

Economic Resurgence and Resiliency Action and Implementation Plan in Grand and Clear Creek Counties, CO:

State of Clear Creek Economy

April 2017



Clear Creek | Table of Contents

- I. Introduction
- II. Who Lives Here?
- III. Where do People Live?
- IV. Who Works Here?
- V. Jobs and Wages
- VI. Entrepreneurship
- VII. Hypotheses and Discussion

Clear Creek | Table of Contents

- I. Introduction
- II. Who Lives Here?
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Introduction | Why a State of the Economy Report?

Why?

Necessary to develop a baseline assessment of the economic characteristics and trends of the county – and the communities within it – to help understand the economic challenges and opportunities facing Clear Creek County. This work will inform our hypotheses and the development of strategies for the diversification and strengthening of the county's economy after the closure of the Henderson Mine.

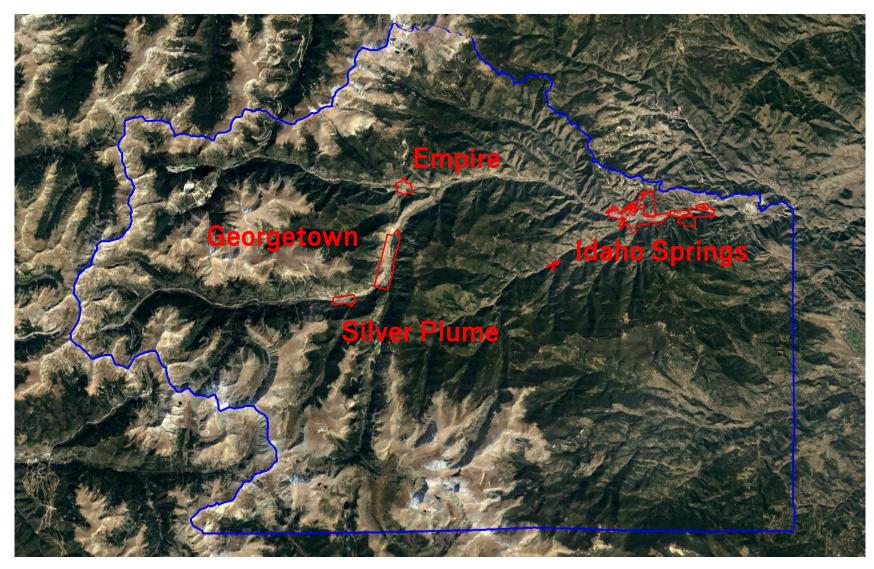
What is it?

We have grouped our findings into sections that cover different themes and aspects of the County's economy. We have included preliminary hypotheses, questions, and strategies that will be researched and developed further in task two, based on additional field work and conversations with the client and key stakeholders.

Clear Creek | Table of Contents

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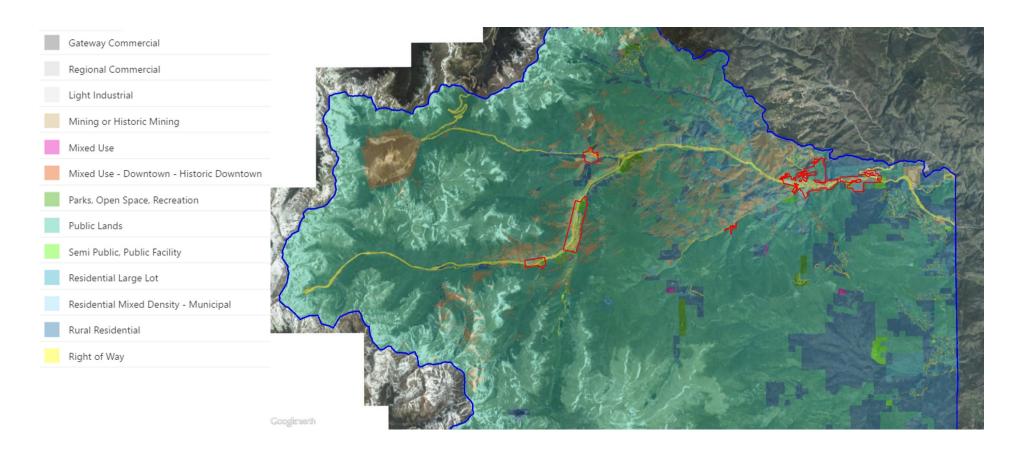
Who Lives Here | Overview Map with Incorporated Towns



Note: Unincorporated portion of county reflects portion outside of the four incorporated towns

Who Lives Here | Overview Map with Incorporated Towns

- County is already very land constrained by area, about 75% of the land is tax-exempt, publicly owned
 - Need to get strategic about what land particularly in and adjacent to the towns becomes reserved (in perpetuity) as open space, public land, parks

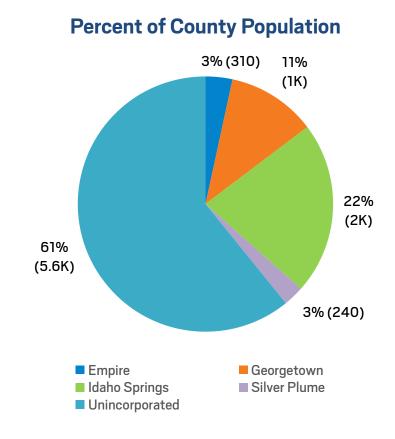


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Who Lives Here | Population

- Majority of the population resides in the unincorporated areas of the county
- Idaho Springs has 2X the population of Georgetown while Empire and Silver Plume are both a fraction of their size

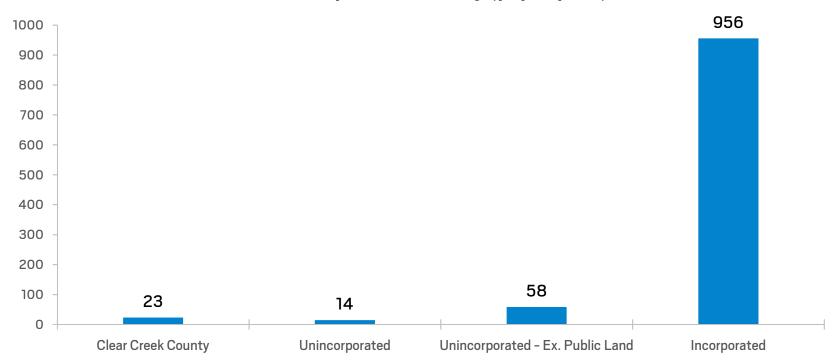
Geography	Population
Incorporated Towns	3,580
Idaho Springs	2,000
Georgetown	1,030
Empire	310
Silver Plume	240
Unincorporated	5,560
Clear Creek County	9,140



Who Lives Here | Population + Density

- The county has the third lowest density of the 10 region (MSA) counties and the second lowest population
- Densities are important as they impact:
 - The costs and efficiency of providing services to residents
 - The ability to attract and support retail, groceries, and other local and population-dependent industries
 - The quality of life and attractiveness to different sub-populations (e.g. millennials)

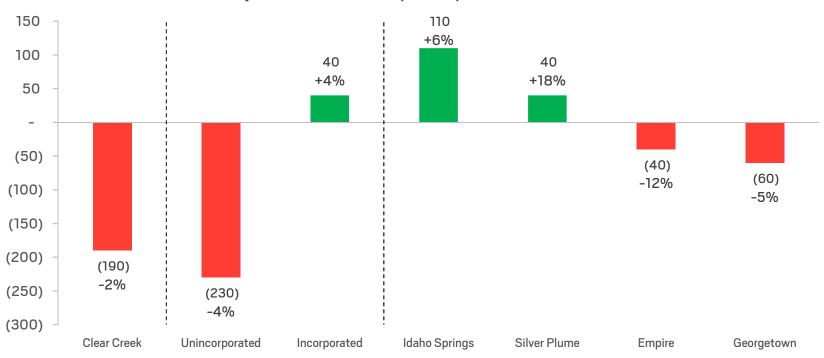
Current Population Density (pop/sq. mi.)



Who Lives Here | Population + Growth

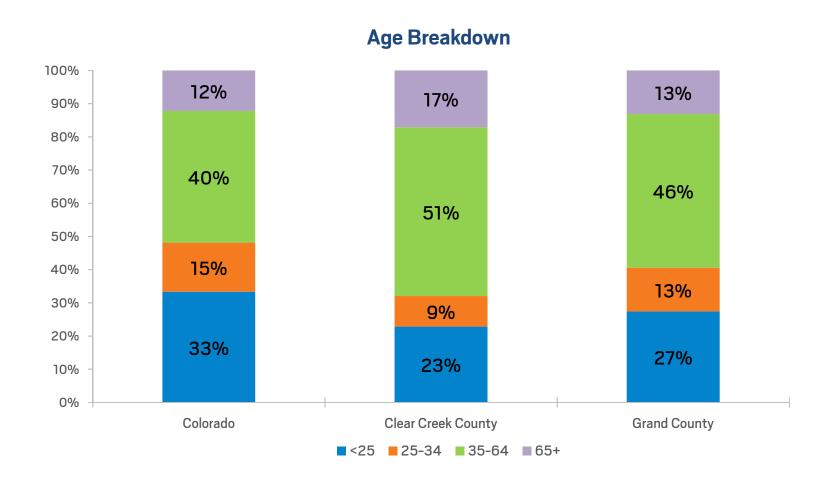
- Clear Creek County experienced slight population loss in a state and region that had double-digit growth (23% and 25%, respectively)
- This decline is driven by the unincorporated portions of the county; the towns' population grew slightly
- All of the population growth was concentrated in Idaho Springs and Silver Plume

Population Growth (Delta), 2000 to 2015



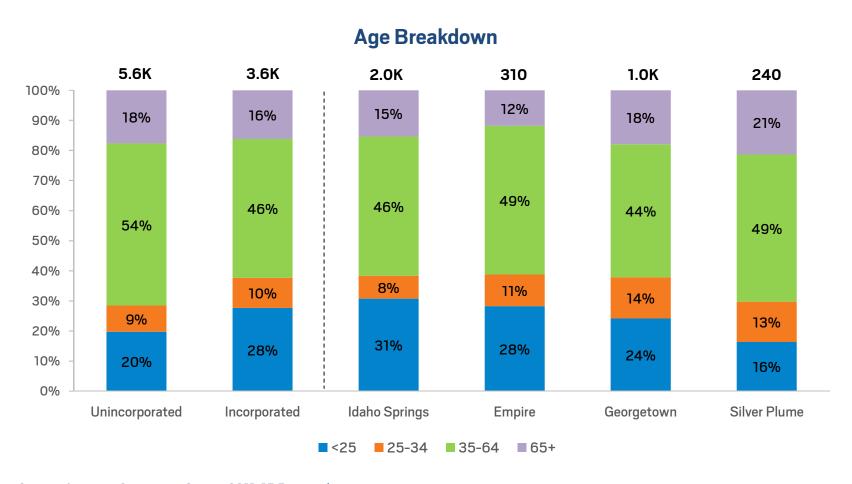
Who Lives Here | Population by Age

 Clear Creek County has fewer residents <25, fewer millennials (25-34), and more >65 compared to the state and Grand County



Who Lives Here | Population by Age, Continued

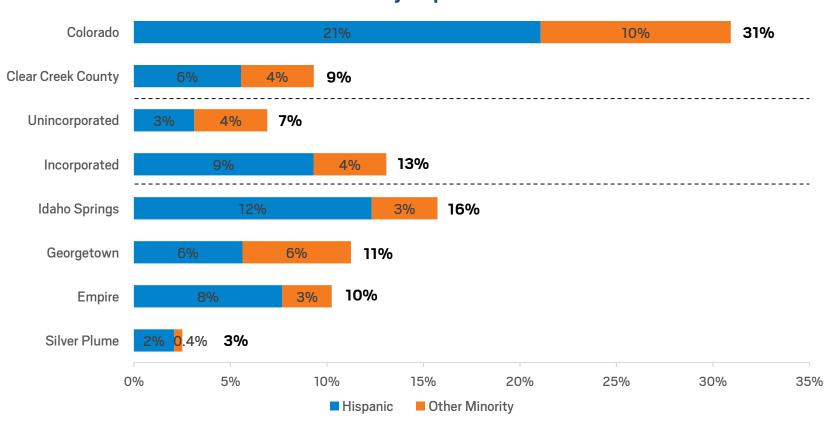
- Within the county, incorporated towns have more residents under the age of 35
 - None of the towns, however, are close to Denver's proportion of millennials aged 25-34 (22%)
- Silver Plume and, to a lesser extent, Georgetown both have disproportionately high >65 population (even higher than the unincorporated portions of the county)



Who Lives Here | Population by Race

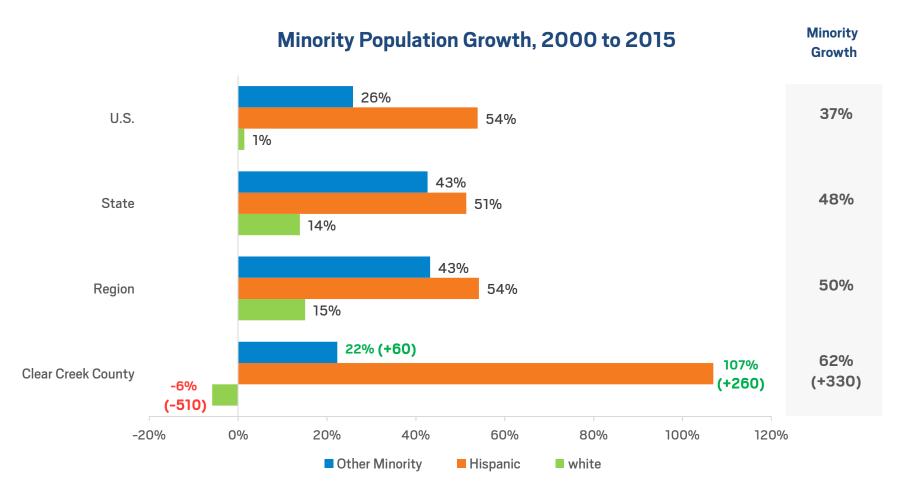
- Clear Creek County is significantly less diverse than the state (and region, US)
 - Save for Silver Plume, the towns are all more diverse than the unincorporated portions of the county (but still significantly lower than the state)

Minority Population



Who Lives Here | Population by Race, Growth

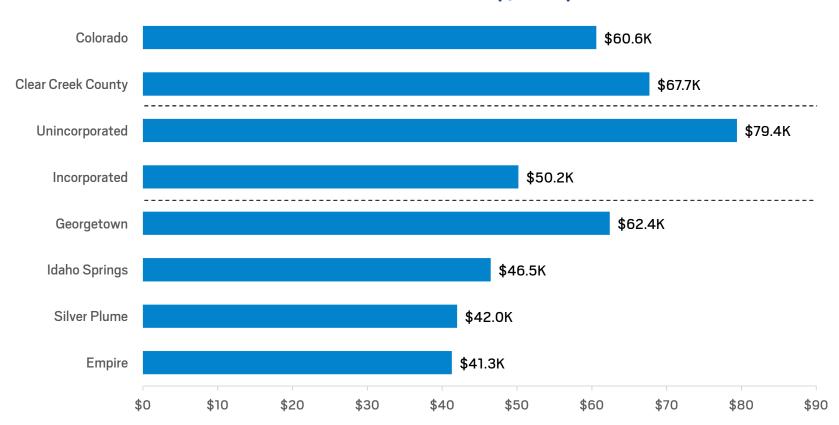
- Since 2000, the largest group white non-Hispanic actually declined by 6% (losing over 500 residents) in the county while the minority population (almost entirely driven by Hispanic growth) grew by 62% (+330 residents)
- Hispanic population projected to grow by almost 200% (or triple) through 2040 while rate for white non-Hispanic only 47%



Who Lives Here | Median Household Income

- Wealth is concentrated outside of the towns in the unincorporated areas of the county
 - Only Georgetown has a higher median HH income than the state

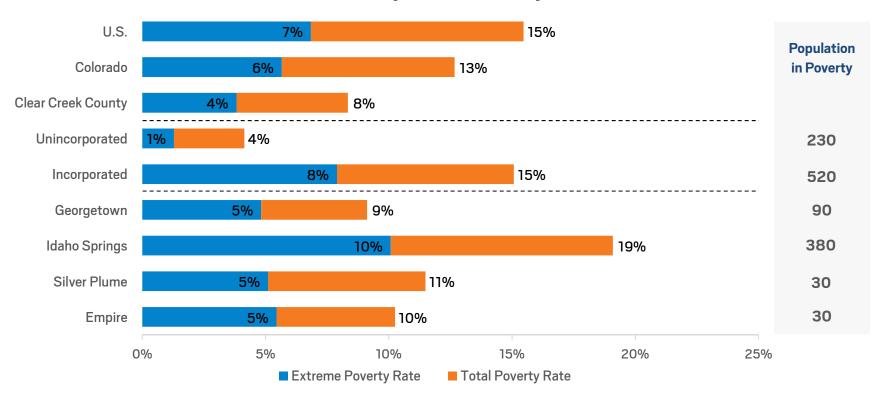
Median HH Income (\$'000)



Who Lives Here | Person Statistics: Poverty

- Clear Creek has significantly lower poverty rates compared to the state (and region) overall but...
- Poverty in the incorporated towns is 4X and 5X in Idaho Springs the poverty rate in the unincorporated areas
- The extreme poverty rate is greater in each of the towns than the total poverty rate in unincorporated CC
 - Idaho Springs extreme poverty rate is 2X the rate of the other towns and is 2X the total poverty rate in unincorporated CC
- Taking median HH incomes and poverty into account, points to a need for well paying jobs for town residents (and distinct needs in the towns vs. unincorporated portions of the county)

Extreme Poverty + Total Poverty Rates

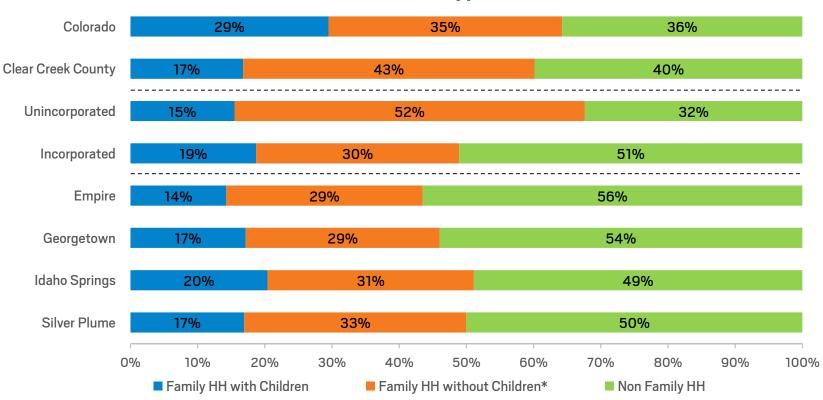


Note: Extreme poverty is defined as incomes totaling less than half of the poverty line Source: American Community Survey, 2011-2015 5-year release

Who Lives Here | Household type

- County has fewer family households with children, more family HH without children (both "empty nesters" and just couples without children) and more non-family households compared to the state
- The majority of the towns are non-family households but they are also where families with children are concentrated; the unincorporated portion of the county is majority family HH without children
- Idaho Springs has the highest concentration of family HH with children in the county

Household Type



Note: Family HH without Children represent "empty nesters" and couples without children Source: American Community Survey, 2011-2015 5-year release

Who Lives Here | Summary + Questions

- Incorporated towns and unincorporated portion of county have dramatically different population densities and growth patterns
- County is disproportionately older (65+), with younger residents (<35) concentrated in the towns
 - Do you want to be more of a retiree community (with development of industries serving the aging baby boomer population), attract more millennials (biz. succession planning, new industries), mix of both?
 - Current and future accessibility and provision of services issues for older populations located in unincorporated portions of the county and in less walkable towns (who may not be able to drive)
- County has a small but (dramatically) growing minority population, concentrated in the towns
 - Minority population growth expected to outpace non-minority growth significantly
- Wealth is concentrated in the unincorporated portions of the county; higher poverty in the towns
 - Distinct needs for towns vs unincorporated; points to a need for clusters that provide well paying jobs for town residents
- Non-family households and family households with children are concentrated in the towns while unincorporated portion of the county is disproportionately family households without children

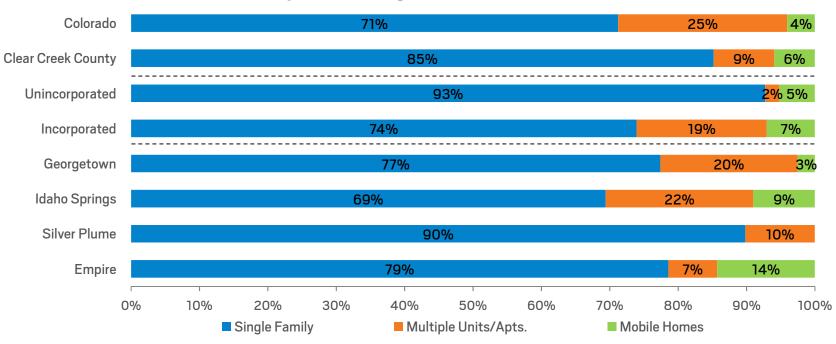
Clear Creek | Table of Contents

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Where do People Live | Units in Structure

- Single family homes (SFH) are the overwhelmingly dominant housing type throughout the county
 - Towns have much lower percent of SFH compared to the unincorporated portion of the county (>90%) but only Idaho Springs has a lower percentage than the state average (69% vs 71%)
- Important implications for land demand in a land constrained county
 - SFH are, on average, approximately 2.6K sq ft per home while multifamily units are only 1.1K sq ft per home¹
 - In terms of housing unit densities per acre in new subdivisions in the U.S., SFH take up over 5X the acreage compared to multifamily units²
- Taking into account land constraints and the need for more jobs, do you want to attract more SFH, which require more space
 and have fewer workers per resident or build more multi-unit housing to attract younger, working age populations with a 1 to
 1 worker to pop ratio?

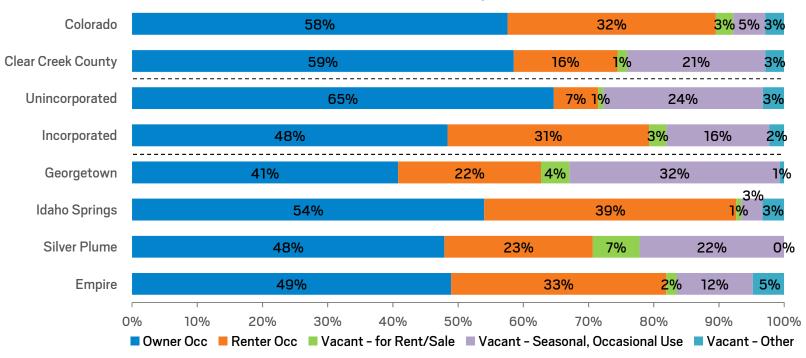
Occupied Housing: Units in Structure



Where do People Live | Housing: Vacancy + Tenure

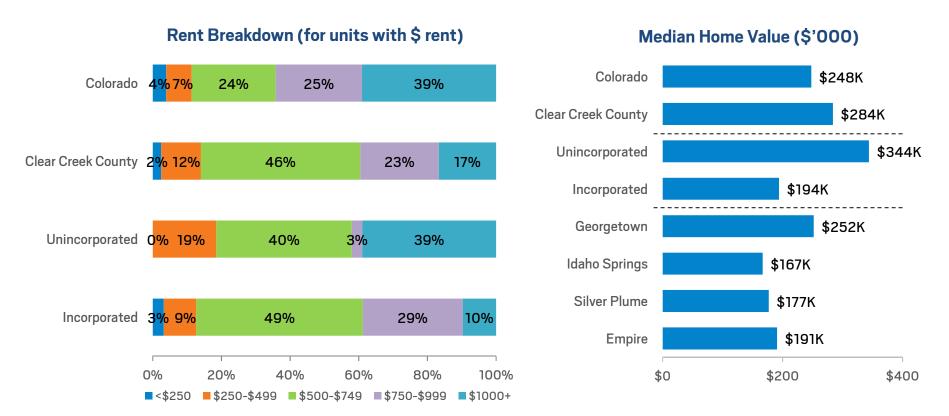
- Very high vacancies in the county and more heavily concentrated in the unincorporated areas, although there is significant variation across the towns (e.g. Idaho Springs is less than the state while Georgetown is almost 4X the state)
- Vacancies in the county are almost entirely for seasonal, occasional use actual vacancies for sale or rent are only
 1% of all housing units and 6% of all vacancies; these actual vacancies are more heavily concentrated in the towns
 - Vacant units still pay property taxes but the towns aren't collecting as much sales tax if they were occupied year-round
- Of occupied housing units, approximately 40% and 10% are rentals in the towns and unincorporated areas, respectively
- Does the county want to explore ways to "extend the season" of the temporary rental properties, support additional "AirBnB"—type models, or try to shift these back to the full-time rental market?

Tenure and Vacancy



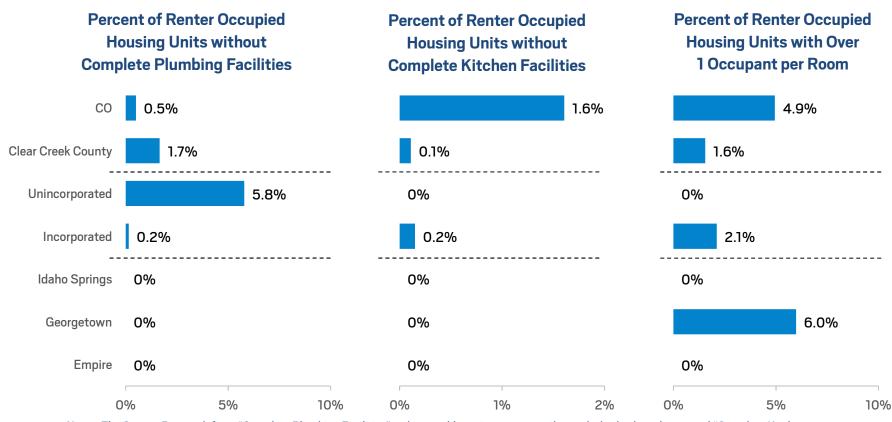
Where do People Live | Housing: Median Rent + Home Value

- Rents are cheaper in the county compared to the state and the median rent is about 20% less than Denver's
 - Unincorporated has dramatically more \$1000+ rentals but also more for <\$500; Idaho Springs only geography to offer sub \$250 rents and the median rents are lower than the unincorporated areas of the county
- House prices are high in the county compared to the region (and City of Denver) but dramatically lower in the towns compared to the
 unincorporated portions of the county
 - The median home value in Idaho Springs is less than half the value in the unincorporated portions of the county, and over 80% of Idaho Springs homes cost less than \$250K
- Potentially market towns as affordable "starter homes" for a younger demographic?



Where do People Live | Housing: Quality Metrics

- Clear Creek County has lower quality rental housing than the state with respect to plumbing facilities but is better than the state when it comes to complete kitchen facilities
 - Almost 6% of the unincorporated rentals are lacking hot + cold running water, a toilet, and/or a shower
- The County has about one third the percent of rentals with over one occupant per room compared to the state
 - 6% (10 housing units) and 11% (4 housing units) of Georgetown's and Silver Plume's rental housing units have over one occupant per room, respectively



Note:s The Census Bureau defines "Complete Plumbing Facilities" as hot + cold running water, a toilet, and a bathtub or shower and "Complete Kitchen Facilities" as a sink with faucet, a stove or range, and a refrigerator; Silver Plume not included due to insufficient sample sizee

Source: American Community Survey, 2011-2015 5-year release

Where do People Live | Summary + Questions

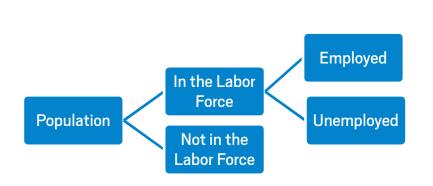
- Single family homes are the overwhelmingly dominant housing type throughout the county
 - Taking into account land constraints and the need for more jobs, do you want to attract more SFH, which require more space and have fewer workers per resident or build more multi-unit housing to attract younger, working age populations with a 1 to 1 worker to pop ratio?
- Vacancies in the county are almost entirely for seasonal, occasional use and actual vacancies for sale or rent are only 1% of all housing units and 6% of all vacancies
 - Does the county want to explore ways to "extend the season" of the temporary rental properties, support additional "AirBnB" —type models, or try to shift these back to the full-time rental market?
- Homes are relatively affordable in the towns
 - Market towns as affordable "starter homes" for younger demographic?

Clear Creek | Table of Contents

- I. Introduction
- II. Who Lives Here?
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Who Works Here | Workforce: What is your Labor Force?

- The population can be broken into those persons that are in the labor force and within that, those either working (employed) or actively seeking work (unemployed) and those not in the labor force (not working or seeking work)
- Unemployment rate is calculated by dividing the unemployed by the labor force (employed+unemployed)

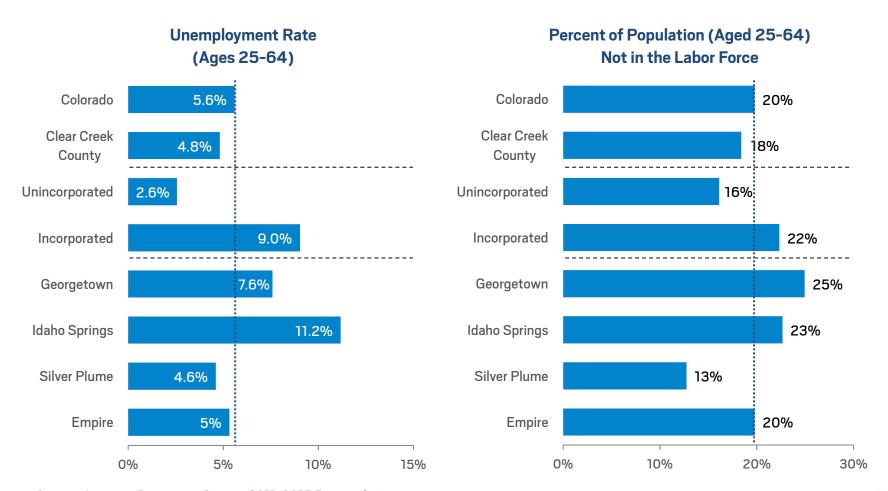


Geography	Population
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Georgetown	1,030
Empire	310
Silver Plume	240
Unincorporated	5,560
Clear Creek County	9,140

- When analyzing the labor force, we focus on the "productive" work force between the ages of 25 and 641
 - We use 25 as the bottom bound to reduce the influence of college students (as college attendance among this age group has become increasingly common over the past decades)
 - 64 is used as the upper bound to capture the "pre-retirement" age population
- Some focus on the "prime" age workforce of 25 to 54², as labor force participation rates start falling for persons 55+
 - But in Clear Creek County, the 55-64 year old population makes up about 28% of the employed residents between 25 and 64 years old

Who Works Here | Workforce: Employment Status

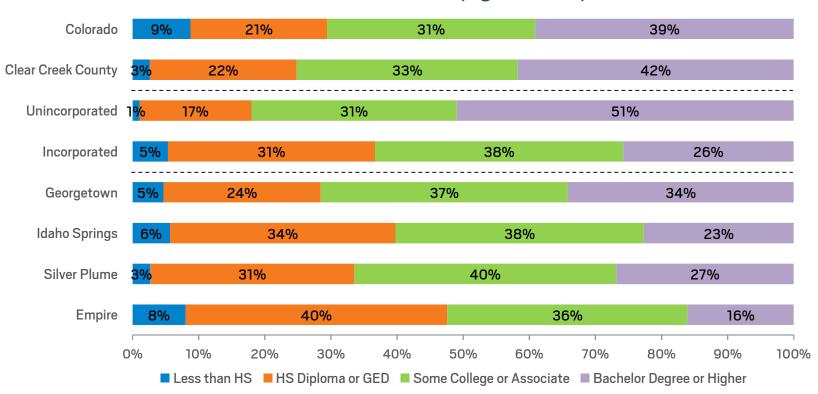
- County has lower unemployment than the state but this is driven by unincorporated portions of the county (<3%)
- Town residents have over 3X the unemployment of the unincorporated residents
- Larger towns of Idaho Springs + Georgetown have significantly higher unemployment and lower labor force participation
- Taking incomes, employment status, and education levels into account, points to a need for clusters that offer accessible, well paying jobs for residents of the incorporated towns



Who Works Here | Workforce: Educational Attainment

- Residents of Clear Creek County are better educated compared to the state overall but...
- Towns are less well educated compared to the unincorporated areas (which have very high educational attainment levels) and educ. attainment varies significantly across towns
 - Only about 1/6 of Empire residents have a college degree or higher while over 1/3 for Georgetown

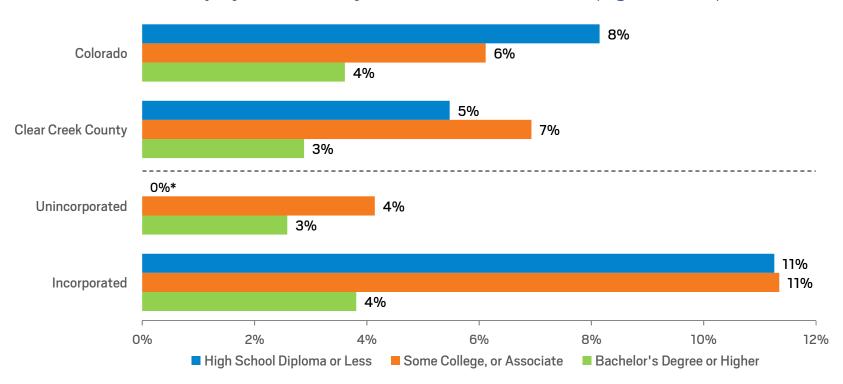
Educational Attainment (Ages 25-64)



Who Works Here | Educational Attainment by Employment Status

- As compared to the state, Clear Creek County has higher unemployment for residents with only some college or an
 associate's degree; those with bachelor's degrees and those with a high-school diploma or less have significantly
 lower rates of unemployment
- Residents of towns with a bachelor's degree or higher have about the same unemployment rate as residents with only some college or associate degree from the unincorporated portions of the county
 - May be driven by differences in access to networks?

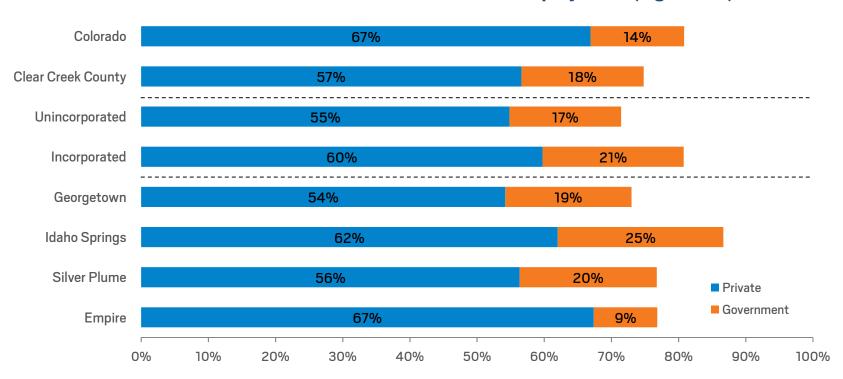
Unemployment Rate by Educational Attainment (Ages 25-64)



Who Works Here | Workforce: Private vs Government

- Residents of Clear Creek and the incorporated towns in particular are disproportionately concentrated in government employment (and less in private companies)
- With declines in government revenue as a result of the mine closure, potential for government job loss, increases in unemployment, and, perhaps, a drop in population if ex-government workers need to relocate to find work?
- As government workforce is stretched, potential "downstream" impacts of making environment for businesses more challenging (e.g. around permitting, licenses, etc)

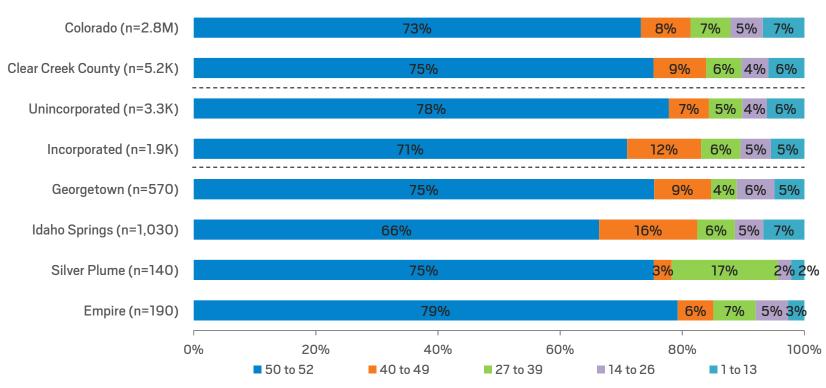
Private vs Government as Percent of Total Employment (Ages 16+)



Who Works Here | Workforce: Weeks Worked per Year

- Residents of the county are actually more likely to have year-round employment (>50 weeks) than the state
- Within the county, however, town residents are less likely to have year-round employment (71%) compared to almost 80% in the unincorporated portions of the county
- Idaho Springs has the greatest seasonal employment within the county

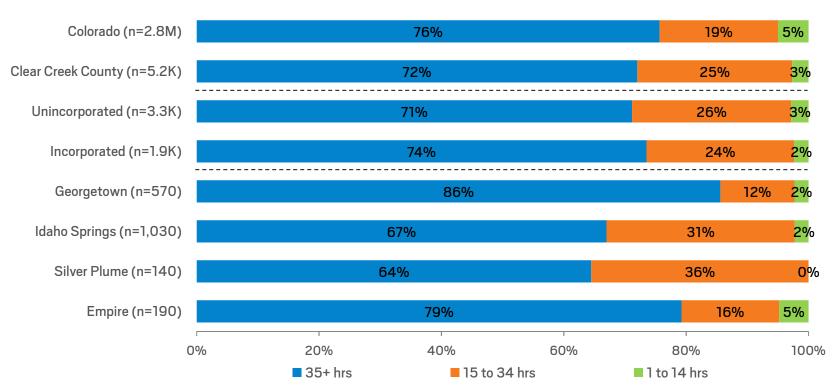
Weeks Worked per Year (for residents who worked, aged 16-64)



Who Works Here | Workforce: Hours Worked per Week

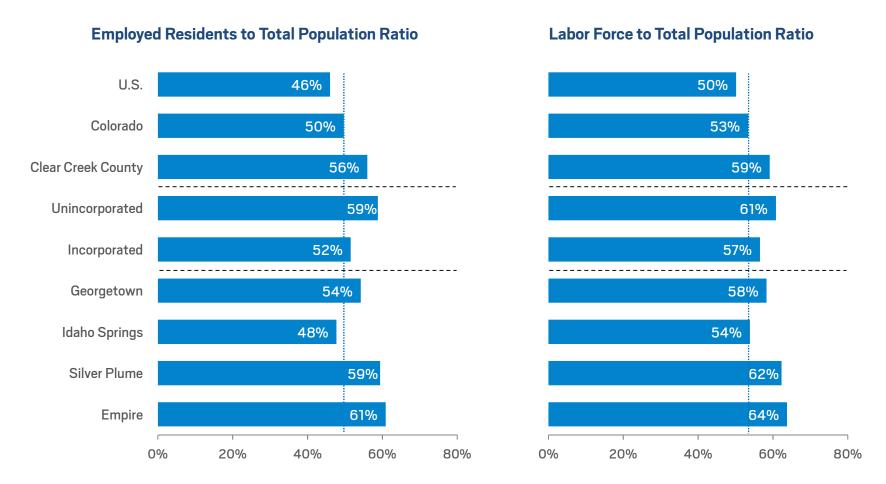
- Clear Creek both incorporated and not has a disproportionate number of residents working only 15-34
 hours per week
- Residents of Georgetown and Empire more likely to have full-time employment while unincorporated, Idaho Springs and Silver Plume residents more likely to only have part-time employment

Usual Hours Worked Per Week in Past 12 Months (for residents who worked, aged 16-64)



Who Works Here | Workforce: Employed + WF to Population Ratios

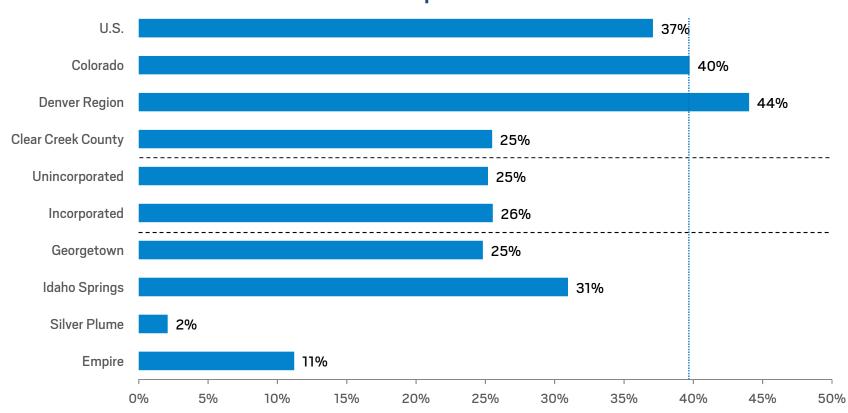
- Unincorporated portion of the county has significantly higher ratio of employed residents to population (59%) compared to the state (50%), while the towns are only slightly higher than the state (52%)
- Relationship is similar for labor force to population ratios although the spread between towns and the state is doubled (driven by higher unemployed population in the towns)



Who Works Here | Workforce: Jobs to Population Ratios

- The county has dramatically fewer jobs per resident than the state and region (25% vs 40%)
- The unincorporated portions of the county have about the same jobs per resident as the towns overall
- While Idaho Springs has the highest jobs to population ratio in the county, it is still 22% lower than the state

Jobs to Total Population Ratio



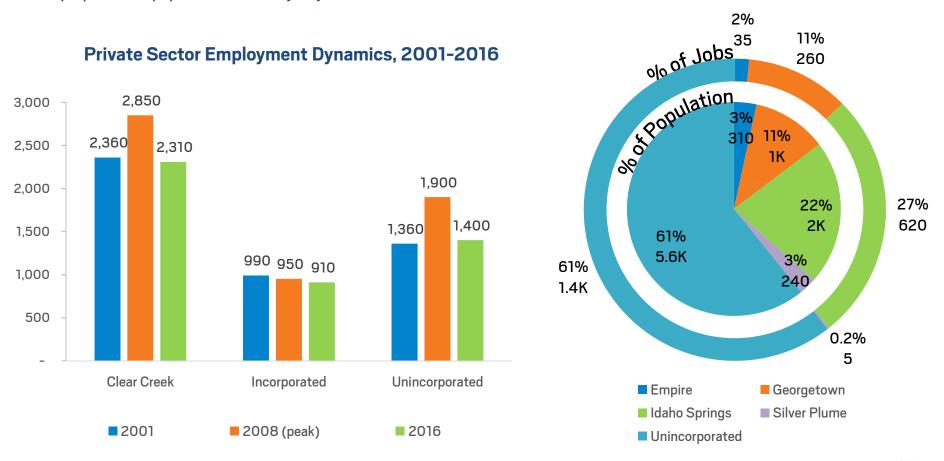
Who Works Here | Summary + Questions

- Residents of the towns have lower educational attainment levels than the (highly educated) residents
 of the unincorporated areas; over 3X their unemployment rate; and town residents with a bachelor's
 degree or higher have about the same unemployment rate as unincorporated residents with lower
 educational attainment levels
 - Taking incomes, employment status, and education levels into account, points to a need for clusters that offer accessible, well paying jobs for residents of the incorporated towns
 - May be driven by differences in access to networks?
- Residents of Clear Creek and the incorporated towns in particular are disproportionately concentrated in government employment
 - With declines in government revenue as a result of the mine closure, potential for government job layoffs and downstream impacts in unemployment, population, etc
- Town residents and Idaho Springs residents in particular are less likely to have year-round employment and more likely to only work part-time
 - Presumably driven by seasonal industries (e.g. tourism, construction) but could also be parttime by choice for some (older) residents?
- The County has dramatically fewer jobs per resident than the state and region (25% vs 40%)

Clear Creek | Table of Contents

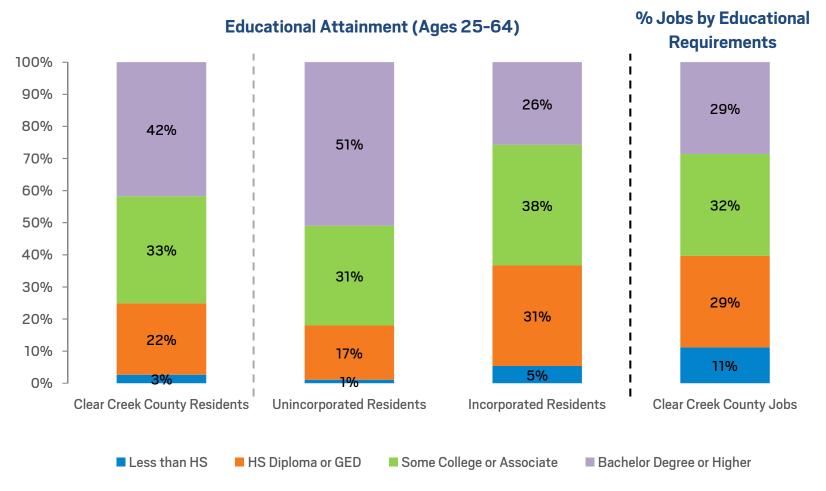
- I. Introduction
- II. Who Lives Here?
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- 2.3K total private sector jobs in Clear Creek in 2016, down from its peak of 2.85K in 2008 (pre-recession)
- The unincorporated portion of the county reflects over 90% of the job loss since 2008
- Unincorporated portion of the county makes up same proportion of jobs as it does residents (61%), as does Georgetown (11% for both)
- Idaho Springs reflects 27% of jobs but only 22% of residents; both Empire and Silver Plume represent larger proportion of population than they do jobs



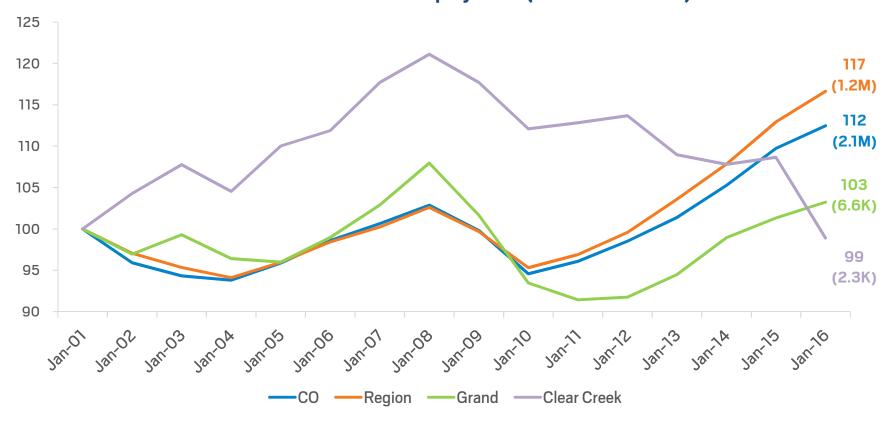
Jobs and Wages | Educational Attainment Gaps

- Residents of Clear Creek County are generally overqualified for the jobs that exist in the county (e.g. 42% of residents have a Bachelors Degree or higher compared to only 29% of jobs that require that level of education)
- This, however, varies by incorporation status: residents of the towns are underqualified (only 26% with a college degree) while over 50% of unincorporated residents have a bachelor's degree or higher



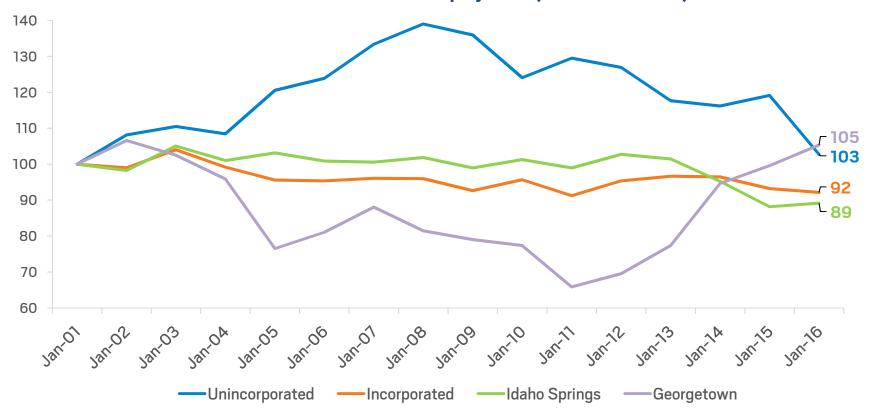
- Clear Creek outperformed the state and region until 2013; yet, while the state and region started rebounding in 2010, Clear Creek continued declining
- From 2015 to 2016, it dropped dramatically to below its 2001 employment level

Indexed Private Sector Employment (Jan 2001 = 100)



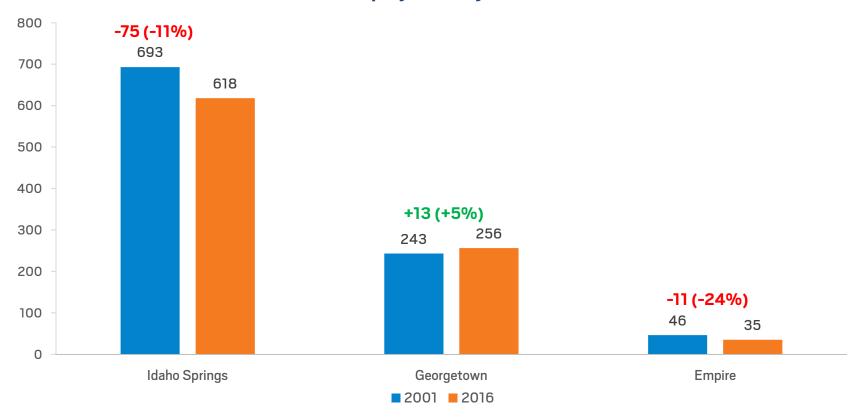
Source: QCEW, 2001-2016 39

- Unincorporated portion of the county has outperformed the towns but it has also experienced dramatic decline since
 2008
- Unlike the unincorporated areas, the towns overall did not experience a boom-bust and have remained relatively constant since 2004, with employment ranging between about 900 and 950
- While it only represents an increase of about 100 employees, Georgetown has grown significantly since 2011
- Hypothesize the relative stability of town employment is driven by its reliance on neighborhood (local) clusters
 Indexed Private Sector Employment (Jan 2001 = 100)



- Georgetown is the only town to gain jobs since 2001
- Approximately 68% and 28% of town jobs are concentrated in Idaho Springs and Georgetown, respectively

Private Sector Employment Dynamics, 2001-2016

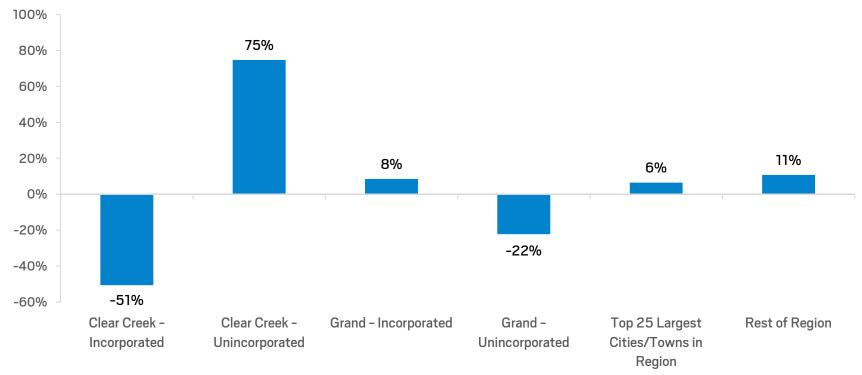


Note: Silver Plume employment dynamics not reported to maintain confidentiality Source: Confidential QCEW, 2001–2016

Jobs and Wages | Jobs – Urbanization Trends

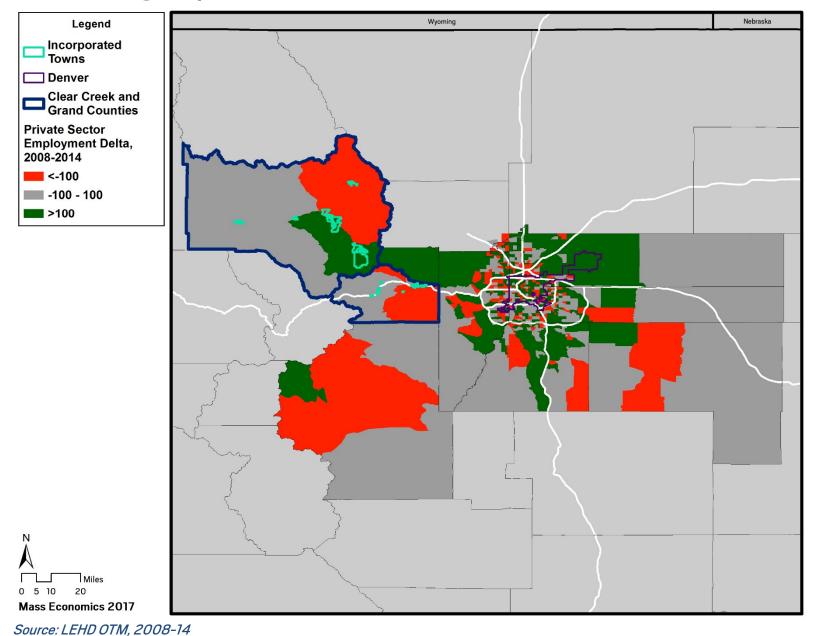
- During the period 2008-2014, private sector jobs grew more in the unincorporated portions of the county
- This mirrors the growth patterns in the region overall growth in the top 25 largest cities (by 2014 employment)
 was outpaced by growth in the more suburban parts of the region
 - Even within the top 25 cities, Denver only grew by 6% while more suburban cities along the south side of route 470 grew by 2X-6X Denver's rate



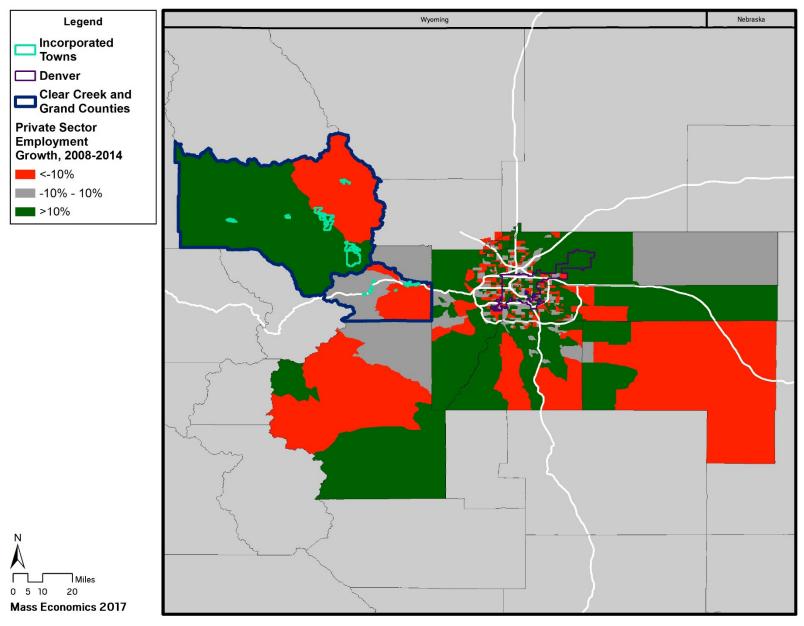


Source: LEHD 0TM, 2004-14 42

Jobs and Wages | Jobs – Urbanization Trends



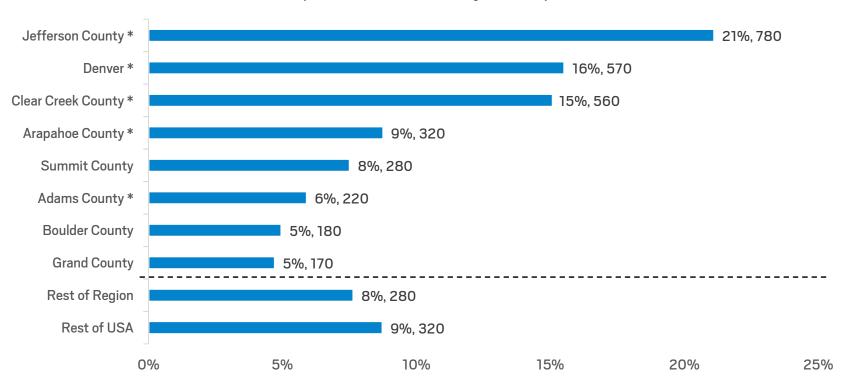
Jobs and Wages | Jobs – Urbanization Trends



Jobs and Wages | Jobs – Commuter Flows

- 74% of Clear Creek residents work within the Denver Region (including Clear Creek)
- Only 15% of Clear Creek residents work within their home county, compared to 41% of Grand county residents
- Over half of the Clear Creek residents who work in Jefferson County and Denver are from the portion of the county southeast of Idaho Springs (e.g. Floyd Hill, Upper Bear Creek)

Place of Work for Employed Clear Creek County Residents (Private Sector Only, 2014)

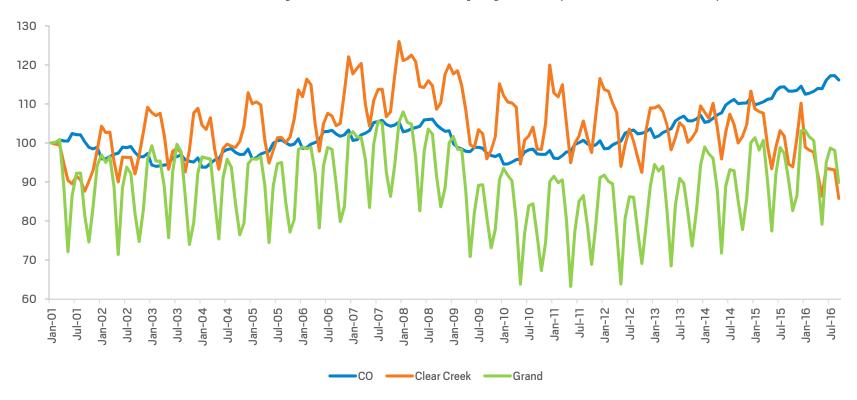


Note: Starred counties are in the Denver Region

Jobs and Wages | Jobs + Seasonality

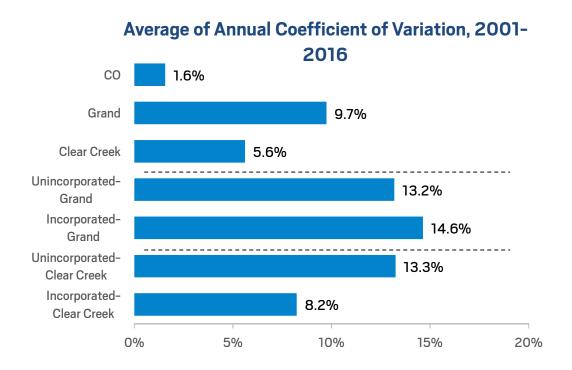
- Clear Creek and Grand county economies are extremely seasonal (Grand more so than Clear Creek)
 - Variations by season can overshadow annual and even multi-year changes in employment
 - Peak employment in Clear Creek is usually December (ski season) but there are secondary (lower) peaks in employment in July/August
 - Minimum employment is in May or, less frequently, in September during the transition periods between seasons

Indexed Monthly Private Sector Employment (Jan 2001 = 100)



Source: QCEW, 2001-16 46

Jobs and Wages | Jobs + Seasonality

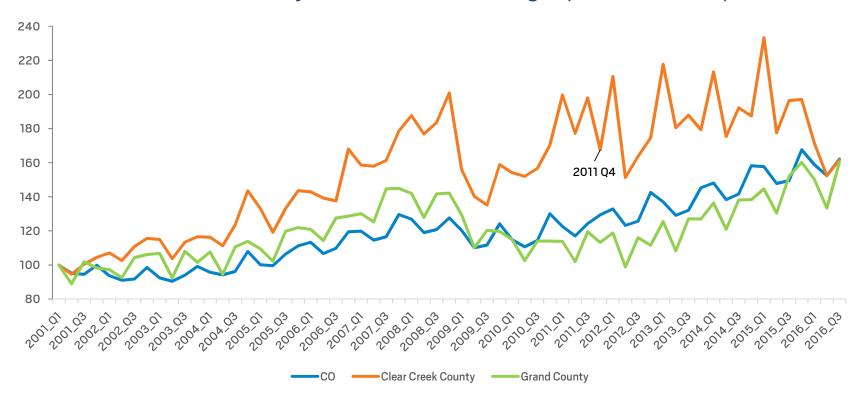


- The annual coefficient of variation is a measure of seasonality. If month to month employment over a single year did not change, this value would be 0; higher percentages indicate higher variability.
- How is it calculated? For a single year, the number of jobs in each month is compared to the mean (average) for the whole year to determine differences month to month (standard deviation). Then that is divided by the mean to get a percentage. For the values shown in this chart, the results for the years (2001-16) were averaged.
- Clear Creek is about 3.6X more seasonal than the state although it is significantly lower than Grand
- In Clear Creek, incorporated towns have lower variation compared to the unincorporated portions of the county
- Need to identify and attract industry clusters that operate on current "off-season" (spring, fall) schedules to provide opportunities to fill in seasonal gaps in employment
- Need to diversify and grow accessible clusters that offer full-time, year-round employment

Jobs and Wages | Wages + Seasonality

- Clear Creek and Grand county economies are extremely seasonal (Grand more so than Clear Creek)
 - Variations in total wages by season can overshadow annual and even multi-year changes
 - Prior to 2011, peak wages in Clear Creek were in Q4 but since have moved to Q1 (both reflect ski season)
 - Minimum total wages are in Q2 although worth noting that in 2011 the min was in Q4 (one of the worst ski seasons
 in the recent history)

Indexed Quarterly Private Sector Total Wages (Jan 2001 = 100)

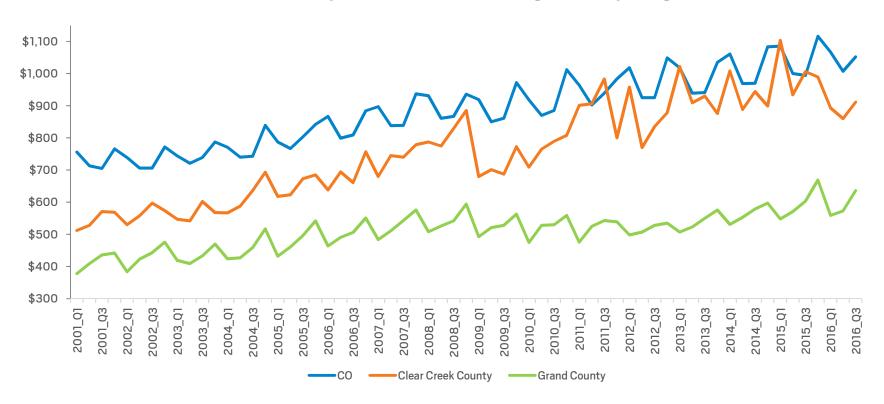


Source: QCEW, 2001-16 48

Jobs and Wages | Wages + Seasonality

- Clear Creek and Grand county economies are extremely seasonal (Grand more so than Clear Creek)
 - Variations in average weekly wages by season can overshadow annual and even multi-year changes
 - Peak weekly wages have shifted from Q3 prior to 2004, to Q4 for 2004 to 2010, and have been in Q1 since 2012
 - The minimum weekly wage for 8 of the 10 years prior to 2011 was actually in Q1, and Q2 was the minimum for 6 of the 16 available years of data

Quarterly Private Sector Average Weekly Wages

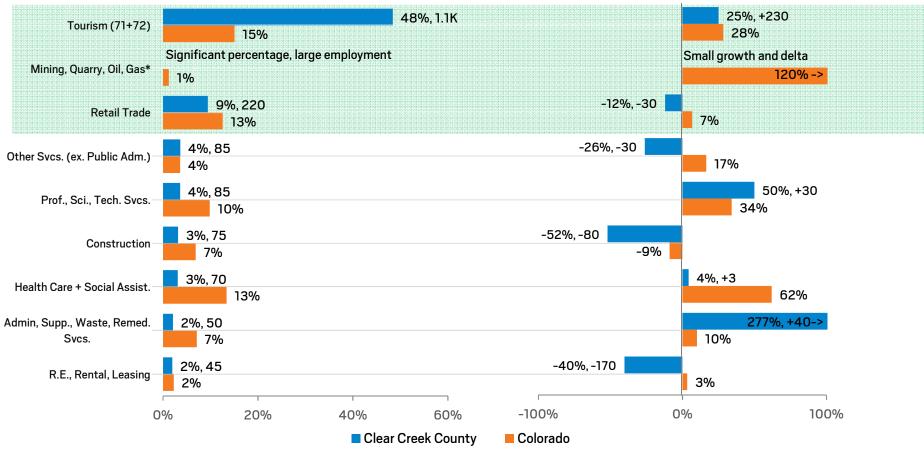


Source: QCEW, 2001-16 49

Jobs and Wages | Clear Creek - Jobs by Sector, 2016

- The top three sectors by jobs in Clear Creek are tourism-related (accommodation, food services, arts, entertainment, recreation), mining, and retail (serving both locals and tourists)
- Only the tourism related sectors grew in significant numbers in the county since 2001





Note: Not all sectors are shown (to protect confidentiality); * Mining sector data suppressed due to confidentiality constraints Source: Non-Confidential + Confidential QCEW, 2001-2016

Jobs and Wages | Unincorporated Areas and Towns - Jobs by Sector

- The accommodation + food service and retail trade sectors are concentrated in the incorporated towns
- Arts, entertainment + recreation (which includes Loveland Ski area, rafting) and mining sectors are concentrated in the unincorporated areas of the county
- · Significant declines in construction throughout the county and notable decline in retail in the towns

Rank of Jobs by Sector, 2016

Sector	Unincorporated	Incorporated
Arts, Entertainment, + Rec.	1	13
Mining, Quarry, Oil, Gas	2	17
Other Services (ex. Pub. Admin.)	3	10
Accom. + Food Svcs.	4	1
Construction	5	6
Prof., Sci., Tech. Svcs.	6	4
R.E., Rental, Leasing	7	14
Retail Trade	8	2
Health Care + Soc. Assist.	9	3
Educational Services	10	17
Admin, Supp., Waste, Remed. Svcs.	11	7
Wholesale Trade	12	12
Utilities	13	16
Manufacturing	14	8
Mgmt. of Co.	15	11
Finance + Insurance	16	9
Transportation + Warehousing	17	5
Information	17	15
Rest of Economy	19	17

Rank of Job Delta, 2001-2016

Sector	Unincorporated	Incorporated
Arts, Entertainment, + Rec.	1	6
Mining, Quarry, Oil, Gas	7	9
Other Services (ex. Pub. Admin.)	13	14
Accomm. + Food Svcs.	4	1
Construction	19	16
Prof., Sci., Tech. Svcs.	3	5
R.E., Rental, Leasing	8	16
Retail Trade	6	19
Health Care + Soc. Assist.	16	2
Educational Services	5	18
Admin, Supp., Waste, Remed. Svcs.	2	3
Wholesale Trade	18	12
Utilities	14	8
Manufacturing	11	15
Mgmt. of Co.	8	4
Finance + Insurance	15	13
Transportation + Warehousing	12	6
Information	17	11
Rest of Economy	10	9

Jobs and Wages | Georgetown + Idaho Springs

Georgetown

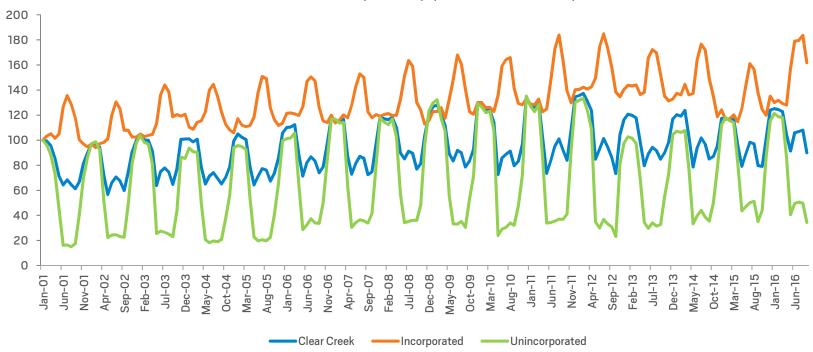
- Georgetown is disproportionately concentrated in the accommodation + food services and retail sectors, which together make up over 60% of the economy
- Unique in its concentration in the transportation and warehousing, which is a small but growing sector

Idaho Springs

- Idaho Springs is more severely undiversified: over 80% of jobs are in the accommodation
 + food services and retail sectors
- Only four sectors grew in Idaho Springs from 2001 to 2016 and the only one to grow substantially was accommodation+ food services

- The tourism sector particularly in the unincorporated portions of the county is hyper-seasonal
- The peaks and troughs of tourism employment are different opposite based on geography (town vs unincorporated):
 - · Peak period for the towns are in the summers while this corresponds with the troughs in unincorporated
 - Peak period for the unincorporated areas is in winter while this corresponds with the troughs in the towns
- Peak-trough delta is much larger (about 2X) for unincorporated portions of the county

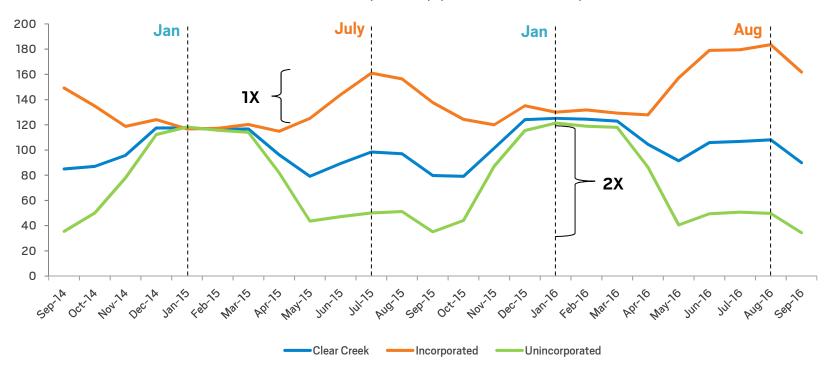




Source: Confidential QCEW, 2001-2016

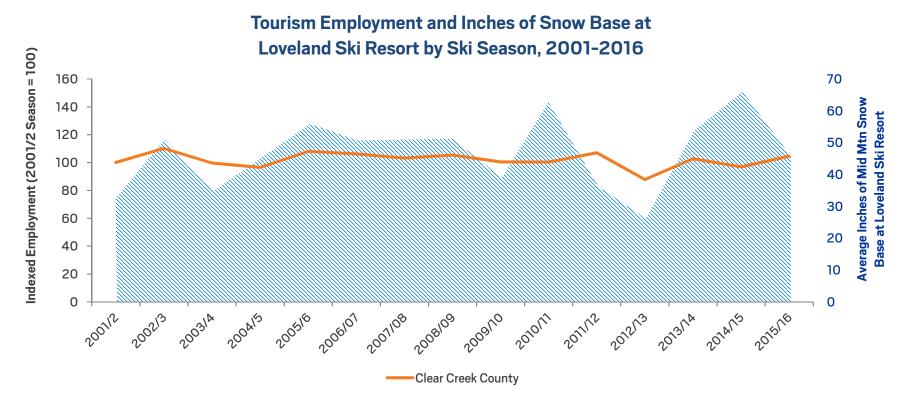
- The tourism sector particularly in the unincorporated portions of the county are hyper-seasonal
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- Peak-trough delta is much larger (about 2X) for unincorporated portions of the county

Indexed Monthly Private Sector Employment in Tourism (71+72) (Jan 2001 = 100)



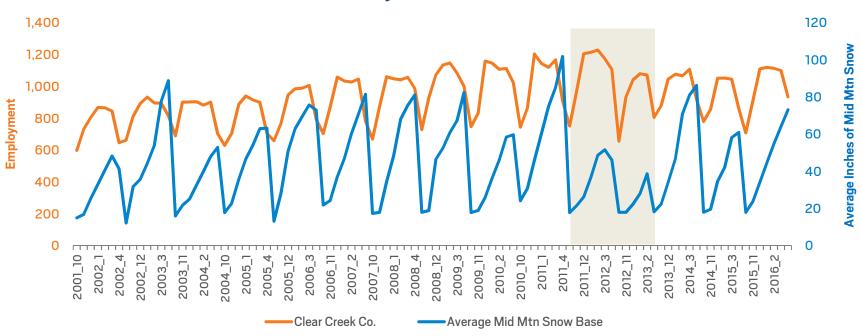
Source: Confidential QCEW, 2001-2016

- While Loveland ski area lacks on-site lodging, it is a favorite, convenient ski area for locals including Denver, front range
 residents*; with the lack of condos and time shares reserved by out-of-staters months in advance, however, the local-serving
 mountain may be more sensitive to variations in winter conditions
- Although there seems to be a bit of a lag in terms of changes in tourism employment in relation to snow conditions at the Loveland Ski area, a bad snow season can greatly impact the county's tourism employment (e.g. ski seasons 2011/12, 2012/2013)



- While Loveland ski area lacks on-site lodging, it is a favorite, convenient ski area for locals including Denver, front range
 residents*; without as many advance housing reservations by out-of-towners, however, the local-serving mountain may be
 more sensitive to variations in winter conditions
- Although there seems to be a bit of a lag in terms of changes in tourism employment in relation to snow conditions at the Loveland Ski area, a bad snow season can greatly impact the county's tourism employment (e.g. ski seasons 2011/12, 2012/2013)

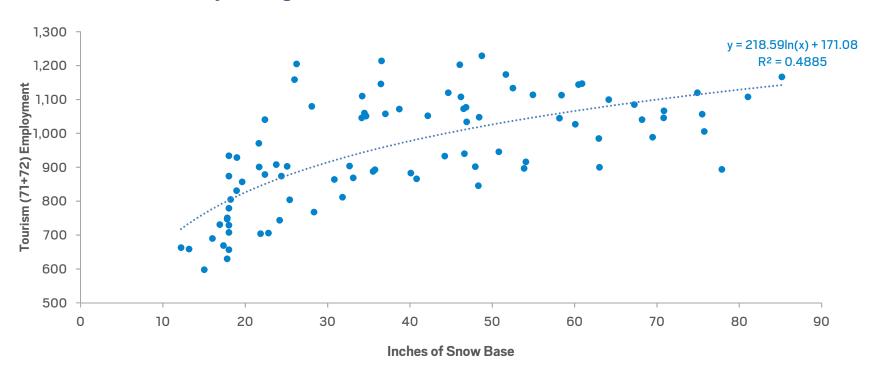




Note: *this is based on non-scientific intel from family members and web research Source: Confidential QCEW, 2001-2016; Loveland Ski Resort data

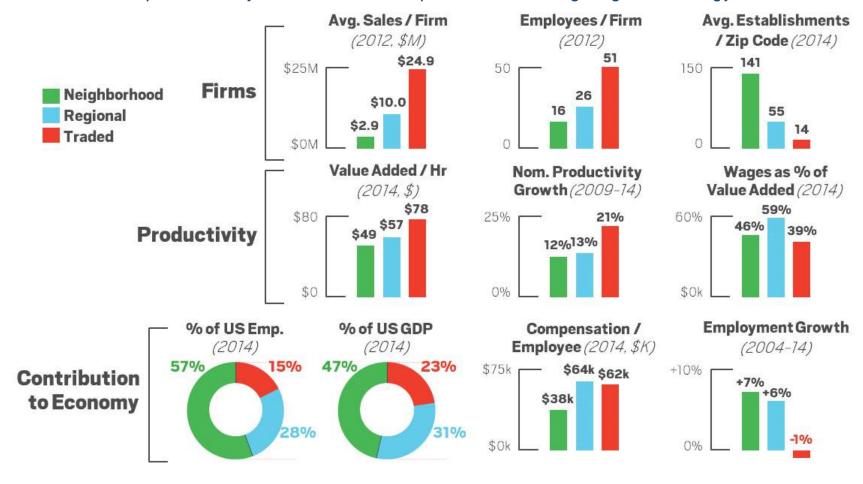
- The monthly snow base (for ski season months October through March) at Loveland Ski Resort is positively correlated with tourism employment in the County
- With only 20 inches of snow, on average, we predict about 825 tourism jobs in the county; at 60 inches of snow, we predict 1,065 a difference of 240 jobs, which reflects about 10% of Clear Creek County's total employment in 2016

Tourism Employment in Clear Creek County vs. Monthly Average of Mid-Mtn Snow Base at Loveland Ski Area



Jobs and Wages | Neighborhood, Regional, Traded Industries

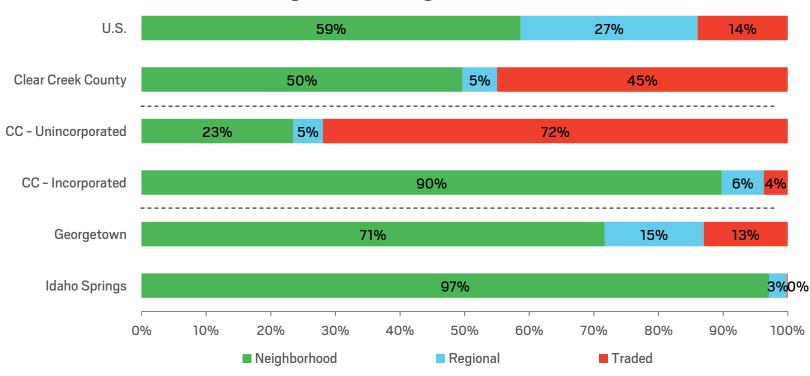
- Neighborhood operates within a town, zip code, small area; consumer oriented; has some natural limits to growth based on local population but is growing across the nation; however, offers relatively low wages
- Regional operates across counties (e.g. within a metropolitan area); B2B; offers high wages and employment growing
- Traded competes nationally and is concentrated in specific areas; offers high wages but is losing jobs



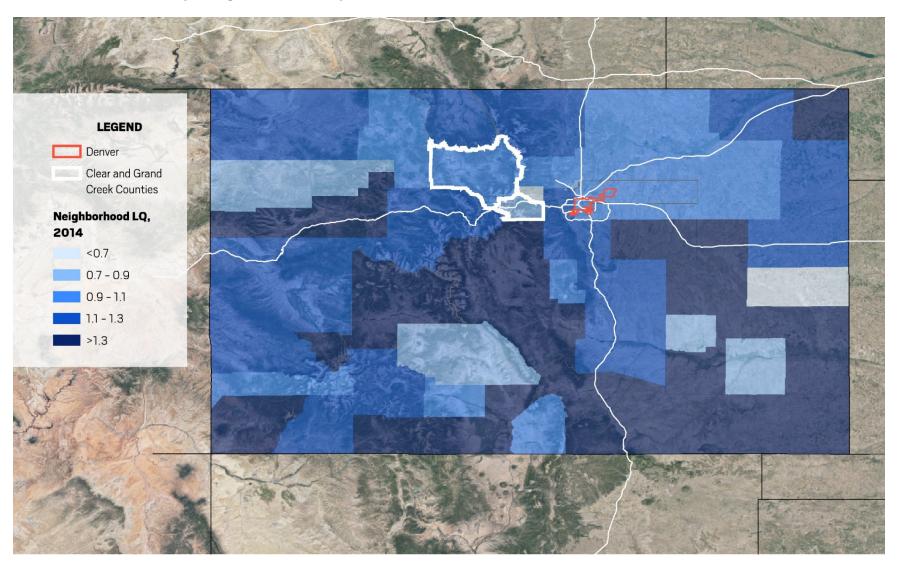
Source: U.S. Census Bureau, County Business Patterns, Survey of Business Owners, BEA Input-Output Accounts Data

- Clear Creek County has significantly higher traded employment and lower neighborhood and regional employment compared to the U.S.
- Within the county, however, the towns are almost entirely composed of neighborhood (local) cluster employment while the unincorporated areas are over 70% traded

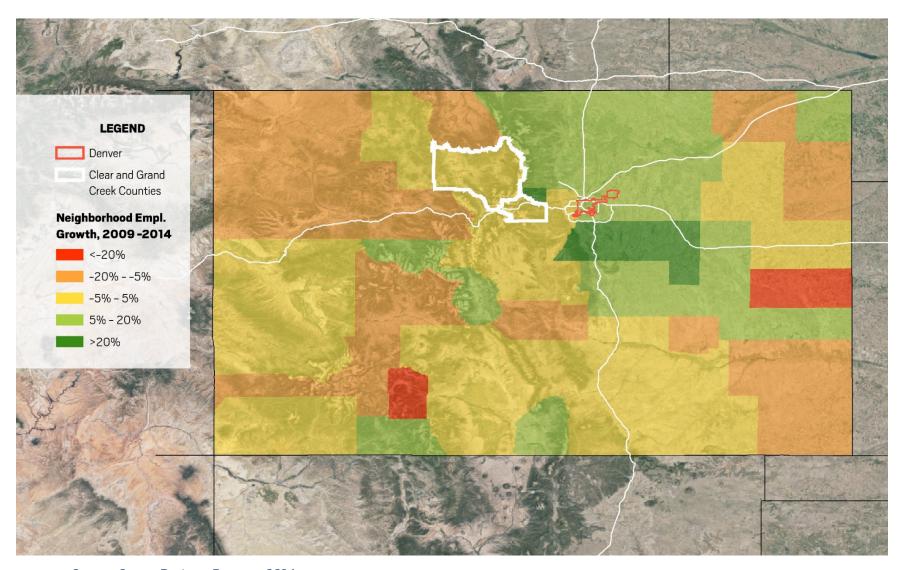




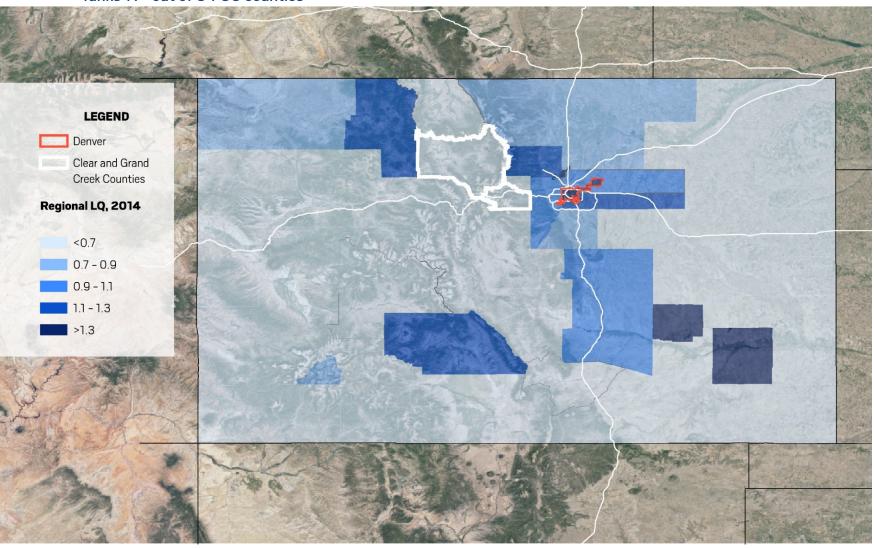
- \bullet Clear Creek's neighborhood LQ is only 0.86 and ranks towards the bottom at 59^{th} out of 64
- Grand County's neighborhood LQ is just under 1.1 and ranks 43rd out of 64 Colorado counties



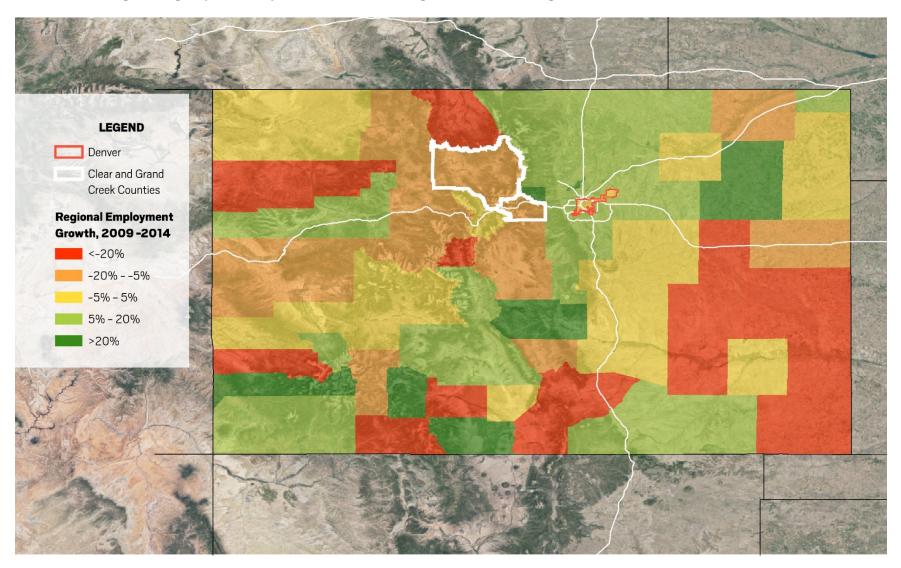
 Unlike Denver, its suburbs, and the front range, neighborhood employment declined by 3.2% in Clear Creek County from 2009 to 2014



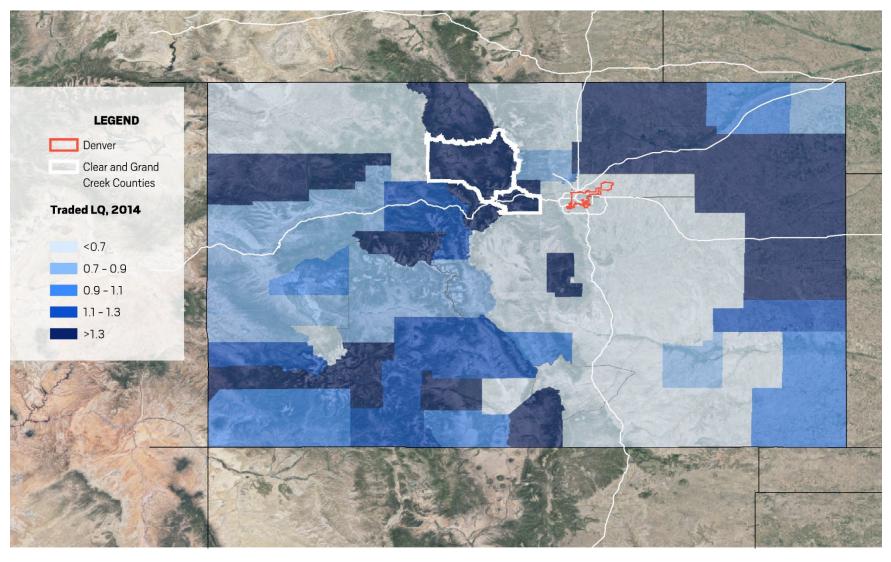
- Grand and Clear Creek have extremely low regional LQs of 0.18 (rank 58/64) and 0.17 (rank 59/64), respectively
- Regional jobs are concentrated in and around Denver and along the front range; Jefferson County has an LQ of 1.0 and ranks 11th out of 64 CO counties



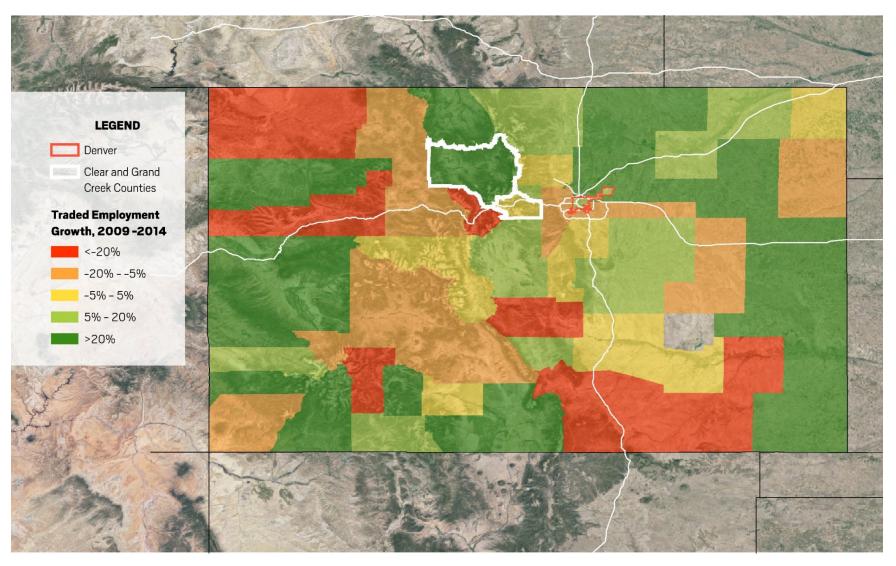
- Unlike Denver, its suburbs, and the front range, regional employment declined by 20% in Clear Creek County
- Neighboring Gilpin County notable for its 54% growth the 4th highest in the state



- Clear Creek's traded LQ, at 3.0, is the 3rd highest in the state after Gilpin and Cheyenne counties
- Grand County's traded LQ is over 2.2 and ranks 9th out of 64 Colorado counties



- Clear Creek traded employment only grew by 1.4% from 2009 to 2014 (ranked 42nd out of 64 CO counties)
- Neighboring Grand County grew the most of any CO county (5X traded employment over the five year period)



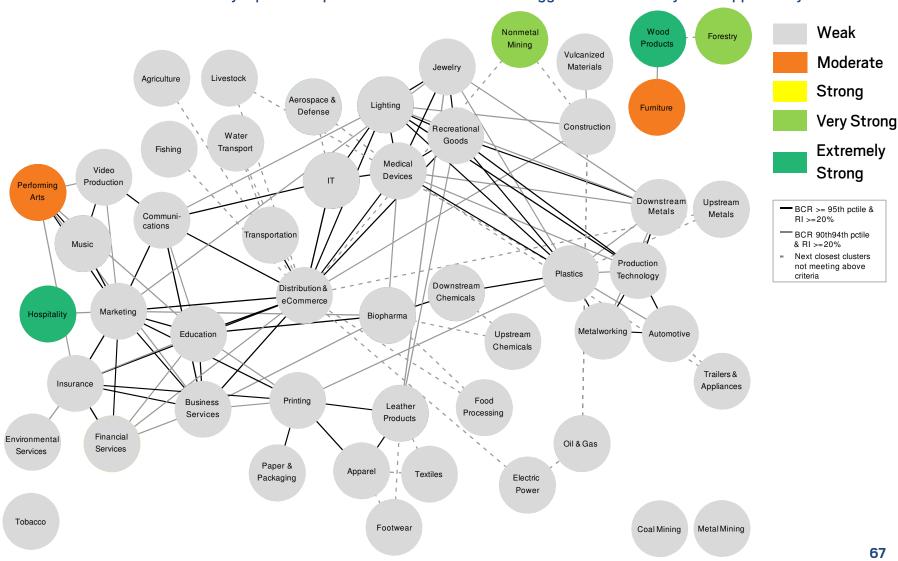
Jobs and Wages | Clear Creek Traded Clusters 2016

Among traded clusters, Clear Creek County is severely lacking in diversity and only strong in four clusters (albeit extremely strong in those clusters) Weak Moderate Wood Forestry **Products** Mining Vulcanized Strong Materials Jewelry Livestock Agriculture Very Strong Aerospace & Lighting Furniture Defense Extremely Construction Recreational Water Strong Goods Fishing Transport Medical BCR >= 95th pctile & Video Devices RI >=20% IT Production Performing BCR 90th94th pctile Arts Downstream Upstream & RI >=20% Metals Metals Communi-Next closest clusters cations not meeting above Transportation criteria Music Production **Plastics** Technology Downstream Chemicals Marketing Hospitality Biopharma Metalworking Automotive Education Upstream Chemicals Trailers & Insurance Appliances Printing Food **Business** Leather Processing Services Products Financial Environmental Oil & Gas Services Paper & Apparel Textiles Electric Packaging Power Tobacco Footwear Metal Mining Coal Mining

Source: Confidential QCEW, 2016

Jobs and Wages | Grand Traded Clusters 2016

- · Among traded clusters, Grand County is lacking in diversity and only strong in four clusters
- Wood Products + Forestry represent a pair of related clusters and suggests furniture may be an opportunity



Source: Confidential QCEW, 2016

Jobs and Wages | Largest Clusters in Clear Creek County, 2016

- The top 2 clusters Hospitality and Tourism and Local Hospitality account for over 53% of the total economy and the top 5 (unsuppressed) clusters account for about two thirds
- Traded clusters account for significant portion of 2016 jobs, but they are concentrated in only 7 traded clusters

Largest Clusters in Clear Creek*

Cluster Name	Jobs, 2016
Hospitality and Tourism	690
Local Hospitality Establishments	540
Local Motor Vehicle Products and Services	110
Local Personal Services (Non-Medical)	100
Business Services	90
Local Real Estate, Construction, and Development	90
Local Food and Beverage Processing and Distribution	60
Local Health Services	60
Distribution and Electronic Commerce	30
Local Commercial Services	20

Jobs and Wages | Typology of Clusters

Cluster Typology	Description
Strong + Competitive	Growing clusters with high LQs (over 1) Existing strengths that are growing
Strong but Slipping	Declining clusters but with high LQs Existing strengths that are declining
Emerging	Clusters with LQs <1 that have grown faster than the U.S. Small, emerging clusters to support in scaling, growth
Deteriorating	Weaker clusters (LQs <1) that are declining Retain existing jobs, assess viability + opportunities to bring cluster back
"Missing"	TBD from case study research but will reflect clusters we would expect to be represented in the county

Jobs and Wages | Typology of Clusters - Clear Creek County

LQ Growth 2001-2016 vs 2016 LQ for Clear Creek County

	Strong but Slipping	Strong + Competitive
Strong	Local Personal Services	Hospitality + Tourism Local Hospitality Local Motor Vehicle Products + Services Nonmetal Mining*
	Deteriorating	Emerging
Weak	Local Food + Bev. Proc. + Dist. Local RE, Construction + Dev. Distribution and Electronic Commerce Local Health Services	Business Services Local Commercial Services

Declining Growing

Jobs and Wages | Typology of Clusters – Grand County

LQ Growth 2001-2016 vs 2016 LQ for Grand County

Strong but Slipping

Strong + Competitive

Strong

Weak

Local Hospitality
Local Real Estate, Construction + Development
Local Entertainment and Media

Hospitality + Tourism

Local Food + Beverage Processing + Distribution

Wood Products

Local Utilities

Deteriorating

Local Health Services Local Logistical Services

Local Motor Vehicle Prod. + Services

Local Community + Civic Orgs.

Local Financial Services

Local Retailing of Clothing + Gen. Merch.

Emerging

Local Commercial Services
Local Household Goods + Services

Distribution + Electronic Commerce

Local Personal Services (non-medical)

Business Services

All Other Crop + Animal Production

Financial Services

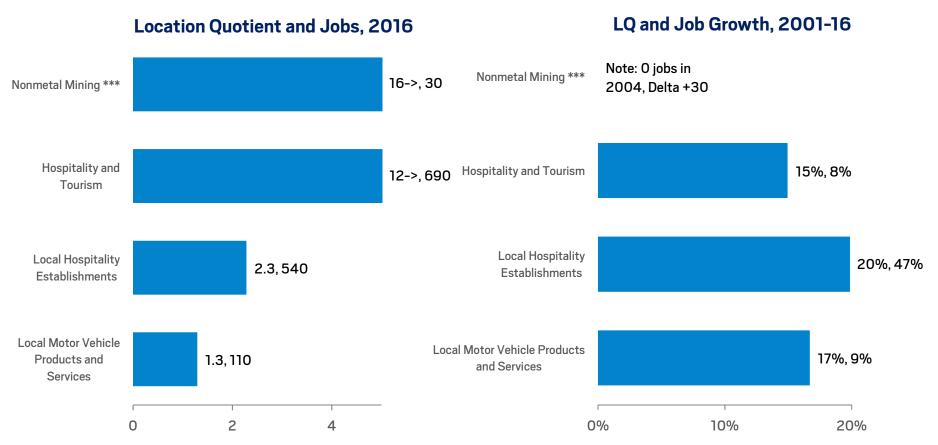
Declining

Growing

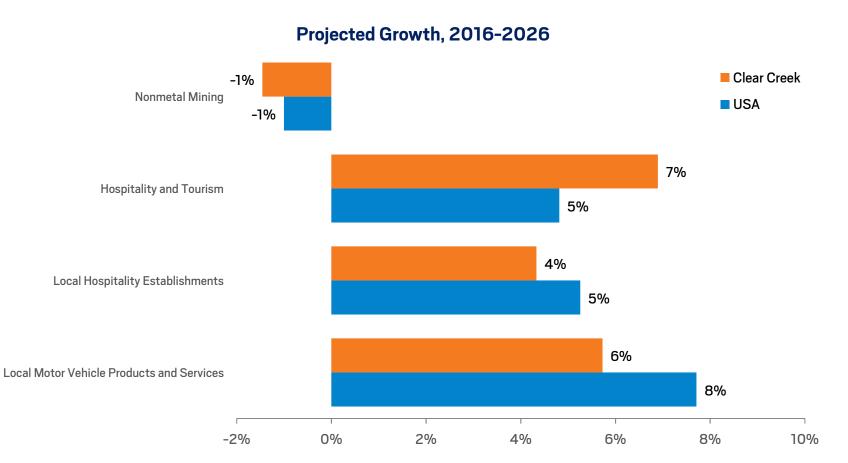
Note: only clusters with at least 20 employees shown Source: Confidential OCEW. 2001-2016

Jobs and Wages | Strong + Competitive Clusters

- Save for the Nonmetal Mining, all strong + competitive clusters are related to tourism + serving tourists
- Local Hospitality Establishments is an important economic driver, gaining strength and numbers; it
 accounts for approximately 46% of the job growth in the County (among clusters that grew)
- Nonmetal Mining is a traded cluster that is new to Clear Creek; it has notable strength, albeit with relatively low job numbers at this early stage

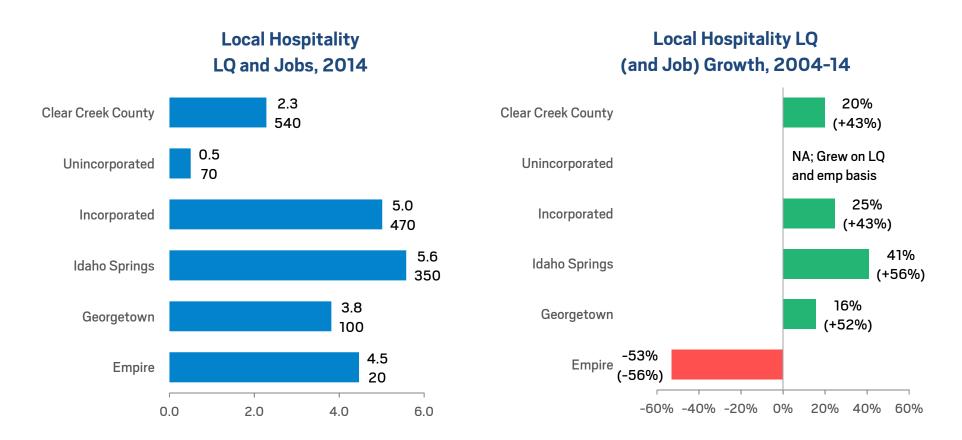


- Excluding Nonmetal Mining, all of the clusters are projected to grow over the next 10 years
- Based on Clear Creek County's current industry mix, the County is projected to outperform the nation in Hospitality and Tourism and underperform the nation Local Hospitality Establishments and Local Motor Vehicle Products and Services



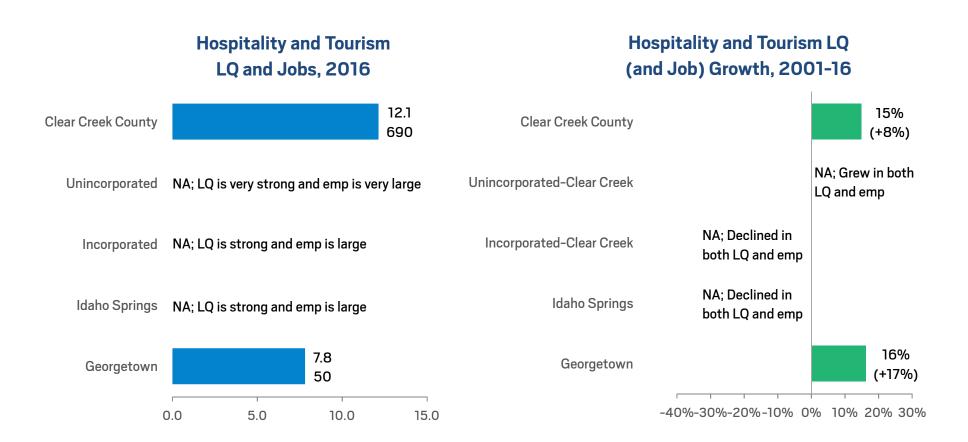
Local Hospitality

- Accounts for 23% of Clear Creek County's jobs and has shown strong job growth (+43%) since 2001
- Save for Empire, the cluster has grown across all geographies in Clear Creek County
- The vast majority of jobs (about 90%) are in the Hospitality Establishments sub cluster, which is made up of
 restaurants, bars, and caterers; growth in this sub cluster surpassed the other sub clusters' growth significantly



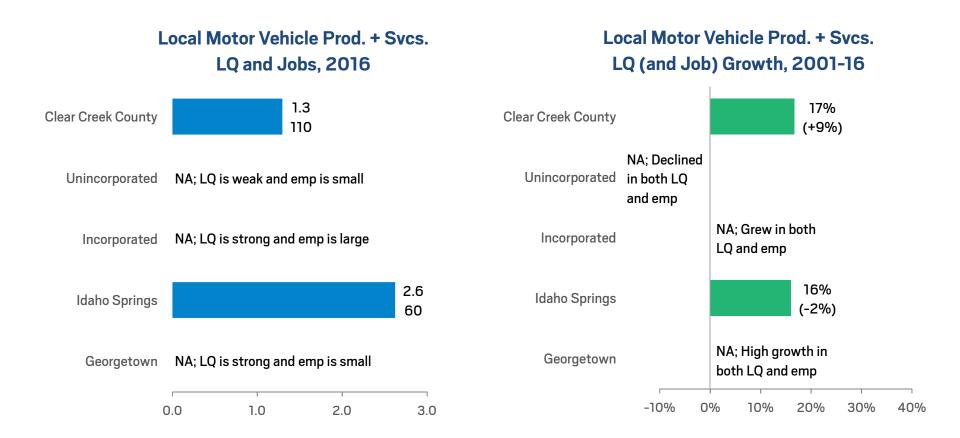
Hospitality and Tourism

- Accounts for 28% of Clear Creek County's jobs and has shown job growth (+8%) since 2001
- The cluster has grown in the unincorporated portion of the county and declined in the incorporated towns
- Hospitality and Tourism is driven primarily by Other Tourism Attractions, with additional strengths in Accommodations Services and Tourism Related Services



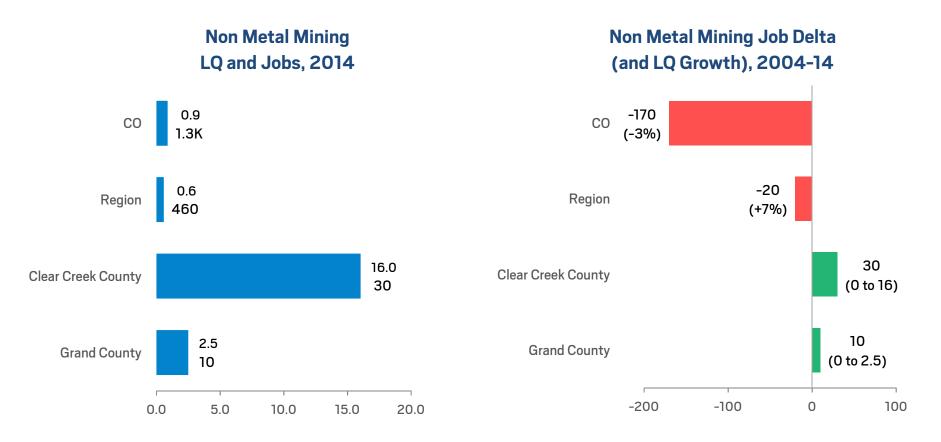
Local Motor Vehicle Products + Services

- Accounts for 5% of Clear Creek County's jobs and has shown job growth (+9%) since 2001
- The cluster has grown in the incorporated towns and declined in the unincorporated portions of the county
- The overwhelming majority of jobs in the cluster are in the Gas Station and Other Automotive Services subclusters

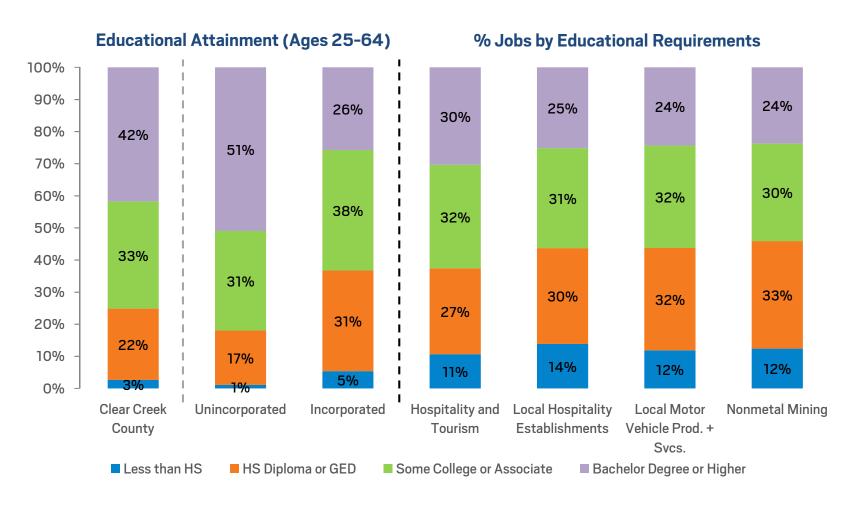


Non Metal Mining

- Clear Creek County represents 6% of the region's jobs in this cluster but only about one-fifth of one percent of all jobs
- In Clear Creek, the cluster is composed of construction and industrial sand and gravel mining industries
- The cluster was non-existent in 2004 but has become a strength in both Clear Creek and Grand counties



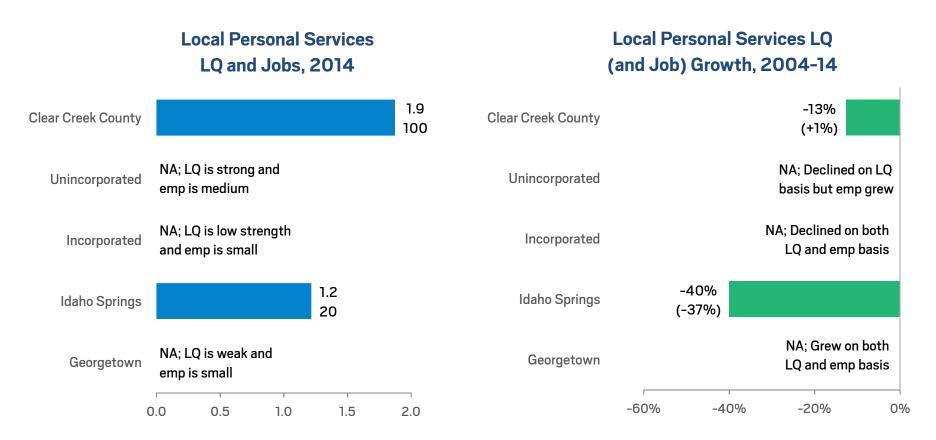
- All of the strong and competitive clusters are accessible to residents of the towns and unincorporated areas (although hospitality and tourism is the least accessible of these clusters)
- There is an educational attainment gap for town residents for the Hospitality and Tourism cluster: 30% of the jobs in the cluster require a Bachelor's Degree or higher while only 26% of town residents aged 25 to 64 have this level of education



Jobs and Wages | Strong but Slipping Clusters

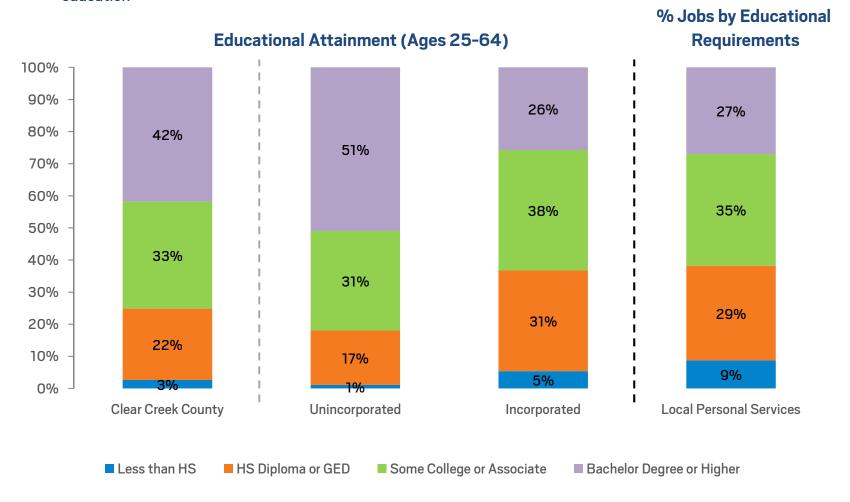
Local Personal Services

- Accounts for about 4% of Clear Creek County's jobs and while LQ has declined (-13%), employment actually grew by 1% since 2001
- Cluster LQ has declined in both incorporated towns and unincorporated portions of the county but more so in the towns
- Employment is concentrated in the Other Personal Services, Personal Products Retailing, and Child Care Services subclusters
- The cluster is projected to grow by 10% in the County and 7% nationally over the next 10 years



Jobs and Wages | Strong but Slipping Clusters

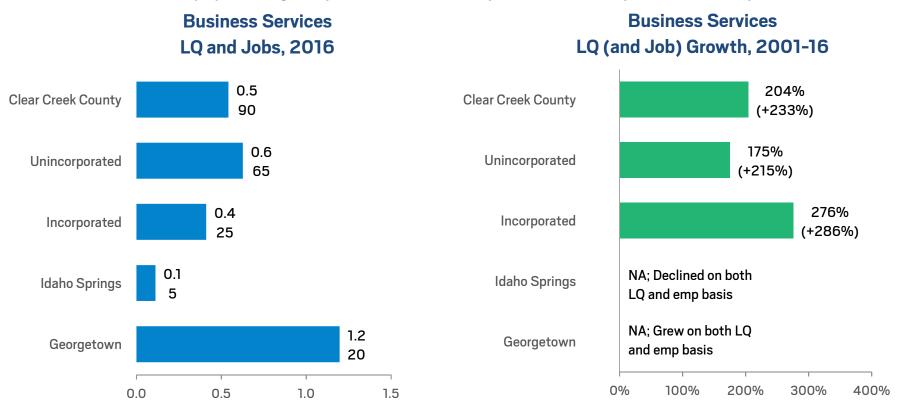
- The Local Personal Services cluster is accessible to residents of both the towns and unincorporated areas
- There is a small educational attainment gap for the towns: 27% of the jobs in Local Personal Services require a Bachelor's Degree or higher while only 26% of town residents aged 25 to 64 have this level of education



Jobs and Wages | Emerging Clusters

Business Services

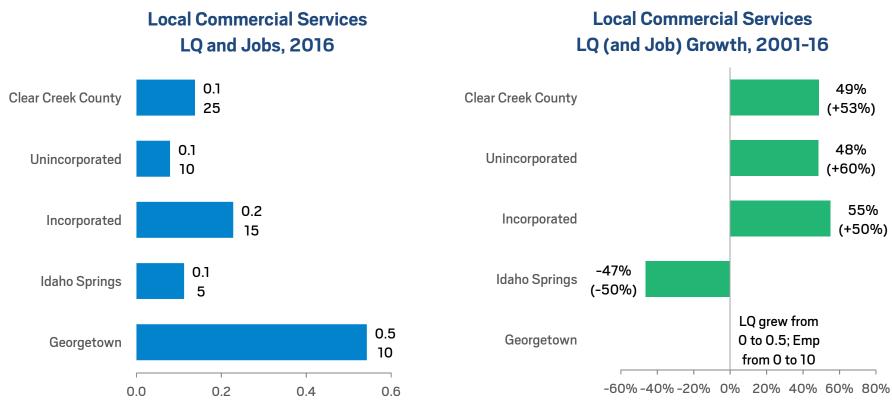
- While the numbers are small, Business Services employment is more heavily concentrated in the unincorporated portion of the county; the cluster actually represents a small strength in Georgetown (with an LQ of 1.2)
- The cluster, however, has grown dramatically in both the incorporated and unincorporated areas
- Employment is relatively evenly distributed across five of the seven subclusters, with Business Support Services, Engineering Services, and Consulting Services the three largest subclusters
- The cluster is projected to grow by over 13% in the County and 14% nationally over the next 10 years



Jobs and Wages | Emerging Clusters

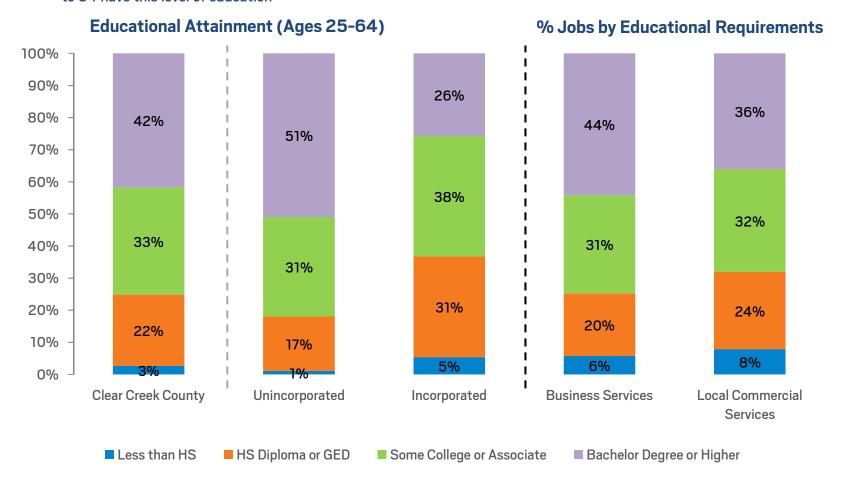
Local Commercial Services

- While the numbers are very small, Local Commercial Services employment is more heavily concentrated in the incorporated towns
- The cluster, however, has grown dramatically in both the incorporated and unincorporated areas
- Employment is almost entirely concentrated in the Local Professional Services subcluster, which includes lawyers, accountants, and other office admin services
- The cluster is projected to grow by 8% nationally, but only 4% in Clear Creek based on its current industry mix



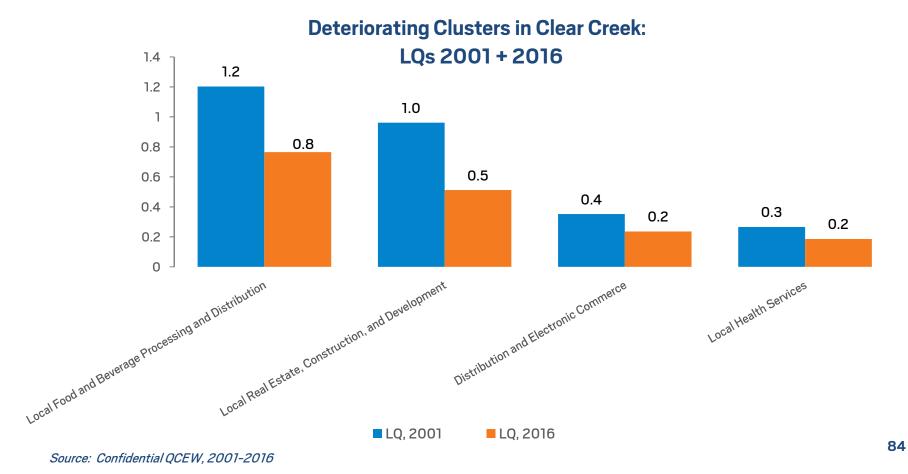
Jobs and Wages | Emerging Clusters

- Business Services Cluster is significantly less accessible than Local Commercial Services although both are accessible to residents of the unincorporated portions of the county
- There is a sizable educational attainment gap for town residents for both clusters: 44% and 36% of jobs require a Bachelor's Degree or higher for Business Services and Local Commercial Services, respectively, while only 26% of town residents aged 25 to 64 have this level of education



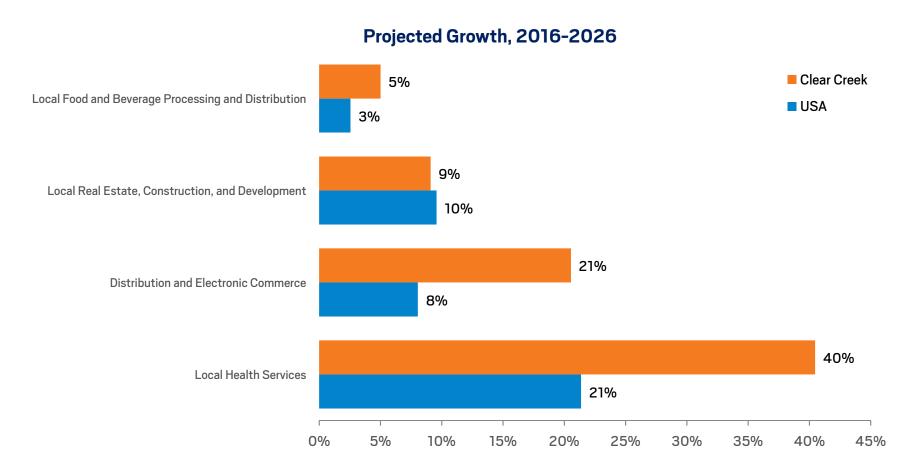
Jobs and Wages | Deteriorating Clusters

- As a group, jobs in these clusters have decreased 40% since 2001 (losing about 160 jobs)
- The sum of these clusters account for over 10% of the county's jobs in 2016, making retention strategies for select clusters important to consider
- Among the larger clusters, Local RE, Construction, and Development lost over half of its employment between 2001 to 2016 (losing over 90 jobs) and Local Food and Beverage Processing and Distribution declines have been driven by losses in the Beer and Liquor Wholesaling and Retail Food Stores subclusters



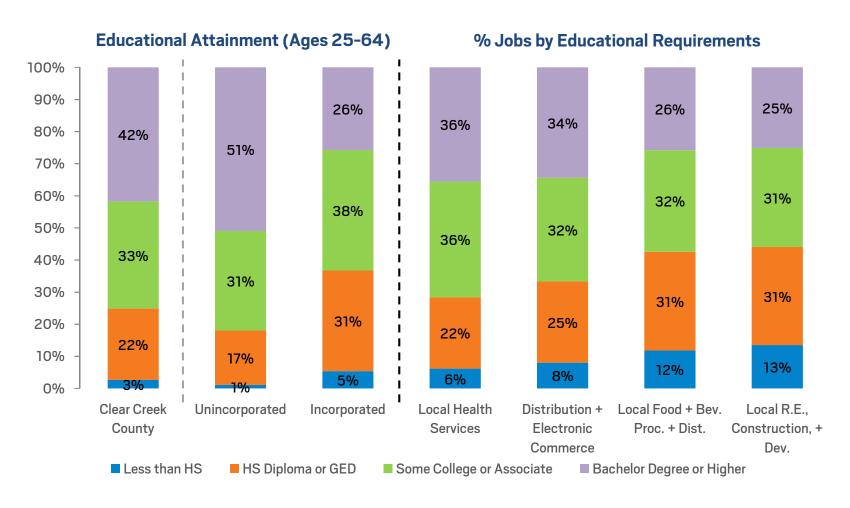
Jobs and Wages | Deteriorating Clusters

- All of the clusters deteriorating in Clear Creek County are projected to grow over the next 10 years
- Based on Clear Creek County's current industry mix, the County is projected to outperform the nation in all of the deteriorating clusters save for Local Real Estate, Construction, and Development



Jobs and Wages | Deteriorating Clusters

- Local Food + Beverage Processing + Distribution and Local Real Estate, Construction, and Development both reflect deteriorating but highly accessible clusters
- The Local Health Services and Distribution + Electronic Commerce clusters are accessible to residents of the unincorporated portion of the county but reflect clusters with an educational attainment gap for town residents



Jobs and Wages | Summary

- Overall, county has been losing jobs since 2008 but when mining is excluded, county actually growing in recent years
- Towns and unincorporated areas are distinct economic geographies which will require unique economic and land strategies
- Overall job growth has generally been concentrated outside of the towns
- Towns are relatively isolated from the rest of the regional economy (limited traded cluster activity)
 - Need better integration with the regional economy (through B2B, for example)
- The county's economy is severely lacking economic diversity and it is also extremely seasonal –
 especially for the unincorporated portion of the county
 - A bad snow season has the potential to be catastrophic for tourism employment (and revenues)
 for the county
 - Assuming the temp, seasonal work is a "way of life" that some people enjoy (e.g. raft guides in summer, ski resort worker in winter), need to identify and attract industry clusters that operate on current "off-season" (spring, fall) schedules to provide opportunities to fill in seasonal gaps in employment
 - Need to diversify both clusters and skills and grow clusters that offer full-time, year-round employment

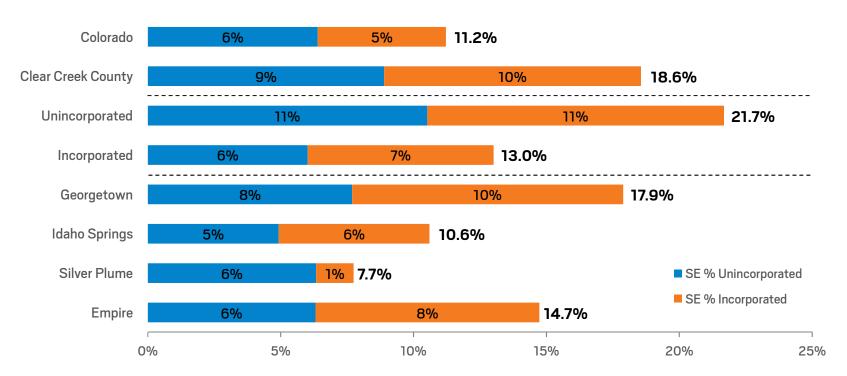
Clear Creek | Table of Contents

- I. Introduction
- II. Who Lives Here?
- III. Where do People Live?
- IV. Who Works Here?
- V. Jobs and Wages
- VI. Entrepreneurship
- VII. Hypotheses and Discussion

Entrepreneurship | Workforce: Self-Employment

- Self-employment is dramatically higher in Clear Creek compared to the state (and region) both for unincorporated and incorporated businesses
- Unincorporated Clear Creek has higher self-employment rates than the towns, likely driven by educational attainment, occupational backgrounds, access to networks

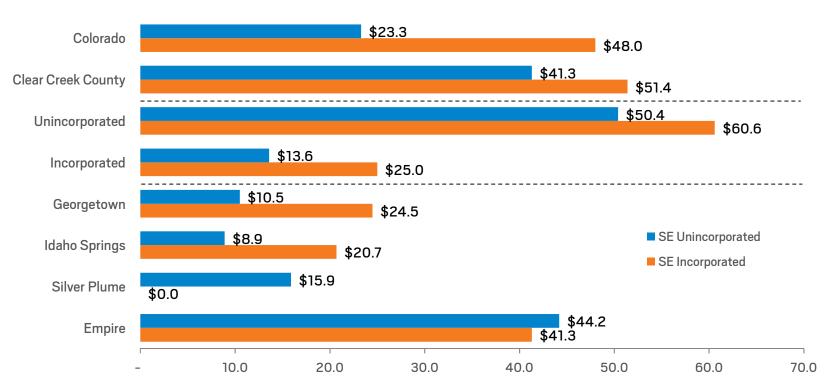
Self-Employment by Type as Percent of Total Employment (Ages 16+)



Entrepreneurship | Workforce: Self-Employment Wages

- Median self-employment incomes are significantly higher in Clear Creek compared to the state but the difference is larger for the unincorporated businesses
- Self-employed residents of the unincorporated portion of Clear Creek have higher incomes than the selfemployed in the towns: in fact, unincorporated businesses have over 2X the income of incorporated business in the towns (\$50.4K vs only \$25K)

Self-Employment Median Income by Type Ages 16+ (\$'000)



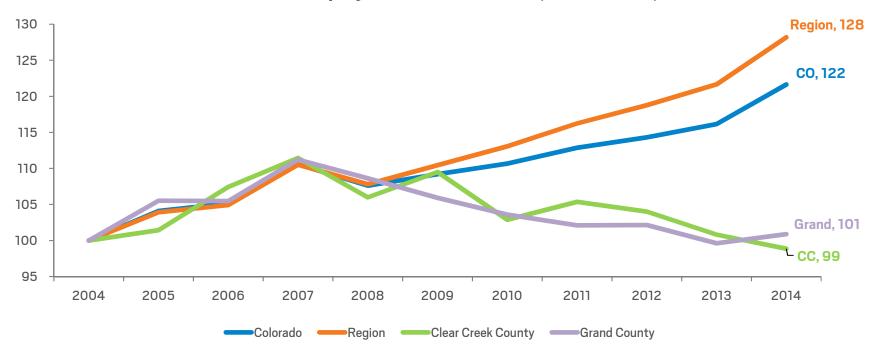
Note: Data not available for Silver Plume and incorporated, unincorporated statistics represent weighted average excluding Silver Plume Source: American Community Survey, 2011–2015 5-year release

Entrepreneurship | Nonemployer Establishments, 2004-2014

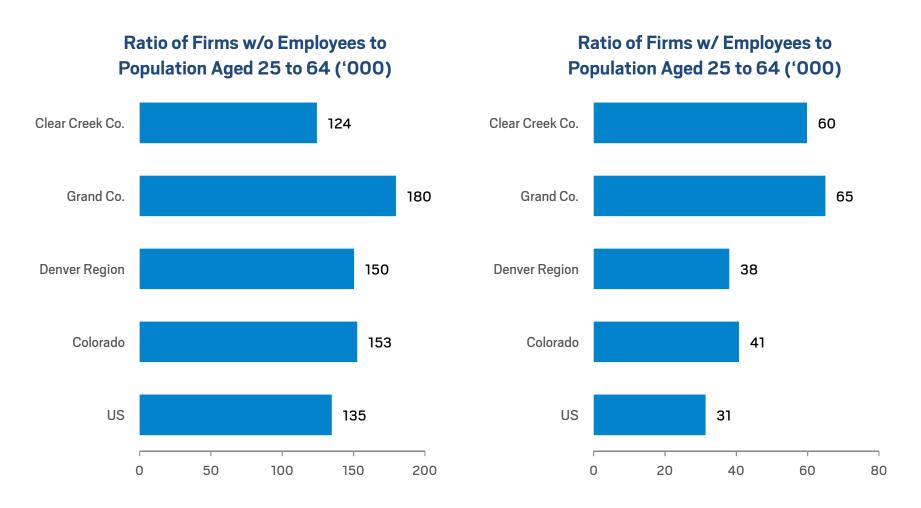
- Unlike the state and U.S., the number of nonemployer establishments in Clear Creek has declined since the recession

 which may point to lower rates of entrepreneurial activity and/or declines in the business supports ecosystem
 - Compared to the U.S., nonemployers in Clear Creek are more heavily concentrated in construction, professional/scientific/technical services, and accommodation + food services

Indexed Nonemployer Establishments (2004=100)

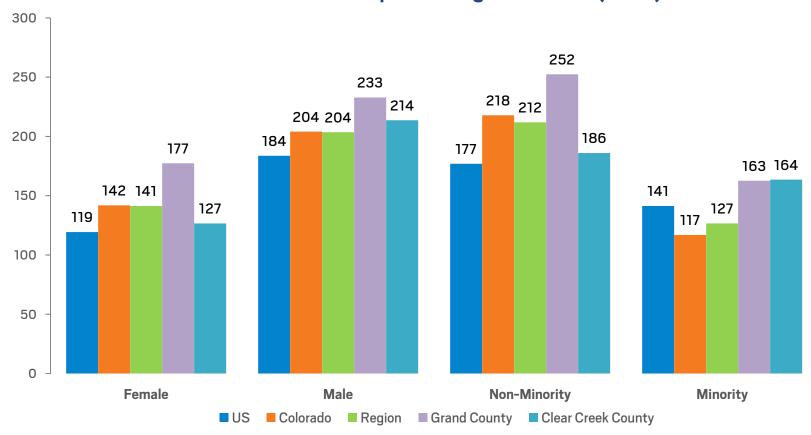


 Clear Creek County has fewer firms without employees per population compared to other geographies but higher firms with employees

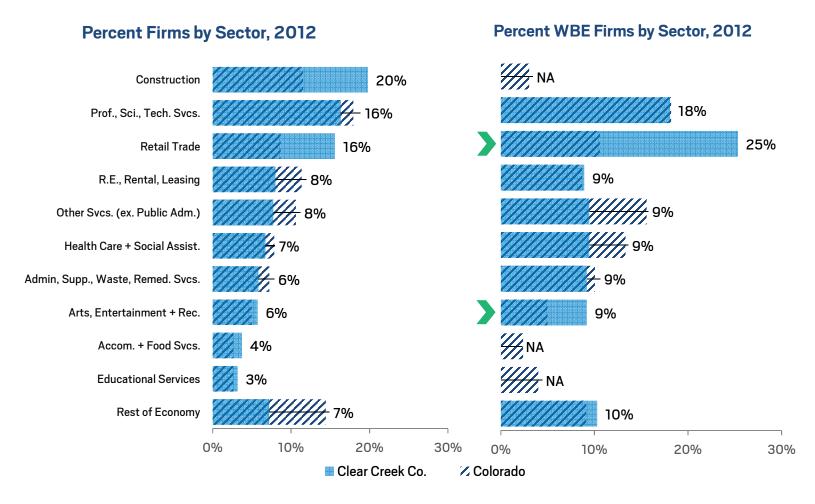


- Clear Creek County underperforms in entrepreneurship for WBEs but over performs for MBEs
- This pattern holds for both firms with and without employees

Ratio of Firms to Population Aged 25 to 64 ('000)

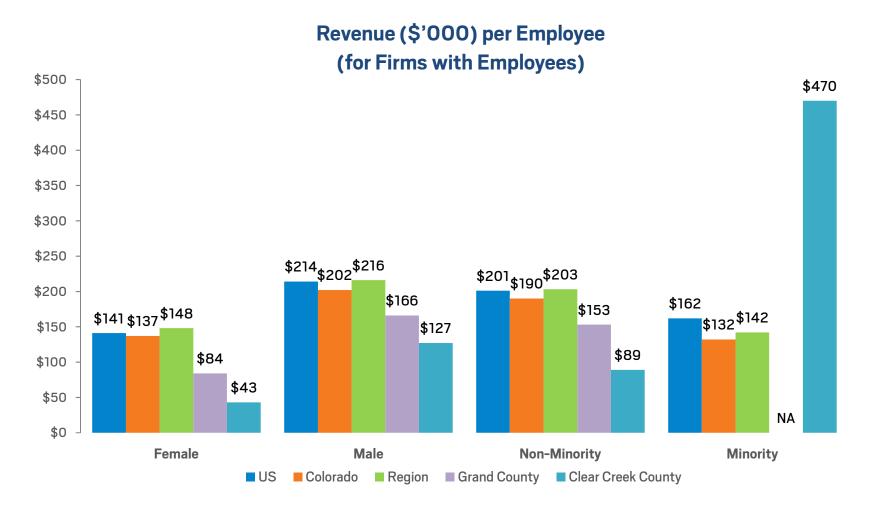


- 45% of MBEs are in the construction sector in Clear Creek compared to only 14% statewide*
- WBE's are disproportionately concentrated in retail (44-45) and arts, entertainment and recreation (71)



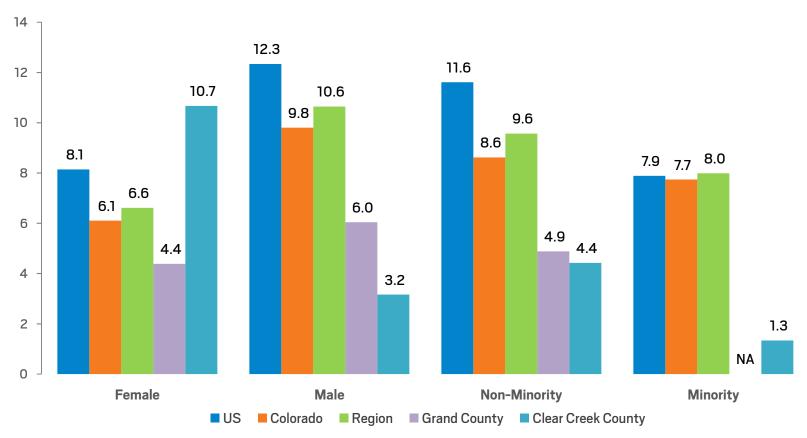
^{*}Note: Data for MBEs in Clear Creek are suppressed for all other sectors; Suppressed WBE data are noted as NA in above chart Source: Survey of Business Owners, 2012

Clear Creek County significantly underperforms in revenue per employee (for firms with employees)
 but is dramatically higher (>3.3X compared to the Region) for MBEs

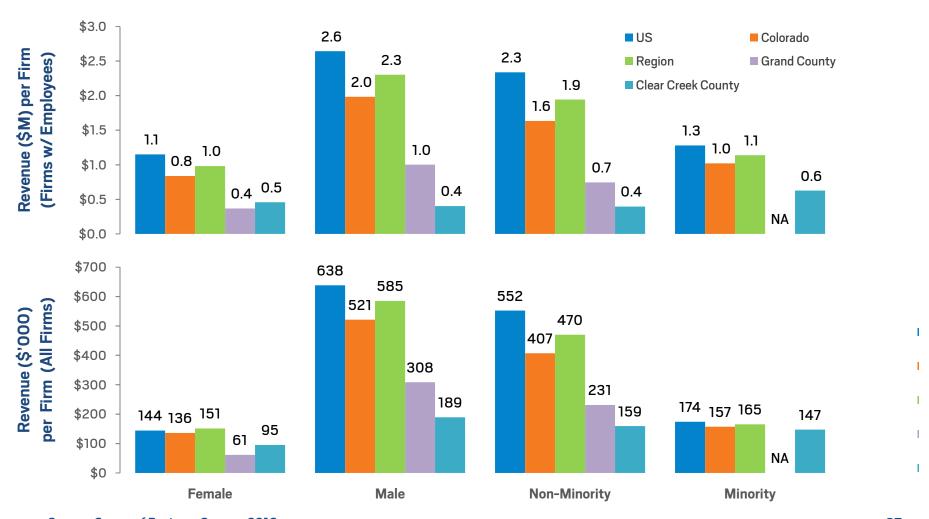


 Clear Creek County firms are significantly smaller in size compared to the region, except for WBEs which are about 60% larger on average compared to the region

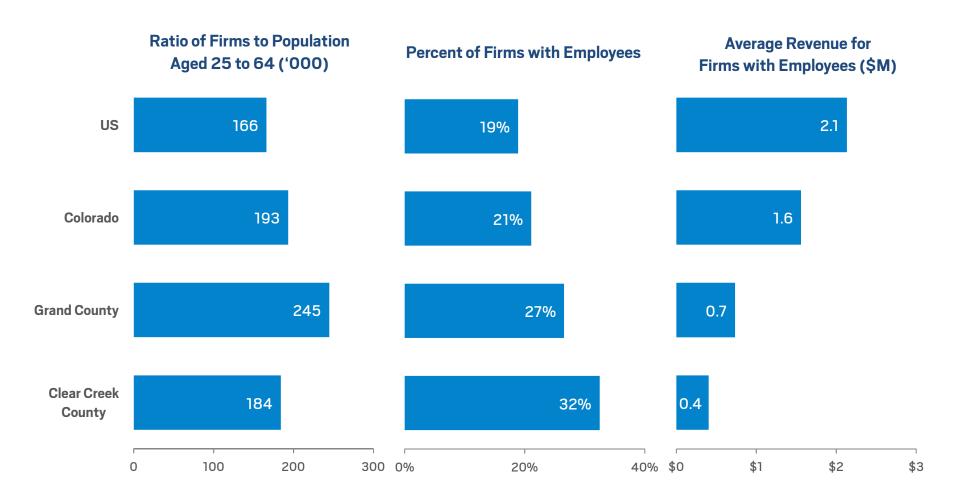
Average Firm Size (for Firms with Employees)



 Clear Creek County underperforms in revenue per firm but, for firms with employees, both WBEs and MBEs actually outperform male-owned firms and non-minority owned firms, respectively



• Entrepreneurship – particularly for firms with employees – is strong and almost 1/3 of firms have employees (compared to only 20% nationally and in the state) but revenue per firm is very low in Clear Creek County



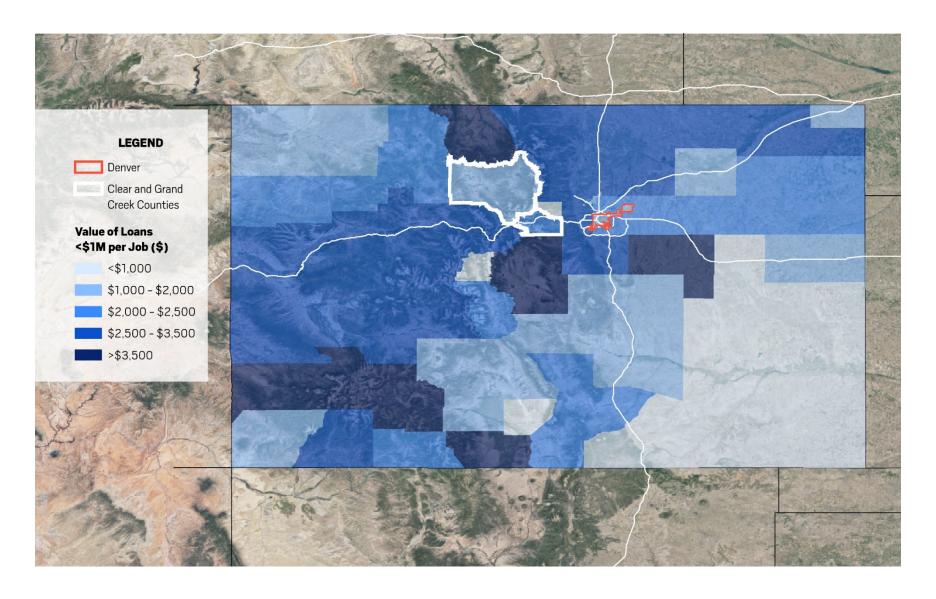
Entrepreneurship | Business Loans per Job Summary

- Clear Creek County has both a higher number and \$ value of business loans per job compared to the state
- Clear Creek only outperforms the state in terms of both the number and value of loans/job below \$100K its numbers and \$ value of loans/job are lower than the state for larger loan sizes

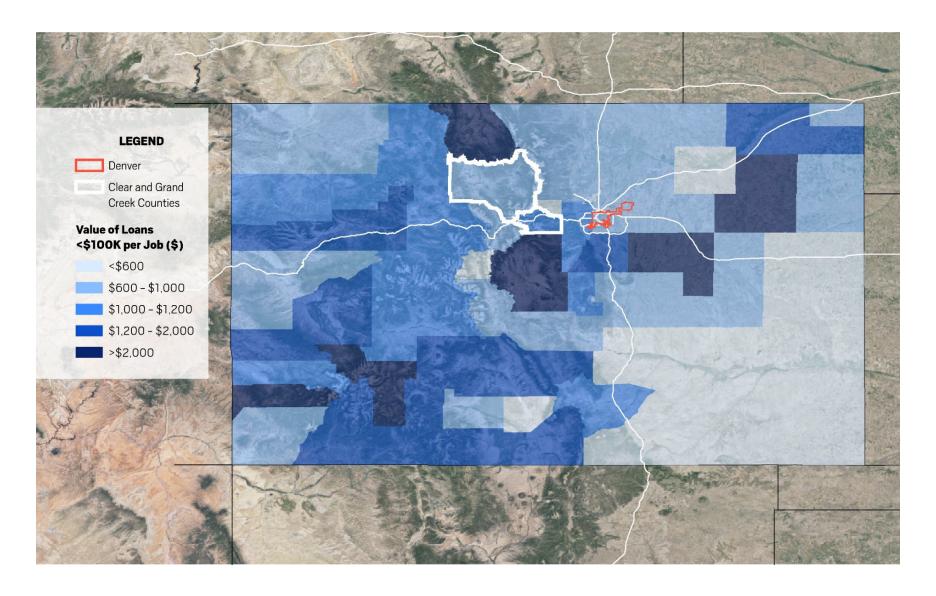
	Clear Creek	Grand	
Statistic	County	County	СО
Number of loans below \$1M per 1K jobs	95	67	64
Number of loans below \$100K per 1K jobs	93	65	60
Number of loans between \$100K and \$250K per 1K jobs	0.8	1.3	1.7
Number of loans between \$250K and \$1M per 1K jobs	1.1	0.5	2.0
Value of loans below \$1M per job (\$)	\$2,230	\$1,340	\$2,230
Value of loans below \$100K per job (\$)	\$1,100	\$930	\$850
Value of loans between \$100K and \$250K per job (\$)	\$90	\$190	\$300
Value of loans between \$250K and \$1M per job (\$)	\$1,040	\$220	\$1,090
Rank, Number of loans below \$1M per 1K jobs	17	38	NA
Rank, Number of loans below \$100K per 1K jobs	16	36	NA
Rank, Number of loans between \$100K and \$250K per 1K jobs	50	42	NA
Rank, Number of loans between \$250K and \$1M per 1K jobs	39	49	NA
Rank, Value of loans below \$1M per job (\$)	31	47	NA
Rank, Value of loans below \$100K per job (\$)	25	36	NA
Rank, Value of loans between \$100K and \$250K per job (\$)	50	44	NA
Rank, Value of loans between \$250K and \$1M per job (\$)	26	52	NA

Source: FFIEC-CRA 2015 Data Notes: Rank out of 64 Colorado Counties

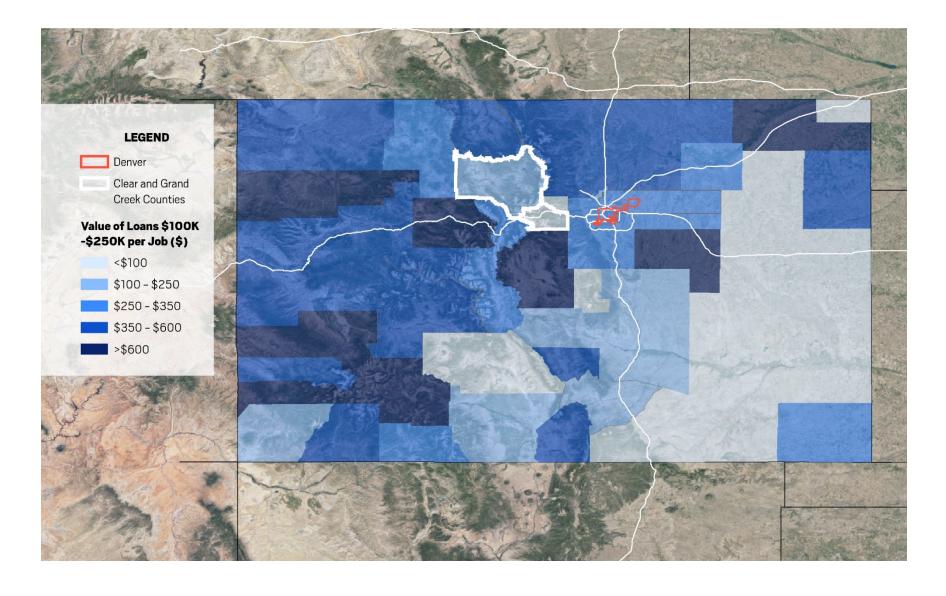
Entrepreneurship | Value of Business Loans for <\$1M per Job



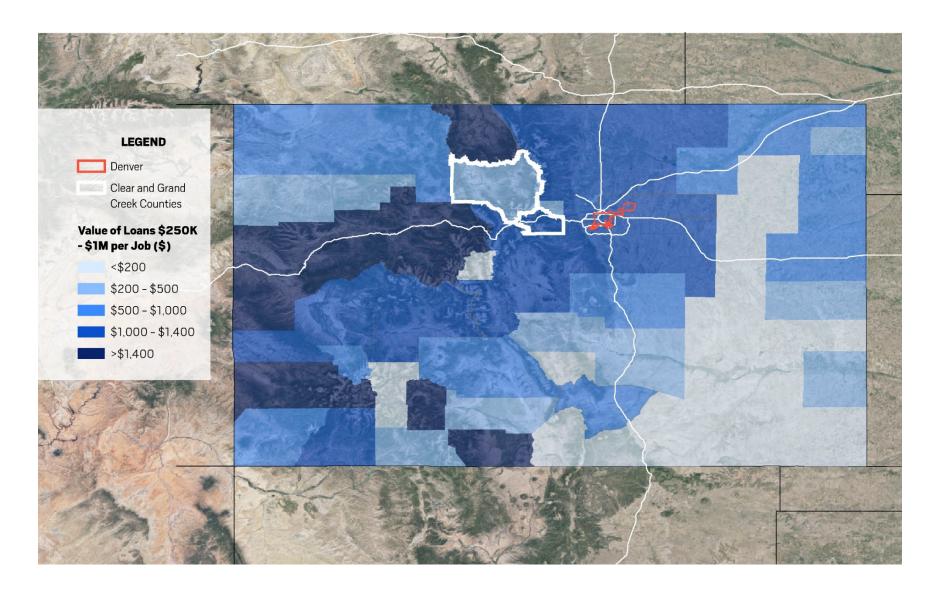
Entrepreneurship | Value of Business Loans for <\$100K per Job



Entrepreneurship | Value of Business Loans for \$100K to \$250K per Job



Entrepreneurship | Value of Business Loans for \$250K to \$1M per Job



Entrepreneurship | Summary

- High rates of self-employment throughout the county, but more concentrated in unincorporated portion
 - Unincorporated area SE strength likely driven by educational attainment, occupational backgrounds, access to networks but could also be out of a need or desire for job flexibility
- Unlike the state and U.S., the number of nonemployer establishments in Clear Creek has declined since the recession – which may point to falling rates of entrepreneurial activity and/or declines in the business supports ecosystem in the county
- Need for additional WBE supports/programs and a diversification effort beyond retail + arts, entertainment, and recreation
- Need to support the attraction and retention of MBEs, which are outperforming on a number of metrics (MBEs represent a significant opportunity and will be increasingly important as minority population grows in the county)
- Need to support firm growth within the county, as firms are smaller and have lower revenues on average compared to other geographies
 - Need to identify the factors limiting growth through additional research and interviews e.g. TA, capital, building/land, etc.

Clear Creek | Table of Contents

- I. Introduction
- II. Who Lives Here?
- III. Where do People Live?
- IV. Who Works Here?
- V. Jobs and Wages
- VI. Entrepreneurship
- VII. Hypotheses and Discussion

1. Need a two-pronged strategy

- Macro level = Portfolio approach to offset system risk
 - Tourism is central economic driver and volatility is inevitable
 - Increase presence in clusters with growth potential and offsetting risks and volatility
 - Clusters that operate on current "off-season" (spring, fall)
 - B2B clusters that serve multiple industries (low growth but low volatility)
- Micro level = Address growth and volatility at worker, firm, and industry level wherever possible
 - Offset weak winter season with higher targets for summer season (e.g., increase marketing, make available working capital)
 - Expand the tourism seasons
 - Establish program (or for-profit businesses) to help homeowners become more productive seasonal renters

2. Need better integration with the regional economy

- More focus on B2B engagement with the Denver economy
- Second office, conference facilities, business retreats
- Broadband quality may be an issue here

3. Under-utilized land and space is an asset

- It may be difficult to add jobs-producing/-supporting real estate
 - Most land is protected
 - Construction costs are high
 - Real estate is late in existing cycle
- There is a variety of types of under-utilized land/space
 - Henderson Mine
 - Very high seasonal housing vacancy
 - Empty public facilities (e.g., schools)
 - Empty second floors on strong commercial strips (e.g., Georgetown)

4. Need to build off of the base of current entrepreneurs

- Better understanding of current operations
 - Industries / clusters
 - Seasonality
 - Growth constraints
- Assess current ecosystem, especially capital and specialized real estate (e.g., shared kitchens)
- Succession planning

5. Need to improve foundational elements of county economic development

- Need to develop strong cluster organizations
 - Clear Creek business survey: connections with other firms is significant weakness
 - Interview: not a lot of collaboration today, used to be more
- Change incentives on business attraction
 - Low incentives for within-county collaboration because tax revenues are dedicated to town or go right to county
 - May even be negative incentives for cooperation: town managers are sometimes judged based on their business attraction record relative to other town managers
 - Solution: Centralized referral system? Finders/referral fees? Regional tax-base sharing?