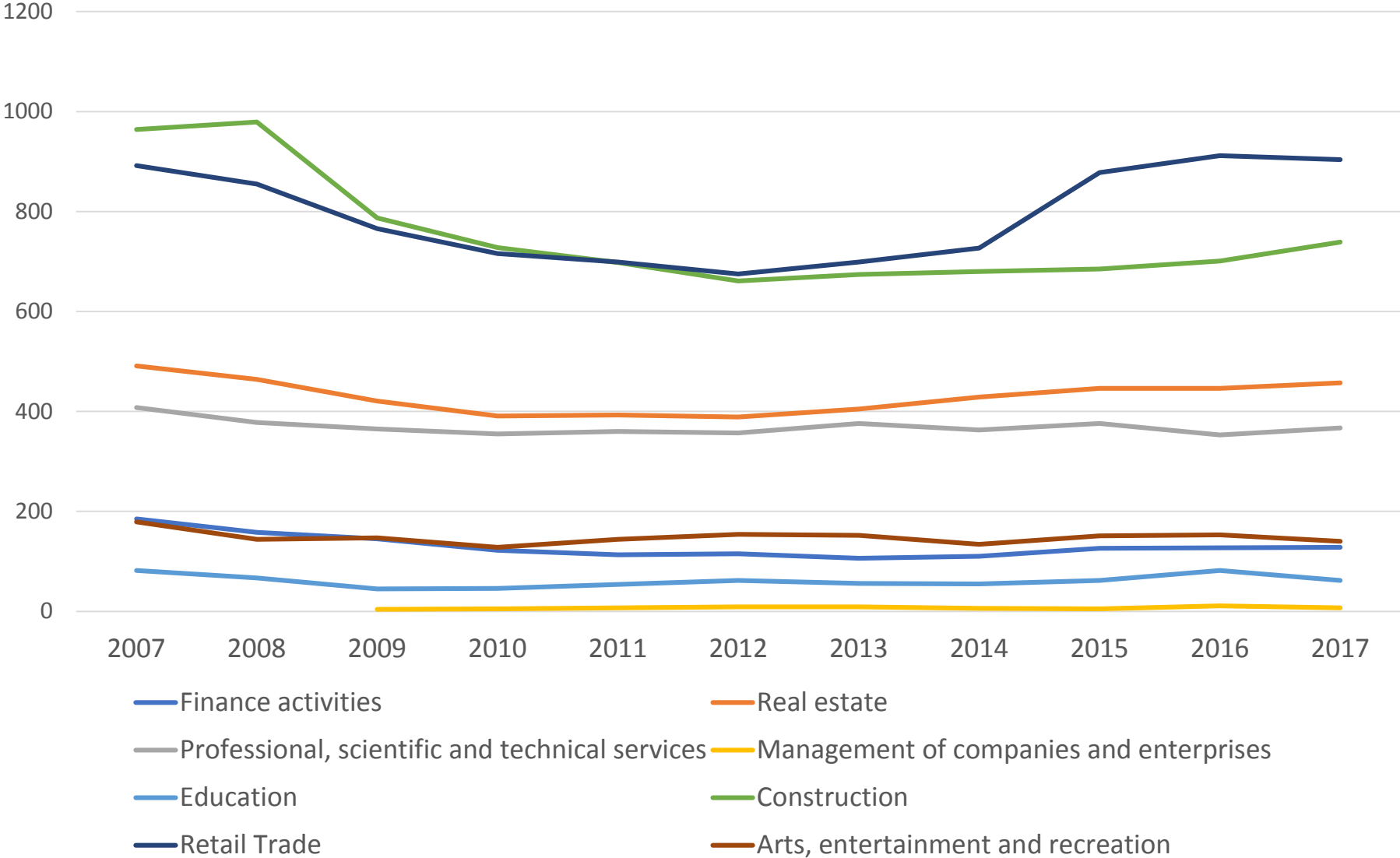
Source: US Bureau of Economic Analysis

What do we know so far?

- DOLA population forecasts > projections of past trends
- Growth–flat cycles, not boom-bust
- Cycles of housing construction and absorption
- Housing vacancy around 40% since 2000 ≈ 2nd homes
- Jobs can go away but most people stay here
- Jobs and population grow concurrently
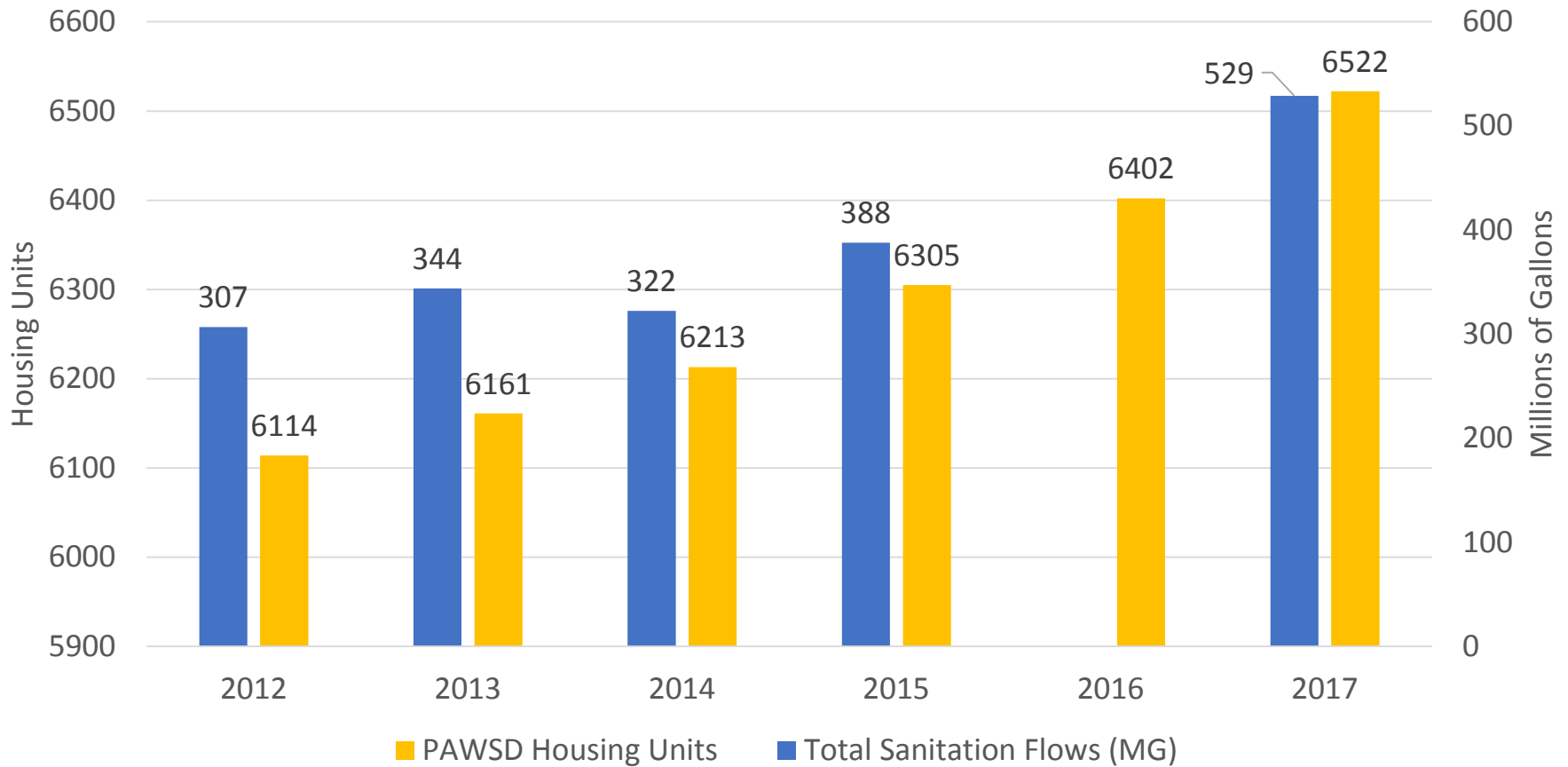- Positive trend in some sectors, some key sectors flat

PAWSD & Town of Pagosa Springs (TOPS) Trend Analysis

PAWSD & TOPS Total Housing Units
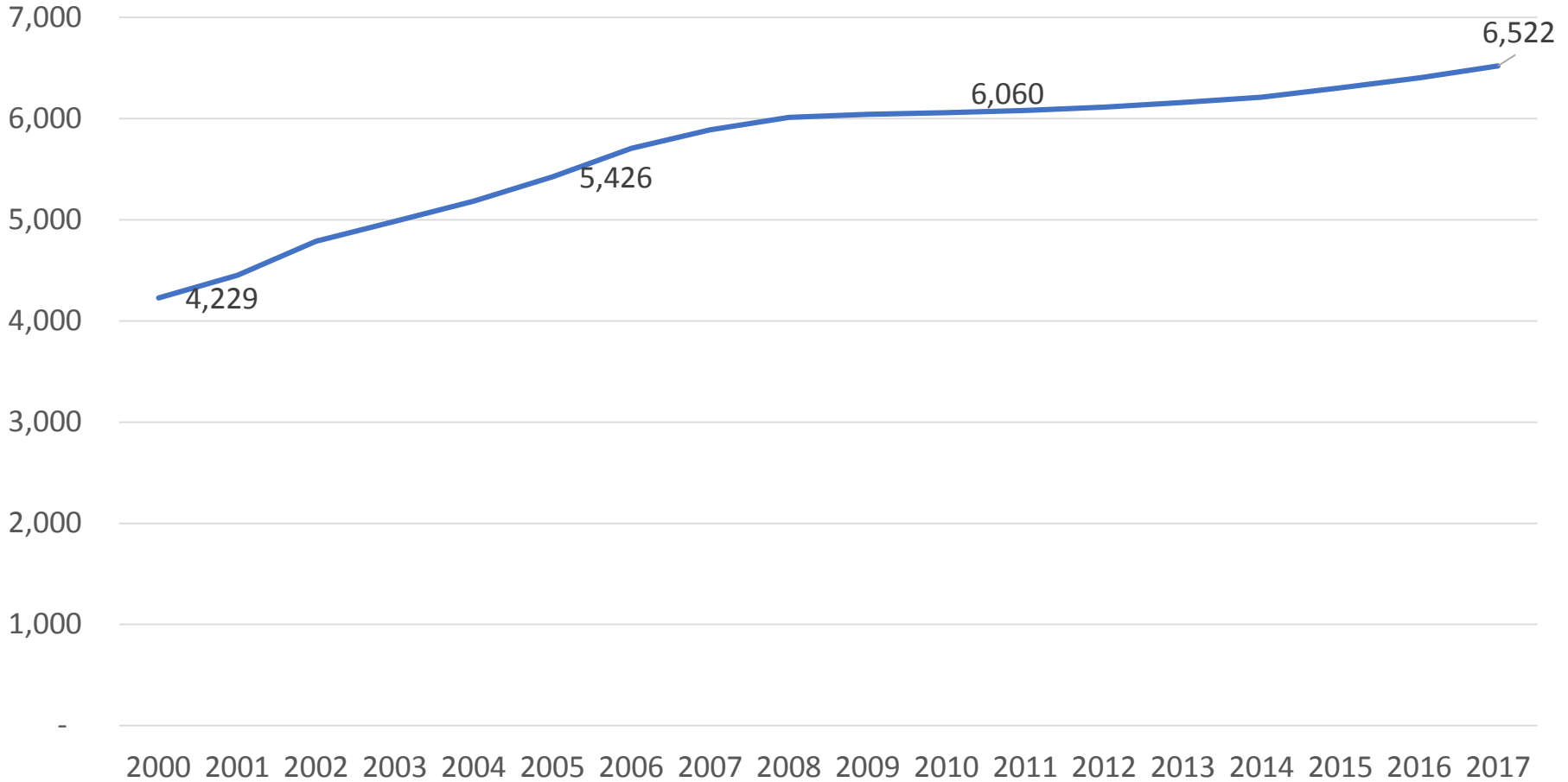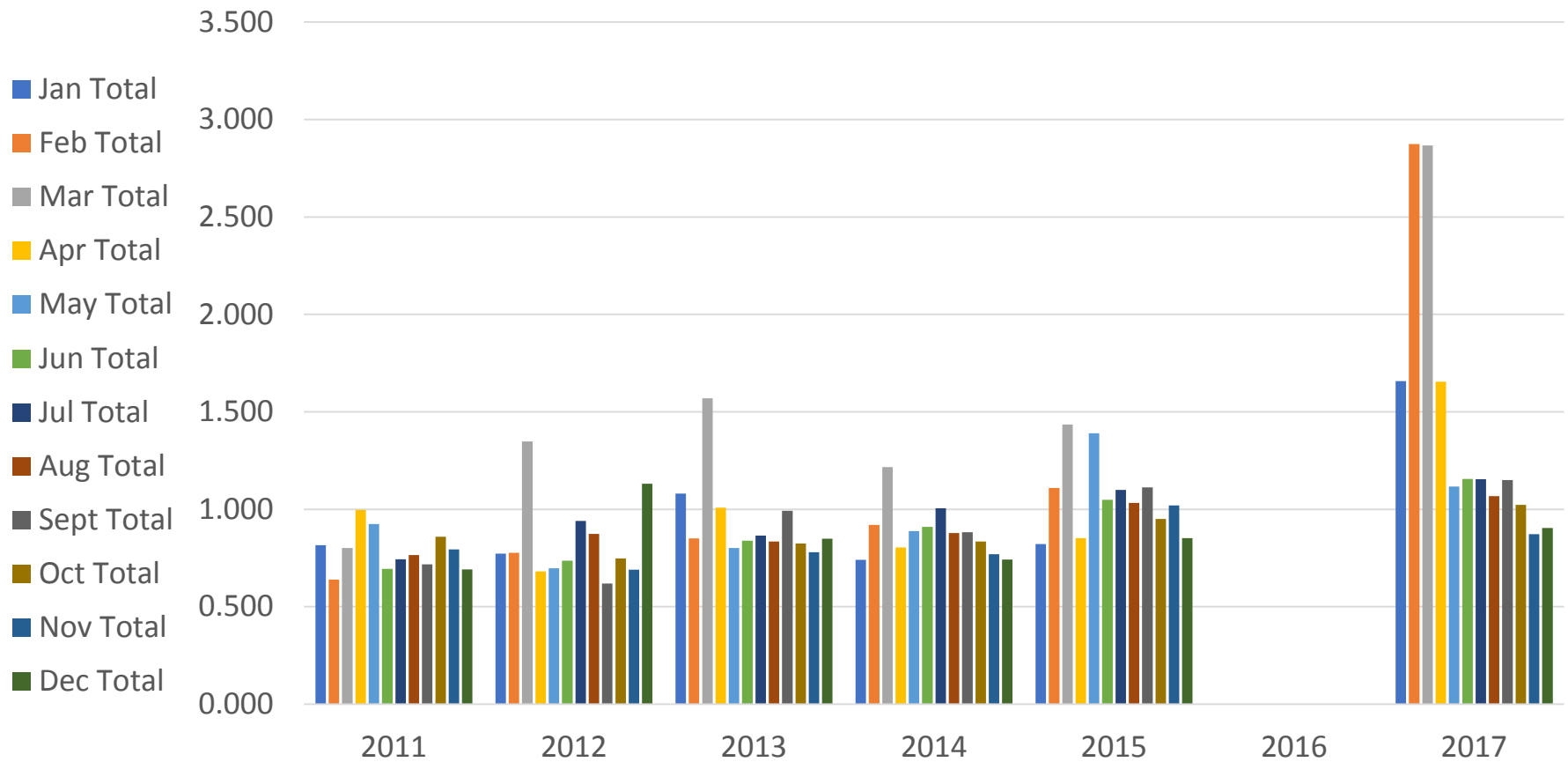

Source: Archuleta County Assessor

PAWSD & TOPS Sanitation Flows and PAWSD & TOPS Housing Units

Sources: Archuleta County Assessor, PAWSD, Town of Pagosa Springs

- Sanitation flows are an indicator of activity
- Housing units and flows have grown concurrently since 2014
- Includes both treatment plants, 2016 data incomplete
- Spike in 2017 sanitation flows is related to pumping activities

Monthly Sanitation Flows (MGD) PAWSD & TOPS
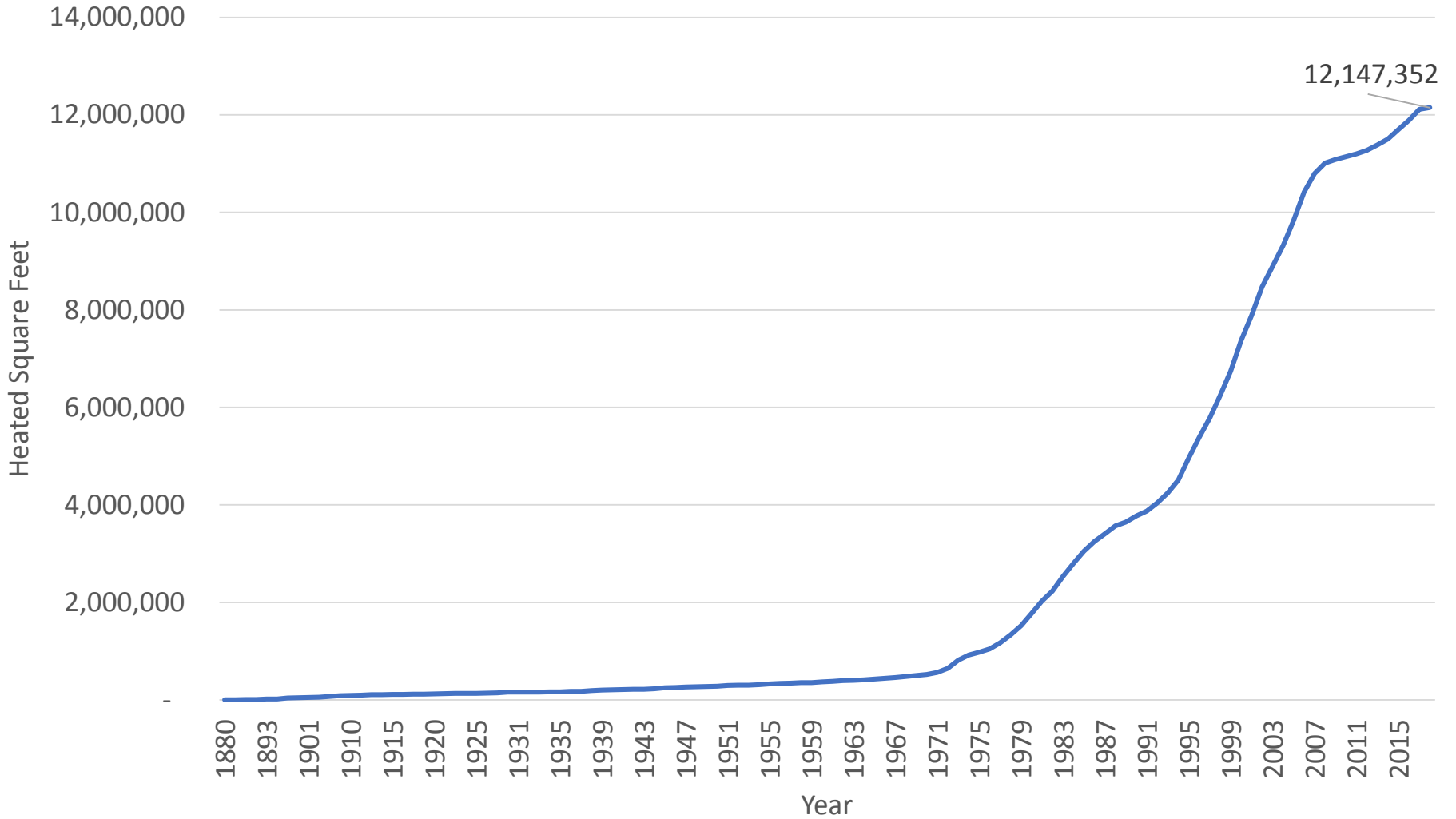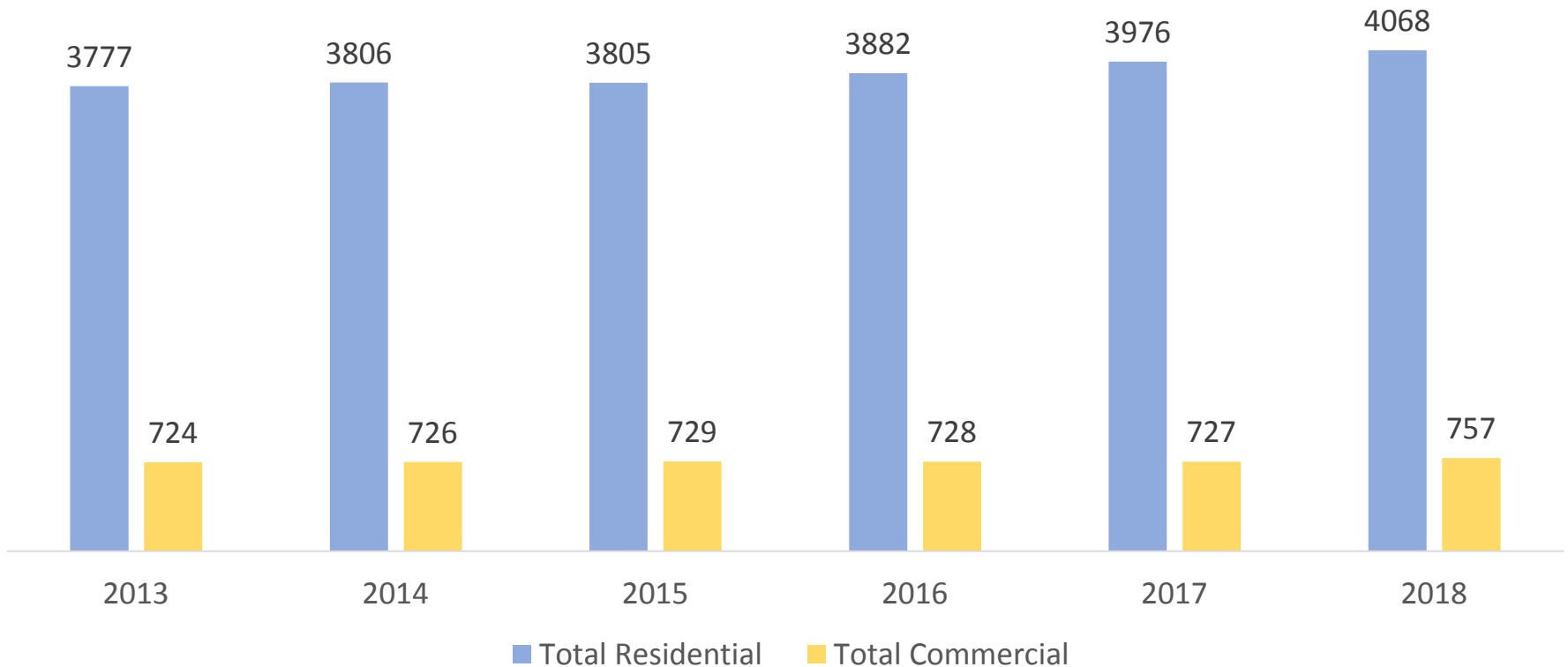
Sources: PAWSD, Town of Pagosa Springs

- Big spikes in early-mid spring likely infiltration.
- Obvious peak in July/August/September.
- Abnormally high infiltration/spike in Feb. and March 2017 due to pumping activities associated with pond maintenance

Cumulative Total Residential Square Feet – PAWSD & TOPS

12,147,352

Heated Square Feet

Year

Sources: Archuleta County Assessor

PAWSD & TOPS Total Sanitation Accounts by Type

Year	Total Residential	Total Commercial
2013	3777	724
2014	3806	726
2015	3805	729
2016	3882	728
2017	3976	727
2018	4068	757

■ Total Residential   ■ Total Commercial

Sources: PAWSD, Town of Pagosa Springs

- Modest increase in residential accounts
- Recent growth (2018) in previously flat commercial accounts
- All sanitation flows from TOPS register as 1 account

PAWSD & TOPS Peak Season Average Sanitation Flows
(MGD, May - August)

Year	Value
2011	0.782
2012	0.812
2013	0.835
2014	0.921
2015	1.143
2016	
2017	1.124
2018	
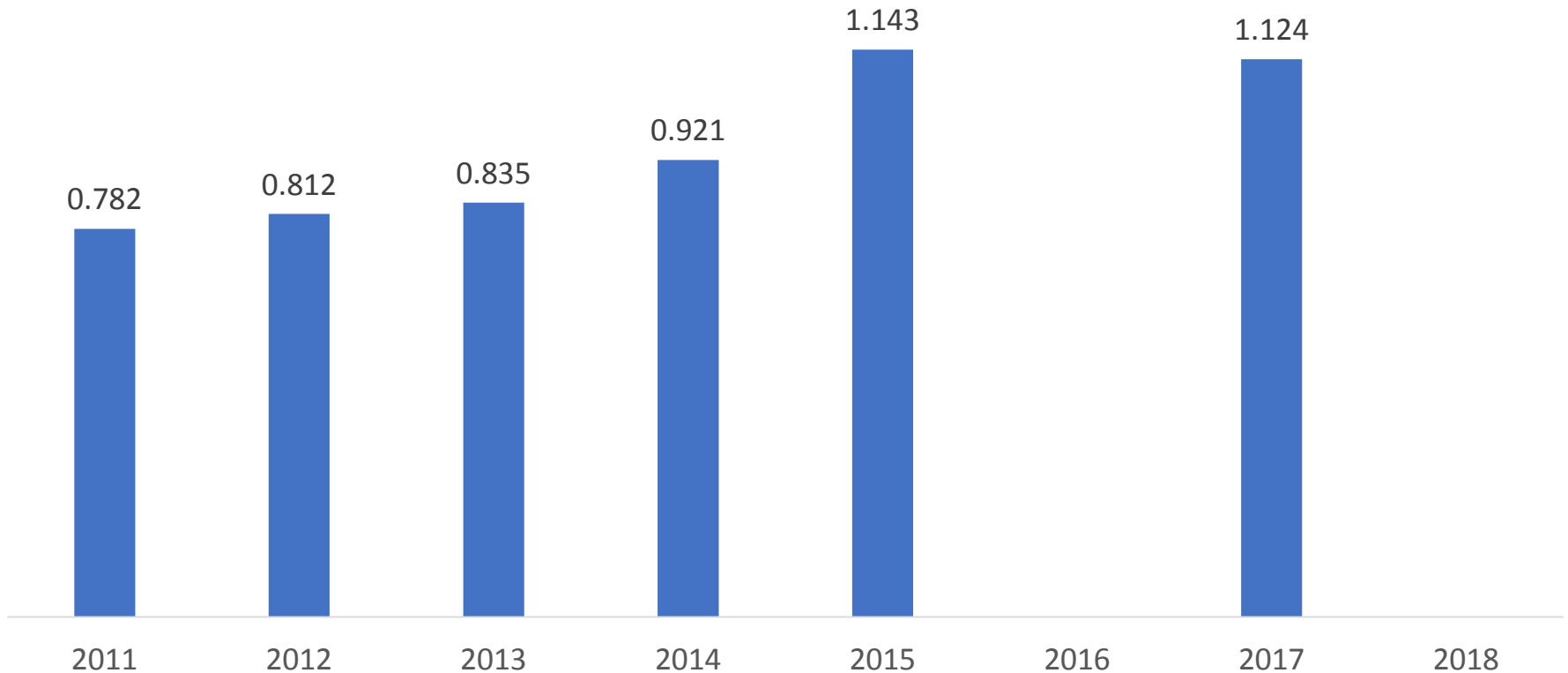
Sources: PAWSD, Town of Pagosa Springs

- Peak season flows have steadily increased since 2011
- Peak season flows include less infiltration
- Peak season is a better indication of flow trends because infiltration and 2017 pumping activities are not included

Residential Listings and Sales – Archuleta County
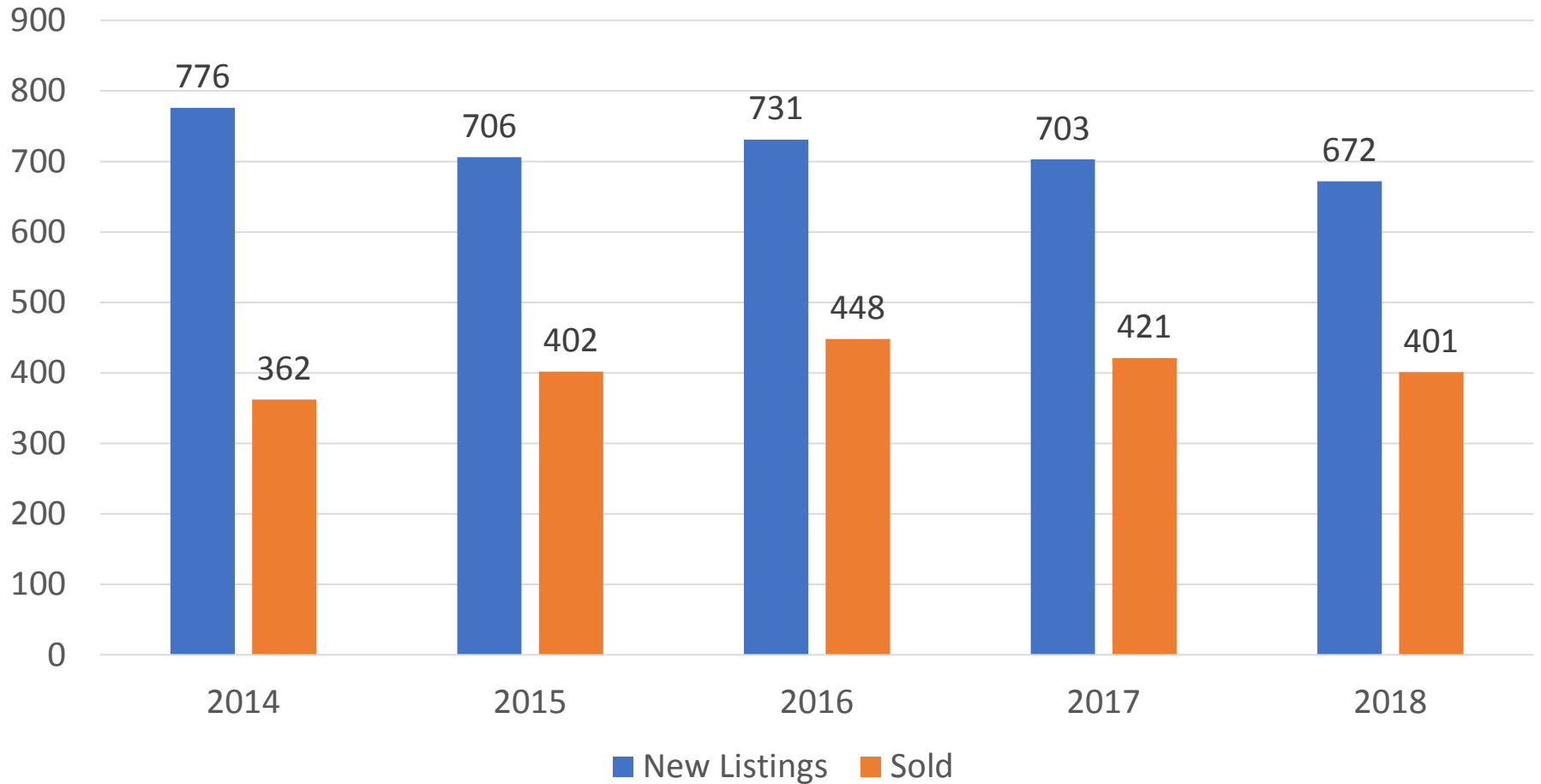
Sources: Colorado Real Estate Network

- Listings and sales steady since 2014
- Indicates that supply is holding in the for sale market
- Downward trend for listings beginning in 2017?

PAWSD & TOPS Recent Trend Analysis

Indicator	Geography	Start Year	End Year	Start Value	End Value	Percent Change 2012 - 2017	Average New Annually	Average Annual Change
Housing Units	PAWSD & TOPS	2012	2017	6,114	6,522	6.7%	82	1.3%
Sanitation Flows (Annual MG)	PAWSD & TOPS	2012	2017	307	529	72.5%	44	14.5%
Sanitation Flows (Peak Season MGD)	PAWSD & TOPS	2012	2017	0.812	1.124	38.4%	0.062	7.7%
Total Sanitation Accounts	PAWSD & TOPS	2013	2017	4,501	4,703	N/A	50.5	1.1%
Jobs	Archuleta County	2012	2017	5,531	6,634	19.9%	221	4.0%
Total Personal Income	Archuleta County	2012	2017	409,227	531,858	30.0%	24,526	6.0%
Room Nights	Archuleta County	2012	2017	41,754	66,680	59.7%	4,985	11.9%

Sources: Archuleta County Assessor, PAWSD, Town of Pagosa Springs, DOLA, US Census, Visit Pagosa Springs

- Increase in peak season sanitation flows (MGD) exceeds most indicators

- Sanitation accounts and housing units increasing at about the same rate

- Note- all sanitation flows from TOPS register as 1 sanitation account

- Existing housing units are being further activated/utilized

Estimated Lodging Units 2017

	Town	Unincorporated County	Entire County
Hotel / Motel	375	166	541
B&B's	0	19	19
Cabins	37	15	52
Vacation Rentals	100	500	600
Total	512	700	1,212

Sources: Pagosa Springs Area Tourism Board

- About 600 traditional lodging units, most are in TOPS
- Estimated 600 vacation rentals, most in the uninc. county.
- Assessor search showed no new lodging structures in recent years

Total Lodging Sales Archuleta County

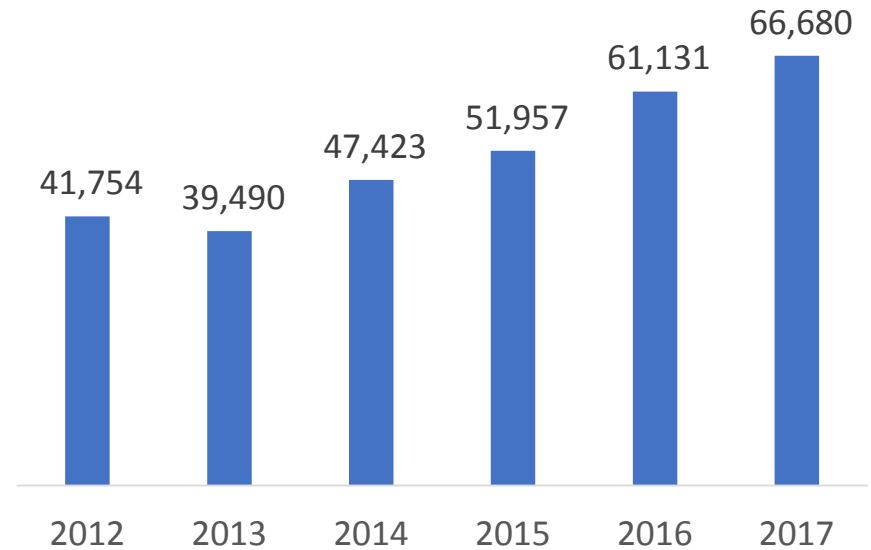| Year	Sales
2012	$5,010,449
2013	$4,738,826
2014	$5,690,701
2015	$6,234,798
2016	$7,335,690
2017	$8,001,632
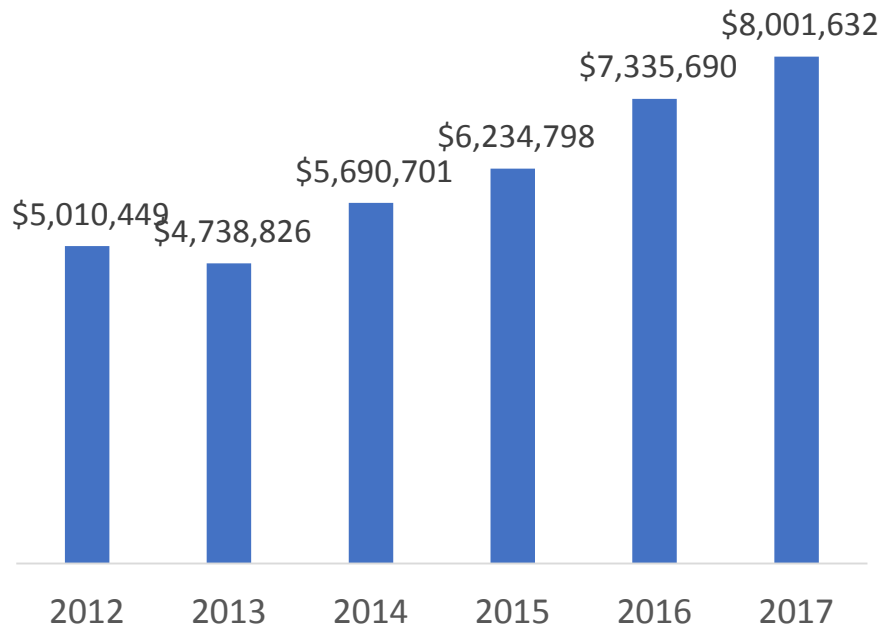
Archuleta County Calculated Room Nights

| Year	Room Nights
2012	41,754
2013	39,490
2014	47,423
2015	51,957
2016	61,131
2017	66,680

Sources: Pagosa Springs Area Tourism Board

- (Calculated) room nights increased 60% since 2012
- About 5,000 room nights added each year or approximately 9,000 overnight guest stays.
- Visitor's center sees over 80,000 guests each year
- Existing lodging base is being further activated, RBOs growing

Projection inputs and observations

- Trends during 2000-2017 make it a reasonable projection period
- PAWSD sanitation flows exceed housing unit growth 2012-2017
- County housing unit growth exceeded population growth 2000-2008
- Existing capacity in housing stock is being absorbed
- Room nights have grown far more than lodging base
- Visitors are filling existing lodging capacity, new capacity in RBOs
- County pop. and housing increased the same % between 1985-2017
- Occupancy rates remained stable between 2000-2017
- New PAWSD accounts 2013-2018 were mostly residential accounts
- All flows from TOPS register as one (1) sanitation account
- PAWSD & TOPS housing units = primary basis for growth projections

PAWSD & TOPS Residential Units
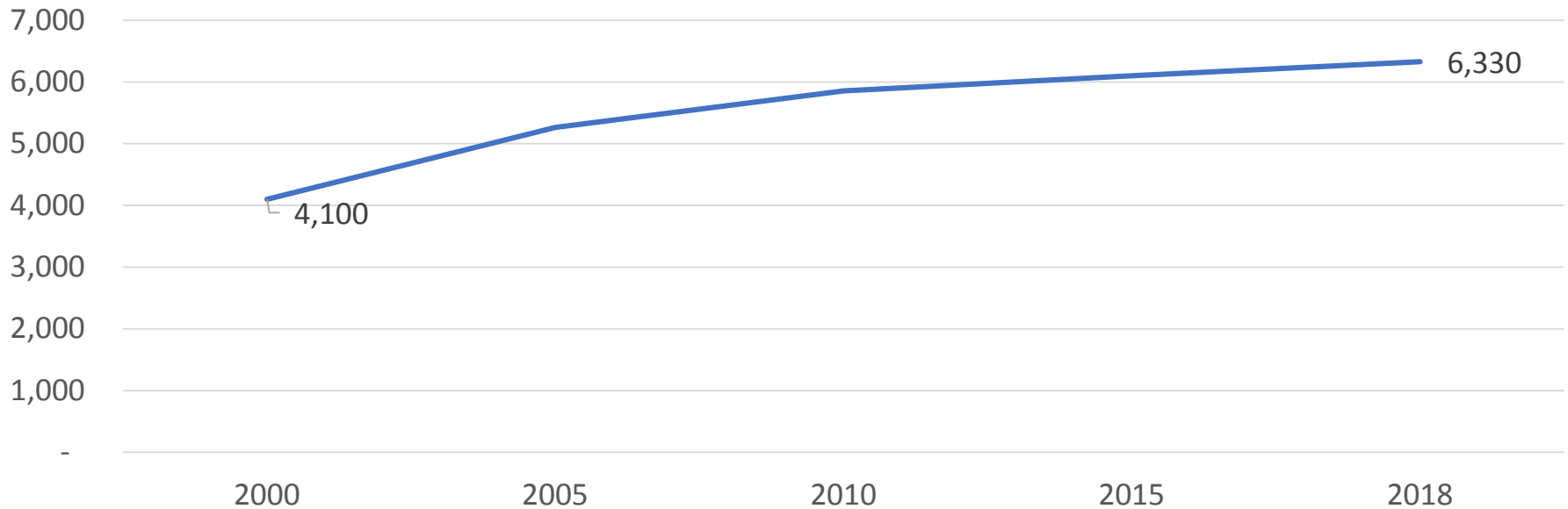
Indicator	Geography	Start Year	End Year	Start Value	End Value	Percent Change for Period	Average New Annually
Population	Archuleta County	1985	2017	4,847	13,316	174.73%	265
Housing Units	Archuleta County	1985	2017	3,379	9,327	176.03%	186
Housing Units	Archuleta County	2000	2017	6,302	9,327	48.00%	178
Housing Units	PAWSD	2000	2018	4,100	6,330	54.39%	124
Housing Units	Town of Pagosa Springs	2000	2017	746	1,124	50.67%	22
Population	Archuleta County	2000	2017	10,042	13,316	32.60%	193

Sources: Archuleta County Assessor, PAWSD, Town of Pagosa Springs, DOLA, US Census

- Housing unit growth in PAWSD & TOPS @ 124 units/year
- County housing units and PAWSD & TOPS units grew at similar rates
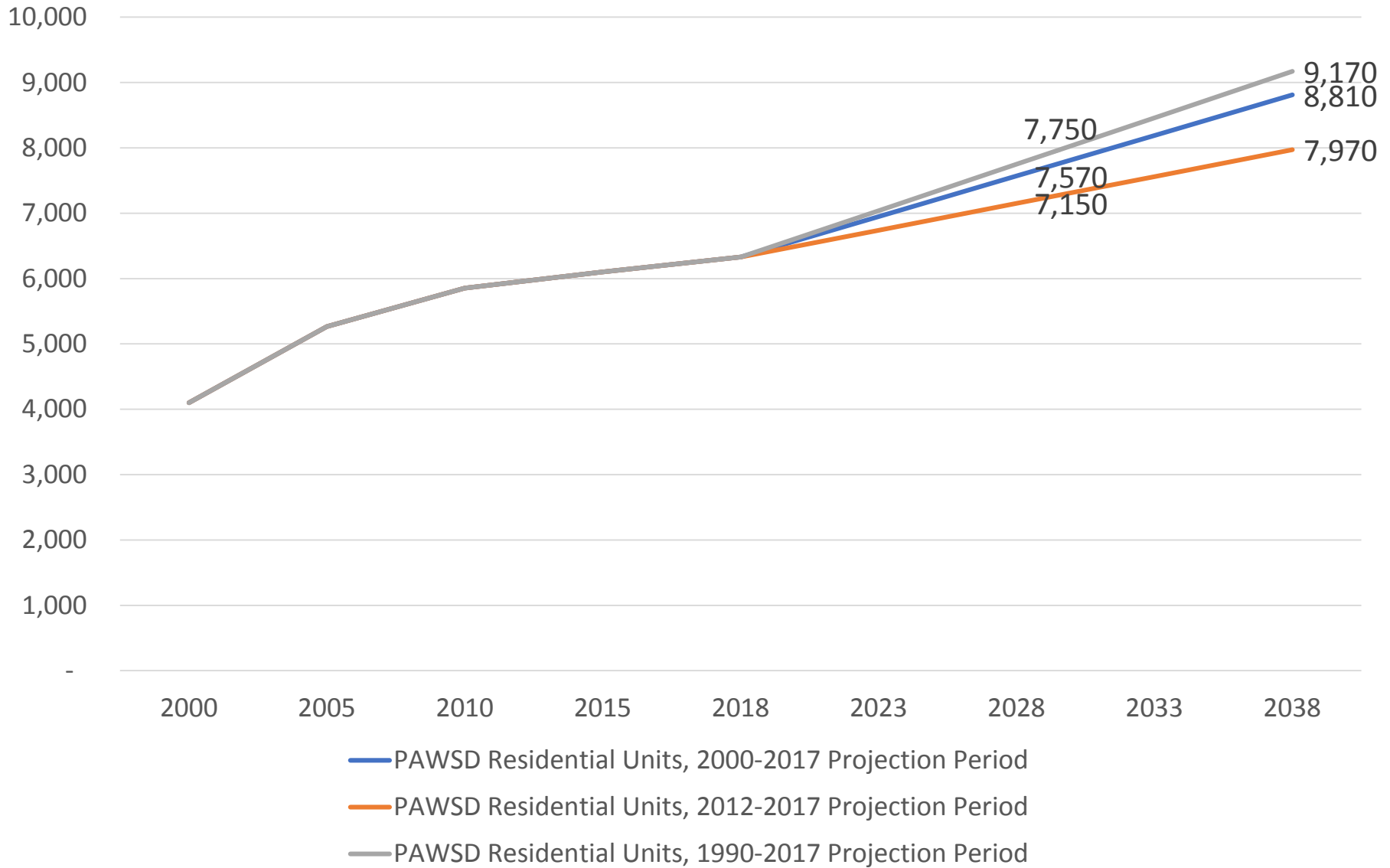
PAWSD & TOPS Housing Unit Projections

Year	PAWSD Residential Units, 2000-2017 Projection Period	PAWSD Residential Units, 2012-2017 Projection Period	PAWSD Residential Units, 1990-2017 Projection Period
2000	4,100	4,100	4,100
2005	5,266	5,266	5,266
2010	5,856	5,856	5,856
2015	6,101	6,101	6,101
2018	6,330	6,330	6,330
2023	6,950	6,740	7,040
2028	7,570	7,150	7,750
2033	8,190	7,560	8,460
2038	8,810	7,970	9,170
Projected New per Year	124	82	141

Projection Years	PAWSD Residential Units, 2000-2017 Projection Period	PAWSD Residential Units, 2012-2017 Projection Period	PAWSD Residential Units, 1990-2017 Projection Period
% Change 2019-2023	10%	6%	11%
% Change 2024-2028	9%	6%	10%
% Change 2029-2033	8%	6%	9%
% Change 2034-2038	8%	5%	8%

Projection Years	PAWSD Residential Units, 2000-2017 Projection Period	PAWSD Residential Units, 2012-2017 Projection Period	PAWSD Residential Units, 1990-2017 Projection Period
% Average Annual Change 2019-2023	2.0%	1.3%	2.2%
% Average Annual Change 2024-2028	1.8%	1.2%	2.0%
% Average Annual Change 2029-2033	1.6%	1.1%	1.8%
% Average Annual Change 2034-2038	1.5%	1.1%	1.7%

Sources: Archuleta County Assessor, PAWSD, Town of Pagosa Springs, DOLA, US Census

PAWSD & TOPS Housing Unit Projection Scenarios

9,170

8,810

7,750

7,570

7,970

7,150

2000   2005   2010   2015   2018   2023   2028   2033   2038

— PAWSD Residential Units, 2000-2017 Projection Period

— PAWSD Residential Units, 2012-2017 Projection Period

— PAWSD Residential Units, 1990-2017 Projection Period

Sources: Archuleta County Assessor

Comparing Forecasts and Projections

Projection Years	PAWSD Residential Units, 2000-2017 Projection Period	PAWSD Residential Units, 2012-2017 Projection Period	Linear Projection of County Population 1985-2015	Linear Projection of County Population 2000-2015	DOLA County Population Forecasts
% Average Annual Change 2016-2020	1.6%	1.3%	2.0%	1.3%	2.6%
% Average Annual Change 2021-2025	1.9%	1.3%	1.8%	1.2%	1.6%
% Average Annual Change 2026-2030	1.7%	1.2%	1.7%	1.1%	1.8%
% Average Annual Change 2031-2035	1.6%	1.1%	1.6%	1.1%	2.4%

Sources: Archuleta County Assessor, DOLA, US Census

- **Low-end:** 1.1-1.3% average annual growth

- **Likely:** 1.6% - 1.9% average annual growth

- **High-end:** up to 2.6% average annual growth

Conclusions and Considerations

- On-going trend of activation of underutilized housing stock has a limit.

- Projections assume supply will balance with demand as it has historically: cycles of development and absorption.

- Will the job market perform as needed to drive this projected demand?

- Need to explore how these projections would play out from a land use and infrastructure perspective.

- Need for improved visitor data collection.

- Opportunity to track additional metric from PAWSD (connections, availability accounts vs active accounts, etc.)

- Revisit trends and growth rate assumptions every two or three years.

Questions for Discussion

- Do we agree that these trends reflect our region accurately?

- Does this data set as presented serve our needs? Can we agree to use these for future projections of services?

- The working group will reconvene to develop finalize a summary report of their effort and recommendations for next steps. With this information, what are some of your ideas for what to do next to ensure a sustainable and resilient water supply?