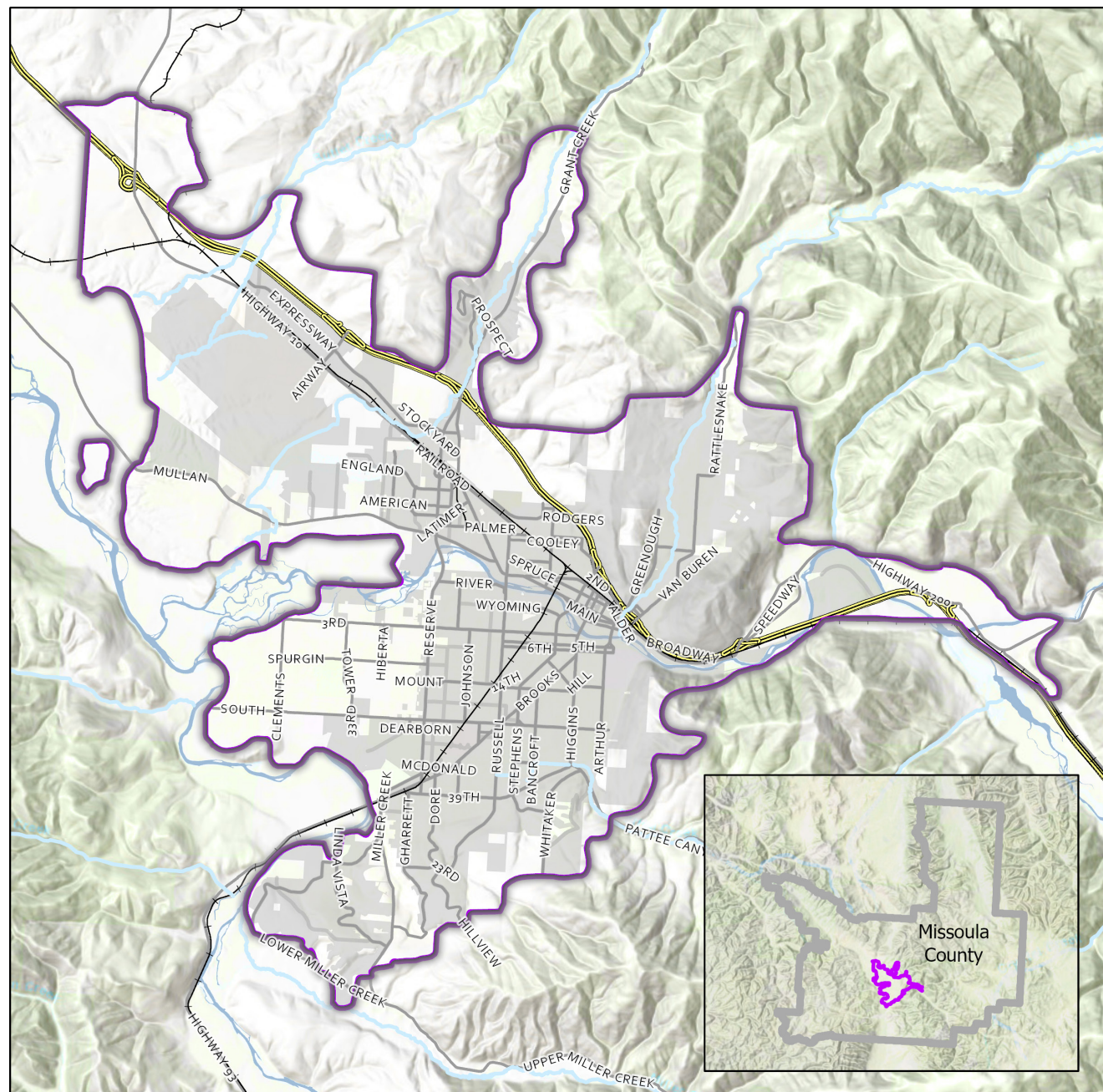


Community Profile

The Community Profile is a comprehensive analysis of current conditions and projected trends within the Land Use Plan area as shown in the figure below. It adheres to the requirements of the Montana Land Use Planning Act (LUPA), which mandates the analysis of trends including, but not limited to, demographics, housing, natural resources, the environment, natural hazards, the economy, infrastructure, and local services.

This document, along with its related analyses, forms the foundation for the Our Missoula 2045 Land Use Plan. It also provides essential information and context for residents, policymakers, and advisors, enabling them to make data-driven decisions regarding the challenges and opportunities within the Land Use Plan area.

Each chapter of the document is interrelated, as the analysis of current and projected population directly informs every other chapter.



Sections | *Community Profile*

- 1 Population & Demographics
- 2 Housing & Projected Housing Need
- 3 Local Services & Facilities
- 5 Economic Development
- 6 Natural Resources
- 7 Natural Environment
- 8 Natural Hazards
- 9 Livability

Population and Demographics

Current Population | Population & Demographics

In 2020 the City of Missoula had 73,949 people inside city limits, while the Land Use Plan area had an estimated 88,583 people living within it. Since the 2020 decennial census, the population is estimated to have increased by 1.9% annually. This brings the total population of the City to 76,955 people and the Land Use Plan area's population up to 93,926 people.

1 Current Population

Land Use Plan area 2022 Population = 93,926
City of Missoula 2022 Population = 76,955

2 Population Change

2010-2022 average yearly growth = 1.11%
Highest Growth Area = Sx^wtpqyen Area

3 Population Density Change

Average density = 3.38 people per acre
Highest density increase 2010-2022 = Sx^wtpqyen Area

4 In & Out Migration

Missoula County 2020 Net Migration = + 3,594 people
Missoula County 2014 Net Migration = + 1,014 people

5 Projected Population

2045 Population = 128,345
Population increase by 2045 = + 37,523

6 Educational Attainment

2015 population with Bachelors or Higher = 43.8%
2021 population with Bachelors or Higher = 48.7%

7 Race & Ethnicity

2021 percent of population that identifies as non-white = 14.8%
Most diverse areas = University and River Road Neighborhoods

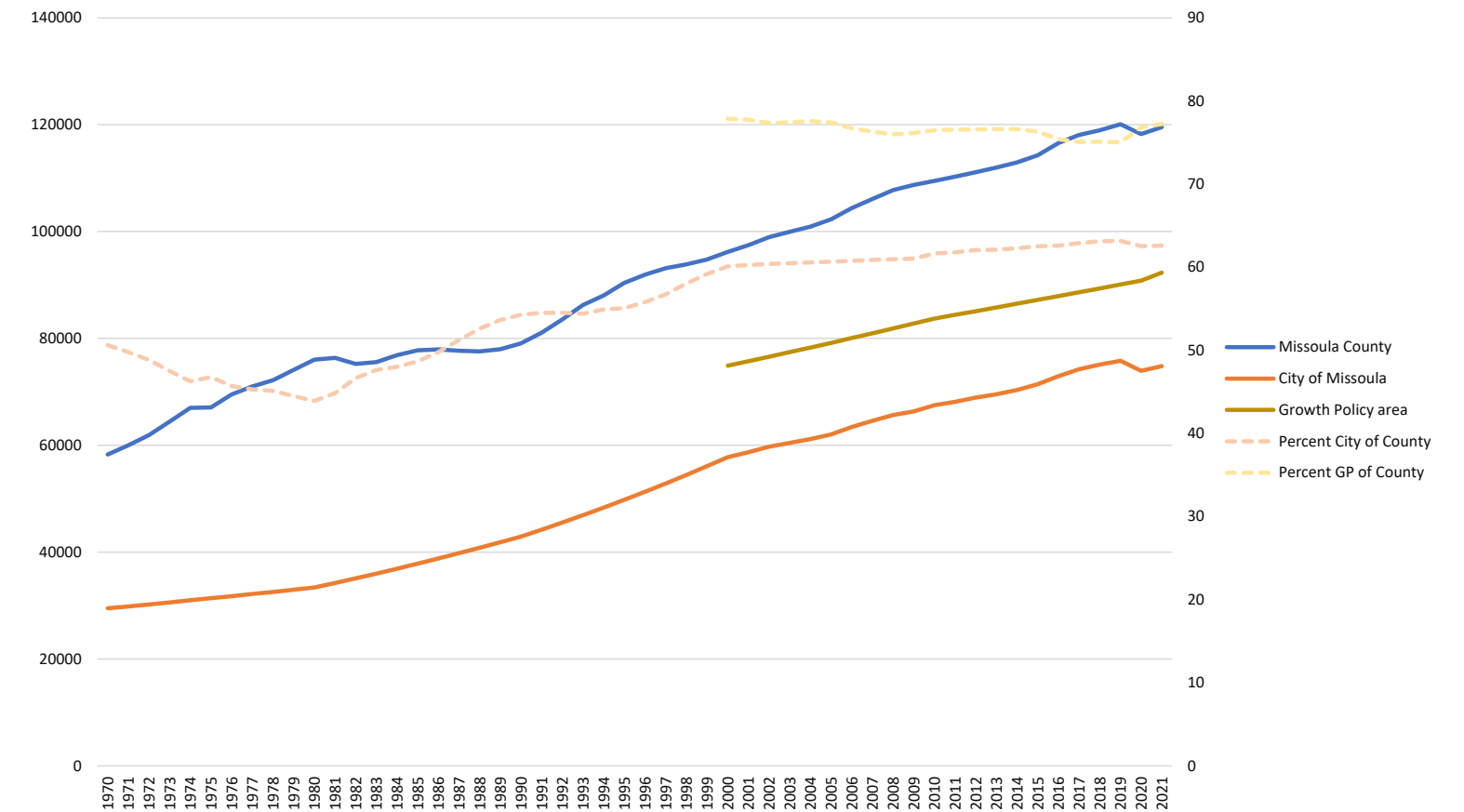
8 Disability

Missoula County percent of population under 65 with a disability = 8.8%
Largest Disability Group in Missoula County = Cognitive Difficulty

9 Age Groups

Percent of population under 65 years old = 83.6%
Percent of population 65 years old or older = 16.4%

Chart P1: Historic Population Growth



Source: Decennial Census, American Community Survey, CPDI Population Estimates

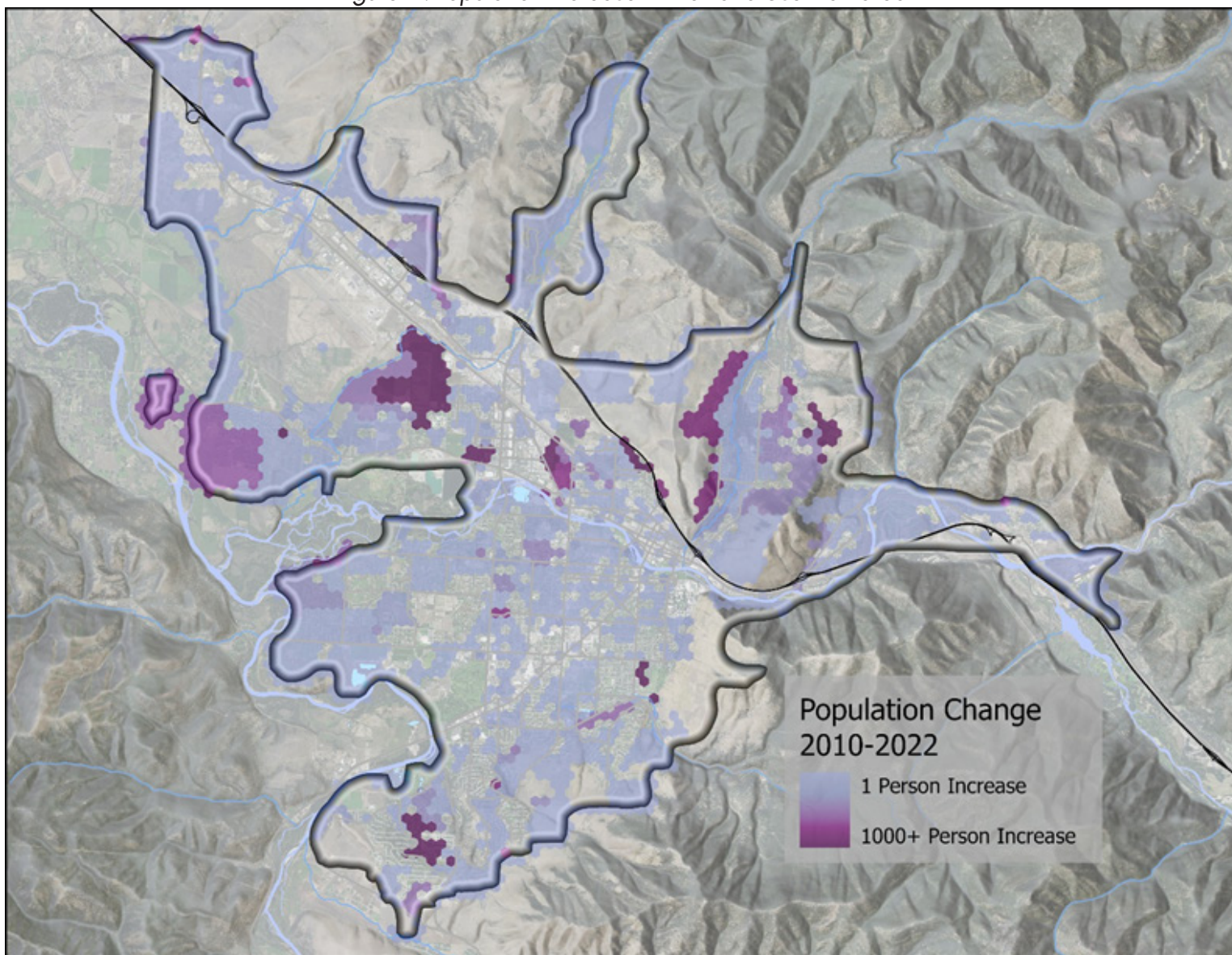
The majority of population growth within Missoula County took place inside of the Land Use Plan area. It accounts for roughly 77% of the county's population, a proportion that has remained consistent over the last several decades. This trend of people moving and living within proximity to an urban area is called urbanization. According to the Census Bureau Missoula County's population that lives in urban areas or urban clusters has increased by 27% since the beginning of the century compared to the rural population which has increased by 13%.

Population Change | Population & Demographics

The 2020 Decennial Census happened during the same period of time that the COVID-19 pandemic affected the distribution of people in areas around the City. Areas most affected typically had high levels of students living in them. This contributed to a loss in population around the University of Montana. In 2020, the population of the University of Montana decreased by 75.4% during the peak of hybrid schooling. As of 2023, the University's enrollment and population has returned to normal levels and has experienced an annual increase of 3.7%, bringing it above pre-pandemic levels.

Figure P1 shows the increase in population within the Land Use Plan area from the 2010 Census to the 2022 population estimates produced by CPDI using the 2020 Decennial Census combined with residential building permits.

Figure P1: Population Increase in the Land Use Plan area



Source: Decennial Census and CPDI Population Estimates

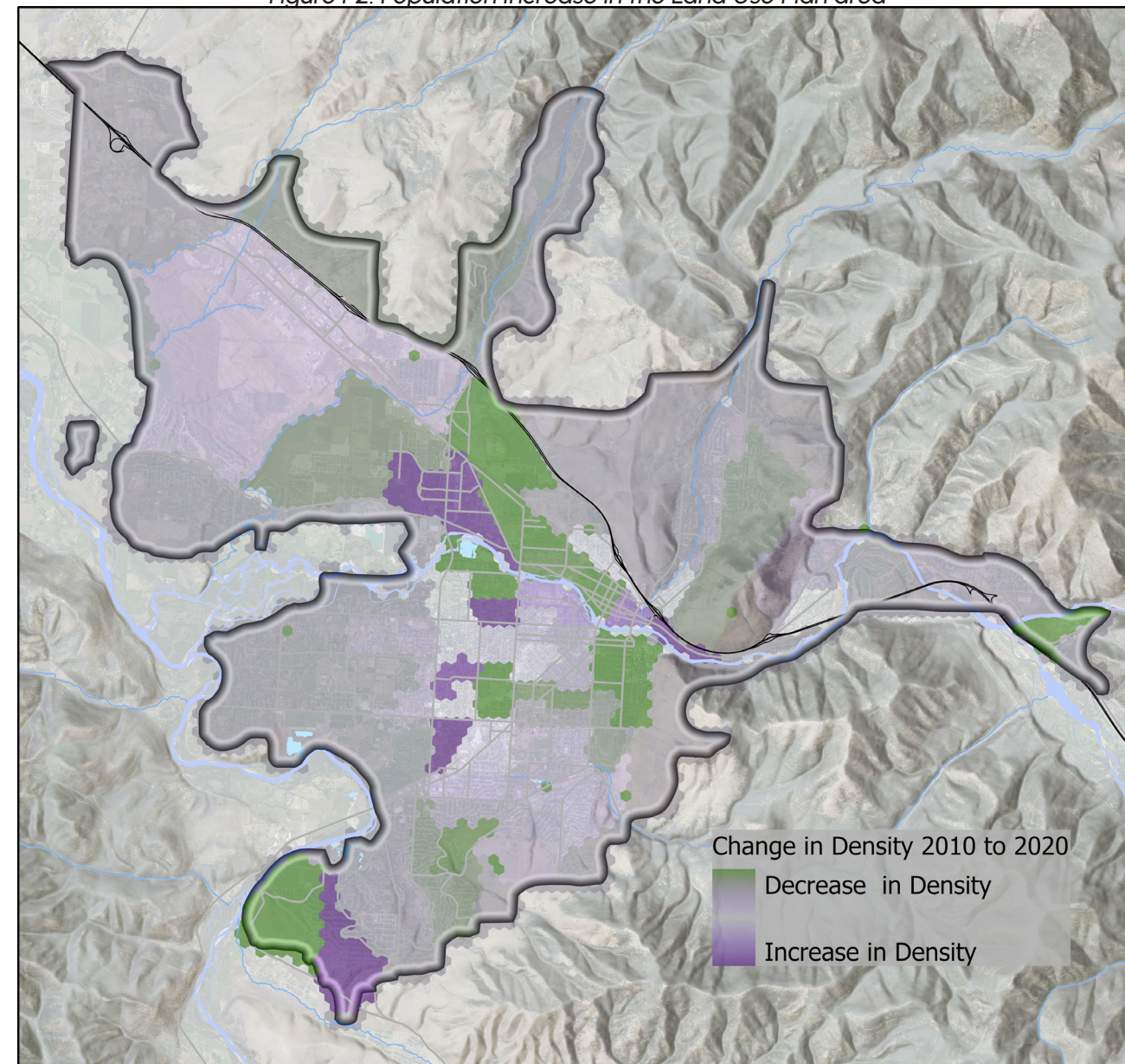
From 2010 to 2022 the population within the Land Use Plan area increased by 1.11% annually. The largest increases were seen in new subdivisions and master planned areas. The area known as *Sx^wtpqyen*, meaning "place where something is cut off and comes to a point" in Salish, has seen large increases in population due to a large amount of developable land and the adoption of the [Sx^wtpqyen Master Plan](#) and [Form-Based Code](#) in 2020. Other notable areas of population increase include 44 Ranch, Miller Creek Subdivisions, the Westside neighborhood, and the Upper Rattlesnake area.

Population Density Change | Population & Demographics

The population within the Land Use Plan area is much denser than the rest of the county with an average of 3.32 people per acre compared to an average of 0.07 people per acre in the entire county. This density is centered around the urban amenities, lifestyle choices, and housing availability that the area provides as indicated by the higher growth in areas classified as urban from the 2000-2020 decennial census.

Figure P2 below shows how density has changed over the last 10 years from the 2010 census to the 2020 census. The darker purple areas represent a significant change in population density. Areas that are clear experienced no density change and areas that are green experienced a decreased in density since the 2010 census.

Figure P2: Population Increase in the Land Use Plan area



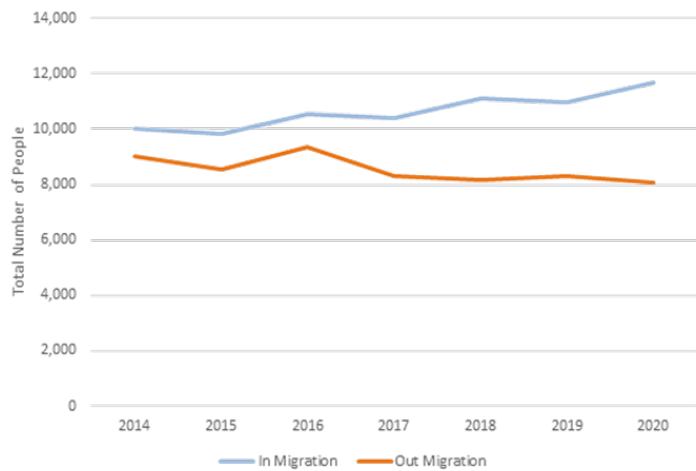
Source: 2010 & 2020 Decennial Census

Density increases in the Land Use Plan area are caused by three main drivers: new Greenfield development, Brownfield development, or infill development in already established neighborhoods. The increases in population density in the East Mullan, Miller Creek, and Riverfront areas were caused by expansion of residential development into Greenfields and redevelopment of Brownfields. These areas had little to no residential units in them before the 2010 Census and saw large residential developments and subdivisions within the last decade. Infill development has generally occurred in the River Road, Franklin to the Fort, Rattlesnake, Northside, and East Missoula areas.

In & Out Migration | Population & Demographics

The American Community Survey (ACS) studies migration flows for Missoula County which include people moving into and out of the County. The County had a net migration in 2014 of 1,014 people and has increased every year since then to a 3,594 people as of 2020. Looking at both in and out migration in the ACS tables indicates that migration into the County has increased from 10,025 people in 2014 to 11,674 people in 2020. In addition to this number rising, the number of people moving out of the County has dropped from 9,011 people in 2014 to 8,080 in 2020.

Chart P2: In and Out Migration (Missoula County)



Source: American Community Survey

Table P1: In and Out Migration (Missoula County)

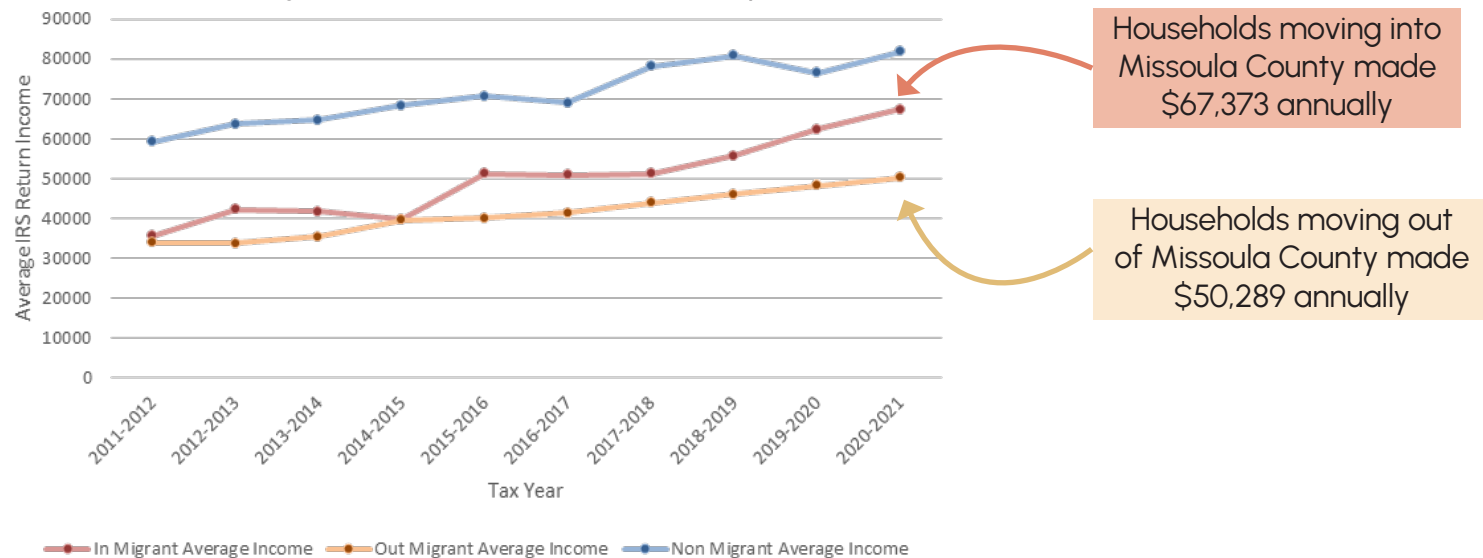
Year	In	Out	Net
2014	10,025	9,011	+ 1,014
2015	9,852	8,561	+ 1,291
2016	10,549	9,376	+ 1,173
2017	10,410	8,292	+ 2,118
2018	11,094	8,159	+ 2,935
2019	10,983	8,312	+ 2,671
2020	11,674	8,080	+ 3,594

Source: American Community Survey

Since the tax year 2011-2012 households moving into Missoula County have made a larger average income than households moving out of the County. The percentage difference in average income of households moving out and households moving in has ranged from under 1% to 34% difference. While the difference has fluctuated since 2011, since 2018 the earnings gap between in and out migrants has been increasing at an average of 5.8% every year with households moving in having more wealth than those moving out.

During the COVID-19 pandemic national studies from the Economic Innovation Group revealed that high earners were moving from large urban counties to rural counties. This exodus spurred large increases in high earner households moving into Missoula County and is evident in the wage gap of households who moved into the County, which made an average of \$67,373 in 2020, versus households moving out, which made an average of \$50,289 in 2020.

Chart P3: Migration and Income (Missoula County)



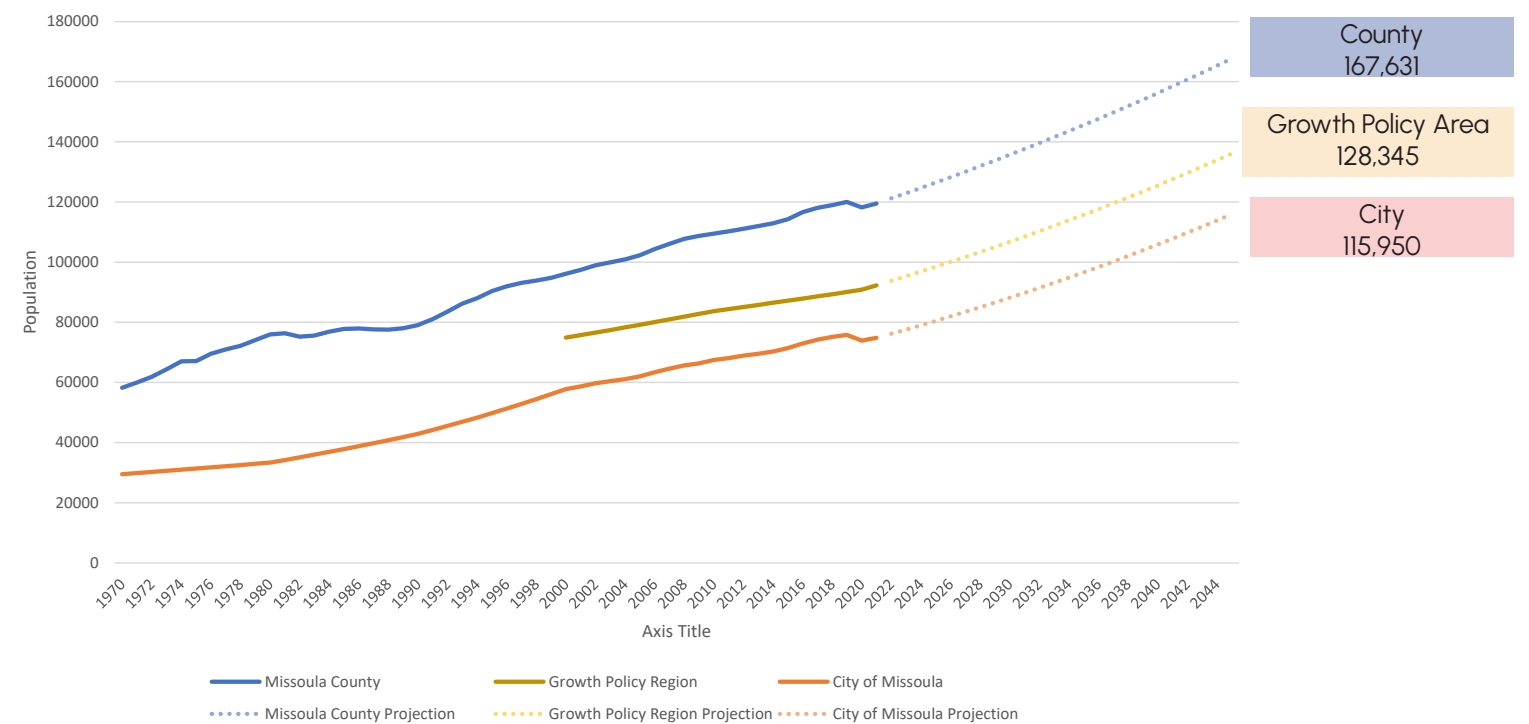
Source: IRS Migration SOI

Projected 2045 Population | Population & Demographics

Missoula County has gone through periods of minimal growth and periods of significant growth. From 1970 to 1980 Missoula County grew at a 2.7% cumulative annual growth rate (CAGR) while this last decade (2010-2020) the County grew at a 0.8% CAGR. Fluctuations of growth are hard to predict. They can be spurred on by economic recessions, urbanization, lifestyle choices, pandemics, and/or climate change. Over the last 51 years the County has grown at an average of 1.39% annually. Extrapolating this trend of growth 24 years into the future, the County will add 48,731 new people.

Applying the county's CAGR of 1.39% to the Growth Policy area yields a population increase of 37,523 people over the next 24 years. Using this assumption of growth, the total population within the Land Use Plan area will be 128,345 by 2045.

Chart P4: Population Projection 2021-2045



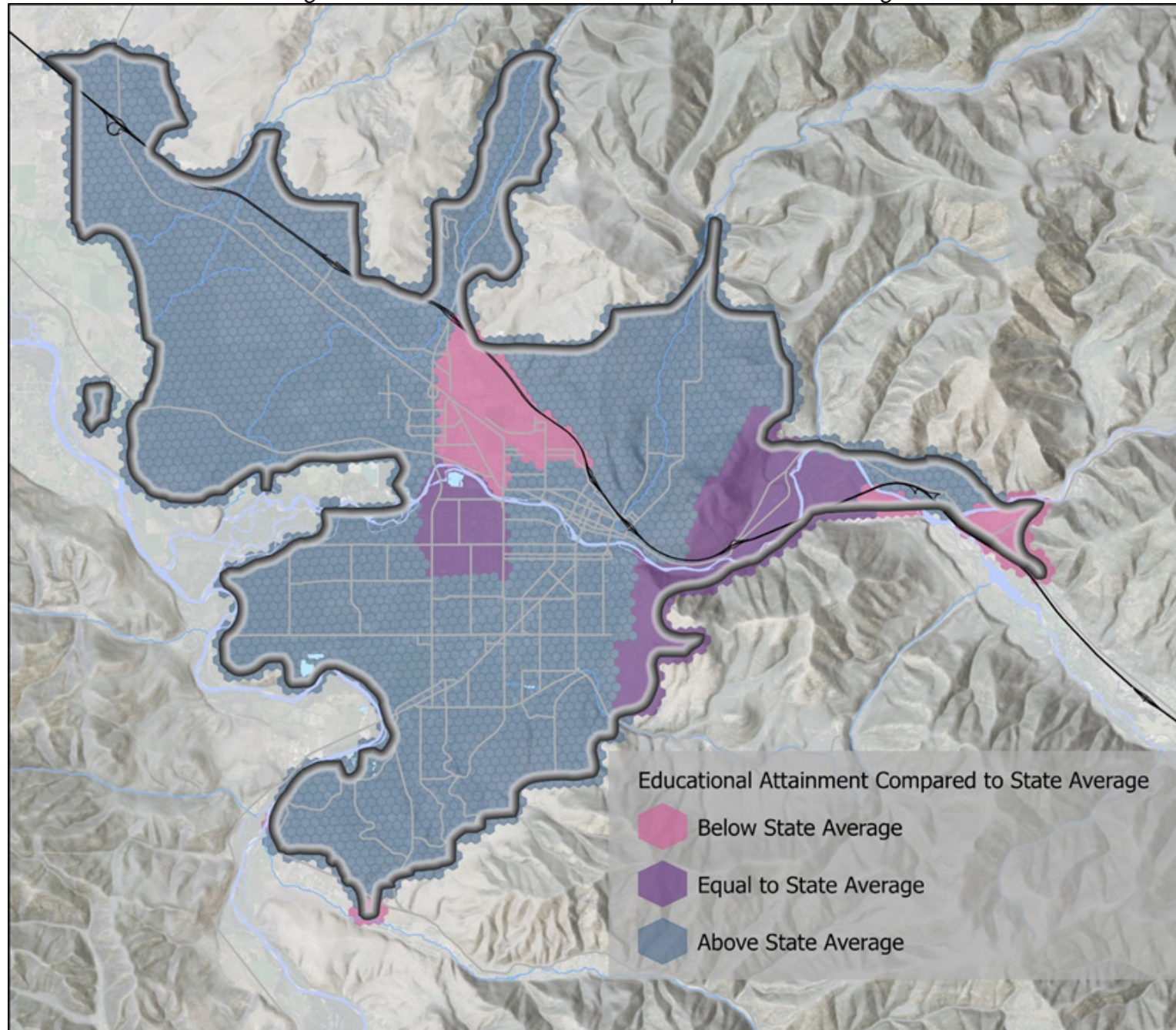
Source: Decennial Census, American Community Survey, CPDI Population Estimates and Projections

In recent years, climate studies have provided a window into how areas in the United States will be adversely affected by climate change. This has spurred demographers to try to estimate the effects climate change will have on migration patterns within the country. There is consensus among demographers and climate scientists that Montana is predicted to not be as adversely affected by climate change as other areas of the country, which will likely translate into an increase in climate migration into the State. However, the amount and timing of this type of migration is not fully understood. Instead, looking at past growth trends for the County, Growth Policy area, and City provides a more reliable way to measure how the region will grow in the future and provides room for periods of high and low growth that may occur because of external factors.

Educational Attainment | Population & Demographics

According to American Community Survey 5-year estimates, 43.8% of people in the region over the age of 25 had received a bachelor's or higher in 2015. In 2021, this percentage increased to 48.7% of people. Within the Land Use Plan area the population generally has a higher level of educational attainment than the rest of the state, which averages 34.9% of people over the age of 25 with a bachelor's degree or higher.

Figure P3: Educational Attainment compared to State Average



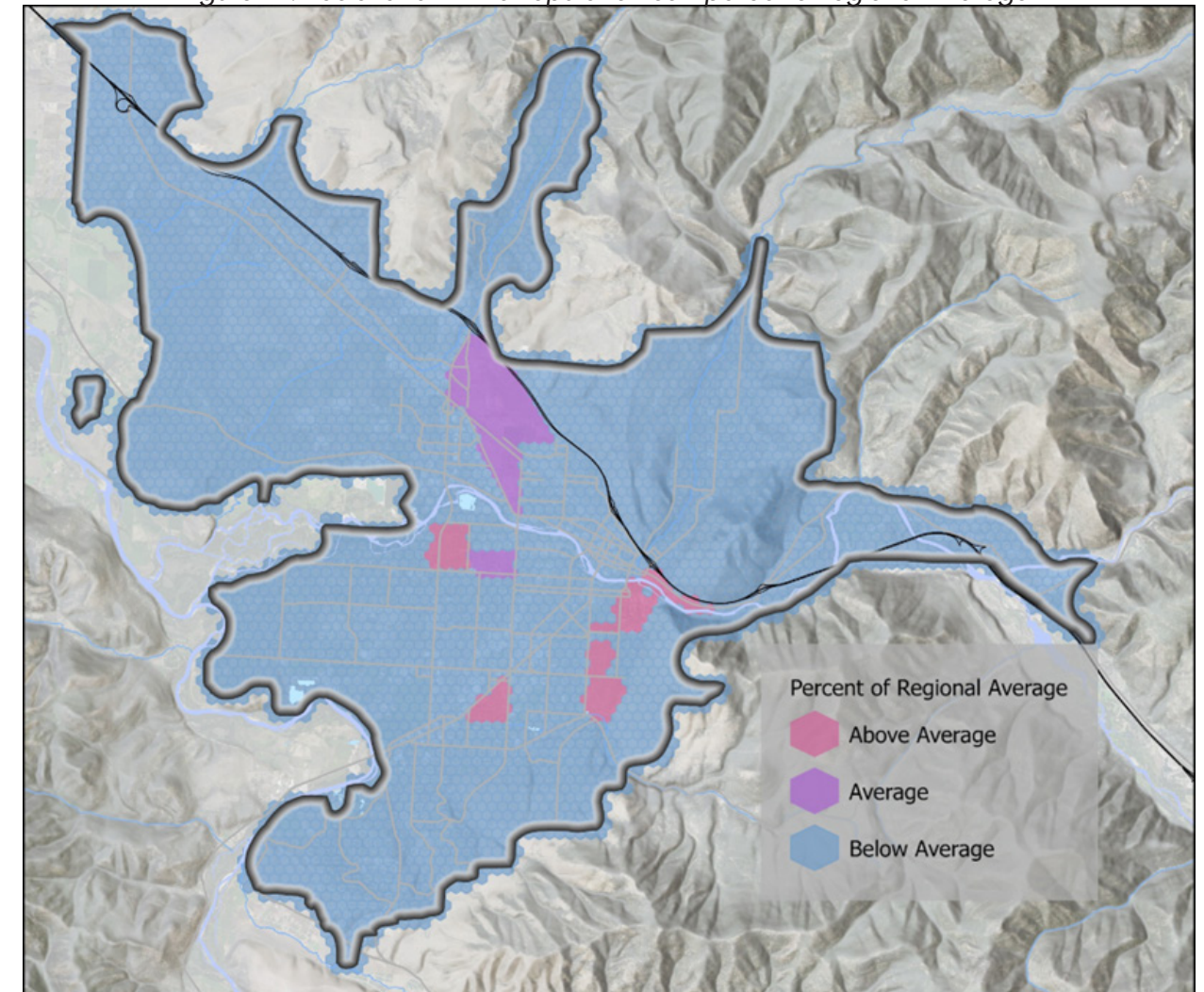
Source: 2021 American Community Survey

High School graduation rates around the region have continued to climb since 2015. Missoula County Public Schools (MCPS) reported a 90% graduation rate in 2015 and 96% of enrolled students in 2019. A 2019 MCSP demographic study found that the students who identified as being American Indian/Alaska Native accounted for around 10% of students enrolled but this same demographic accounted for 27% of the student population that did not graduate.

Race & Ethnicity | Population & Demographics

The City of Missoula has adopted a resolution to consider justice, equity, diversity, and inclusion (JEDI) into all its decisions. Cataloguing and describing the demographics of the region informs the JEDI principles and how policies and decisions can affect certain portions of the population. Table P2 below shows the percentages of the current population that identify as certain races and ethnicities based on the 2020 Decennial Census.

Figure P4: Racial and Ethnic Population compared to Regional Average



Source: 2020 Decennial Census

Table P2: Race and Ethnicity

Ethnicity	% of Population
Not Hispanic	94.3
Hispanic	5.7
Race	% of Population
White	85.2
Black	0.8
American Indian	2.8
Asian	1.4
Pacific Islander	0.1
Other	2.7
Two or More	7.1

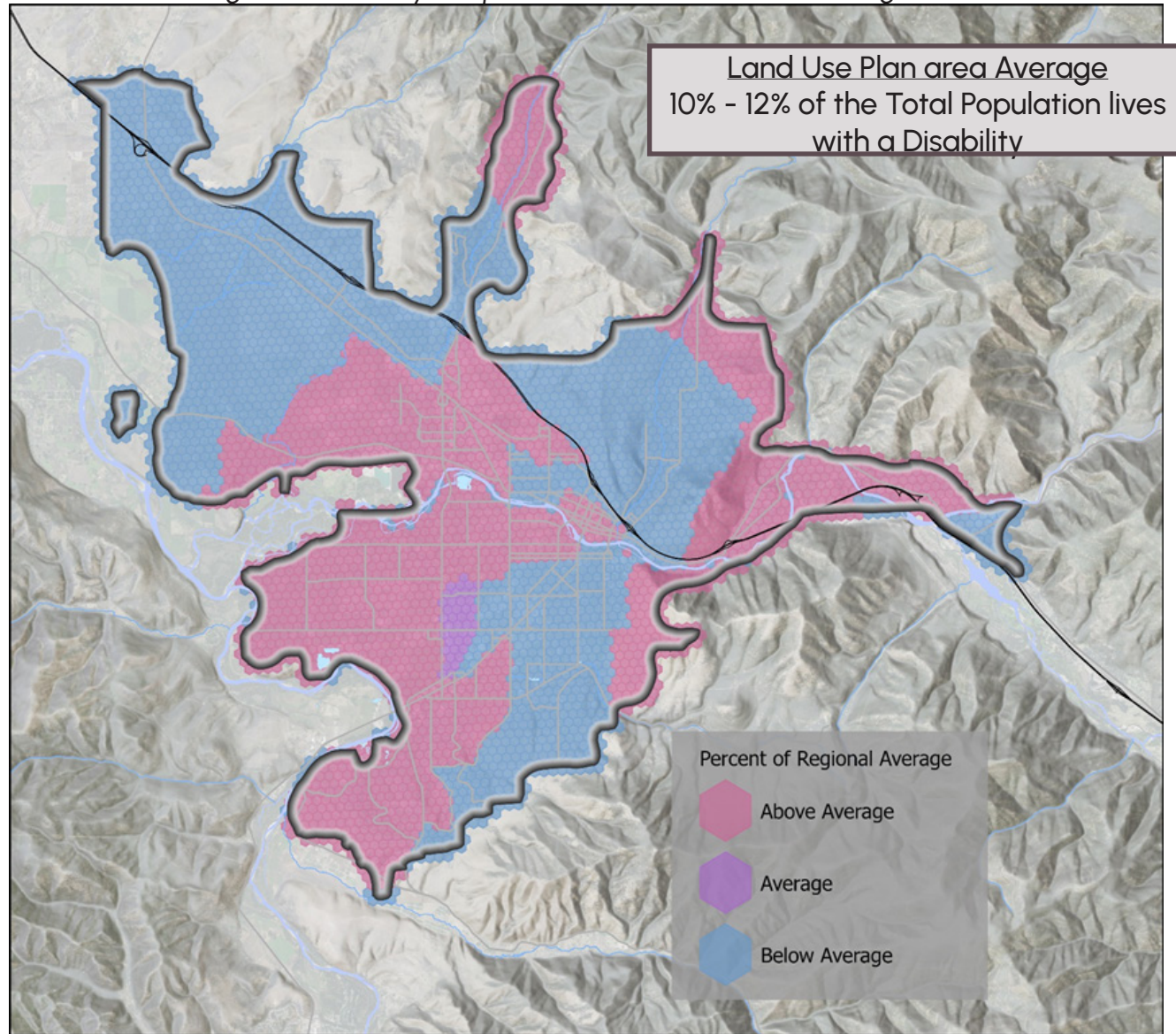
Source: 2020 Decennial Census

The area around the University of Montana tends to be the most racially and ethnically diverse within the Growth Policy Region. This is likely because of students attending the school. Other areas that tend to be more diverse coincide with areas that are zoned for a higher density or are prescribed higher density through the Land Use Map and corresponding zoning. This is further explored in the [Equity in Land Use Report](#).

Disability | Population & Demographics

An estimate of disability within Missoula County from the 2021 American Community Survey provides information on the percent of the population living with the following disabilities: hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties.

Figure P5: Disability compared to Land Use Plan area Average



Source: 2021 American Community Survey

Table P3: Population with Disability

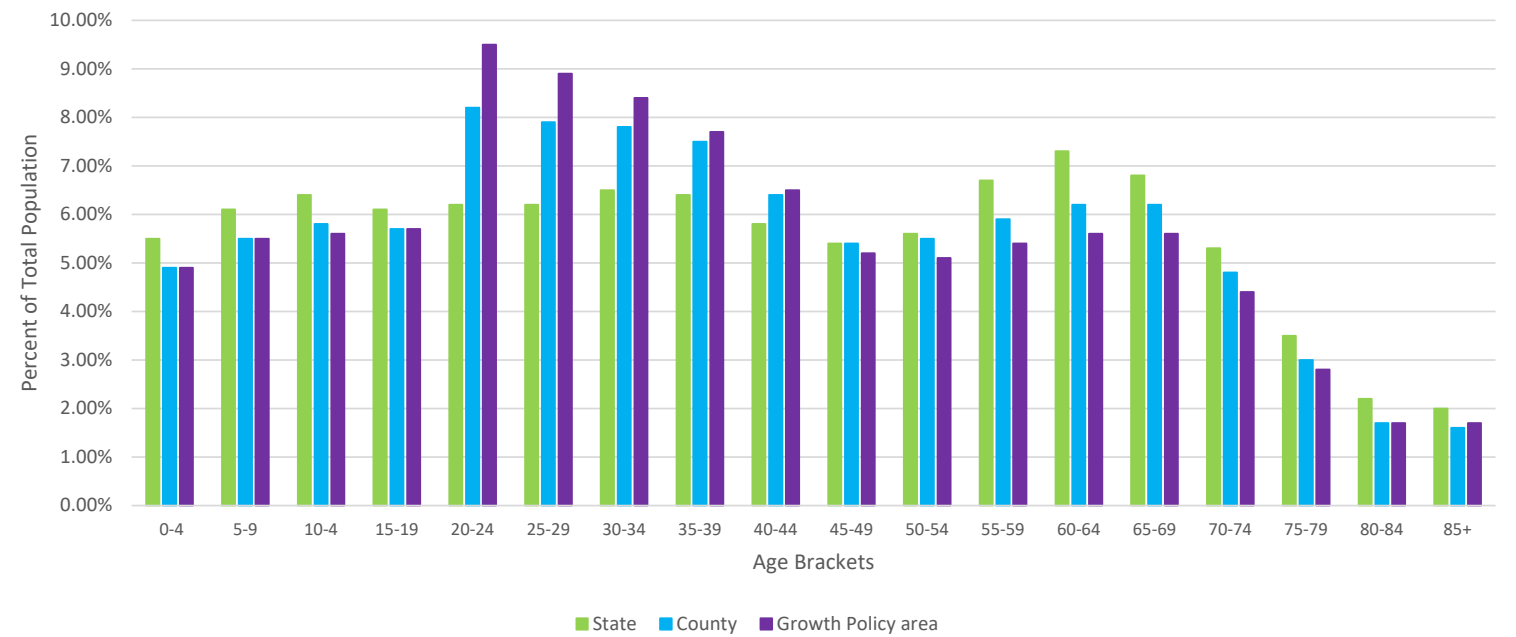
Disability	% of Population
Hearing Difficulty	3%
Vision Difficulty	1.8%
Cognitive Difficulty	6.8%
Ambulatory Difficulty	5.6%
Self-Care Difficulty	2.3%
Independent Living Difficulty	5.6%

Source: 2021 American Community Survey

Age Brackets | Population & Demographics

The Land Use Plan area has a median age of 35.2 years old, making it a relatively younger average than the state as whole which has a median age of 40.1. This can be attributed to a significant portion of the population being of college age and the students attending the University of Montana, which in 2021 had 10,106 students enrolled.

Chart P5: Population Age Brackets



Source: 2020 Decennial Census

Currently, 16.4% of the population is at least 65 years old. According to the Montana Department of Commerce this is expected to rise with roughly 20% of the region's population projected to be over the age of 65 years old by 2045.

Current Housing

1 Location of Residential Units

Core of the City ranges from 4-16 Dwelling Units per acre
Average Density within the Land Use Plan area = 3.5 Dwelling Units per acre

2 Residential Development

Residential Units permitted since 2015 = 5,450
Land Use Designation with highest number of permits = Sx*tpqyen Land Use area

3 Missing Middle Housing

Building types include Townhomes, 2-4 Unit Complexes, Condominiums, Small Lot Single Family, Courtyard Developments, or Mobile Homes

4 Household Types

Most Common Housing Type = Single Family, Detached
Household Type with the largest increase (2011-2021) = Multi-Dwelling

5 Cost Burdened Households

Cost Burdened Households = 35.6% of all households
Households that rent are more likely to experience cost burden

6 Rental and Homeownership Opportunities

51% of Households rent
49% of Households own their home

7 Age of Residential Units

Most common decade of construction = 2000-2010
Oldest Residence according to DOR = 1864

8 Condition of Residential Units

Most Common Physical Condition according to DOR = Average
98% of all Residential Units are classified as Average or above

9 Vacant Residential Units

Number of Vacant Units available to Rent or Homeownership (2021) = 961
Number of Vacant Units for Seasonal or Recreational Use (2021) = 574

10 Household Size

Average Household Size for Owners (2021) = 2.5 people
Average Household Size for Renters (2021) = 1.9 people

11 Houselessness

January 2023 PiT Count = 311 Households experiencing houselessness
January 2023 HMIS Count = 811 Households experiencing houselessness

Current Housing

The [2015 City of Missoula Growth Policy](#) stated that there were approximately 40,000 housing units within the Land Use Plan area. According to the 2020 Decennial Census there were approximately 42,051 housing units within the Land Use Plan area. In 2021 and 2022 an additional 2,353 housing units were permitted to be developed, which brings the total housing units within the Growth Policy area to 44,404.

From 2015-2022 the Land Use Plan area averaged 630 new housing units built every year, which is an average annual growth rate of 1.78%. Table H1 shows total estimated housing units within the Land Use Plan area per year and the annual housing unit change.

Table H1: Housing Units per Year

Year	Total Housing Units	New Construction	Growth Rate
2015	41,295	533	1.29%
2016	42,623	795	1.93%
2017	43,473	850	1.99%
2018	43,969	496	1.14%
2019	44,463	494	1.12%
2020	45,109	646	1.45%
2021*	43,415	1,364	3.02%
2022	44,404	898	2.28%
AVERAGE		671/YEAR	1.78%

Source: 2010 and 2020 Decennial Census' & City/County Building Permits * Reset with Decennial Census

The City and County keep track of residential building permits at a much finer scale than the Census Bureau. This enables more accurate tracking of the actual number of housing units within the Land Use Plan area. The statistics presented in the following sections regarding vacant units, housing affordability, condition and age are, however, based on the Census Bureau ACS 2021 5-Year estimates. According to these estimates the total dwelling units within the Growth Policy Area is between 37,110 and 39,248 housing units compared to the local estimate of 43,415 dwelling units as of 2021.

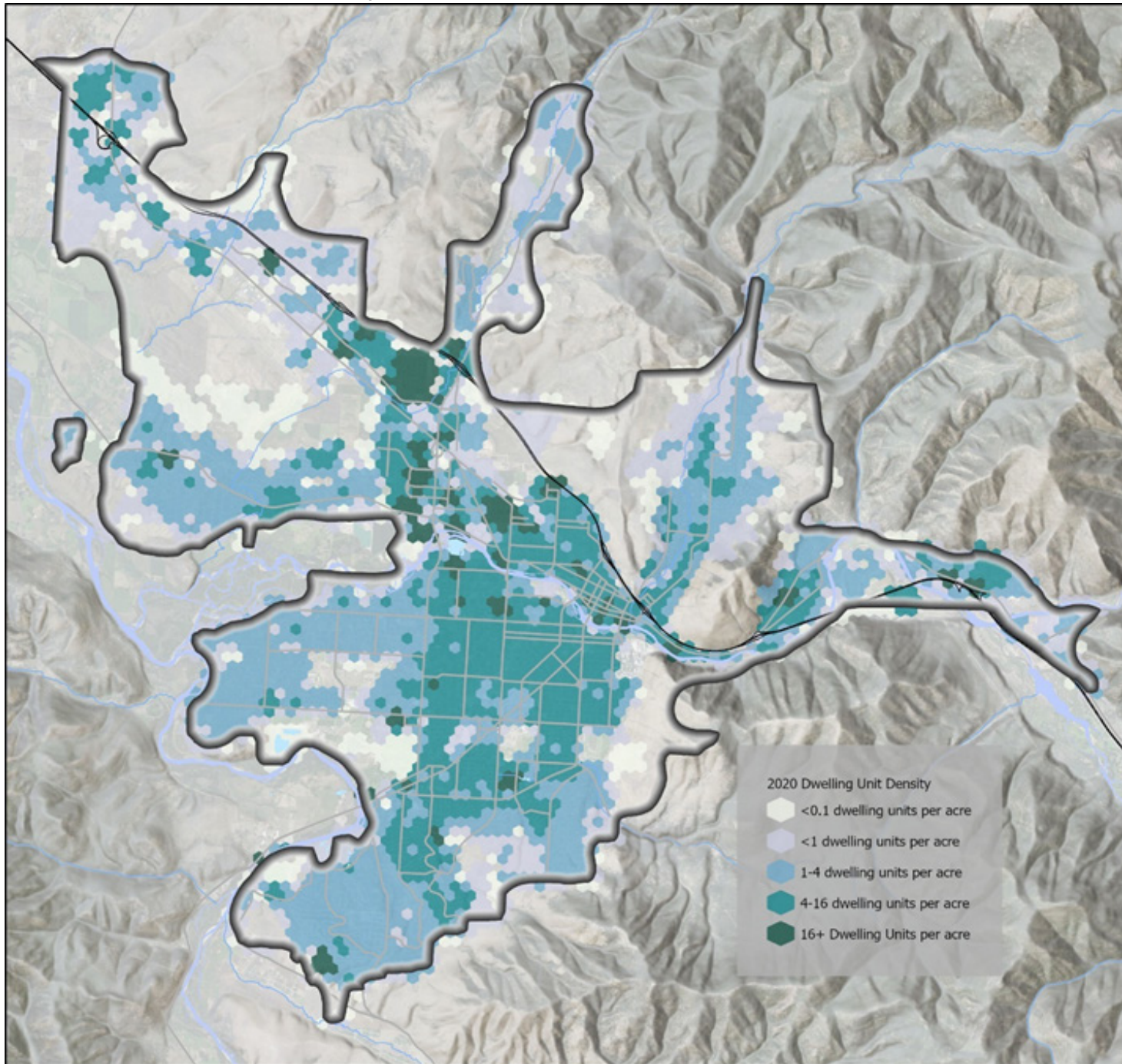
Location of Residential Units | Current Housing

Figure H1 illustrates the density of existing housing units within the Land Use Plan area using 10-acre areas. Individual parcels or buildings with higher densities may exist within each area.

The core of the City ranges from 4 dwelling units per acre to over 16 dwelling units per acre, depending on the building type. Moving farther out into the urban fringes, the concentration of dwelling units decreases to less than 1 dwelling unit per acre. However, there may still be cluster-style developments with a higher density than the area's average.

Schools, commercial and industrial areas, as well as fairgrounds, parks, and open spaces (such as floodplains and hillsides) within the core of the city show low or no residential density. Further out, pockets of Mobile Home Parks and large apartment complexes with multiple buildings exhibit denser development.

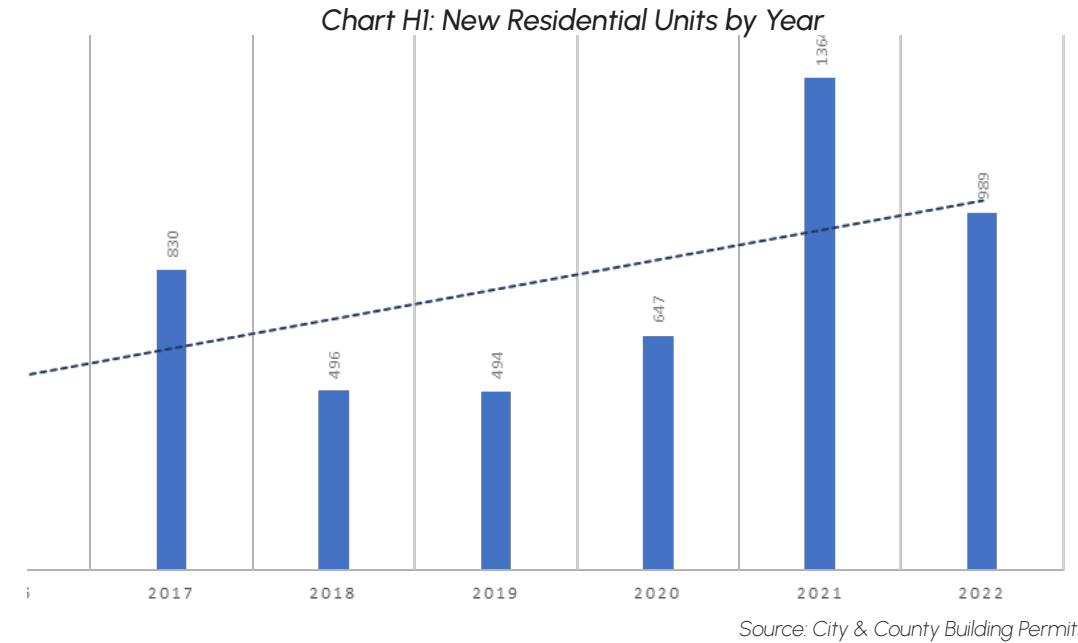
Figure H1: 2020 Location of Residential Units



Source: Montana Department of Revenue Cadastral Service

Residential Development | Current Housing

The issuance of residential building permits in the County and City has led to the addition of 5,450 dwelling units since 2015. The annual housing production, depicted in the Chart H1, illustrates the number of units built each year.



The majority of residential development permitted between 2016 and 2022 occurred in areas designated for accommodating growth. The three primary Place Types that experienced the most residential development include the Urban Residential High, Urban Mixed-Use Low, and Suburban Residential.

Table H1: Residential Building Permits by Place Type

Place Types	Building Permits (2016-2022)
Urban Residential High	1,724
Urban Mixed-Use Low	1,008
Suburban Residential	977
Suburban Mixed-Use	704
Urban Residential Low	505
Urban Mixed-Use High	312
Rural Residential	108
Downtown	103
Open & Resource	7
Parks & Open Space	0
Civic	0

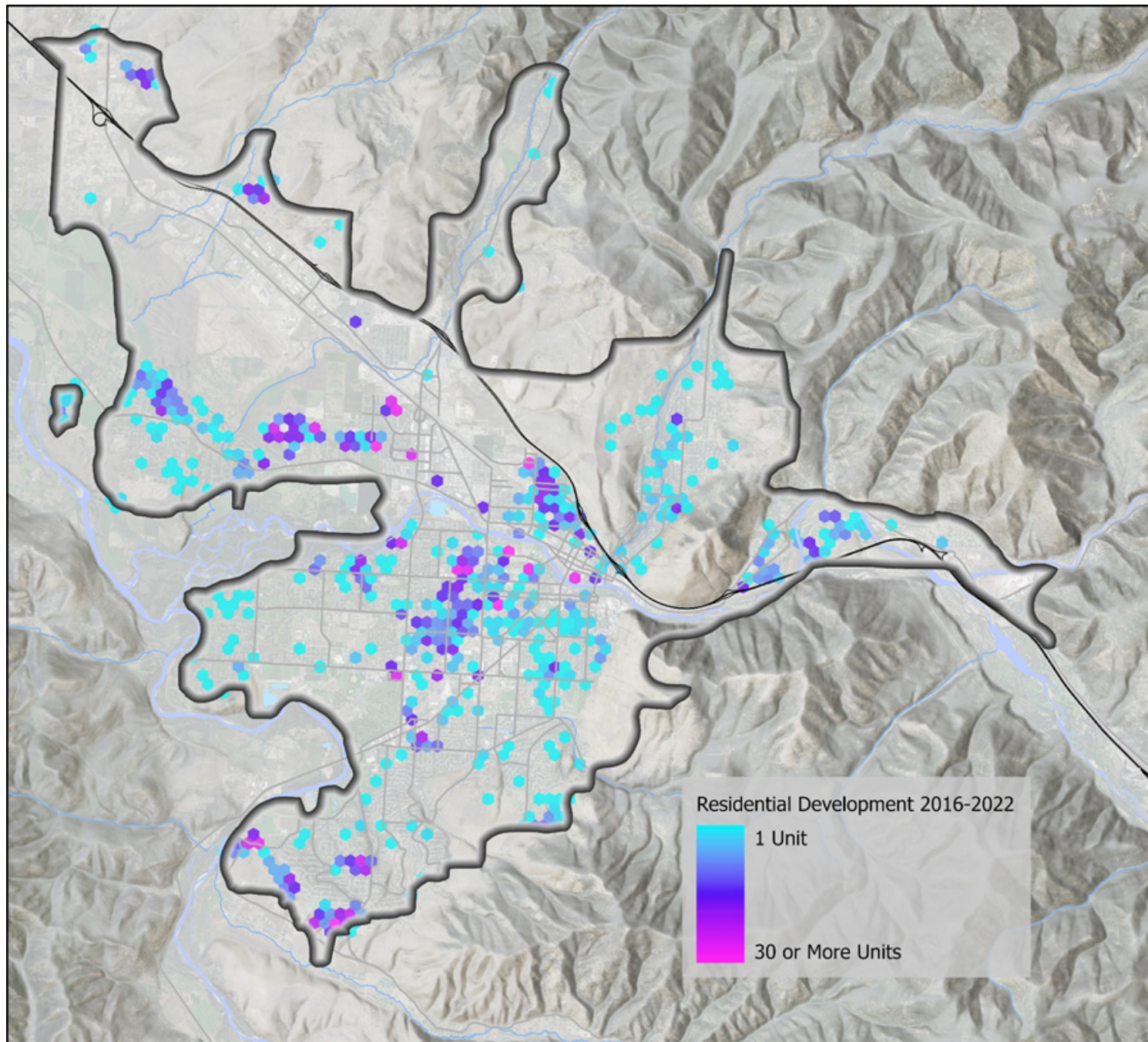
Source: City & County Building Permits and Land Use Designations

Residential Development | *Current Housing*

Residential development was not evenly distributed throughout the Land Use Plan area. In established neighborhoods, the focus of development was particularly on Franklin to the Fort, Riverfront, Northside neighborhoods, and East Missoula. Along the fringe of the urban area, residential development was concentrated in the region west of Reserve Street and along the southern border of the Land Use Plan area boundary in the area known as Miller Creek.

The most substantial amount of residential development since 2016 occurred in the Sx^wtpqyen Land Use area, located just west of North Reserve Street. This area underwent a cross-jurisdictional planning process between Missoula County and the City of Missoula, leading to the adoption of a form-based code by both entities in 2020. This code established guidelines for developing the area, aligning with a shared vision for accommodating the necessary housing units to meet the population's needs.

Figure H2: Concentration of New Residential Development (2016-2022)



Source: City & County Building Permits

Missing Middle Housing | *Current Housing*

The term 'Missing Middle Housing' was coined in 2010 by urban planners and developers to describe a range of housing types that align in use with Single Family Households. This category includes small multi-dwelling structures, duplexes, or attached townhomes and are often more affordable than single family households.

The classification of this type of housing can vary depending on the municipality. In larger cities, it may refer specifically to multi-dwelling apartments, whereas in smaller cities like Missoula, it can encompass not only small multi-dwelling apartments but also single-family attached townhomes and courtyard developments.

The concept of Missing Middle not only pertains to the physical housing units but also characterizes the compatibility of neighborhoods where they exist. Typically, the surrounding areas are more walkable and denser compared to larger single-family housing unit neighborhoods. This characteristic facilitates resident activity and provides choices in multi-modal transportation, reducing reliance on automobiles. Moreover, it fosters a stronger sense of community among residents, which is particularly crucial in light of the CDC's Social Determinants of Health findings, reporting increased feelings of isolation and a higher percentage of the population experiencing chronic depression in the US.

Small Lot Single-Family Residence



Courtyard Development



Townhome/Condominiums



Household Type | Current Housing

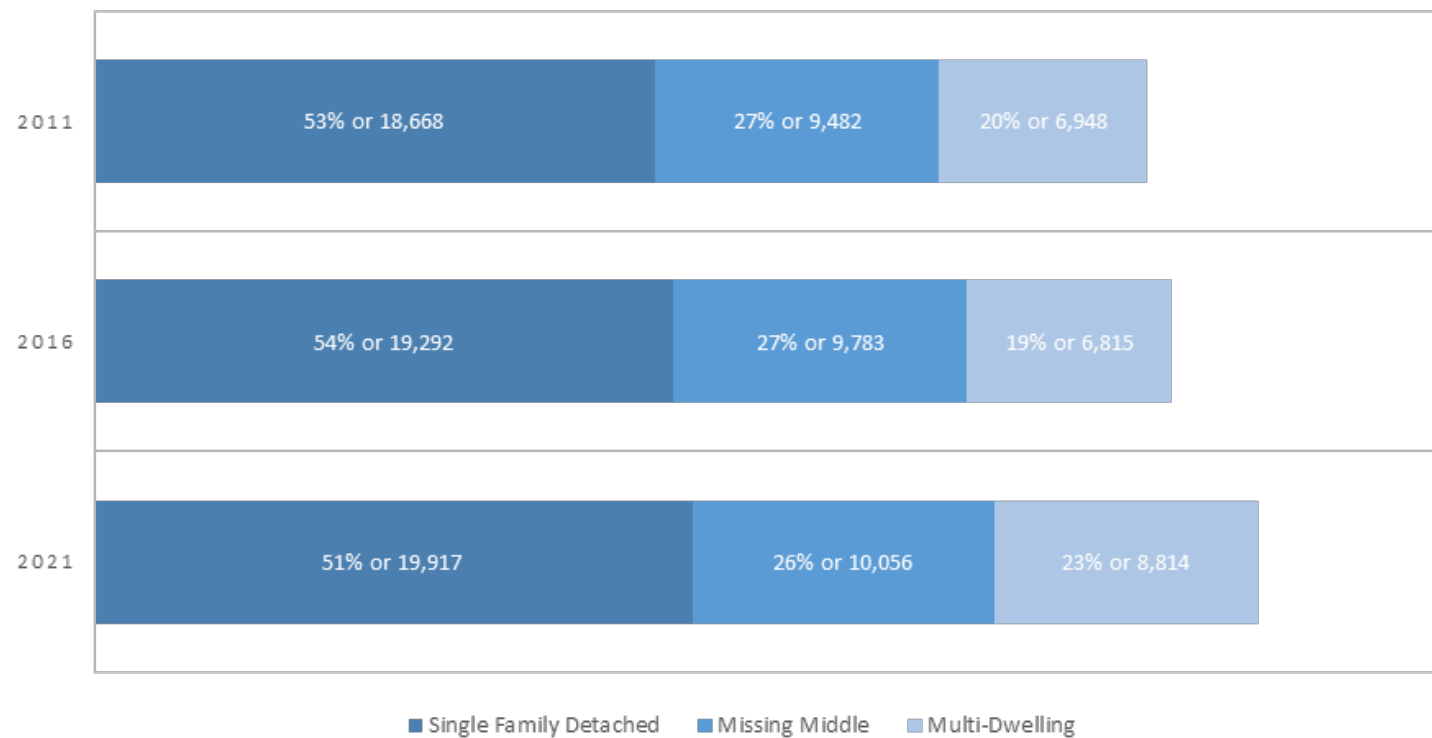
The American Community Survey (ACS) reports housing units in 10 classes. Simplifying this to 3 housing types helps to portray the breakdown of housing units within the Growth Policy Region.

Single Family Detached: This category is defined as a residence that has a single residence inside of it and is separated from other residences by a yard or exterior wall.

Missing Middle: This category aggregates census households that are defined by the Census as Single Family Attached, Duplexes, Triplexes, Quadplexes, and Mobile Homes.

Multi-Dwelling: This unit type category includes all residential units with a primary building that has 5 or more units. Specific types of housing within this category may include apartment complexes, group homes, assisted living centers, or permanent supportive housing.

Chart H2: Household Type Breakdown



Source: ACS 5-Year Estimates

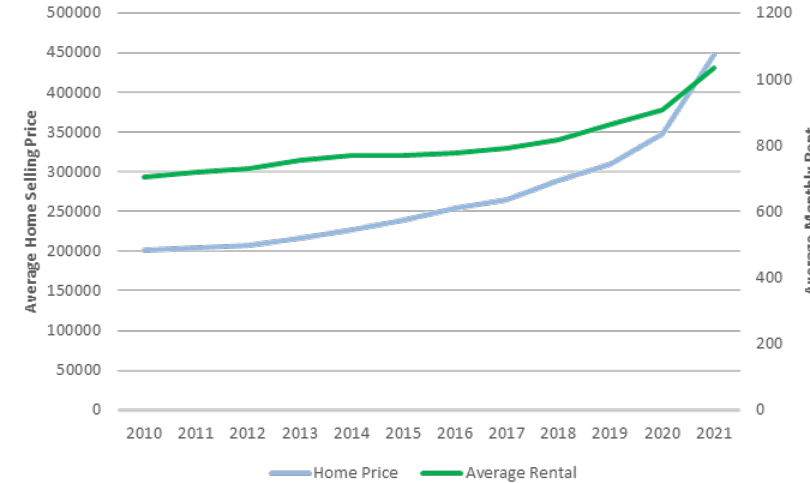
Single Family Detached dwelling units accounted for 54% of all residential units in 2016, and in 2021 they account for 53%.

The missing middle category has stayed the same, accounting for 27% of all residential units.

Multi-Dwelling units have increased from 19% to 20% of all residential units.

Cost Burdened Households | Current Housing

Chart H3: Average Home Sales Price and Rent



Source: Missoula Organization of Realtors & ACS 1-Year Estimates

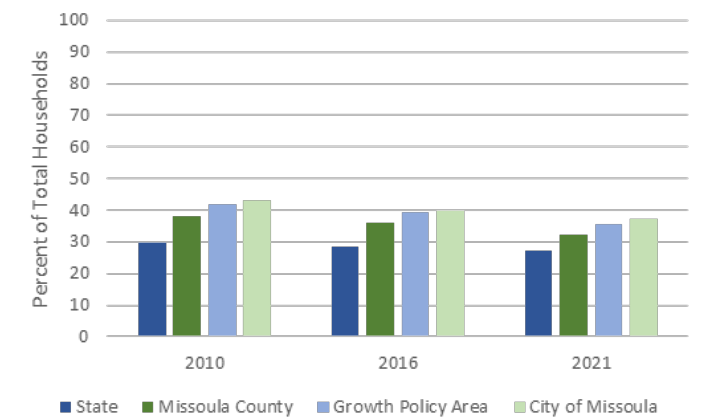
Since 2010 the average home sales price has risen 122% and the average monthly rent has increased 47% within the Growth Policy area.

When a household spends more than 30% of their income on rent or a mortgage payment, it is considered cost burdened. Because these households spend a large portion of their income on household expenditures, they have less money to spend on other critical items such as medicine, food, transportation, or childcare.

In 2010 42% of all households were considered cost burdened. This percentage has decreased to 35.6% of all households in 2021.

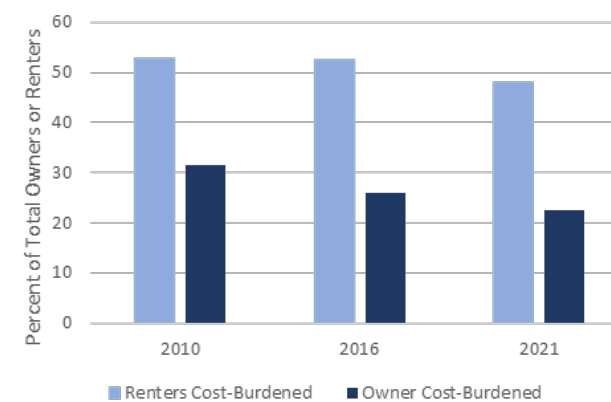
The percentage of households that are cost-burdened within the Growth Policy Region, 35.6% of all households, is higher than the Statewide average or 27.2%. Chart H4, shows cost-burdened household trends over the last decade for the State of Montana, Missoula County, Growth Policy area, and the City of Missoula.

Chart H4: Cost Burdened Household Trends



Source: ACS 5-Year Estimates

Chart H5: Cost Burdened Households by Tenure



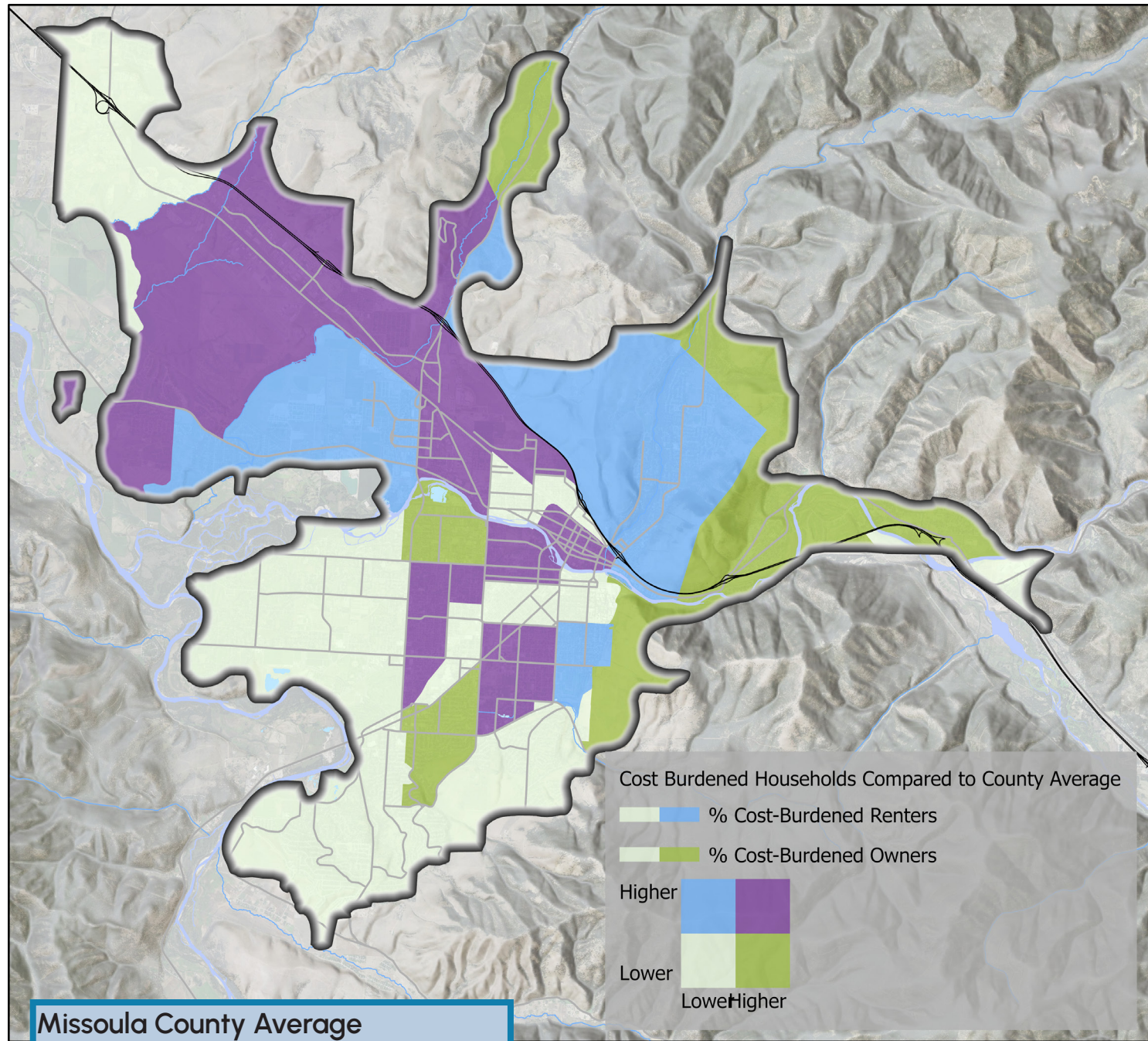
Source: ACS 1-Year Estimates

Cost-burdened households is a critical issue facing the community whether a household rents or owns. However, this financial issue disproportionately affects households that rent. Even though renters account for 51% of all households within the Land Use Plan area, they account for roughly 69% of all households that are experiencing cost burden. While percentages are declining for both households that rent and own, households that own that are cost burdened have dropped by 10% in the last 10 years while households that rent have dropped by roughly 5%.

Cost Burdened Households | Current Housing

Households experiencing cost-burden are not spread evenly around the Land Use Plan area. There are higher concentrations of households that rent and households that own experiencing cost-burden in certain areas. Figure H3 shows the distribution of cost-burdened households by Tenure compared to Missoula County's average, in which 46% of households that rent are cost-burdened and 22% of households that own are cost-burdened. Areas in in dark green on the map indicate more than 22% of households that own are cost-burdened, areas in dark blue indicate more than 46% of households that rent are cost-burdened, areas that are dark purple indicate both households that rent and own are cost-burdened at a higher rate than the county average.

Figure H3: Cost Burdened Households by Tenure



Cost Burdened Households Compared to County Average

- % Cost-Burdened Renters
- % Cost-Burdened Owners
- Higher
- Lower
- Low
- High

Source: 2021 ACS 5-Year Estimates

Missoula County Average
 46% of Renters are Cost Burdened
 22% of Owners are Cost Burdened

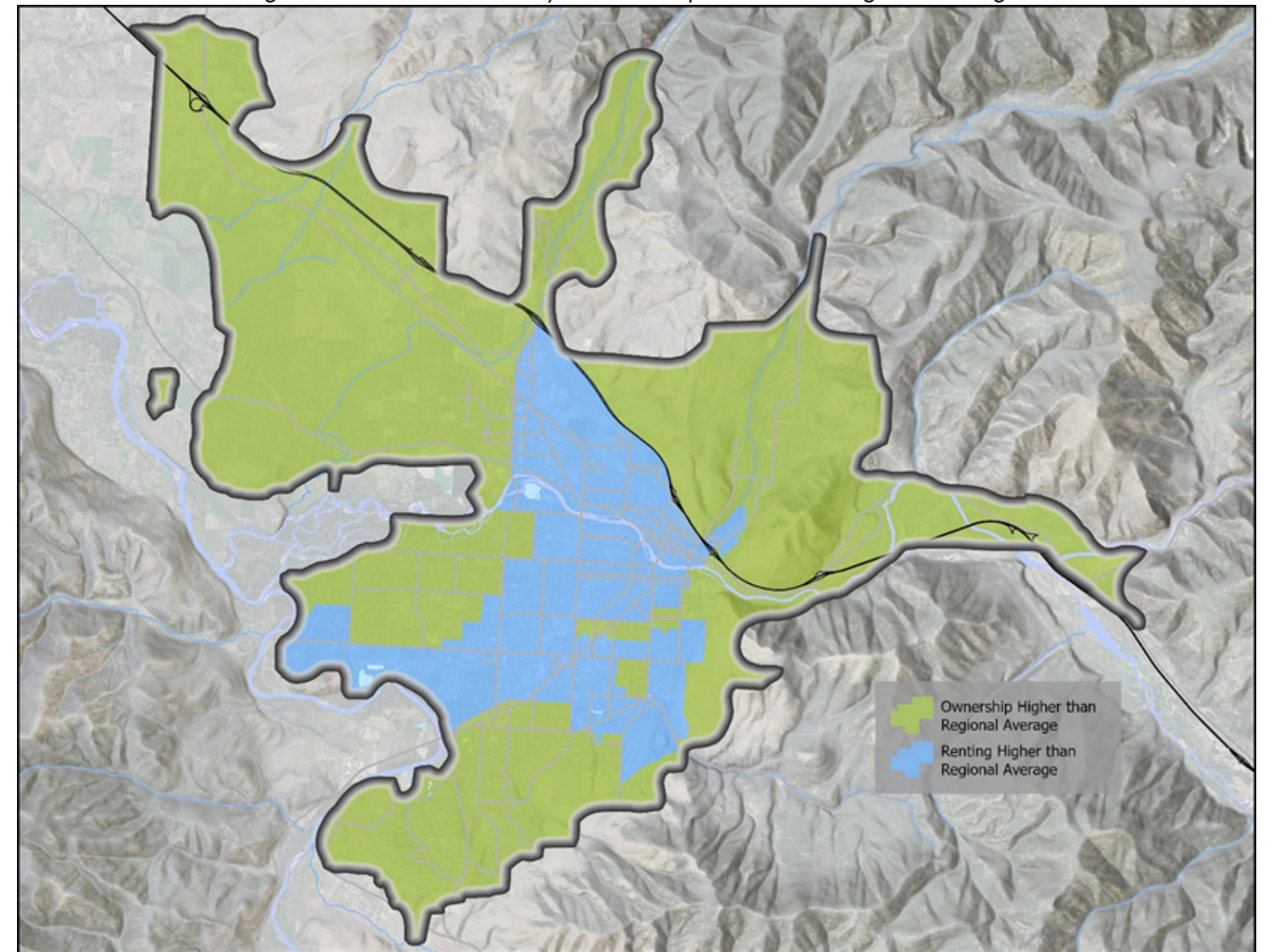
Rental & Homeownership Opportunities | Current Housing

The ratio of owners to renters has been stable across the Land Use Plan area over the last decade. 51% of households rent, and 49% of households own their home.

The ratio has changed in specific areas such as the Westside and Lower Rattlesnake neighborhoods, which shifted from being predominantly renter households, 84% and 46% respectively, in 2016 to predominantly owners in 2021, 63% and 73%. While areas like the Riverfront Neighborhood became further divided between owners, 31% in 2016 to 19% in 2021, to renters, 69% in 2016 to 81% in 2021.

Figure H4 and Figure H5 show the percentage of owners and renters within the region compared to the regional average.

Figure H4: 2016 Households by Tenure compared to 2021 Regional Average



Ownership Higher than Regional Average

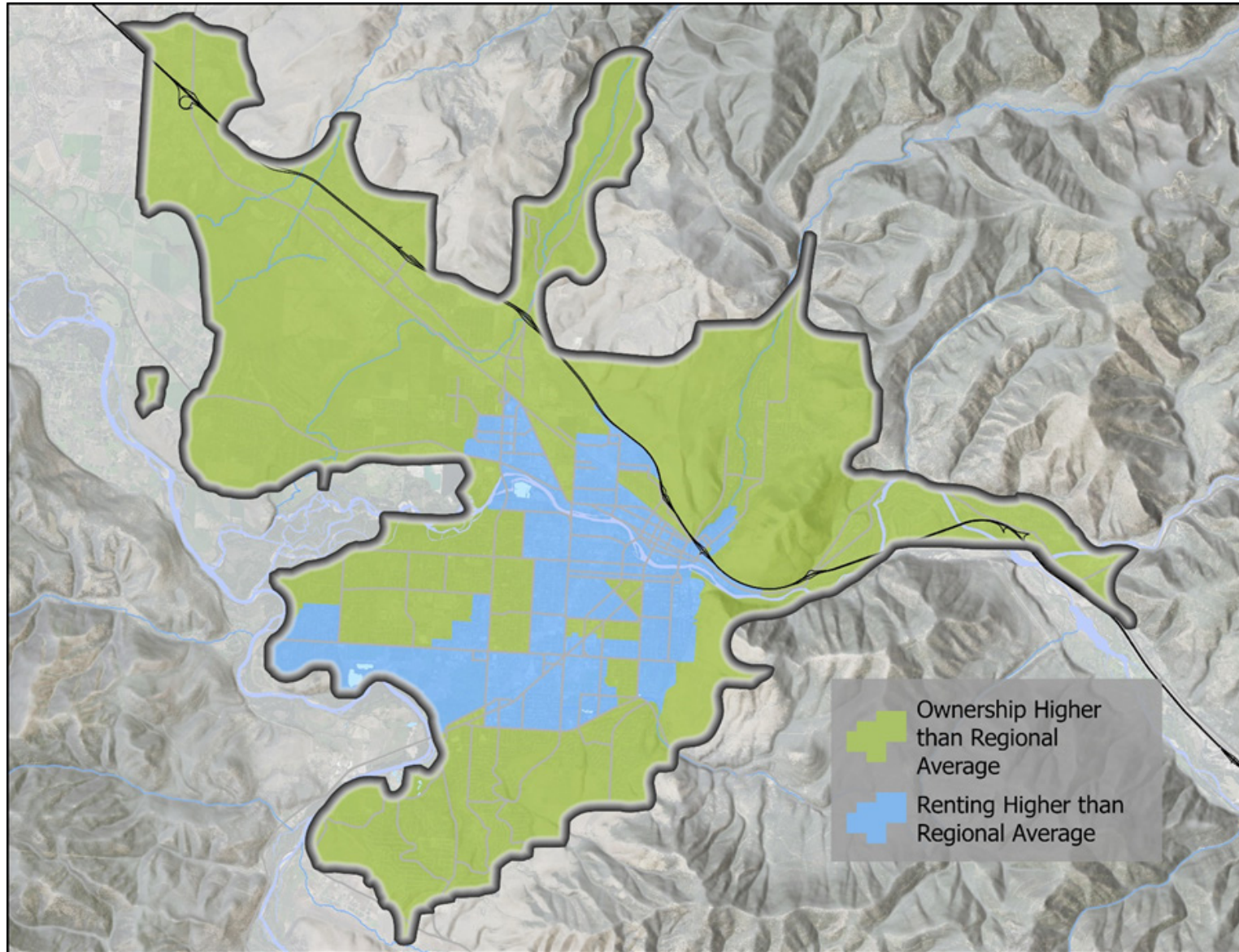
Renting Higher than Regional Average

Source: 2016 ACS 5-Year Estimates

Land Use Plan area Average
 51% of Households Rent
 22% of Households Own

Rental & Homeownership Opportunities | Current Housing

Figure H5: 2021 Households by Tenure compared to 2021 Regional Average

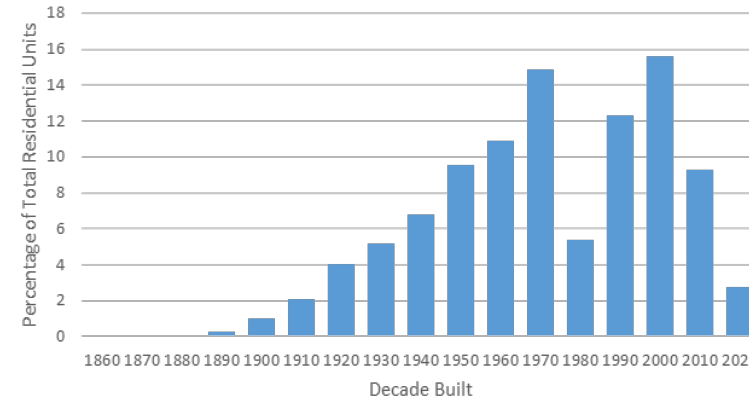


Source: 2021 ACS 5-Year Estimates

There is no target or healthy market indicator that points towards a healthy ratio between renters and owners. Missoula's ratio has been stable over time, indicating that this trend can be expected to be consistent in the future.

Age of Residential Units | Current Housing

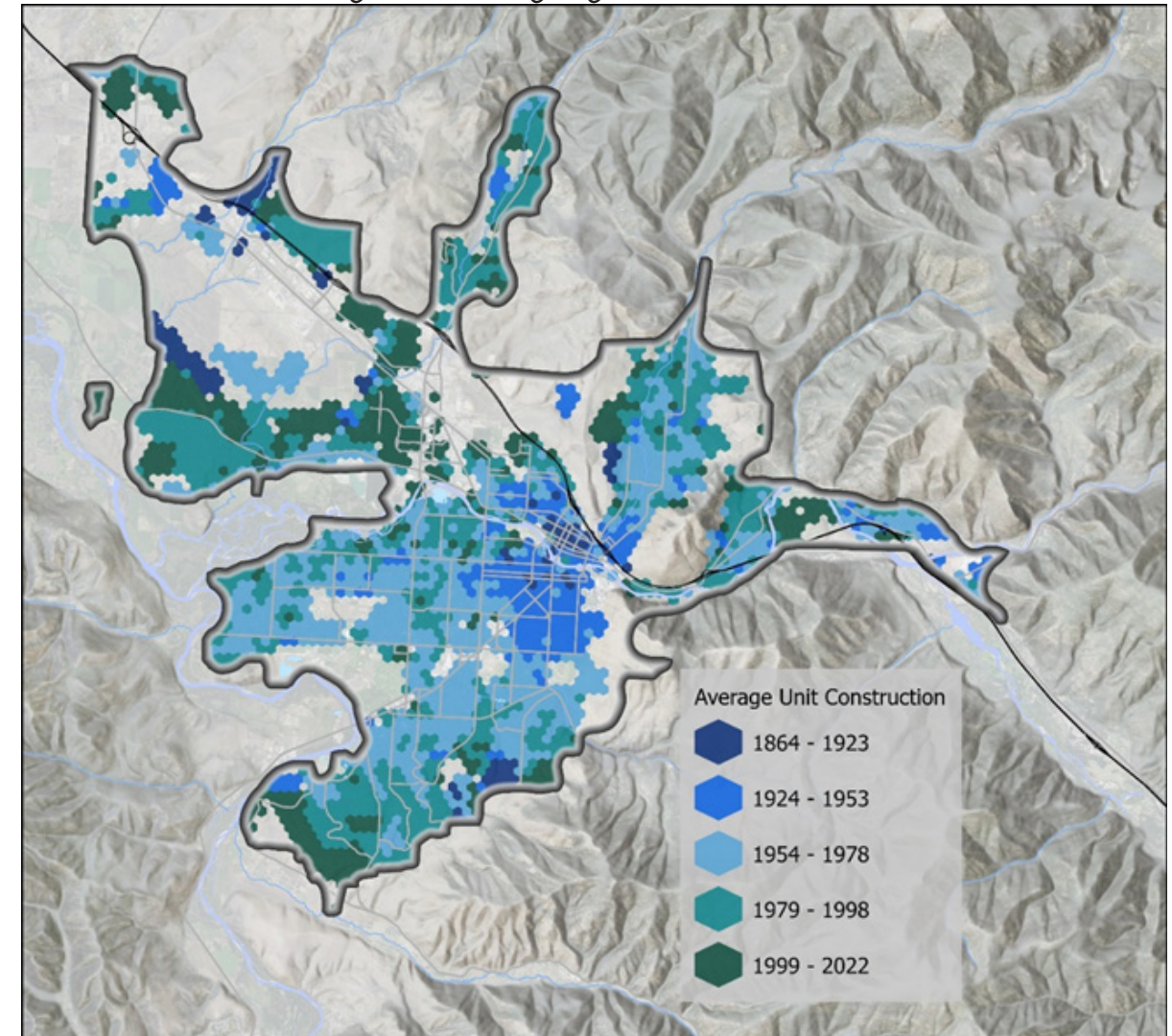
Chart H6: Construction Year of Residential Units



Source: Montana Department of Revenue

Based on the Department of Revenue's Cadastral service, the average construction year of residential units within the Land Use Plan area is 1975. Figure H6 looks at 10-acre areas around the Growth Policy Region and averages all residential units within that area. Areas around the City's Downtown have the highest concentration of older residential units, with the majority of downtown residential units being built between 1864-1923. The area surrounding downtown, specifically the Lower Rattlesnake, University, and Rose Park neighborhoods' residential units were built between 1924-1953. As one moves further out from the City's Downtown the average age of residential units increases. Areas along the urban fringe and around the edges of the Land Use Plan area tend to largely be built between 1999-2022. This is with the exception of historic properties and homesteads such as Moon Randolph Homestead and the Old Flynn Ranch.

Figure H6: Average Age of Residential Units



Source: Montana Department of Revenue

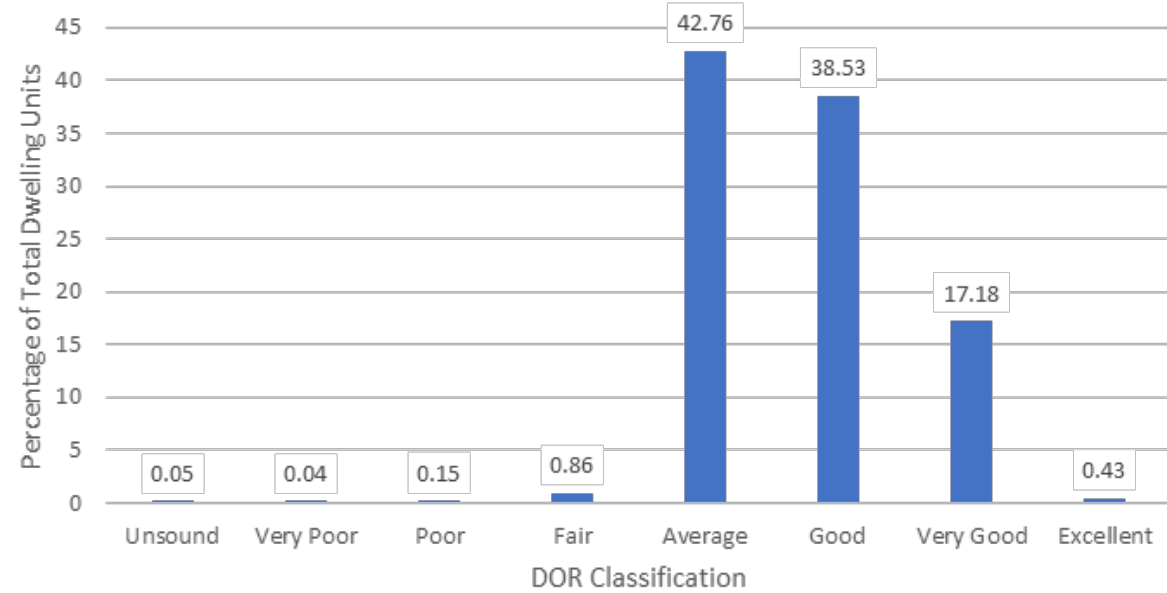
Condition of Residential Units | *Current Housing*

The Montana Department of Revenue (DOR) appraises all properties within the State every 2 years and determines the condition buildings on the property. There are 8 steps in the range of residential property condition.

- *Excellent* – The residential dwelling is in better than new condition; very attractive and highly desirable. There are no deficiencies in material or construction and no signs of deferred maintenance.
- *Very Good* – The residential dwelling is in new or like new condition. There are no deficiencies in material or construction and no signs of deferred maintenance.
- *Good* – The residential dwelling has little to no wear and tear and the structure is slightly more attractive and desirable than average.
- *Average* – The residential unit exhibits normal wear and tear. There are few indications of deferred maintenance, and no significant repairs or replacements are necessary.
- *Fair* – The residential dwelling has some deterioration but is usable. The exterior and interior show wear and deterioration but the property is suitable for use. The structure could be characterized as needing work.
- *Poor* – The residential dwelling has obvious deterioration and is barely usable. Structural elements may require replacement. The exterior and interior are in poor condition and the structure appears barely suitable for use.
- *Very Poor* – The residential dwelling is in very poor condition and practically unusable. Most structural elements require replacement. The exterior and interior are in dilapidated condition and not suitable for use.
- *Unsound* – The residential dwelling is unsound and unfit for use. All major structural elements require replacement. The exterior and interior are in a dilapidated condition.

Within the Land Use Plan area all conditions are present. However, roughly 98% of all residential units exist in three conditions, Average, Good, and Very Good. The full breakdown of these categories in the Land Use Plan area is shown on Chart H7.

Chart H7: Physical Condition of Residential Units

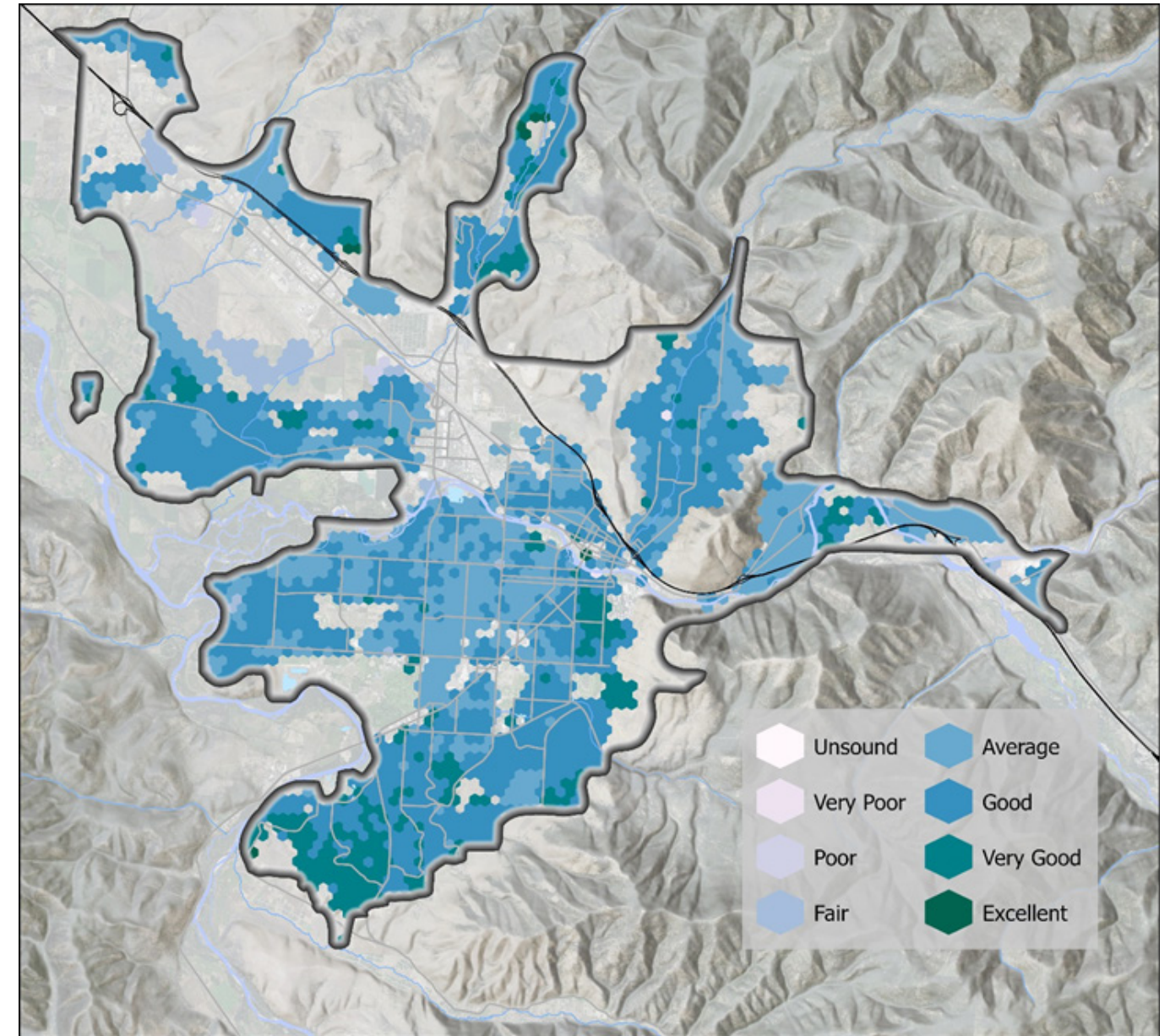


Source: Montana Department of Revenue

Condition of Residential Units | *Current Housing*

Figure H7 visualizes these conditions within the Land Use Plan area. There are areas where the majority of residential units are in the Excellent category, these include newer development areas in the Miller Creek Neighborhood, South Hills, and around Mullan Road. There are also older established areas that are predominantly in the Excellent category, these include the University District and portions of the Upper Rattlesnake neighborhood. Generally, the rest of the region is evenly spread between the Average, Good, and Very Good classifications.

Figure H7: Physical Condition of Residential Units



Source: Montana Department of Revenue

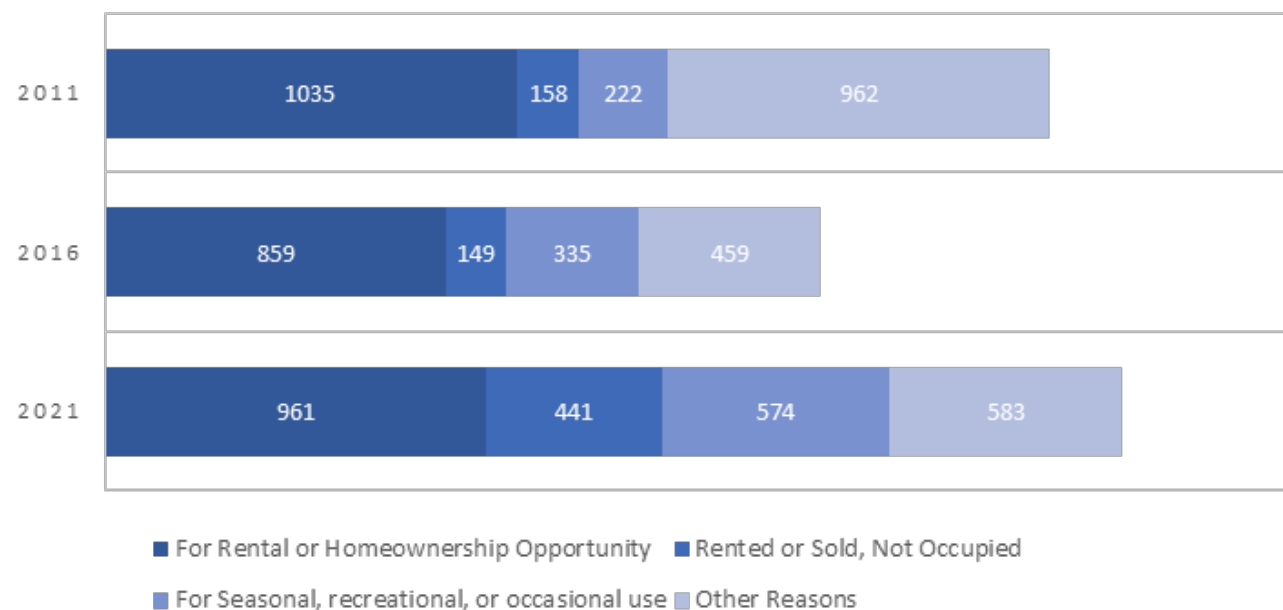
The DOR publishes the methodology of assessing properties every two years when they conduct reappraisals: [Montana Residential, Commercial, and Industrial Property Classification and Valuation Manual](#).

Vacant Residential Units | Current Housing

A 5% - 8% vacancy rate of residential units is considered healthy because there are enough units available to meet the demand but not too many to reduce owner's financial investment. Below 5% indicates that there is an underproduction of residential units to support the population, which will increase housing prices. Above 8% indicates an overproduction of housing units to support the population and can reduce prices and the investments made by homeowners.

The number of vacant residential units in the Land Use Plan area according to the 2021 ACS 5-Year Survey is 2,559. This accounts for 6.16% of the total housing units as estimated in the 2021 ACS statistics. Though this is within the healthy vacancy rate as mentioned before this can be broken down further to provide the vacancy rates for rental or homeownership opportunities. *Chart H8* the breakdown of vacant residential units for 2011, 2016, and 2021.

Chart H8: Number of Vacant Residential Units by Year



Source: 5-Year ACS Estimates

For Rental or Homeownership Opportunity: Residential units that are being listed either for rental property or for sale. Since 2011 this has dropped from 2.95% of all residential units within the Land Use Plan area to 2.49% in 2021.

Rented or Sold, Not Occupied: Units in this category can be vacant for several reasons they may be held for estate settlement, being renovated, occupant is living in supportive housing, unit is being used for storage, or the owner does not want to rent or sell. This category of vacant units has increased from 0.45% in 2011 to 1.14% of all housing stock in the Land Use Plan area.

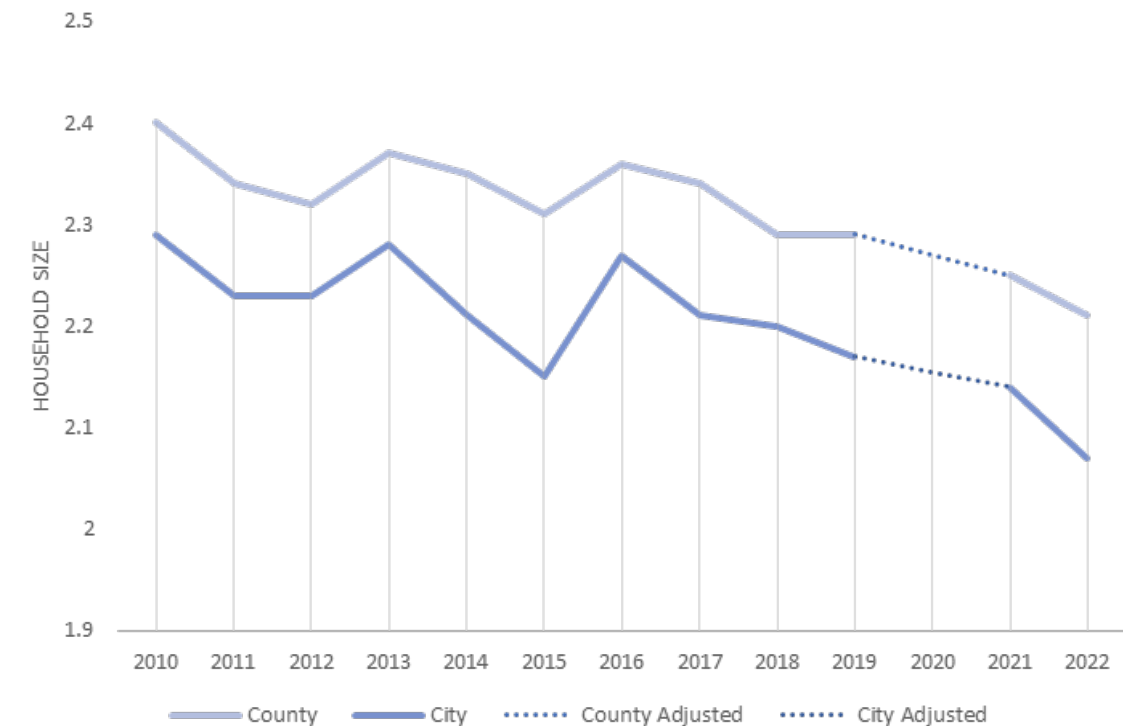
For Seasonal, Recreational, or Occasional Use: These residential units are not used as primary residences, meaning that no one lives in them full time. There can be several reasons why this is, but the two primary ways that these are categorized is if they are either second homes or used as short-term rentals. This category of vacant units has increased from 0.63% in 2011 to 1.49% in 2021 of all housing stock in the Land Use Plan area.

Other Reasons: This category combines vacant households that are reserved for agricultural workers, or the resident failed to respond to the survey or subsequent follow-up visits. This category has dropped from 2.74% in 2011 to 1.51% of all housing stock in the Land Use Plan area.

Household Size | Current Housing

Consistent with national trends, the Land Use Plan area has been experiencing declining household sizes. *Chart H9* shows household size over time for Missoula County and the City of Missoula since 2010 based on American Community Survey 1-Year estimates.

Chart H9: Household Size over Time



Source: 1-Year ACS Estimates

Within the Land Use Plan area this trend can be broken down into households that rent or households that own. Since 2015, households that own have not decreased in size, they have stayed at an average of 2.5 people per household. Households that rent have been the primary driver of the region's decreasing household size. In 2016, the average household size for rental households was 2.8 people per household and in 2021 it is 1.98 people per household.

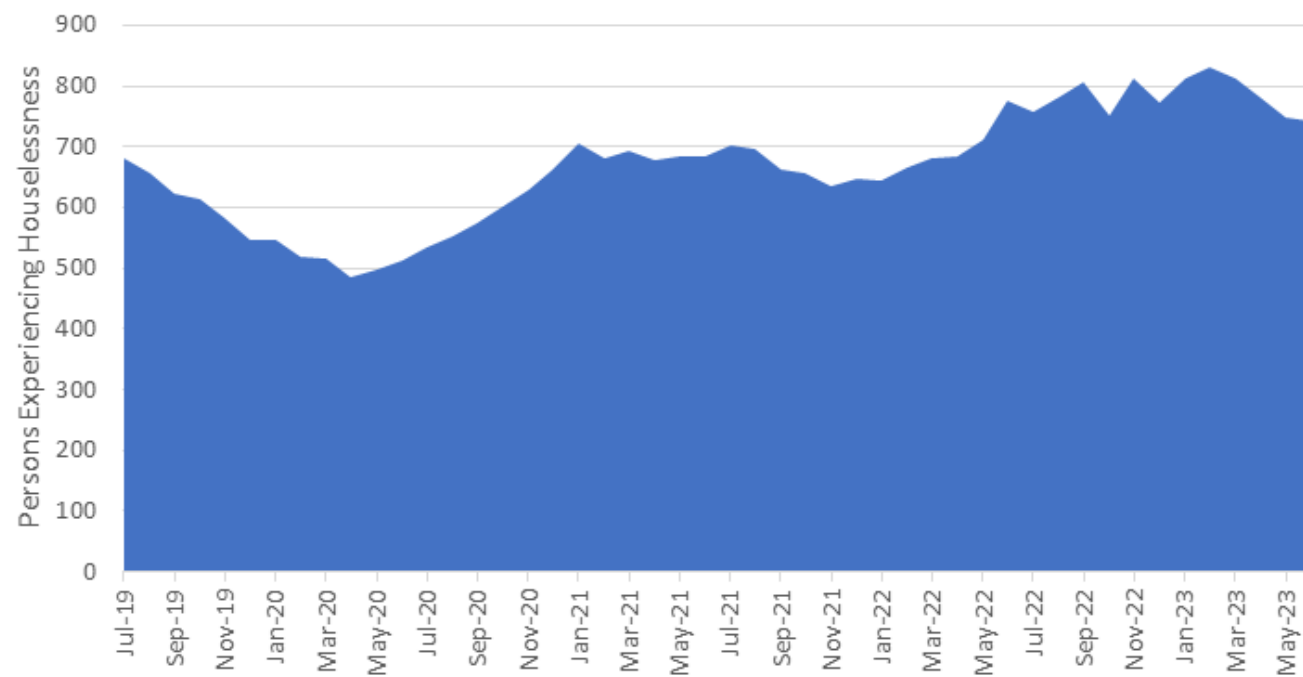
Houselessness | Current Housing

When the 2015 Our Missoula Growth Policy documented people experiencing houselessness the City and provider organizations used Point in Time (PiT) counts. In 2017 the Missoula Coordinated Entry System was created to gather more reliable and timely data collection; this data is reported out using the Homeless Management Information System (HMIS).

PiT counts are not as accurate as gathering data from the HMIS system, so they cannot be directly compared. In the 2015 Growth Policy the city reported that in January of 2014 a PiT was conducted and collected data on 261 households that were currently unhoused. In January of 2023 a PiT was again conducted and collected data from 311 households that were currently unhoused.

Looking at the HMIS system, the number of people experiencing houselessness has been steadily increasing in the region. There was a low of 485 individuals in April of 2020. Since then, rising rent and home prices, layoffs due to the COVID-19 pandemic, and stagnant wages have all contributed to a high in January of 2023 to 811 individuals.

Chart H10: Persons Experiencing Houselessness



Source: Homeless Management Information System

Future Housing Need

Future housing needs are calculated using the underproduction of housing units that is contributing to the current low vacancy rates and unhoused population combined with the projection of new housing units needed to accommodate and keep pace with the projected population in 2045 and future vacancy rate.

The Land Use Plan area has underproduced approximately 2,704-3,704 housing units to keep pace with population growth. This accounts for cost-burdened households and people or households who are currently experiencing houselessness. The lack of affordable housing is the main challenge when accommodating this population. Roughly 84% of the units that are needed will need to be affordable to households making between 0-100% Area Median Income (AMI), which as of June 2023 is \$0 - \$100,900 annually for a family of 4, and 37% need to be affordable to households making between 0-30% MFI, \$0-\$30,270 annually.

Using the projected population, the Land Use Plan area will need to build between 19,000-23,750 units by 2045. These will need to be distributed throughout all income brackets, so households have the ability to move up or down according to household preferences and available annual income.

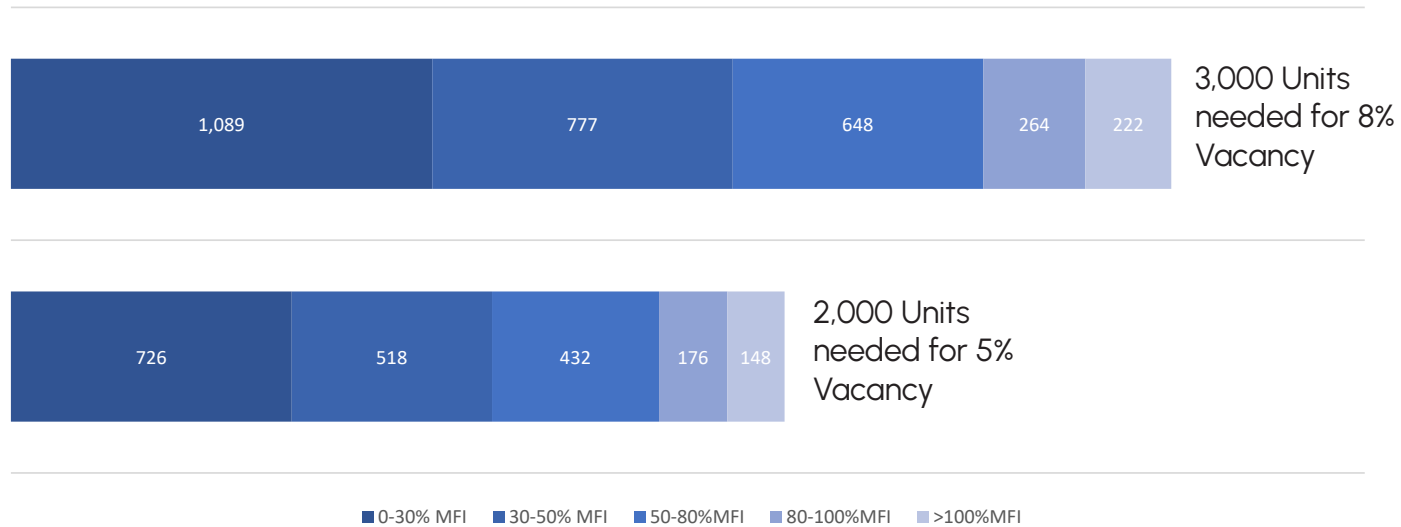
- 1 Underproduction of Housing by Income**
 Residential Units needed based on underproduction = 2,000-3,000
 Lower income households have a greater need based on Cost Burden datasets
- 2 Underproduction of Housing by Income & HMIS**
 January 2021 HMIS Count = 704 Clients experiencing houselessness
 January 2021 HMIS Count = 179 Clients experiencing chronic houselessness
- 3 Underproduction of Housing Type**
 Residential Units needed based on Underproduction and HMIS = 2,704-3,704
 Permanent Supportive Housing Need = 179 Units
- 4 Projected Need by Income**
 Area Median Income (2021) = \$61,423 annually
 Projected Housing Need = 19,000 - 23,750
- 5 Projected Need by Housing Type**
 Multi-Dwelling Unit Need = 64% of total needed units
 Single Family Detached Unit Need = 21% of total needed units
 Missing Middle Unit Need = 15% of total needed units
- 6 Housing Need Summary**
 Yearly Housing Production Goal (first 10-years) = 1,157-1,451 units
 Yearly Housing Production Goal (next 12-years) = 886-1,080 units

Underproduction of Housing by Income | Future Housing Need

Based on low vacancy rates, residential building permit averages since 2016, and population growth, the Land Use Plan area has an underproduction of between 2,000 and 3,000 units as of 2021 to accommodate a healthy vacancy rate between 5-8%. Because of the area's underproduction this has forced an affordability crisis that is especially pronounced for households with the lowest incomes. It is estimated that 85% of households that make between 0-80% of the Area Median Income (AMI) of Missoula County spend more than 30% of their income on housing. This is in stark contrast to 7.4% of all households making over 100% of AMI spending more than 30% of their income on housing.

Chart H11 breaks down how many of the 2,000-3,000 housing units are needed because of underproduction based on income bracket. As evident in the graph households making less than 50% MFI have a much larger need for housing than households in the upper income brackets.

Chart H11: Underproduction of Units based on Area Median Income



Source: ACS 5-Year Estimates

When households cannot afford to move out of housing units that are unaffordable to them and into more affordable units, they face either becoming unhoused or spending more than 30% of their income on household expenses such as rent or mortgage payments. When households pay more than 30% of their income on these expenses this is called cost-burdened, and when households pay more than 50% of their income this is called severely cost-burdened. This combined with low vacancy rates further exacerbates the issue of affordability, because households cannot monetarily afford to move up into another unit, and they cannot move down into a unit in their price range because there is little to no vacant units within that lower range.

Table H3: Cost Burdened and Severely Cost Burdened Households

Income	% of Total HH	% of Total HH that are Cost Burdened or Severely Cost Burdened
0-30% MFI	14.6	12.4
30-50% MFI	12.9	8.9
50-80% MFI	18.7	7.4
80-100% MFI	11.5	3
100%+ MFI	42.3	2.5

Source: ACS 5-Year Estimates and 2021 CHAS Dataset

Using Cost-Burdened Households as an indicator of the income ranges that are facing difficulties because of the underproduction of housing units allows this analysis to target the specific income brackets that face the most challenges due to financial immobility within the local housing market.

Underproduction of Housing with HMIS | Future Housing Need

While the drivers of houselessness are varied and unique to the person, the consistent primary driver at a community level is a lack of affordable housing. By analyzing the needs of people experiencing housing instability and houselessness through the Homeless Management Information System (HMIS) staff can determine how many units are needed in the lower AMI Bracket as well as determine the supply needs of permanent supportive housing units for people who meet the definition of experiencing chronic houselessness.

To be consistent with other datasets this analysis used 2021 HMIS Data. As of January of 2021, there were 704 clients enrolled in the HMIS System. Within that number, 179 people are determined to be experiencing chronic houselessness. Households that meet the definition of chronically unhoused have a diagnosed disability and have been unhoused continuously for twelve months or have been unhoused on at least four separate occasions in the last three years, in which the occurrences total at least twelve months.

Because of the housing challenges present within the region, clients enrolled in HMIS earn between 0-80% of AMI for the County. Eighty-five percent of clients earn between 0-30% AMI, 10% earn between 30-50% AMI, and 5% earn between 50-80% AMI. Disaggregating the 704 households that are identified in the HMIS database based on these income brackets adds an additional 598 needed units in the 0-30% AMI bracket, 70 units in the 30-50% AMI bracket, and 35 units in the 50-80% AMI bracket. This breakdown and addition of units into the underproduction in the Land Use Plan area is visualized below. Chart H12 combines housing units needed by income and the HMIS Datasets.

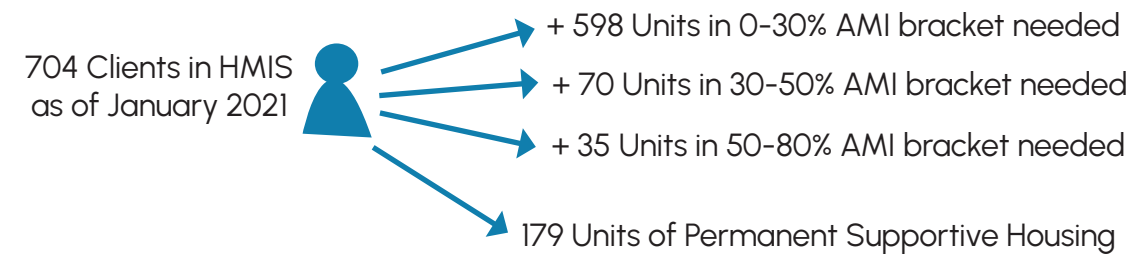
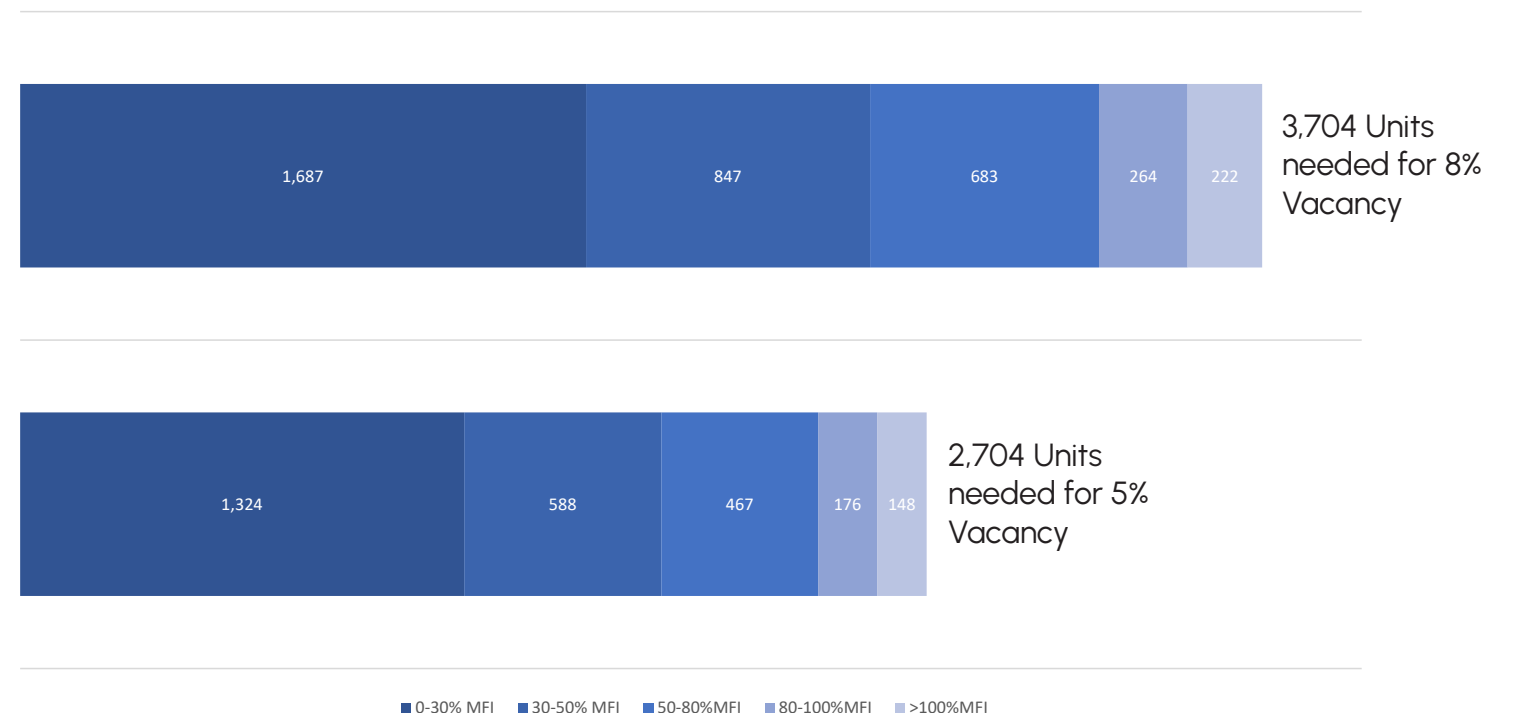


Chart H12: Underproduction of Units with HMIS Dataset as of 2021



Source: ACS 5-Year Estimates, 2021 CHAS, HMIS Dataset

Underproduction of Housing Type | Future Housing Need

Underproduction by household type is determined by categorizing the 2016-2022 city residential building permits into four categories, Single Family Detached, Missing Middle, Multi-Dwelling, and Permanent Supportive Housing.

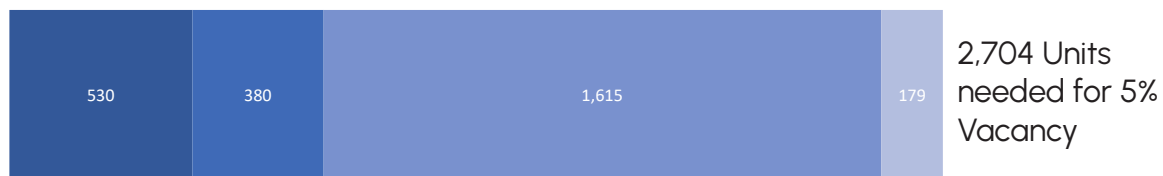
Single Family Detached: Residential building permits that have one dwelling unit associated with them and also have a sub-category entered into the permitting software as BNSFR (Building New Single-Family Residential).

Missing Middle: Multi-Dwelling residential building permits that have 2-4 units associated with the permit. Also, any residential building permit that was categorized as an Accessory Dwelling Unit (ADU), Townhome Exemption Development (TED), or has a sub-category of BNSFT (Building New Single-Family Townhome) in the permitting software.

Multi-Dwelling: Multi-dwelling residential building permits that have 5 or more units associated with the permit.

Permanent Supportive Housing: These types of housing developments are intended to provide housing and supportive services to people who are experiencing chronic homelessness. These developments will need to provide wrap-around services such as tenancy skills, healthcare services and treatment, and employment services.

Chart H13: Housing Type Needs based on Underproduction



■ Single Family Detached ■ Missing Middle ■ Multi-Dwelling ■ Permanently Supportive Housing

Source: City and County Building Permits and HMIS Dataset

Projected Need by Income | Future Housing Need

The Land Use Plan area's population is expected to grow at a rate of 1.39% every year for the next 25 years. This means that the region will have an additional 37,523 people by 2045. The Growth Policy Region will need to build 19,000-23,750 dwelling-units by 2045 to accommodate this population increase and to maintain a healthy vacancy rate between 5-8%.

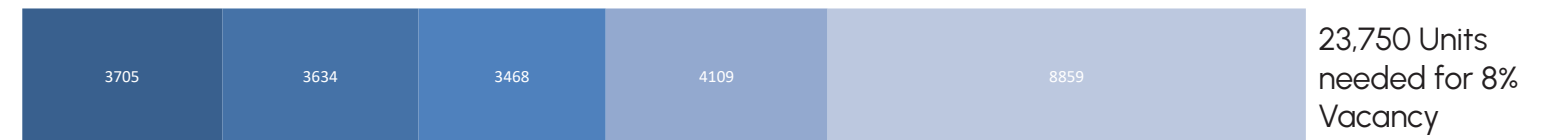
The Area Median Income (AMI) for households within Missoula County is \$61,423 according to the 2021 ACS 1-Year Estimate. The following section will be utilizing income brackets as a percentage of this AMI.

- 0-30% AMI: \$0 - \$17,813 Annually
- 30-50% AMI: \$17,814 - \$30,097 Annually
- 50-80% AMI: \$30,098 - \$48,524 Annually
- 80-120% AMI: \$48,525 - \$73,903 Annually
- 120%+ AMI: \$73,904 and above Annually

Providing dwelling units for all income brackets allows households to move up or down depending on what that household can afford, which is referred to as [Housing Chain Migration](#).

As an example, a household lives in a unit that is available in the 50%-80% AMI bracket and then their income changes and raises the household's income to the 80-120% AMI bracket. Having units available for this upward mobility would enable this household to move into a larger more expensive dwelling unit and open up the unit they were previously living in.

Chart H14: 2045 Projected Unit Needs based on Income Brackets



■ 0-30% AMI ■ 30-50% AMI ■ 50-80% AMI ■ 80-120% AMI ■ 120%+ AMI

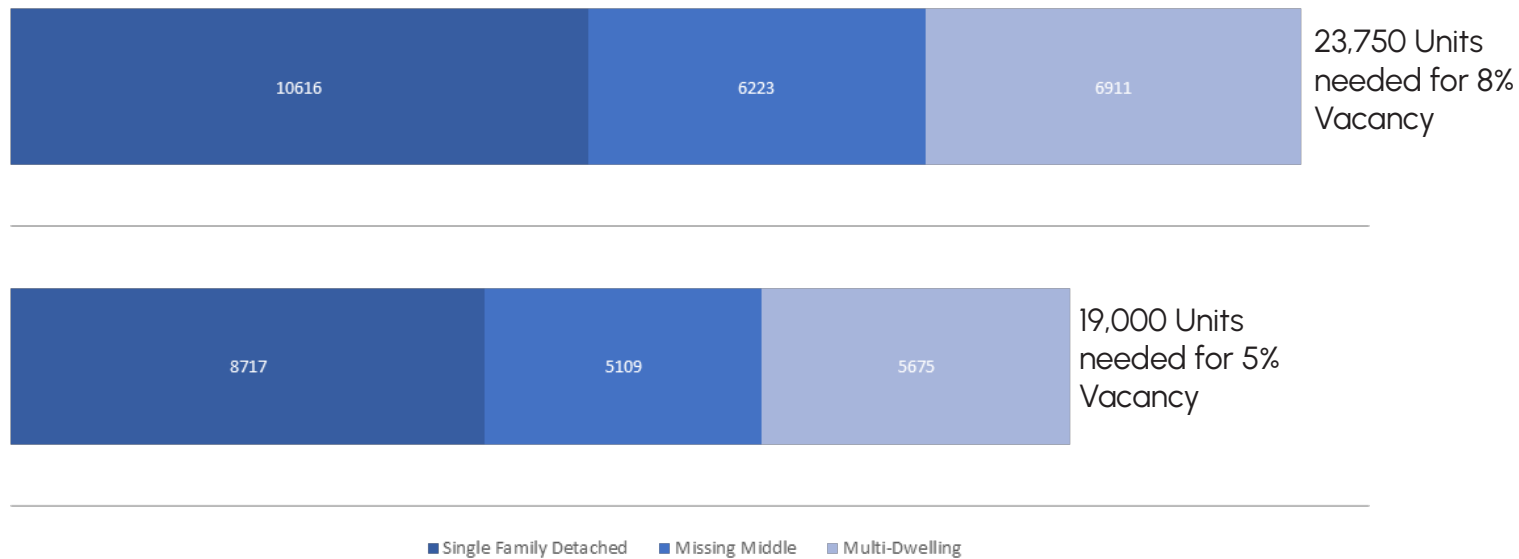
Source: 2021 ACS 5-Year Estimates and City of Missoula Population Projection

Projected Need by Housing Type | Future Housing Need

The determination of desired or anticipated types is a policy question and is impacted by the City's *Focus Inward* strategy outlined in the [2015 Growth Policy](#). While every type of future housing type by need cannot be fully anticipated, there are indicators that can be used to determine the best path forward using past trends in development patterns, existing household characteristics, and the affordability of specific housing types.

To address the anticipated population increase by 2045, areas around the urban fringe are likely to undergo increased urbanization. Additionally, regions already within the urban area and established neighborhoods may need to experience denser development patterns to accommodate the projected population growth. *Chart H15* illustrates the anticipated housing needs by type, utilizing existing development patterns within the urban portion of the Land Use Plan area.

Chart H15: 2045 Projected Unit Needs by Household Type



Source: 2021 ACS 5-Year Estimates and City of Missoula Population Projection

Housing Need Summary | Future Housing Need

The Land Use Plan area will need to build between 22,205 to 27,479 dwelling units by 2045 based on the underproduction of dwelling units and projected population.

Table H4 provides a 10-year annual breakdown of housing type production that the Land Use Plan area should strive for to keep pace with the growing population. *Table H5* represents the annual housing production target for the next 10 years to keep pace with the projected population and maintain a healthy vacancy rate of between 5% and 8%.

Table H4: Yearly Residential Production Goals 2024-2034

Housing Type	5% Vacancy	8% Vacancy
Single Family Detached	449	557
Missing Middle	270	336
Multi-Dwelling	420	540
Permanent Supportive Housing	18	18
TOTAL	1,157	1,451

Table H5: Yearly Residential Production Goals 2035-2045

Housing Type	5% Vacancy	8% Vacancy
Single Family Detached	396	483
Missing Middle	232	283
Multi-Dwelling	258	314
TOTAL	886	1,080

The average number of new residential dwelling units being permitted has increased the last two years to 1,131 compared to the average number of units per year permitted between 2016 to 2022 which is 671 Dwelling Units per year. The current average yearly production rate is roughly half of the dwelling units that the region needs to produce to keep up with the demand of housing and population increases within the Land Use Plans area. This underproduction of housing is exacerbating both the issue of low vacancy rates and cost of housing.

Table H6: Housing Permitted Units per Year

Year	New Construction
2015	533
2016	795
2017	850
2018	496
2019	494
2020	646
2021	1,364
2022	898
AVERAGE	671/YEAR

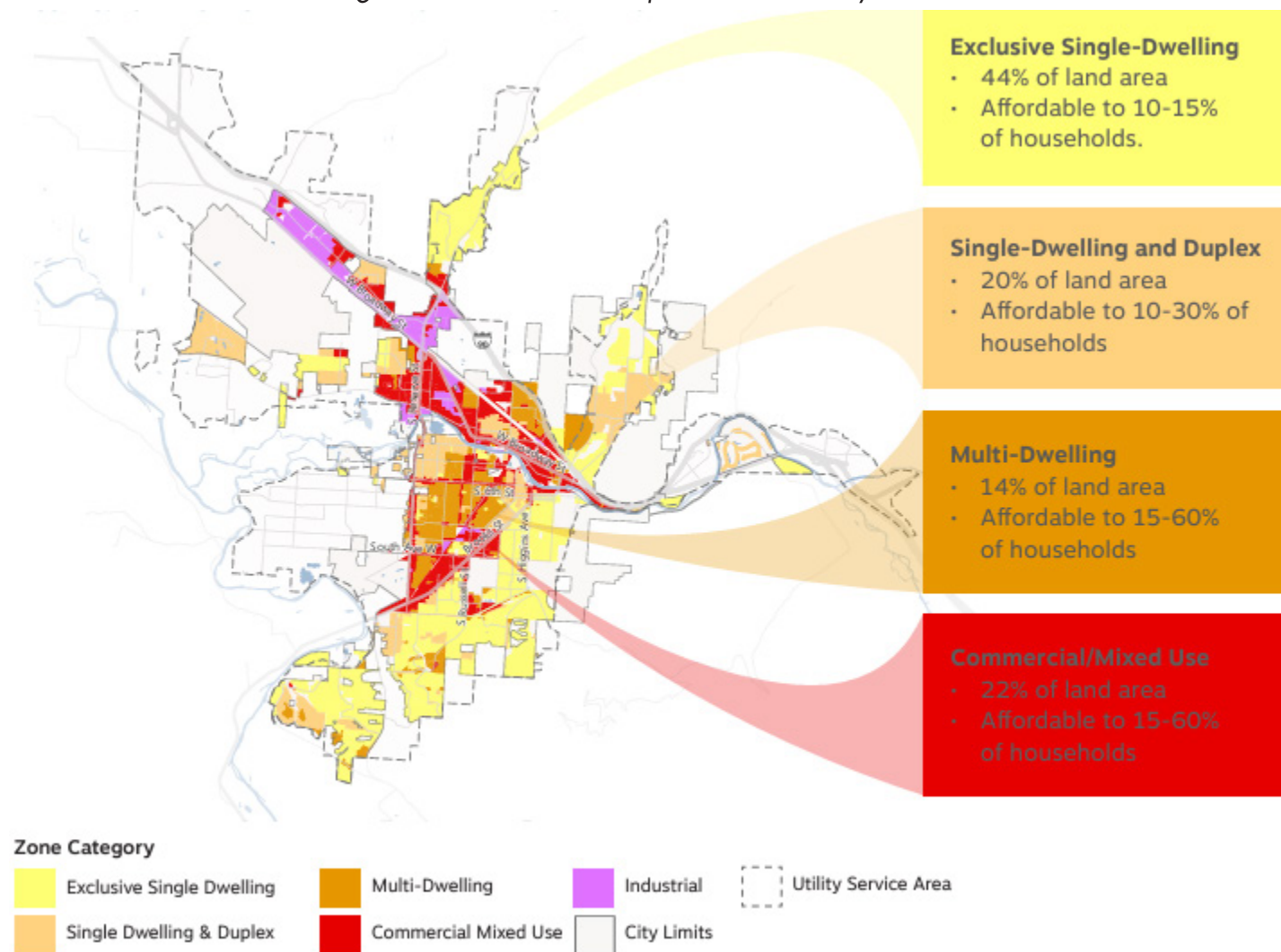
Source: City/County Building Permits

Constraints to Development | Future Housing Need

Utilizing financial pro-formas, zoning, and building standards the [Equity in Land Use Report](#) determined the minimum rent and sale price of newly built residential units in different areas of the Land Use Plan area. It found that building new residential units that are affordable to households making below 120% AMI or 100% AMI are not financially feasible in the current market.

The exception to this is newly built units in the RM1-45 zoning district, where it appears feasible to build units that are affordable to households making 90% or higher AMI. This zoning district accounts for approximately 6% of all zoning districts that allow residential development and is located in the Rose Park, Franklin to the Fort, and Northside neighborhoods. *Figure H8* highlights the zoning districts that are feasible for development to occur that are affordable to income brackets within the region.

Figure H8: Zone District Map with Affordability Estimates



Source: Equity in Land Use Report, Accessed October 2023

This report indicates that the City of Missoula's Zoning and Future Land Use designations are exacerbating the affordability issues that are present today. For the Land Use Plan area to accommodate all income brackets with dwelling units that are affordable public/private investments and subsidies will be necessary if current planning practices and the housing market continue as normal. Along with these investments it will be necessary to determine what zoning and land use practices are contributing to the rising cost of residential development and determine whether adjusting these regulations would have a positive impact on the affordability of housing in the region.

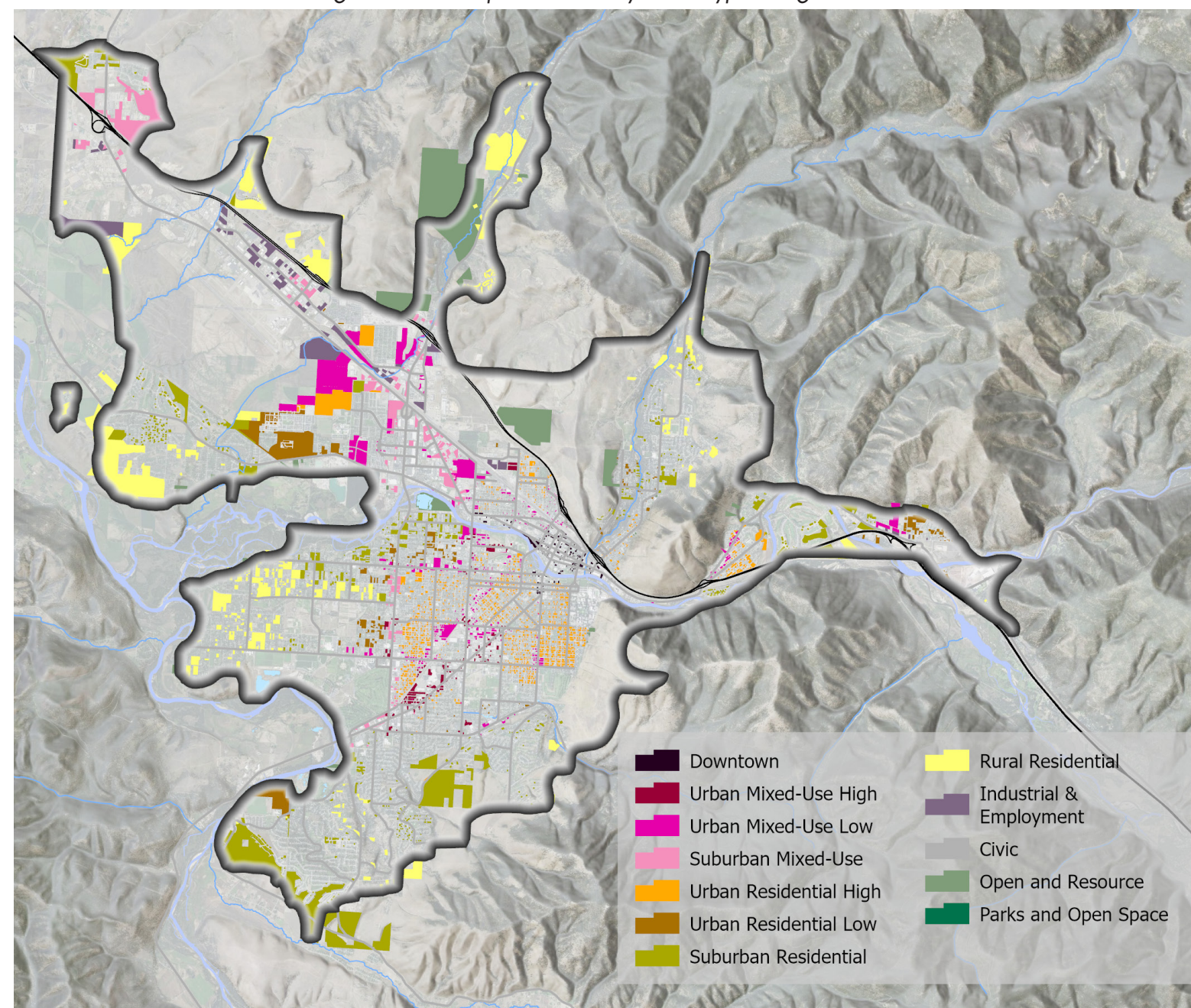
Residential Developable Lands | Future Housing Need

Utilizing Montana Department of Revenue Cadastral data the taxable land value, building value, and primary land use was joined to each parcel within the Land Use Plan area. Parcels were identified for potential new development if they met the following criteria:

- Taxable building value is less than \$10,000
- Taxable land value is greater than the taxable building value on the parcel and the building was constructed before 1990 and has not been remodeled since the year 2000.
- Primary land use on the parcel is not Government Properties, Religious Centers, Cemeteries, Schools, or Utilities.

Figure H9 illustrates the locations of each parcel deemed developable or re-developable based on the Place Type associated with it

Figure H9: Developable Lands by Place Type designation



Source: City of Missoula & Cascadia Partners

Housing Capacity | Future Housing Need

The methodology used to estimate housing capacity within the Land Use Plan area can be summarized into the following steps:

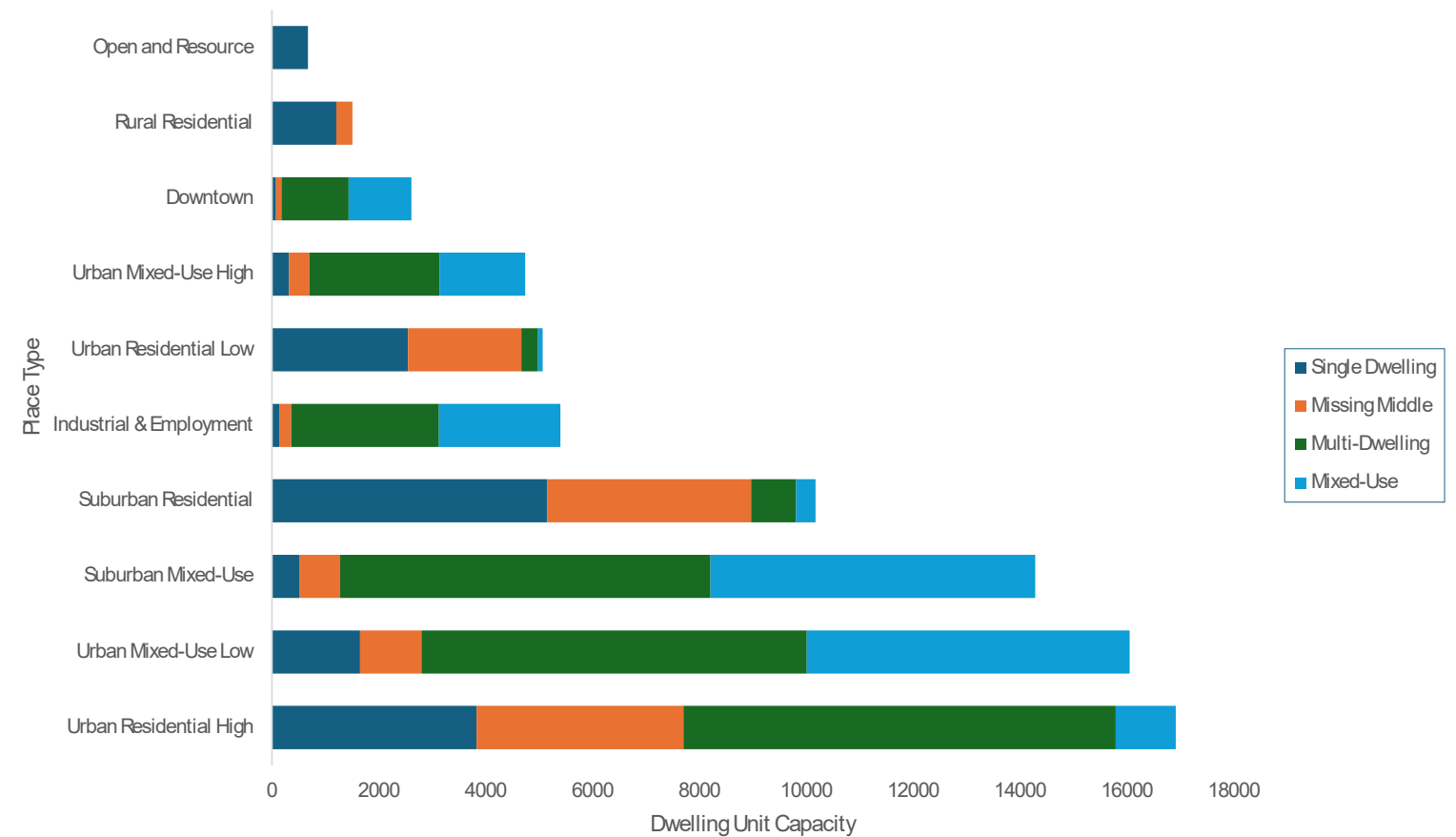
- **Create Development Prototypes:** Residential building prototypes were created based on models of a typical development that would be possible and likely within each Place Type outlined in the Land Use Plan. Instead of a maximum capacity of the most intense development possible, this method assumes that there will be a mixture of housing types within each place type. For example, even though large apartment complexes are allowed in the Urban Residential High Place Type does not mean that each parcel will develop into that.
- **Assigning Prototypes:** Crosswalk tables were created to relate building prototypes to each Place Type and the comparable zoning districts within them. If a Place Type that is proposed to be applied on a parcel signals a higher density or intensity of development than what is allowed now, then it is assumed that the property would then allow a more intense development pattern.
- **Constrained Lands analysis:** Environmental constraints and hazards were highlighted on parcels that intersect existing hazards such as Floodway and Flood Fringe along waterways, Slopes that are over 25 degrees in steepness, and parcels that are under conservation easements. The percentage of parcels that intersect any of these constraints was taken out of the developable acreage of the corresponding parcel.
- **Project Mix of Development Types:** Building types were spread out across Place Types that allowed for a variety of housing types. The types utilized match the projected needs on the preceding pages and are below:
 - Single Dwelling
 - Missing Middle: 4 or less units per parcel
 - Multi-Dwelling: 5 or more units per parcel
 - Mixed-Use: Assumes vertical mixed use with non-residential use on the ground floor
- **Commercial and Mixed-Use Areas:** Place Types that are designated for commercial and residential uses (Downtown, Urban Mixed-Use High, Urban Mixed-Use Low, and Suburban Mixed-Use) are included in developable lands. However, it is necessary to take out 25% of developable lands within these Place Types to account for commercial development.

Housing Capacity | Future Housing Need

The developable lands analysis conducted with the proposed Place Type map indicates that there is capacity for development of a total of 77,431 dwelling units. The three Place Types that have the most capacity within the Land Use Plan area are Urban Residential High with 16,917 units, Urban Mixed-Use Low with 16,056 units, and Suburban Mixed-Use with 14,285 units.

Chart H16 and Table H7 shows the breakdown of each Place Type and the number of potential new building types it has the capacity to build.

Chart H16: Place Type Residential Building Type Capacity



Source: City of Missoula & Cascadia Partners

Table H7: Place Type Residential Building Type Capacity

Place Type	Single Dwelling	Missing Middle	Multi-Dwelling	Mixed-Use	TOTAL
Urban Residential High	3,830	3,871	8,090	1,126	16,917
Urban Mixed-Use Low	1,647	1,153	7,210	6,046	16,056
Suburban Mixed-Use	522	756	6,931	6,076	14,285
Industrial & Employment	135	229	2,760	2,274	5,398
Urban Residential Low	2,548	2,121	309	90	5,068
Urban Mixed-Use High	323	383	2,432	1,600	4,738
Downtown	75	105	1,254	1,176	2,610
Rural Residential	1,203	305	0	0	1,508
Open & Resource	675	0	0	0	675

Source: City of Missoula & Cascadia Partners

Local Services

The demand for local services within the Land Use Plan area is analyzed and presented in various facility and long-range planning documents. Below is a list of some of the plans that analyze local services at more of a fine detail than what will be described in this report. These will be updated as needed as growth within the Land Use Plan area continues.

- Activate Missoula 2045: Missoula Long Range Transportation Plan
- Bicycle Facilities Master Plan
- Pedestrian Facilities Master Plan
- Wastewater Facilities Plan
- Stormwater Facility and Operations Plan
- MUTD Strategic Plan
- Master Fire Plan
- Community Health Improvement Plan
- Community Wildfire Protection Plan

Department webpage links are provided below. Issue plans that go deeper into these subjects can be found within these links.

1 Streets
Department Webpage: <https://www.missoulampo.com/plans>

2 Multi-Modal Transportation
Department Webpage: <https://www.missoulampo.com/plans>
Transit Services Webpage: <https://mountainline.com/>

3 Municipal Water
Department Webpage: <https://www.ci.missoula.mt.us/1983/Missoula-Water>

4 Sewer and Wastewater
Department Webpage: <https://www.ci.missoula.mt.us/562/Wastewater>

5 Stormwater
Department Webpage: <https://www.ci.missoula.mt.us/2138/Stormwater>

6 Fire Department
Department Webpage: <https://www.ci.missoula.mt.us/240/Fire-Department>

7 Law Enforcement
Department Webpage: <https://www.ci.missoula.mt.us/332/Police-Department>

8 Healthcare
Department Webpage: <https://www.missoulacounty.us/government/health/health-department>

9 Public Schools
Department Webpage: <https://www.missoulacounty.us/government/administration/superintendent-of-schools>

10 Office of Emergency Management
Department Webpage: <https://www.missoulacounty.us/government/public-safety/office-of-emergency-management>

Roadways by Functional Classification | Local Services

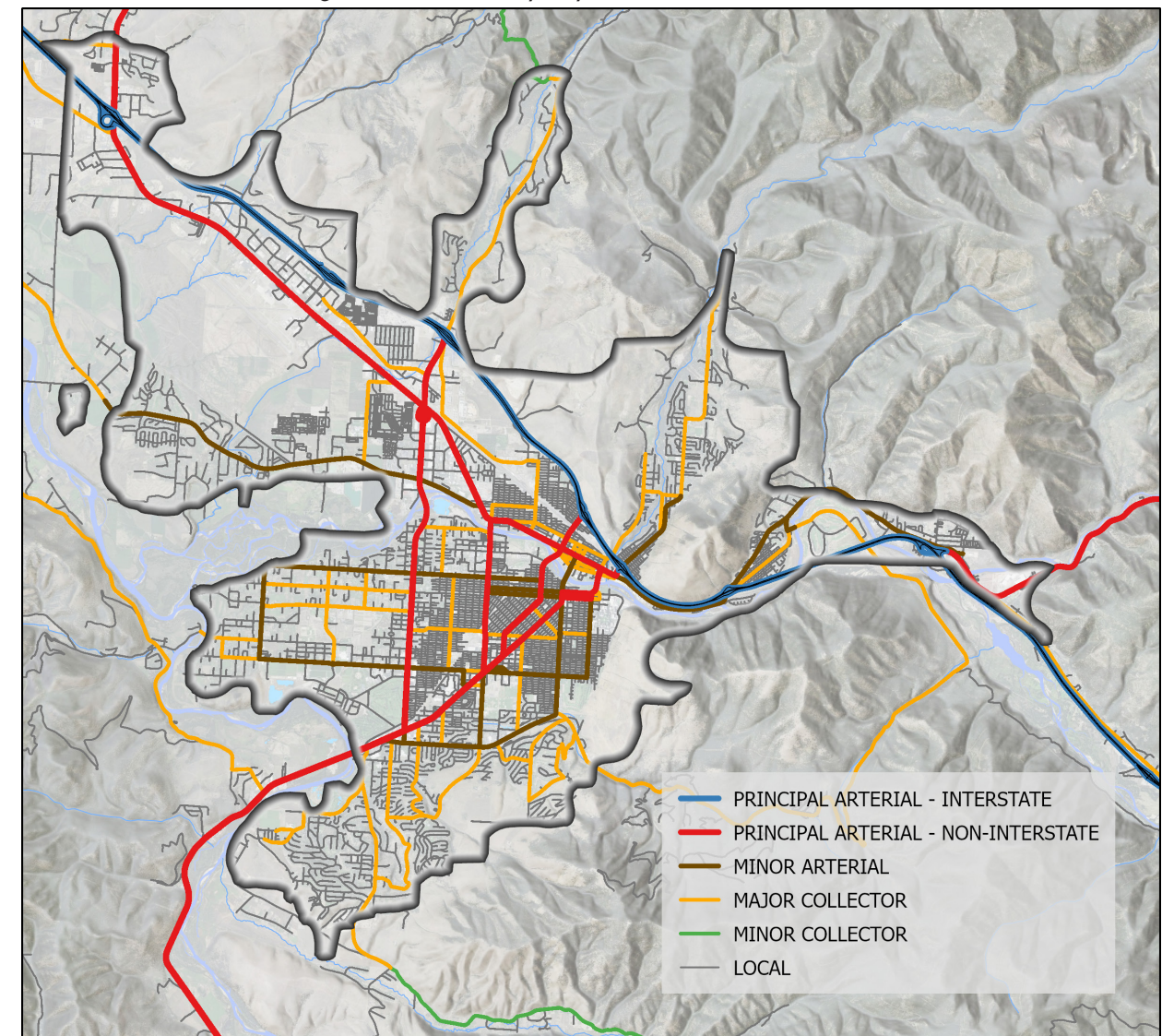
The Federal Highway Administration groups roadways into classes to characterize the level of service that the roadways provide and to allocate different funding for each classification. Within the functional classification system there are three classes, arterial, collector, and local. Within each class of this system there are also sub-classes, *Figure LSI* shows the roadway system within the Land Use Plan area with the roadways designated by Local, State and Federal agencies.

· Arterial: Arterial roadways are high-capacity urban streets intended to connect people to major destinations and other higher volume roadways. Local road names within this classification include Reserve Street, Interstate 90, Broadway Street Orange Street, Brooks Street, and North Russell Street.

· Collector: Collector roads are medium-capacity streets that move people between local streets and higher volume arterials. Examples include Mount Avenue, Duncan Drive, Expressway, Johnson Street, and Turner Street.

· Local: Local streets are low volume and low speed streets typically serving to connect people from their homes to the collector network. Local roads are often classified by default, meaning that once all the roadways are classified that meet the classifications of collector and arterial these are all the roadways that are left over. The majority of neighborhood streets in the Land Use Plan area are classified as local roadways.

Figure LSI: Roadways by Functional Classification

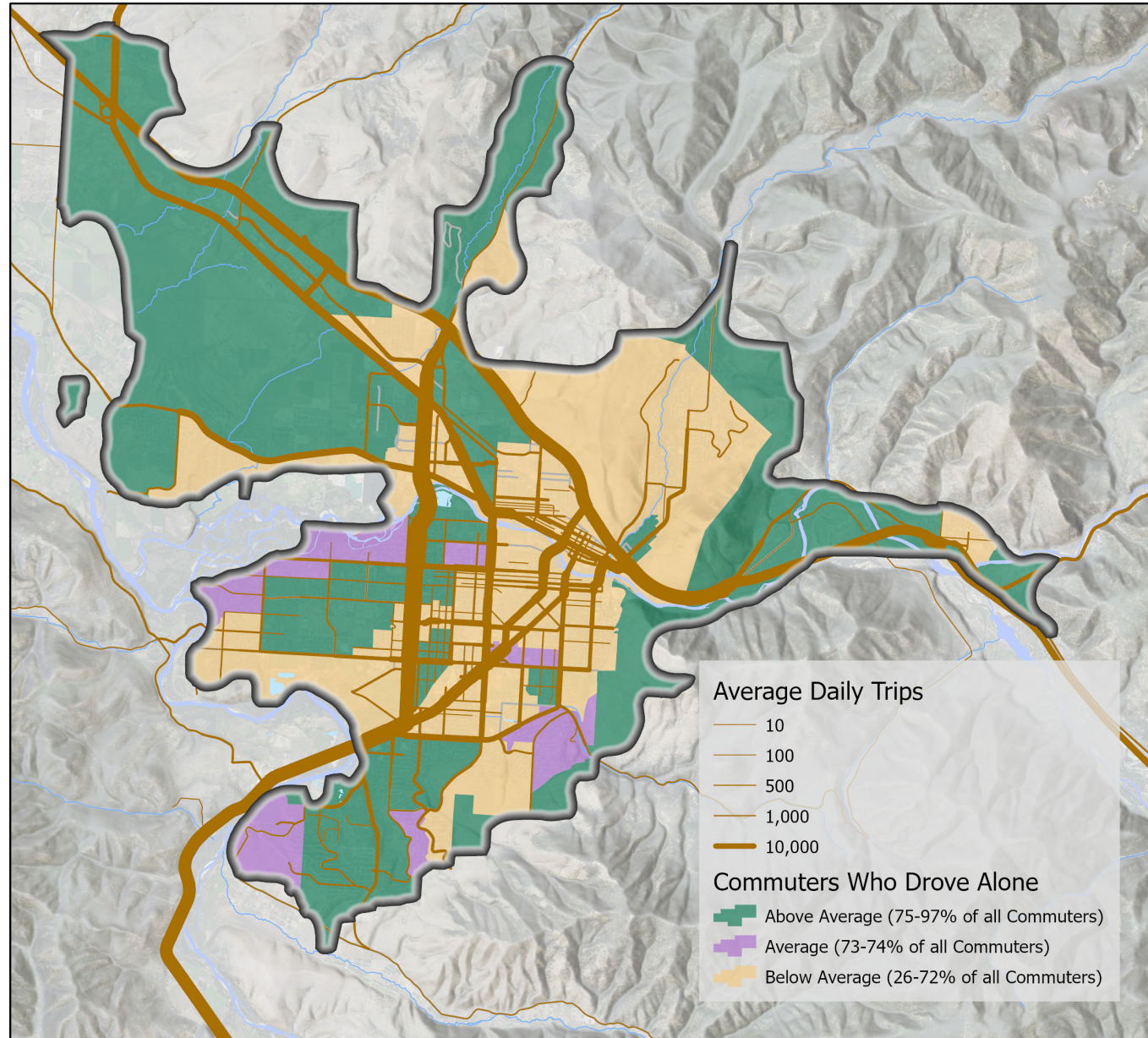


Source: Montana Department of Transportation

Commuting Patterns | Local Services

The average percentage of people who drove alone to commute for work within the Land Use Plan area is 72% of all workers. Areas around the core of the City had a lower-than-average percentage of workers that drove alone with the exception of areas in the Lower Rattlesnake, Lewis & Clark, Southgate Triangle, and River Road Neighborhoods. Figure LS2 shows areas within the Land Use Plan area that are above average, average, or below average in workers that drove alone as commuting behavior.

Figure LS2: 2022 Average Annual Daily Traffic Counts and Commuting Behaviors



Source: MDT & 2021 ACS 5-Year Estimates

Figure LS2 also shows the Average Annual Daily Traffic Counts from the Montana Department of Transportation's 2022 report. The roadways that saw the highest average annual daily trips in 2022 were Highway 93, North Reserve Street, East Broadway Street, and Brooks Avenue. The roadways that had the highest average annual daily trips in 2022 are all classified as Principal Arterial using the functional classification system.

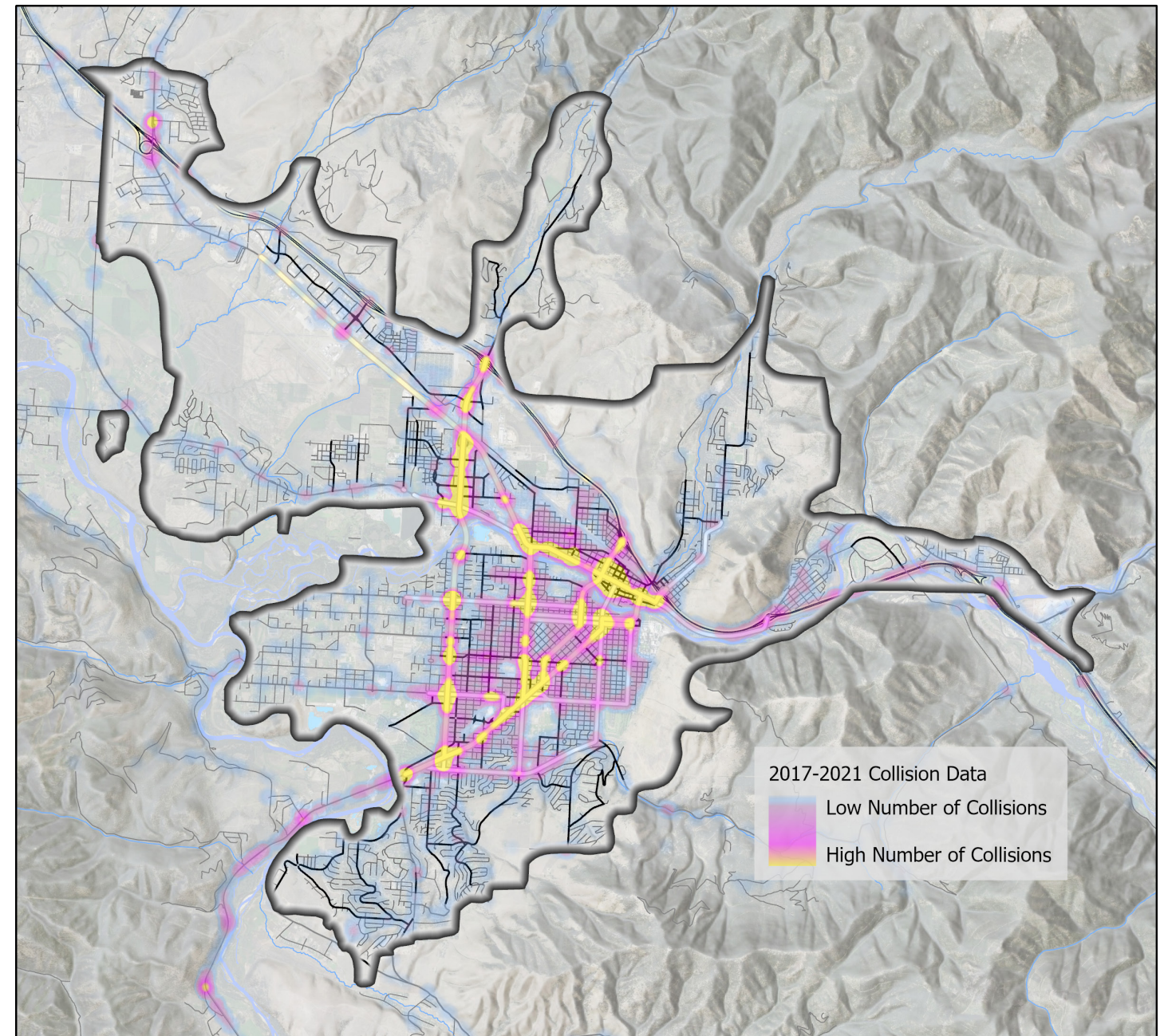
Traffic Safety | Local Services

From 2013 to 2017 there were approximately 12,000 collisions within the Missoula Urban area. Out of those 12,000 collisions 462 involved people that were either walking or biking.

The corridors that have the highest rate of collisions within the Land Use Plan area are:

- Reserve Street from Broadway Avenue to Mullan Road
- Reserve Street from 3rd Street to 39th Street
- Brooks Street from Reserve Street to Higgins Avenue
- Russell Street from Broadway Street to South Avenue
- Broadway Street through downtown

Figure LS3: Collisions within the Land Use Plan area, 2017-2021

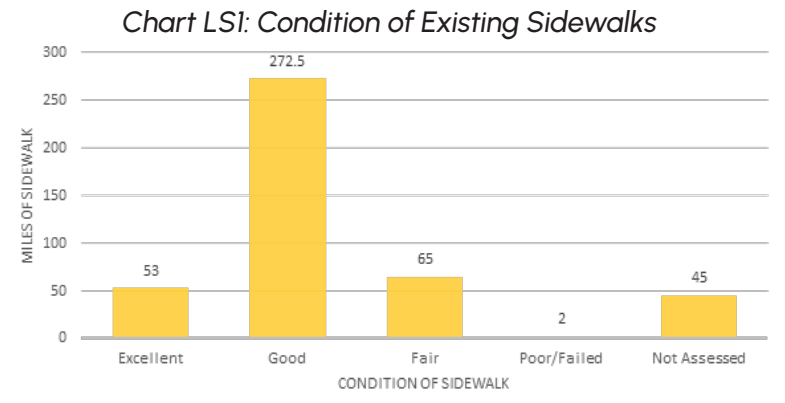


Source: Missoula Metropolitan Planning Organization

Sidewalk Infrastructure | Local Services

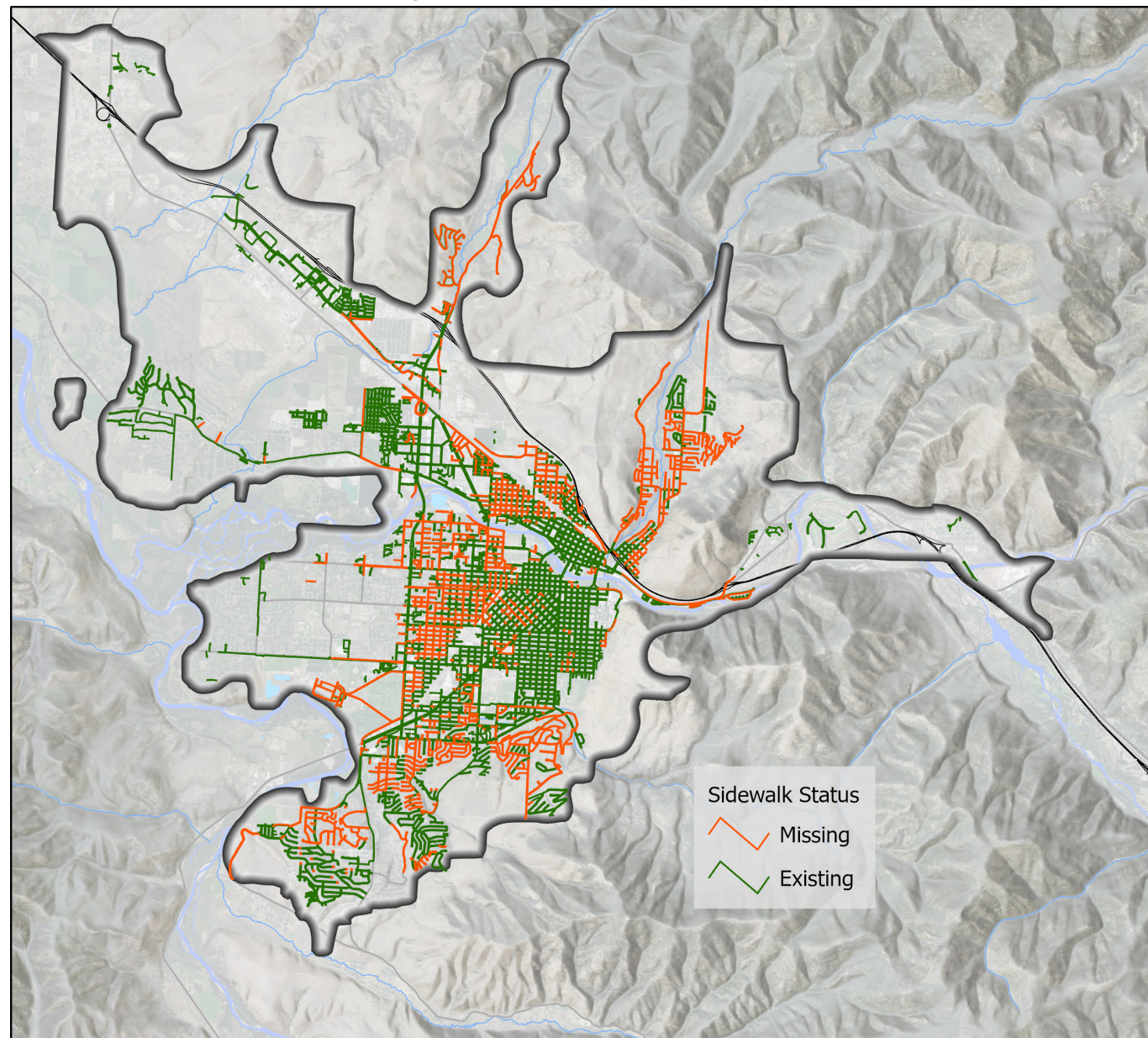
The City of Missoula is committed to providing residents a full network of active transportation facilities that can be utilized for everyday activities such as commuting to work, grocery shopping, school transportation, or recreational activities.

The Land Use Plan area has approximately 437 miles of sidewalks and 199 miles of roadway that are missing sidewalks. When sidewalks exist, they are rated by the Metropolitan Planning Organization (MPO) based on their existing condition. *Chart LSI* shows the mileage of these categories within the Land Use Plan area.



Source: Missoula Metropolitan Planning Organization

Figure LS4: Sidewalk Infrastructure

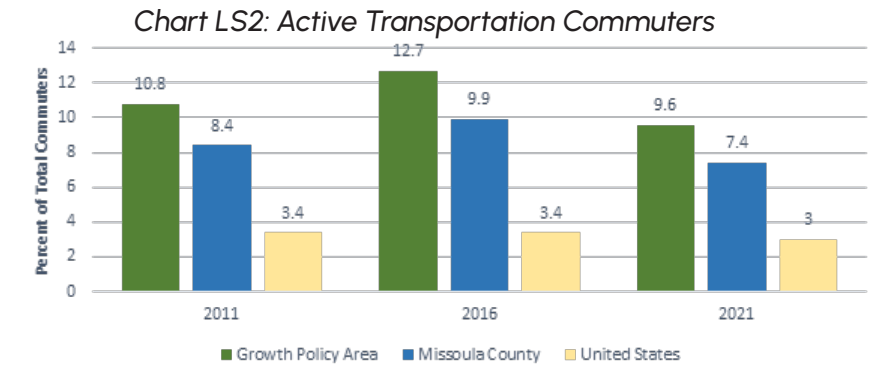


Source: Missoula Metropolitan Planning Organization

Active Commuting Infrastructure | Local Services

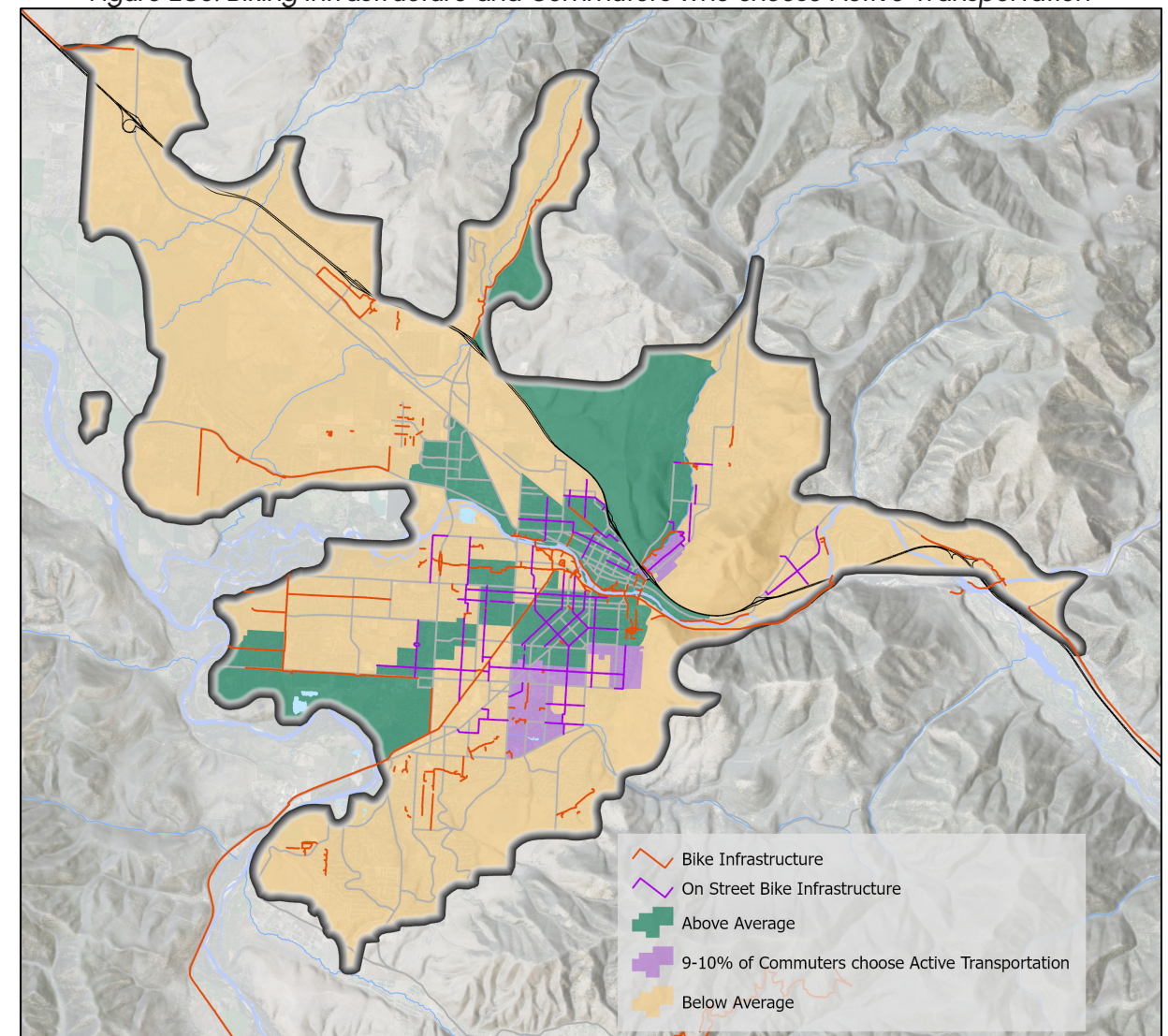
The Land Use Plan area has a higher average number of people than Missoula County or the US who choose to commute by either walking or biking. In 2011 10.8% of all commuters chose active transportation to commute to work, and that percentage increased in 2016 to 12.7%. According to the ACS 5-Year estimates, this percentage dropped down to 9.6% in 2021.

The average percentage of people who chose active transportation to commute to work is higher in the Land Use Plan area than Missoula County's average of 7.4%. However, there are smaller areas within the Land Use Plan area that are much higher where up to 55% of people choose active transportation, and areas that are much lower where less than 1% of people chose active transportation. Generally, the percentage of people who choose active transportation to commute is higher where more robust multi-modal infrastructure is in place, such as primary commuting trails, protected bike lanes, and sidewalks. *Figure LS5* below shows commuting behavior within the Growth Policy Region with biking infrastructure on top.



Source: ACS 5-Year Estimates

Figure LS5: Biking Infrastructure and Commuters who choose Active Transportation

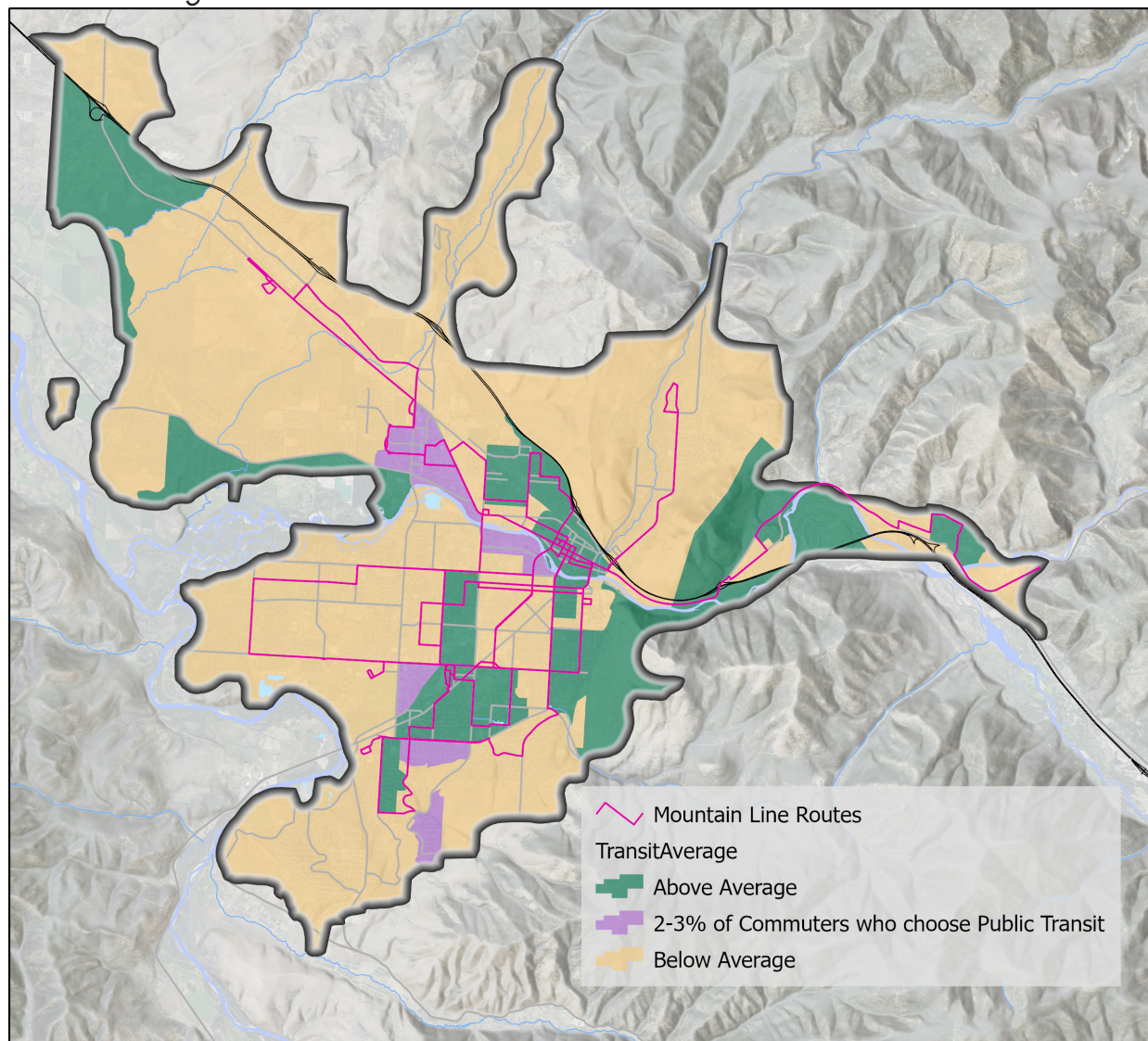


Source: City of Missoula & 2021 ACS 5-Year Estimates

The Land Use Plan area has a lower than national average of people using transit services. According to the American Community Survey 5-Year Estimates 2.5% of commuters in the Land Use Plan area utilized Public Transit in 2011 and in 2021 that percentage has dropped to 1.9%. This drop is similar to the trend that was seen nationally, where in 2011 5% of commuters utilized transit and in 2021 4.2% used public transit on their commute to work.

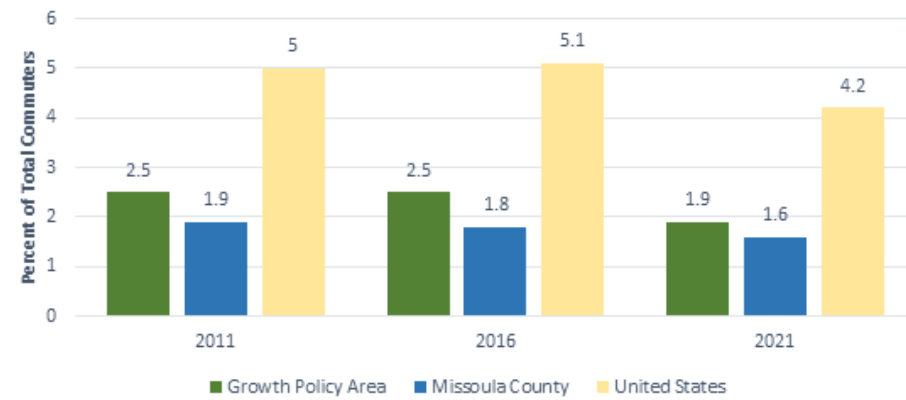
Much like choosing Active Transportation for commuting, utilizing Public Transit is not spread evenly across the Land Use Plan area. There are areas where the percent of people using Public Transit for commuting is as high as 12% of all commuters and areas where there is 0% of commuters that utilize Public Transit. Figure LS6 below shows commuting behavior within the Land Use Plan area compared to the overall average of commuters who chose Public Transit to commute.

Figure LS6: Transit Infrastructure and Commuters who choose Transit



Source: Mountain Line & 2021 ACS 5-Year Estimates

Chart LS3: Commuting via Public Transit

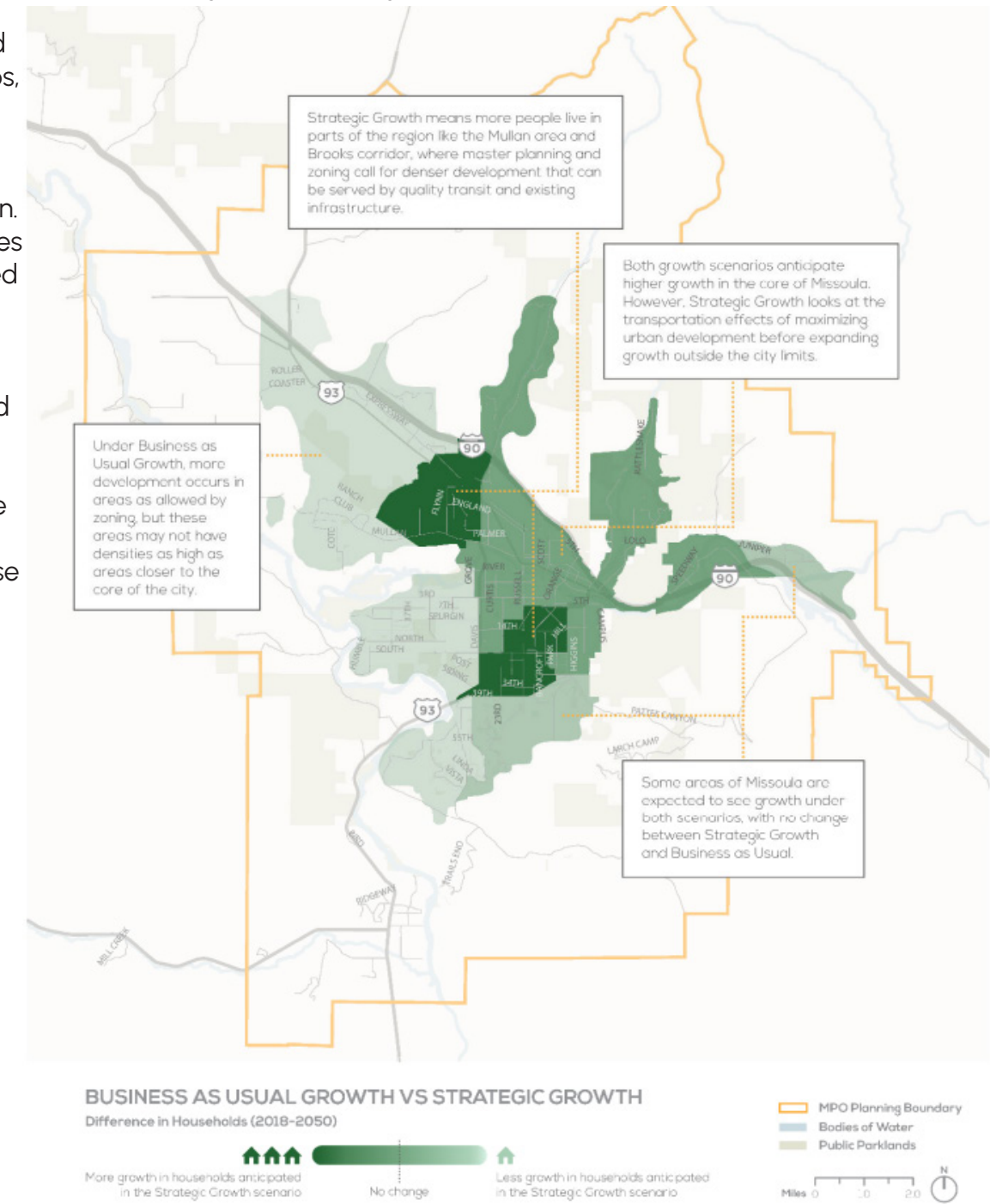


Source: ACS 5-Year Estimates

The Missoula Metropolitan Planning Organization (MPO) regularly updates its Long-Range Transportation Plan to assess the capacity of the transportation system, including automobile and multi-modal systems, and identify areas requiring improvements to meet future population growth. The most recent plan, completed in 2020, is available here: [Missoula Connect: 2050 Long Range Transportation Plan](#).

The 2020 Long-Range Transportation Plan evaluated two different growth scenarios, both utilizing a higher projection of population, household, and employment growth than the Land Use Plan. Results of the scenario analyses showed that compact, focused growth amplified all other metrics such as emissions, safety, level of service, mode shift and equity. The preferred scenario in the LRTP showed sufficient infrastructure and investments to accommodate future growth while simultaneously improving these metrics.

Figure LS7: Strategic Growth Scenario in Missoula Connect

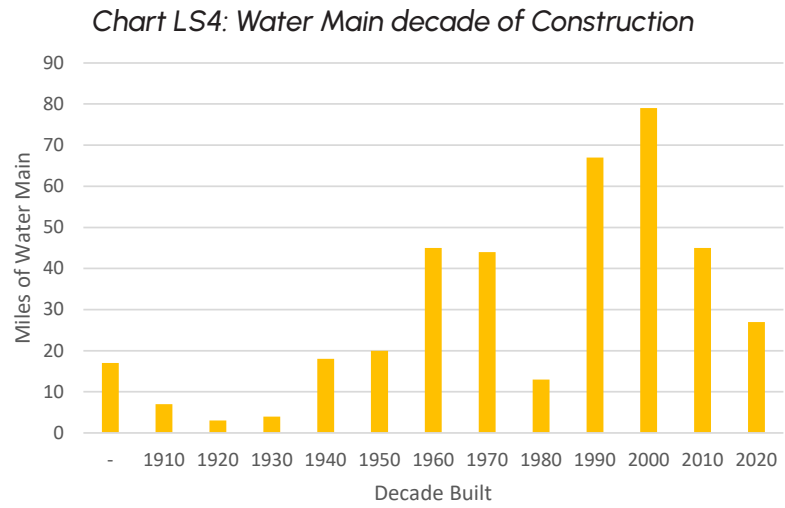


Land use and the application of Place Types that the Land Use Plan is the most important factor to ensure Missoula has an efficient transportation system that reduces the need for costly infrastructure capacity expansion projects. The Focus Inward strategy will enhance the benefits of the multimodal transportation investments identified in the 2020 LRTP and 2024 update (in progress), and these plans work in concert to provide the necessary transportation infrastructure and capacity to support future growth.

Municipal Water | Local Services

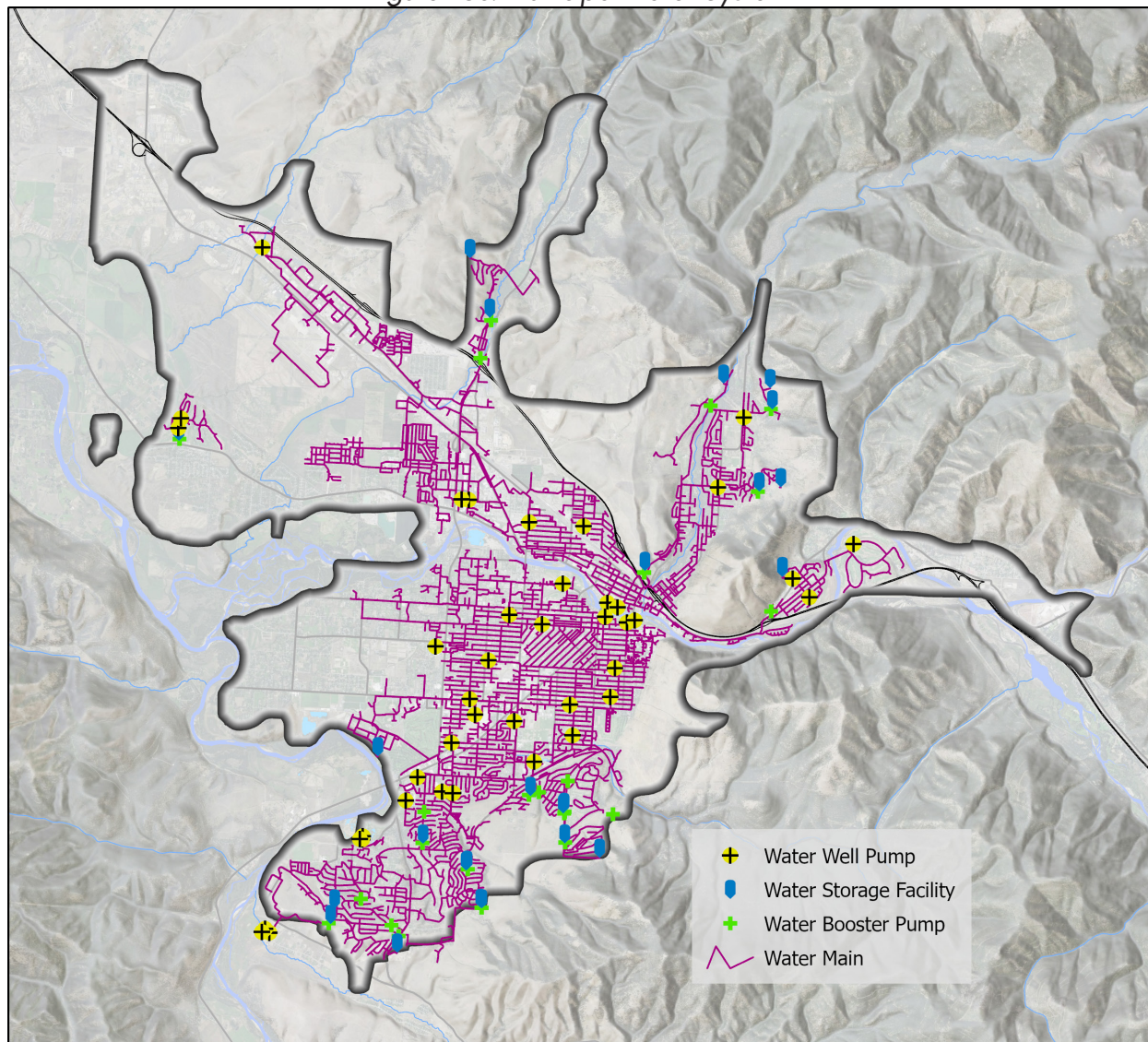
The drinking water for residents within the Growth Policy area is supplied from groundwater that comes from the Missoula Valley aquifer. This is designated as a sole source aquifer because it is the only source of fresh drinking water available to the area.

The City of Missoula owns and operates the municipal water system. This system consists of approximately 389 miles of water main that serves the majority of residents within the area. Households and businesses not on the municipal water system rely on wells drilled into the aquifer to supply fresh water. *Chart LS4* shows the amount of water main that was built in each decade. *Figure LS8* shows the location of the key components of the municipal system that supplies drinking water to the majority of residents.



Source: City of Missoula

Figure LS8: Municipal Water System



Source: City of Missoula

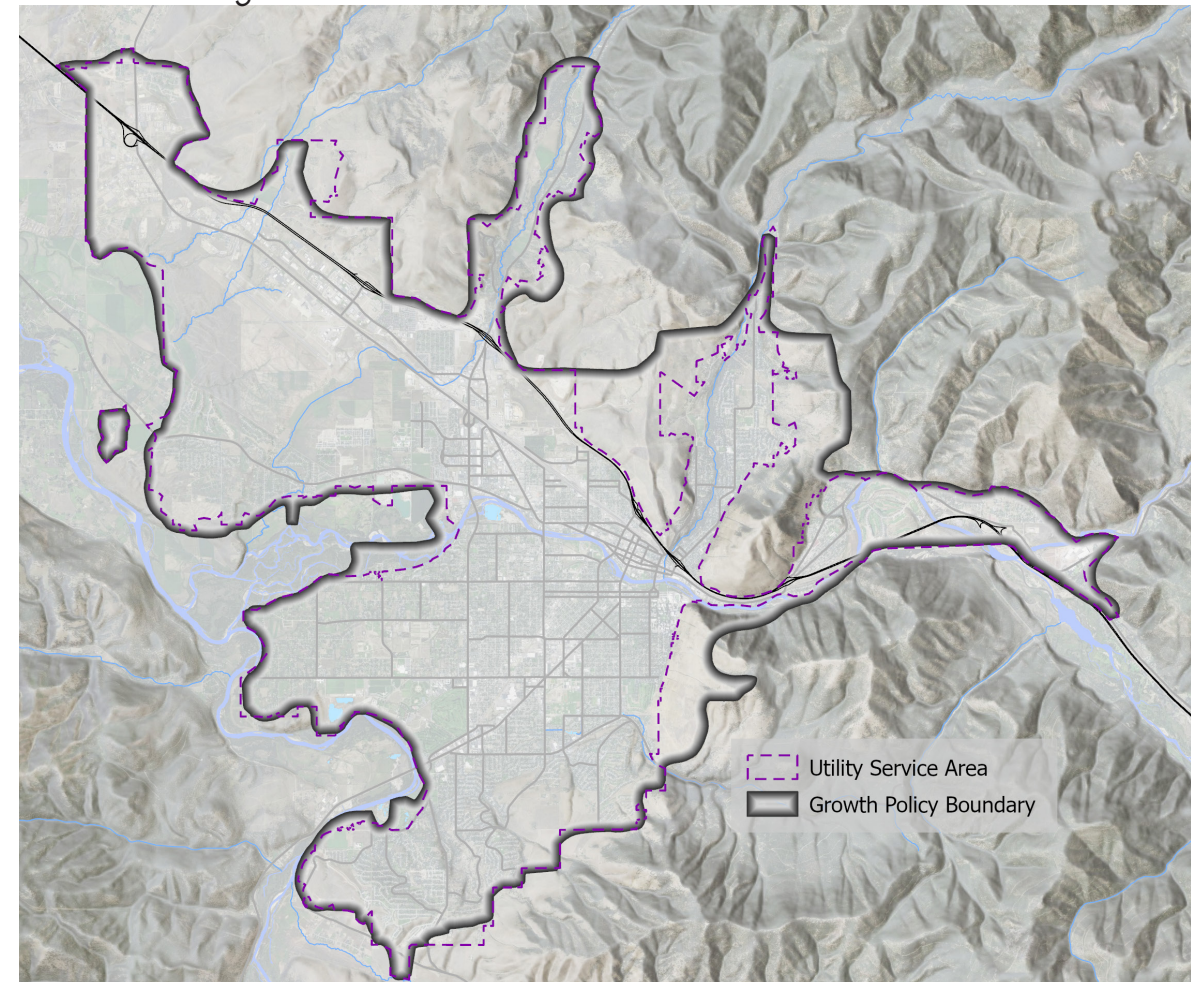
Municipal Water Household Forecast | Local Services

The City of Missoula Public Works and Mobility Department regularly updates its Water Facility Master Plan to assess the water system's capacity and identify areas that may require improvements to support future population growth. The most recent plan, completed in 2018, is available here: [Water-Facility-Plan---Final-Report](#).

The 2018 plan projected a population increase from 83,969 in 2018 to 137,029 by 2042, slightly higher than the estimates used in the Land Use Plan. Employment was also projected to rise from 65,667 workers in 2015 to 100,170 by 2042, exceeding the Land Use Plan's projections.

After reviewing these differences, no additional adjustments are required to analyze potential deficiencies or capacity issues within the Land Use Plan area. The Water Facility Master Plan will continue to be updated as needed and will identify capital improvement projects for the water system based on these or higher population and employment projections.

Figure LS9: Urban Services Area and the Land Use Plan area



Source: City of Missoula

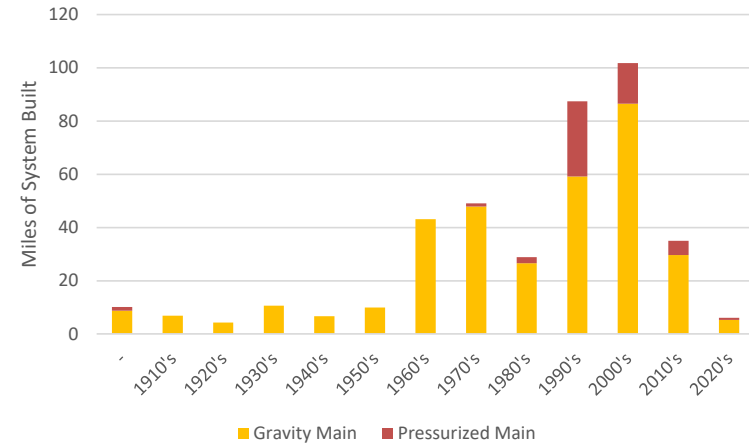
Water infrastructure on the valley floor is adequate for anticipated growth within the Urban Service Area, with some improvements to water main sizing and fire hydrants needed to accommodate development. However, areas outside the valley floor, such as the South Hills, Miller Creek, and Grant Creek, may require additional water rights or increased pressure for fire protection. Expanding the water system beyond the Urban Service Boundary is feasible but would involve long extensions of transmission mains and new pumping and storage systems. Alternatively, more cost-effective options for providing water service outside the boundary may include expanding existing community water systems, such as in the Wye area, or establishing new systems separate from the City's water network.

Wastewater System | Local Services

Wastewater is collected from commercial and residential properties within the Land Use Plan area through approximately 400 miles of gravity and pressurized sewer mains. Chart LS5 shows the decade of construction for these lines around the area. If residences are not serviced by the wastewater system, they must rely on septic systems. This is especially prevalent in the Orchard Homes/ Target Range region of the Growth Policy area. The geographic location of the system is shown below in Figure LS10.

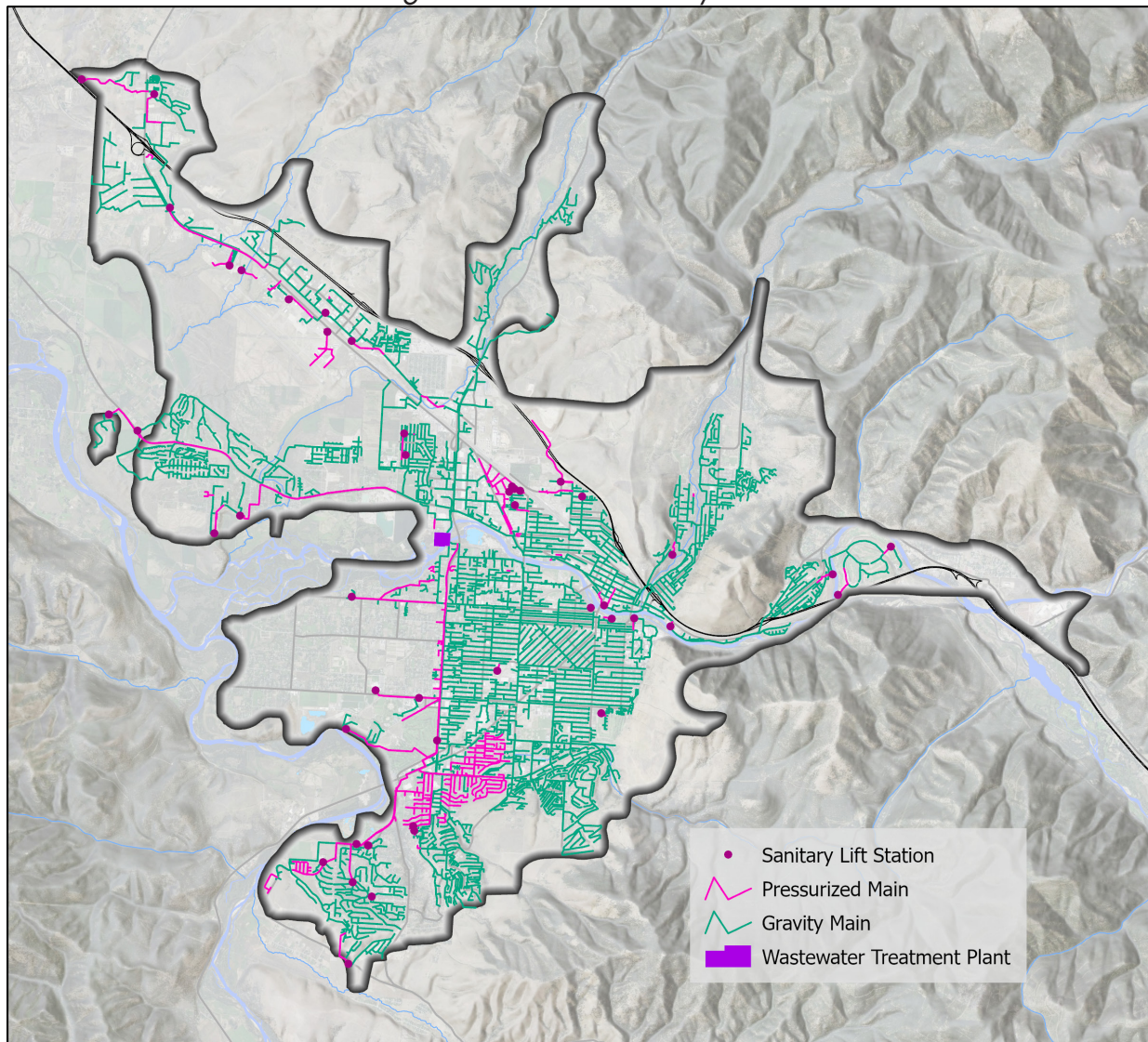
The facility plan was last updated in 2019 and modeled an increase in population within the Growth Policy area to 115,616 people by 2035. The report found that the wastewater system was capable of handling the modeled increase in population and that less than 5% of the system was deficient. The report also recommended extending the system westward into the Orchard Homes/Target Range area to eliminate the need for more septic system installations that may damage the region's sole source aquifer.

Chart LS5: Wastewater System decade of Construction



Source: City of Missoula

Figure LS10: Wastewater System



Source: City of Missoula

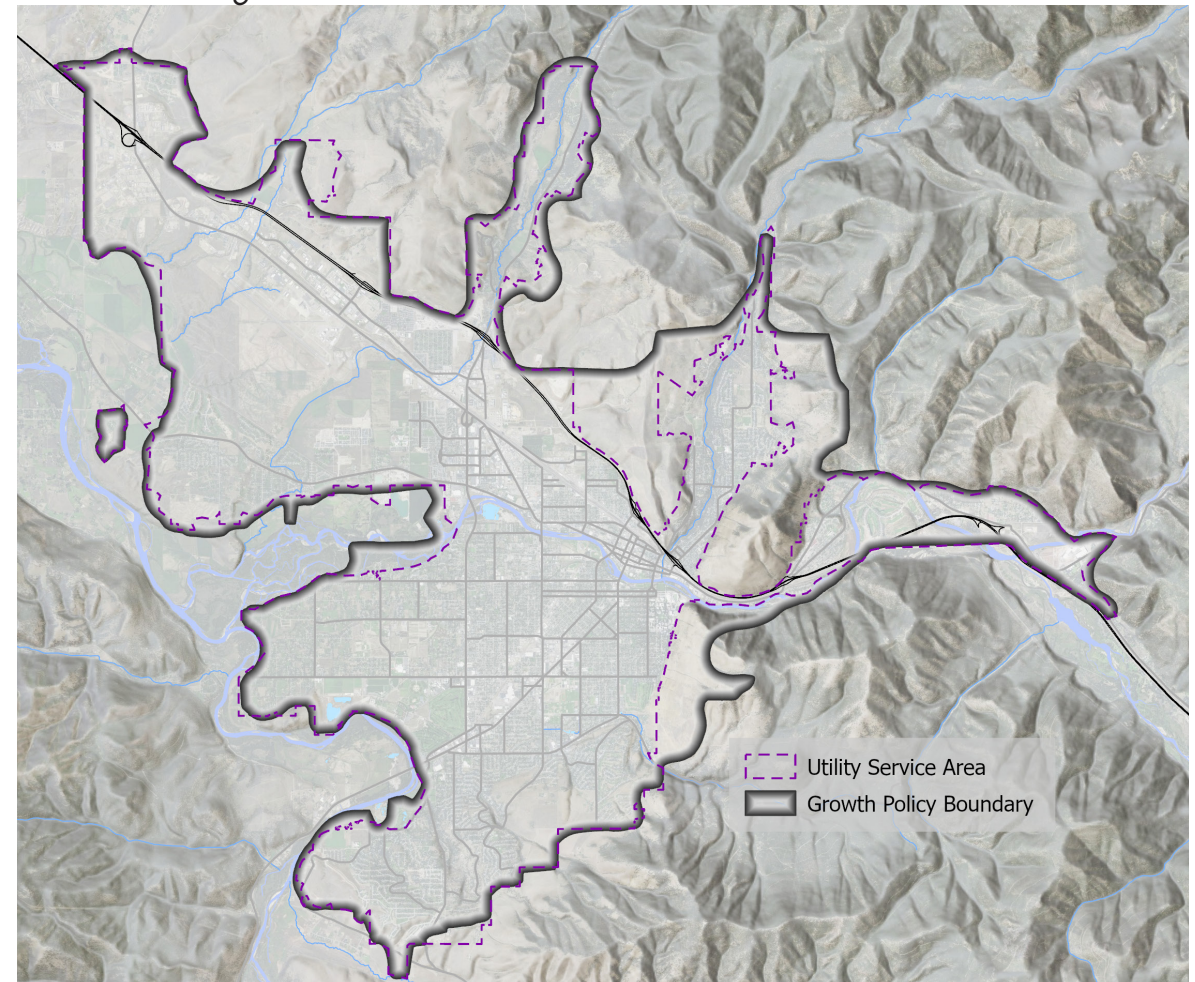
Wastewater System Household Forecast | Local Services

The City of Missoula Public Works and Mobility Department regularly updates its Wastewater Facility Master Plan to assess the capacity of the water system and identify areas requiring improvements to meet future population growth. The most recent plan, completed in 2019, is available here: [Missoula-WW-Facility-Plan-Executive-Summary---Finalsmaller-file](#).

The 2019 plan projected a population increase from 87,279 people in 2017 to 115,616 people in 2037 utilizing a cumulative annual growth rate (CAGR) of 1.41%, which is slightly higher than the estimated population growth rate used in the Land Use Plan. Employment was also projected to rise from 56,503 in 2017 employees to 96,047 employees in 2037, also exceeding the Land Use Plan's projected employee growth rate.

After reviewing these differences, no additional adjustments are required to analyze potential deficiencies or capacity issues within the Land Use Plan area outside of what the 2019 Facility Plan produced. The Wastewater Facility Master Plan will continue to be updated as needed and will identify capital improvement projects for the wastewater system based on these or higher population and employment projections.

Figure LS11: Urban Services Area and the Land Use Plan area



Source: City of Missoula

The sewer collection infrastructure is generally adequate for anticipated growth within the Urban Service Area at densities currently being considered. Some improvements, such as upsizing pumps and upsizing or replacing undersized gravity mains may be required to accommodate development.

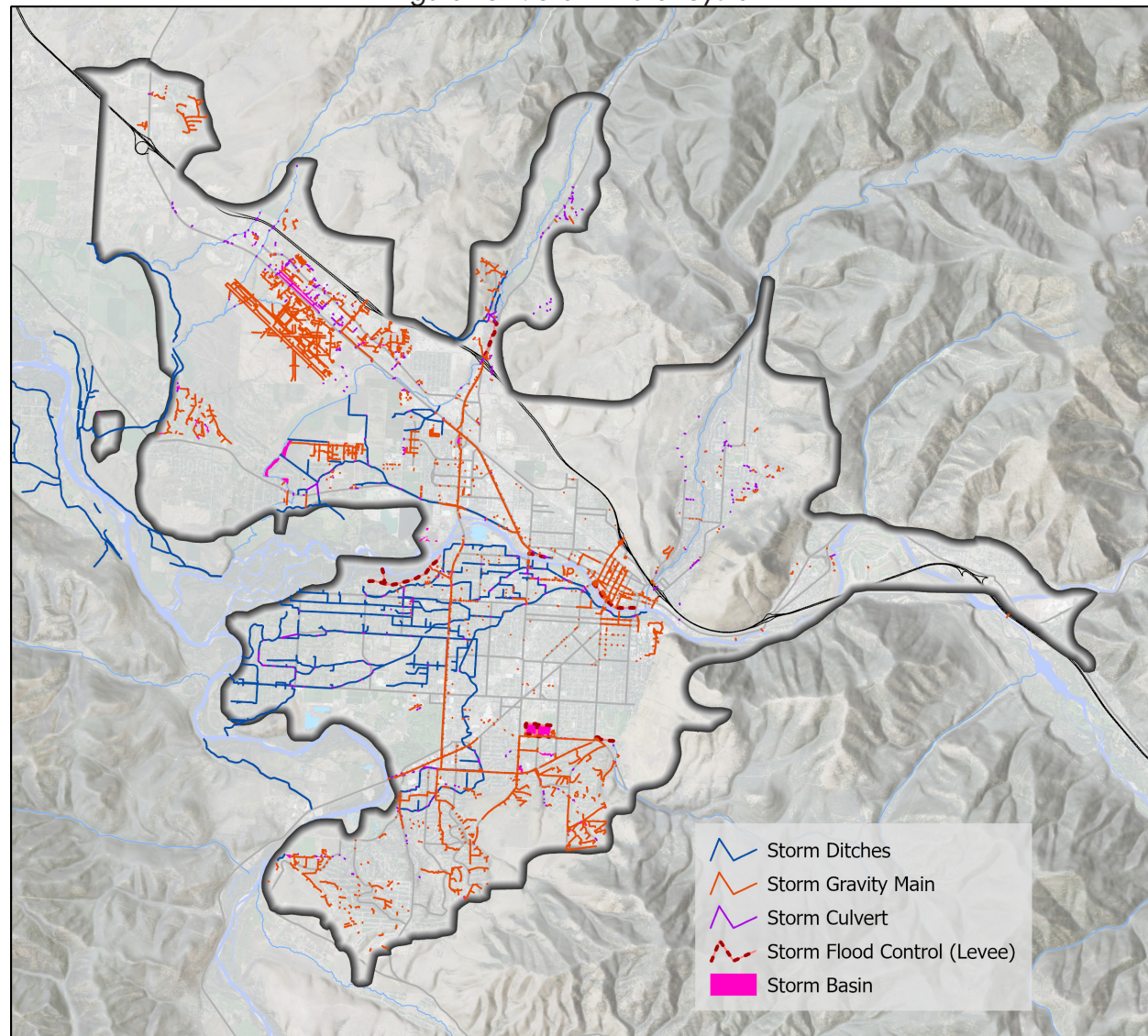
Analyzing expansion of the wastewater system to accommodate growth outside of the Urban Service Area found that expansion would be significantly more expensive than updating the system to accommodate infill and could create treatment capacity issues at the wastewater treatment plant (Resource Recovery Facility).

Stormwater System | Local Services

The City of Missoula's Storm Water Utility was created in 2016 and maintains and operates many different aspects of stormwater. Operations range from flood protection through managing the levee systems to monitoring discharge points for pollutants to measuring and maintaining proper drainage systems to move run-off through residential and commercial areas of the Land Use Plan area.

As of 2023 the stormwater system contains 5,243 dry wells, 51 miles of stormpipe, 5 separators, and 52 outfalls around the Plan area. It also contains 10 levee systems designed to protect areas from flooding damage and approximately 110 miles of ditches to help move run-off through the region. *Figure LS12* shows the location of all these components of this system with the exception of the drywells, which are spread throughout the Land Use Plan area.

Figure LS12: Stormwater System



Source: City of Missoula

Fire Department | Local Services

As stated in the [2021 Missoula Fire Department Annual Report](#) the City of Missoula has 5 stations located within the City boundary with mutual aid agreements to surrounding areas. The larger Land Use Plan area has an additional 6 rural fire stations that respond inside of the Land Use Plan area as well as outlying areas. *Figure LS13* shows the location of fire stations across the Land Use Plan area, Response Times for the City of Missoula boundary, Fire Response overlap, and Rural Fire Districts.

From 2017 to 2021, there has been an approximately 52% increase of total calls. This increase in calls have largely been responded to by either Station 1, located in the Downtown neighborhood, and Station 4, located in the Westside and Captain John Mullan neighborhoods. *Chart LS6* shows the increase in calls from 2017 to 2021 as reported from the Missoula Fire Department to the National Fire Incident Reporting System.

Chart LS6: Annual Calls to Missoula Fire Department

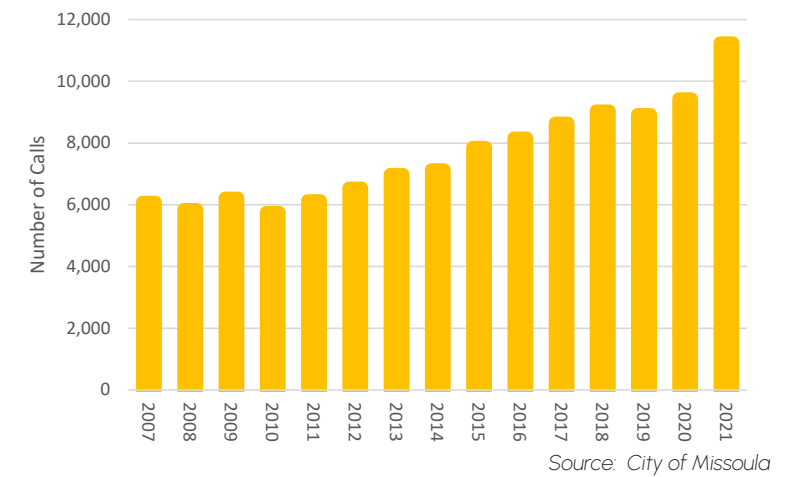
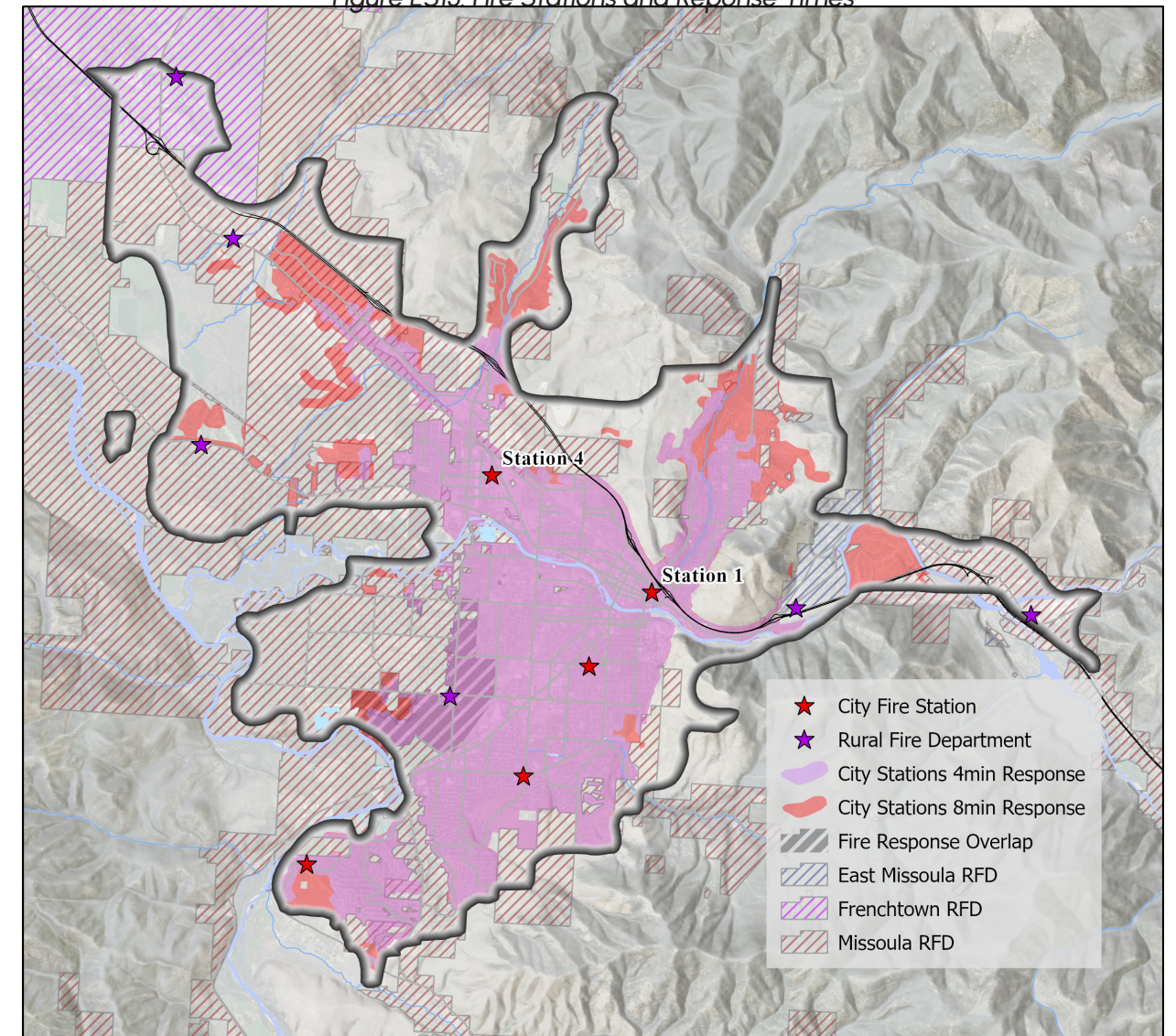


Figure LS13: Fire Stations and Response Times



Source: City of Missoula

Fire Department | Local Services

The Missoula Fire Department (MFD) seeks to maintain service provision commensurate to City growth/development and the assurance of providing timely and nationally recognized best practices in emergency response to the customers they serve.

Master Fire Plans for the MFD were performed in 2006 and 2019. The scope and purpose of these plans are intended to provide education, information and recommendations for strategic planning for the future of the MFD. Data and analytics gathered from the departments incident reporting system are used to compare against National Standards and best practices to adjust for safe, efficient, and practical response to calls for service.

Calls for service are the primary movers behind every decision made at MFD and the fire service in general. Within the context of calls for service one of the most important aspects to every call is the response time to the emergency. When response times exceed the National Standards questions arise relative to the "why". Since 2006 emergency calls for service within the city have increased by 99%, causing a congruent increase to the time it takes fire department resources to reach the scene of an emergency. Additional factors that impact response times include, expansion of city boundaries, multiple incidents occurring simultaneously, and the increase in complex multiple resource emergencies, to name a few.

The Master Fire Plans took these elements under consideration and identified the need for expansion of the fire department. In 2008, after the passage of a voter approved bond held in 2005, the MFD opened a 5th fire station in the Lower Miller Creek area of the city. Station 5 was built to address the needs and future needs of a recently annexed large geographic area and was the last time the MFD added appreciable numbers to its' ranks. In June (2024), Missoula voters once again gave approval to an initiative, this time an Operational Levy, which will provide among other items funding for a 6th fire station and the personnel to staff the emergency response units from that location.

The MFD shares cooperative service agreements between several entities in the region. One such agreement is the provision of Emergency Medical transport. The City of Missoula is in contract with Missoula Emergency Services Inc. (MESI), a private contractor, to provide ambulance service for pre-hospital care and transport to a receiving facility. MFD ensures contract compliance and responds supportively to medical emergencies with MESI crews.

Another close cooperator, in a true geographic sense, that we share a service agreement with, is the Missoula Rural Fire District (MRFD). MRFD provides fire service protection to most of the adjacent properties bordering the city limits. An automatic and mutual aid agreement exists between the two agencies to provide a closest station response and/or provide requested response to one another. East Missoula Fire District (EMFD) provides fire service protection for the bulk of remaining properties bound to the city limits, and a similar automatic/mutual aid agreement exists with them.

MFD also holds service agreements with:

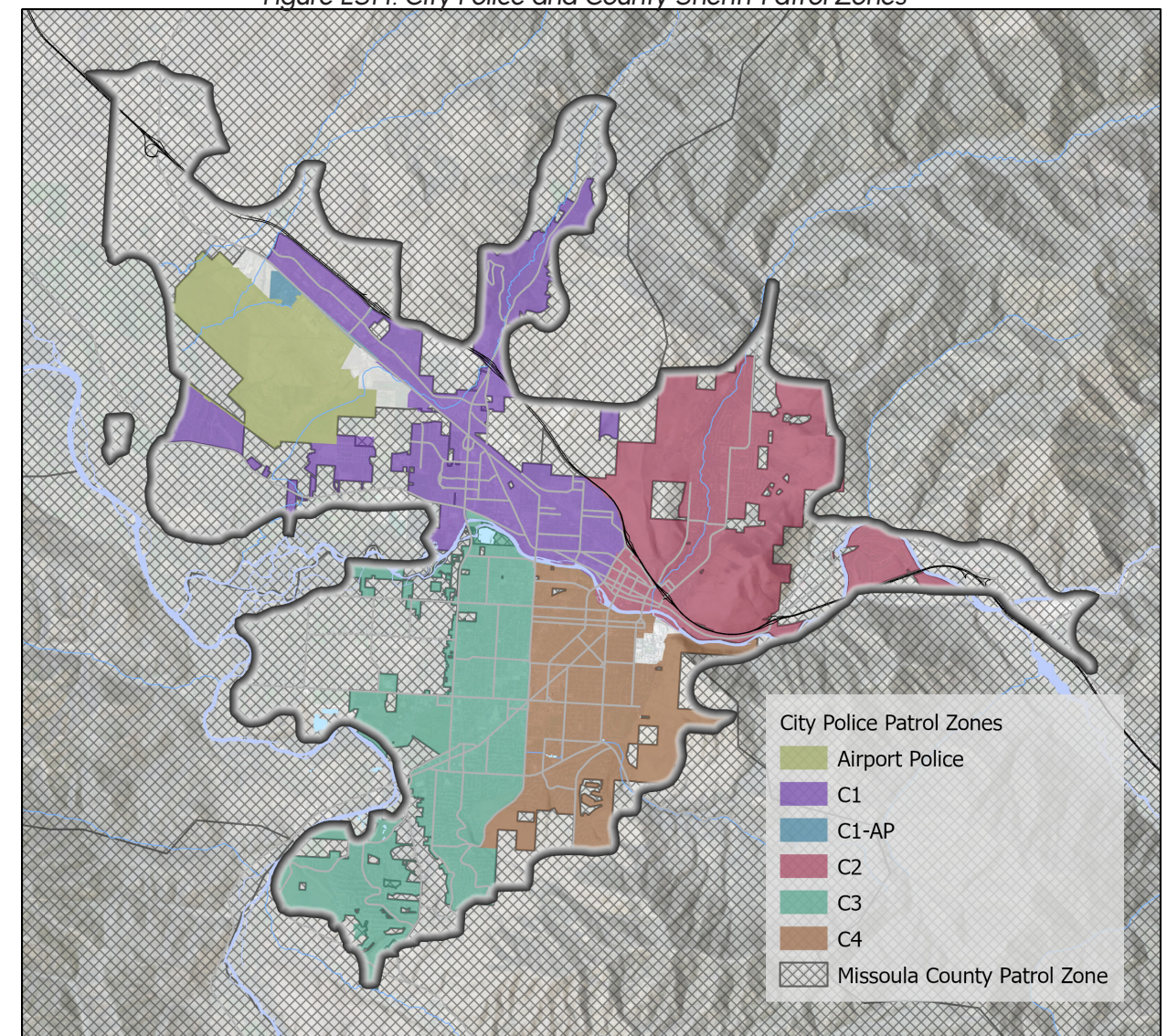
- Missoula Airport Authority
- Montana Department of Natural Resource and Conservation
- Missoula County Fire Protection Association

Law Enforcement | Local Services

The primary law enforcement agency within the City of Missoula is the Missoula City Police Department. The Missoula County Sheriff's Department and Montanan Highway Patrol contribute to traffic enforcement on roadways and respond to incidents outside of the jurisdictional area of the City's Police Department. *Figure LS14* shows Missoula City Police Department's jurisdictional area and patrol zones and area's that are under the jurisdiction of the County Sheriff's Department.

All law enforcement agencies within Montana submit, verify, and review crime statistics to the Montana Board of Crime Control (MBCC), this data can be viewed online at the [MBCC website](#). Once this data is reviewed by the MBCC it is then compiled and used by the Administrative Division of the Police Department in yearly reviews to conduct an analysis of the effectiveness of the department and also future needs of law enforcement within the jurisdictional area.

Figure LS14: City Police and County Sheriff Patrol Zones



Source: City of Missoula & Missoula County

Law Enforcement | Local Services

The Missoula Police Department (MPD) is a community-oriented agency committed to delivering professional police service to Missoula. MPD strives to improve the quality of life of our citizens and the livability of our community and seeks to maintain service provision commensurate to City growth/development and the assurance of providing timely and nationally recognized best practices in response to the customers we serve.

MPD was included in a city-wide Space Needs Assessment in 2018. The 2018 study used projected population growth to recommend planning for substantial facility expansion for MPD in the coming two decades. In 2020, MPD commissioned a study to evaluate and make recommendations relative to the interactions between staffing, patrol deployment and scheduling, response time, and detective staffing and scheduling to maximize efficient response to rising service volumes. In 2024, MPD facilities were the subject a facility condition analysis that identified concerns relative to ongoing facility functionality and, thereby, informed ongoing efforts to plan capital improvements responsive to growth.

The MPD has a Memorandum of Understanding which effectively serves as a Mutual Aid Agreement, with the University of Montana to accept certain felony case investigations after the UM Police makes the initial response. Additionally, the MPD operates within state statute to provide and accept mutual aid with allied agencies throughout the state.

Hospital Service Area | Local Services

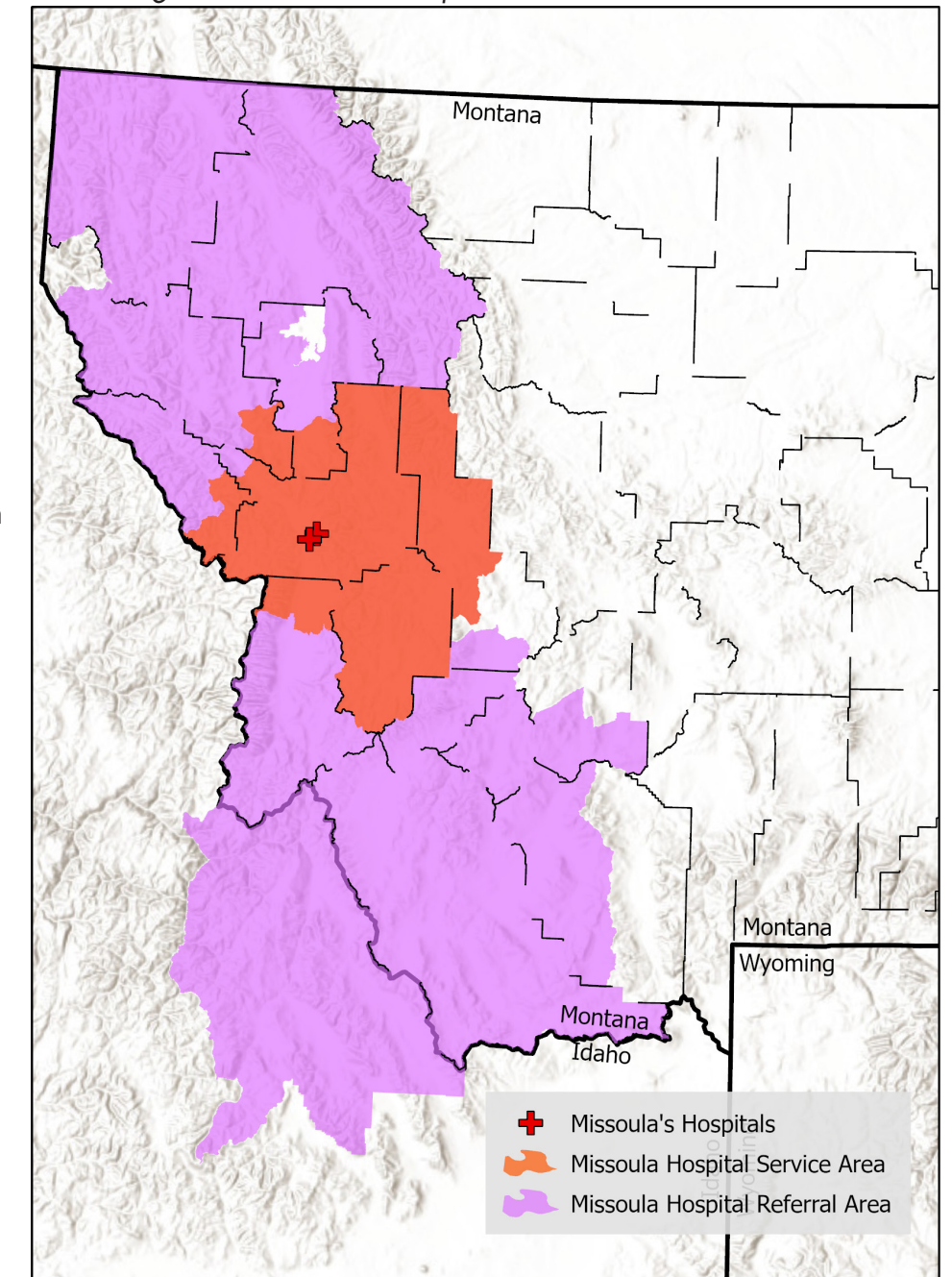
The Land Use Plan area is the medical hub of western Montana. It has two large hospitals, Community Medical Center and Providence St. Patrick Hospital that help to serve the surrounding counties and regions in neighboring states.

The Dartmouth Institute of Health Policy and Clinical Practice with the support of the Robert Wood Johnson Foundation creates geographic representations of Hospital Service Areas (HSAs) and Hospital Referral Regions (HRRs) using zip code datasets. The definitions of each of these areas come directly from the [Dartmouth Atlas](#) documentation website. *Figure LS15* shows the geographic extent of Missoula's HSAs and HRRs in relation to Montana Counties and surrounding states.

Hospital Service Areas: A collection of ZIP codes whose residents receive most of their hospitalizations from the hospitals in that area. HSAs were defined by assigning ZIP codes to the hospital area where the greatest proportion of their Medicare residents were hospitalized.

Hospital Referral Regions: These represent regional health care markets for tertiary medical care. Each HRR contains at least one hospital that performs major cardiovascular procedures and neurosurgery. HRRs were defined by assigning HSAs to the region where the greatest proportion of major cardiovascular procedures were performed, a minimum population size of 120,000 people, and a high localization index.

Figure LS15: Missoula Hospital Service and Referral Areas



Source: Dartmouth Institute of Health Policy and Clinical Practice

Healthcare | Local Services

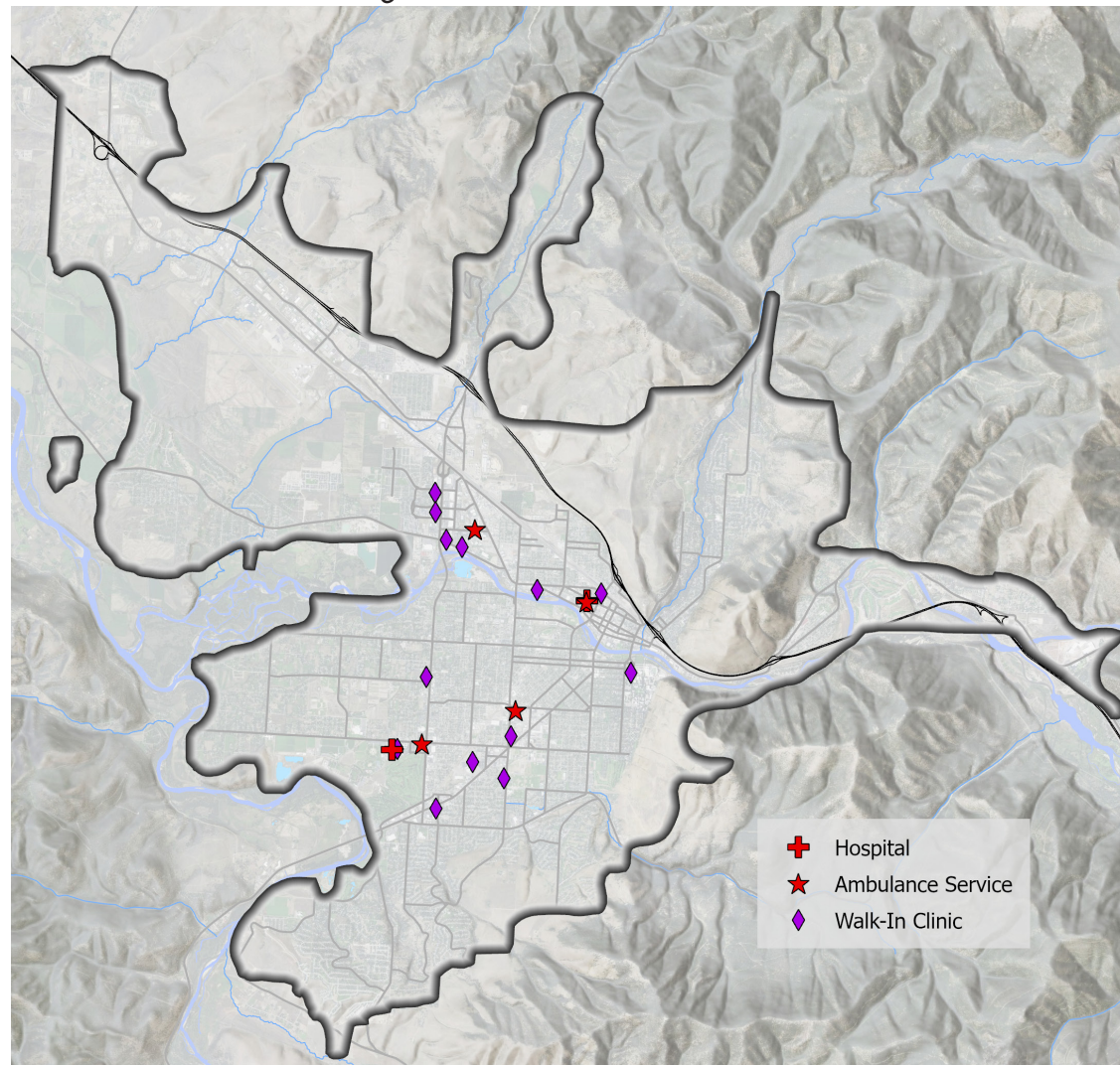
In addition to the two major hospitals that serve a much greater region than the Plan area; the community is also served by Missoula Emergency Services (for paramedic-level ambulance service); 12 walk-in clinics that help to serve non-emergency needs of residents; the All Nations Health Center; Partnership Health Center which is a community health facility; Western Montana Mental Health Center; and the David J. Thatcher VA Clinic.

Figure LS16 highlights the primary services and shows the geographic distribution of the healthcare centers within the Land Use Plan area.

According to Providence St. Patrick Hospital's most recent Community Health Improvement Plan(CHIP), the hospital is a regional tertiary care hospital with 253 licensed beds. The hospital's service area is the entirety of Missoula County, with a population of about 121,000 people. Health needs prioritized through the CHIP process include mental health, homelessness, substance use/misuse, and access to care. Within each of these focus area, Providence St. Patrick Hospital identifies goals and vision statements to address the focus area and strategies as well as key community partners that may help to address the strategies.

Community Medical Center also serves the broader region and is a 151-bed acute care medical facility.

Figure LS16: Healthcare Providers



Source: City of Missoula & State of Montana

Healthcare | Local Services

All Nations Health Center provides an interdisciplinary approach to comprehensive healthcare services, including achieving holistic wellness for the Missoula Native community. The Center serves the Native American population that reside in Missoula and the surrounding area, which totals a client population of about 5,000 individuals. Potential Native American clients include those from the eight Montana tribes and tribal members who relocate to the area. It offers a comprehensive suite of health care services from full

Western Montana Mental Health Center is a non-profit organization serving seven counties, based out of Missoula. It assists individuals and communities by providing mental health services, addiction and substance abuse treatment, intensive case management, crisis intervention, mental health groups, school and community treatment programs. WMMHC includes a local recovery center and has provided client housing and group homes for many people in need.

David J. Thatcher Veterans Affairs (VA) Clinic opened in January, 2022. The facility will serve more than 5,000 Montana Veterans in the Missoula area.

Besides providing fee-based services, these facilities are also dedicated to serving Missoula through education, engagement and support to all sectors of the community. They help to address preventative care, fill gaps in community services, and provide overall support for a healthy community including a healthy built environment.

Missoula Public Health, a joint city-county health department, produces the Community Health Assessment (CHA) and the Community Health Improvement Plan (CHIP) to determine the most pressing medical needs of the community and steps to improve health outcomes of the residents within our community. These assessments are ongoing and will provide more in-depth knowledge of the pressing health needs of residents within the Land Use Plan area and Missoula County.

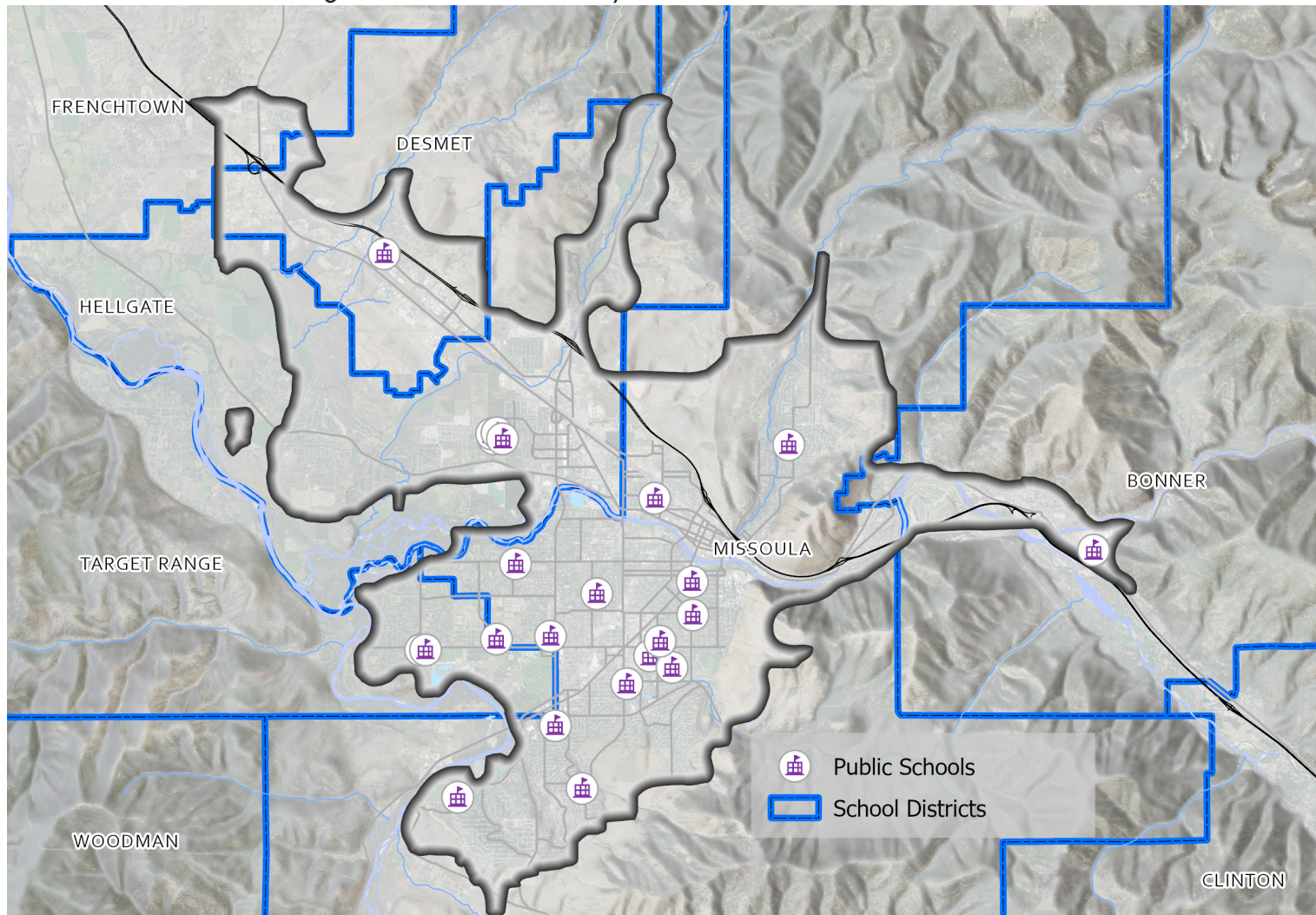
Missoula's medical facilities and services are also a major economic contributor to the community.

Public Schools | Local Services

The K-12 education system that serves residents within the Land Use Plan area consist of both public and private schools. This section pertains specifically to the public schools and higher education facilities within the Land Use Plan area.

The Land Use Plan area intersects with six school districts: Missoula County, Hellgate Elementary, DeSmet, Target Range, Bonner, and Frenchtown. Within the area there are 16 separate public schools, including four regional High Schools, three Middle Schools, and nine Elementary Schools. *Figure LS17* shows the School Districts and Public Schools within the Land Use Plan area.

Figure LS17: Missoula County School Districts and Public Schools



Source: City of Missoula & State of Montana

Missoula County Public Schools (MCPS) is School District #1 and includes most of the Land Use Plan area. It is divided into 12 PreK-8 districts and three high school districts. The Missoula County Public School District also operates an Alternative High School program, Early Learning Preschool program at Jefferson Center and an adult education program at The Lifelong Learning Center. This School District's recent demographic study indicates that changes in year-to-year enrollment over the next ten years will primarily be due to larger cohorts entering and moving through the school system in conjunction with smaller cohorts leaving the system. The elementary (K-5) enrollment will slowly increase most of the next 10 school years. Total district enrollment is forecasted to increase by 112 students, or 1.2%, between 2022-23 and 2027-28. Total enrollment will increase by 228 students, or 2.4%, from 2027-28 to 2032-33. The School District is undergoing long range facility planning, including consideration of adaptively reusing existing facilities and is coordinating with the city on areas of anticipated growth.

Public Schools | Local Services

Target Range (School District #23), De Smet (School District #20), Hellgate Elementary (School District #4) and Bonner (School District #14) make up most of the remaining school district coverage within the Land Use Plan area. Hellgate Elementary is the second largest district in the Land Use Plan area and projects a slow but steady increase in enrollment. They have an integrated strategic action plan that is their long-range vision and mission for serving the district. DeSmet School is anticipating almost doubling its enrollment in the next two years - to 225 students. They are planning further additions to the facilities as housing comes online in the vicinity. The projected school target population is to eventually accommodate 450 students and a measure to accommodate maximum efficiency. Target Range School District has a recent Strategic Plan framework to help guide its services including long term needs. Bonner School District is not anticipating enrollment to grow and has no plans for planned infrastructure improvements other than the potential for a gym expansion in the next four years.

Frenchtown (School District #40) overlaps with the northwest corner of the Land Use Plan area and extends westward. It provides PreK - 8 and a High School.

The tables below represent current enrollment for the public education facilities within the Land Use Plan area.

Table LS1: Elementary School Enrollment

Elementary School	Enrollment
Cheif Charlo	414
Franklin	283
Hawthorne	365
Jeanette Rankin	463
Lewis & Clark	423
Lowell	324
Paxson	418
Rattlesnake	406
Russell	385

Source: MCPS

Table LS2: Middle School Enrollment

Middle School	Enrollment
CS Porter	590
Meadow Hill	405
Washington	682

Source: MCPS

Table LS3: High School Enrollment

High School	Enrollment
Hellgate	1,317
Big Sky	1224
Sentinel	1381

Source: MCPS

Table LS5: Other District School Enrollment

School District	Enrollment
Target Range	537
De Smet	130
Hellgate	1,463
Bonner	335
Frenchtown	1,370

Source: MCPS

School Districts undertake their own facility plans in accordance with growth pressures. The City of Missoula is working alongside the School Districts to make sure that the districts are aware of areas of anticipated growth.

Higher education is provided by the University of Montana which offers bachelors, masters, professional and doctoral degrees, and Missoula College providing technical education in 35 programs.

Enrollment at the University of Montana’s flagship, four-year campus is up nearly 6% fall, 2024. When including Missoula College, total enrollment at UM is up nearly 5%, marking the largest year-over-year jump in 15 years. In total 10,811 students were enrolled in the fall of 2024, an increase of 484 students from 2023. Enrollment included the largest incoming first-year student population in nine years, 1,450 students.

Missoula College enrolled 1,436 total students fall of 2023, an 18.2% increase over the 2022 year. This growth includes approximately 393 Missoula area high school students who are dually enrolled. In addition, AccelerateMT enrolled 827 students in non-degree, short-term workforce development programs.

To plan for growth, the University of Montana doubled the size of its dining center, is adding a new 600 bed residence hall, and is upgrading its central heating systems with the help of a combined new heat and power plant.

According to the Federal Emergency Management Administration, “Emergency management protects communities by coordinating and integrating all activities necessary to build, sustain, and improve the capability to mitigate against, prepare for, respond to, and recover from threatened or actual natural disasters, acts of terrorism, or other man-made disasters” (<https://training.fema.gov/EMIWeb/edu/docs/emprinciples>). Within the State of Montana, Section 10-3-201 of the Montana Code Annotated requires that each political subdivision in the state provide emergency and disaster prevention and preparedness for its citizens, including coordination of response and recovery in the form of an emergency operations plan (EOP).

The City and Missoula County coordinate emergency preparedness through a Disaster Planning committee that develops, approves, and revises the EOP for Missoula (City and County jointly). Missoula’s EOP establishes the Missoula City-County Health Department (MCCHD) as the lead agency tasked with mobilization of medical, mental health, and public health emergency services. The purpose of an EOP is to specify how the City and County will engage in collective capabilities and resources, both public and private, to administer a comprehensive emergency management program. The plan is a basic framework for emergency functions during a significant emergency or disaster event in Missoula County. The functions are broken into five mission areas of emergency management, including: prevention, protection, mitigation, response, and recovery

A Mutual Aid Agreement is in place between the City and County that recognizes the joint undertaking of the Missoula County Emergency Operations Plan and the Disaster Planning Committee. The County Office of Emergency Management oversees the emergency response component of the County and the City, including the Missoula 911 Center and the Disaster and Emergency Services Office. The Department also addresses flood information, wildfire preparedness, emergency preparedness, emergency alerts, evacuation information, and hazardous material reporting.

The Disaster and Emergency Services Office, an entity of the Office of Emergency Management, prepares and manages plans and programs regarding disaster preparedness and coordination of response and recovery.

Additional coordinated plans in place include the Pre-disaster Mitigation Plan and the Community Wildfire Protection Plan. Pre-disaster mitigation planning assesses and prioritizes projects to reduce potential damage and casualties from natural disasters. This process helps communities focus on actual risks by profiling each hazard and comparing their relative impacts. For each hazard, we analyze historical data, economic and structural losses, casualties, and recurrence likelihood. Where possible, hazard zones are mapped to identify at-risk properties and populations, and assessment models simulate hazards and potential damage. The goal is to identify and prioritize projects that can effectively reduce or eliminate threats to infrastructure, structures, and communities. The Community Wildfire Protection Plan is described in the Natural Hazard section (see page CP 59).

Emergency Management is also addressed in the Fire Department and Law Enforcement sections above.

Workforce Trends

The Land Use Plan area serves as an economic hub for not only Missoula County, but also the surrounding counties. The workforce within the area tends to be higher educated than similarly sized cities within the State of Montana and is able to drive industries that need a highly skilled workforce such as Healthcare and Social Services, Information, and Professional, Scientific and Technology Services. The Land Use Plan area also serves as a retail hub for the surrounding counties, which is reflected in the rising Retail Trade sector that accounts for the majority of job creation since the start of the COVID-19 pandemic.

While the area has higher levels of education than similarly sized cities in the state and also the nation, wages are behind nation-wide averages for almost every industry sector present. Workers within the area typically make 7.3% less than the nation-wide average, and some industries within the region make considerably less than the average.

City & County Employment | Workforce Trends

The City of Missoula serves as the economic hub of the county, constituting 84% of all employment in the area. The Land Use Plan area represents approximately 92% of all employment opportunities in the county. The percentages for these different geographic areas have remained stable from 2015 to 2021, as indicated in Chart E1.

1 City & County Employment

Land Use Plan area 2021 employment: 56,694
Missoula County 2021 employment = 61,733

2 Employment by Industry Sector

Largest Industry Growth (2015-2021): Information
Largest Industry: Healthcare and Social Assistance

3 Location of Employees

Employees are generally located along major and minor arterial roadways
Downtown has the densest amount of employees

4 Workforce Inflow/Outflow

41% of the total Workforce lives outside of the Land Use Plan area
9,933 workers live inside the Land Use Plan area but work outside

5 Workforce Age

Workforce aged 30-55 accounts for 53% of total workforce
Workforce aged 29 and under has dropped from 26%-24% since 2015

6 Workforce Education

Education Level with the highest number of employees: Associates, Some College
Bachelors of Higher Education level accounted for 51% of all employment growth

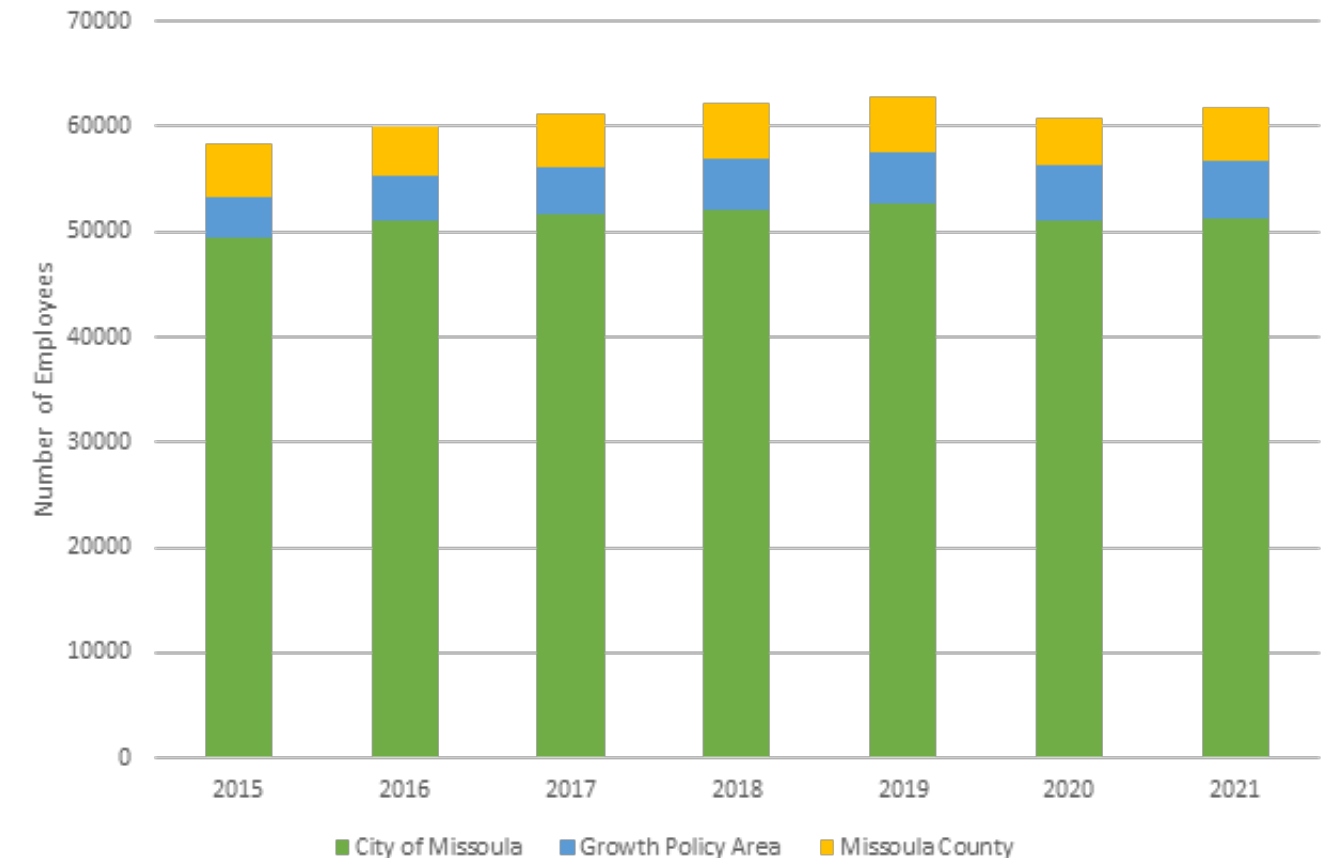
7 Workforce Compensation

Employees making \$15,000-\$40,000 annually: 32% of total workforce
2021 Gini Coefficient Missoula County = 0.475

8 Work from Home Trends

Employees who work from Home within the Land Use Plan area = 9% of total workforce
Employees who work from Home within nationwide: 9.7% of total workforce

Chart E1: Geographic Location of Employment in Missoula County



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

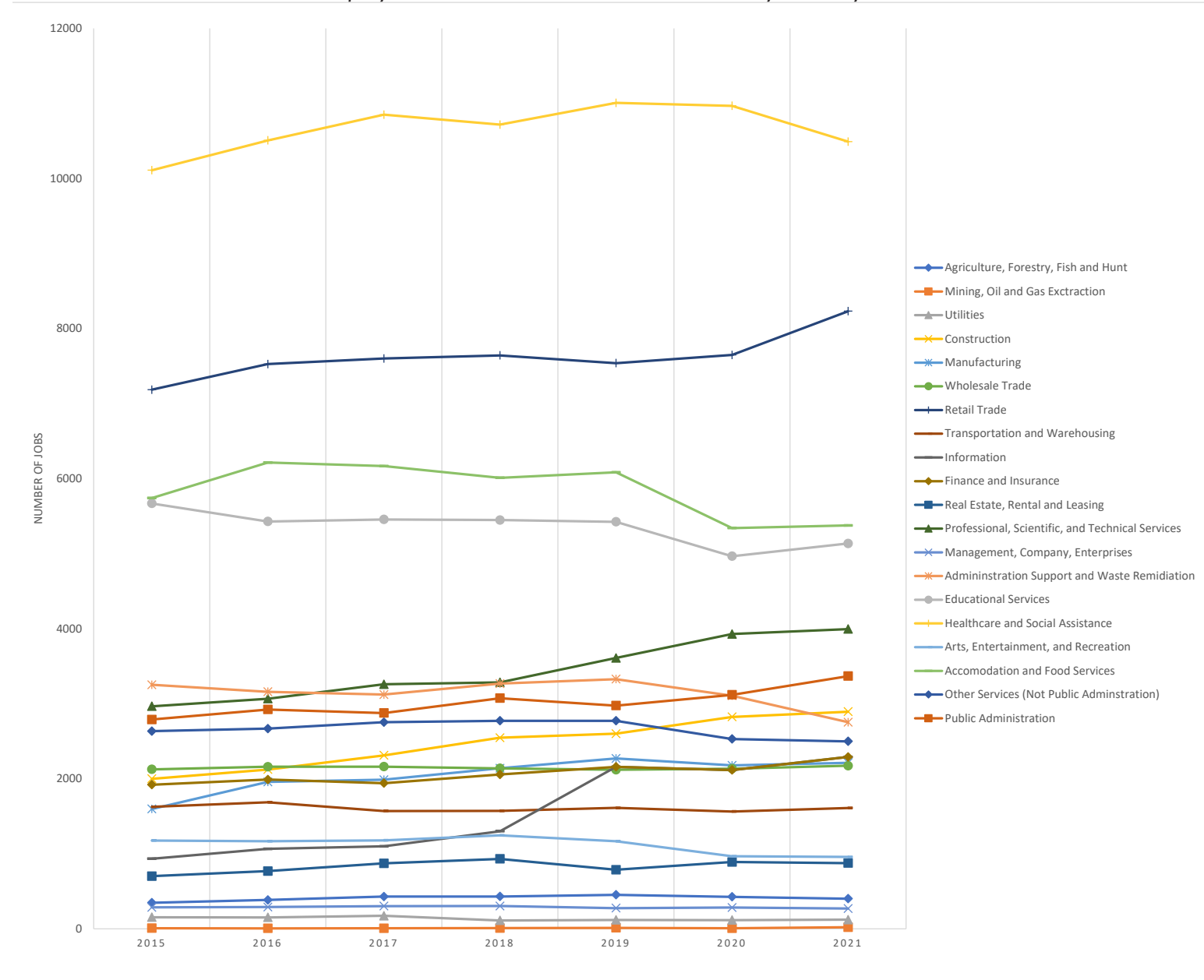
Employment by Industry | Workforce Trends

According to the Longitudinal Employer-Household Dynamics (LODES) datasets from 2016 to 2021 Missoula County has an average yearly employee growth rate of 1.8% and added a total of 3,295 jobs during the same 4 years. During the peak of the COVID-19 pandemic the County lost approximately 3% of its workforce, due to pandemic related lay-offs and cutbacks. From 2020 to 2021 there was slow recovery from the pandemic with a 1.7% increase in employment in Missoula County.

The industry that had the strongest recovery after the COVID-19 pandemic is the Retail Trade sector which saw a 7.62% increase in employment numbers from 2020 to 2021 adding 583 jobs within the Growth Policy area.

The Land Use Plan area's largest sector of employment is Healthcare and Social Assistance, which employs approximately 10,500 people. The Retail Trade sector is the second largest, and as of 2021 employed 8,231 people.

Chart E2: Employment Growth in Land Use Plan area by Industry Classification



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Employment by Industry | Workforce Trends

Industries that saw the largest employment growth since 2015 include the Information (+39%), Retail Trade (+30.1%), Construction (+25.7%), and the Professional, Scientific, and Technical Services (+29.6%). The growth in these industry sectors accounted for 4,327 new employment opportunities within the Land Use Plan area.

Industry sectors that saw negative growth since 2015 include Educational Services (-15.4%), Administration Support and Waste Remediation (-14.4%), Accommodation and Food Services (-10.5%), and Arts, Entertainment, and Recreation (-6.3%). These industry sectors had total job losses from 2015-2021 of 1,618 employment opportunities. The losses in employment in these sectors are not closely tied to the job losses that occurred during the COVID-19 pandemic, they were instead spread out throughout the six years that LODES data was acquired and in some cases such as in the Educational Services sector the COVID-19 pandemic spurred new job creation and the year-over-year growth accelerated during the pandemic years to roughly 35% year-over-year gains.

Table E1: 2015-2021 Growth in Industry Sectors

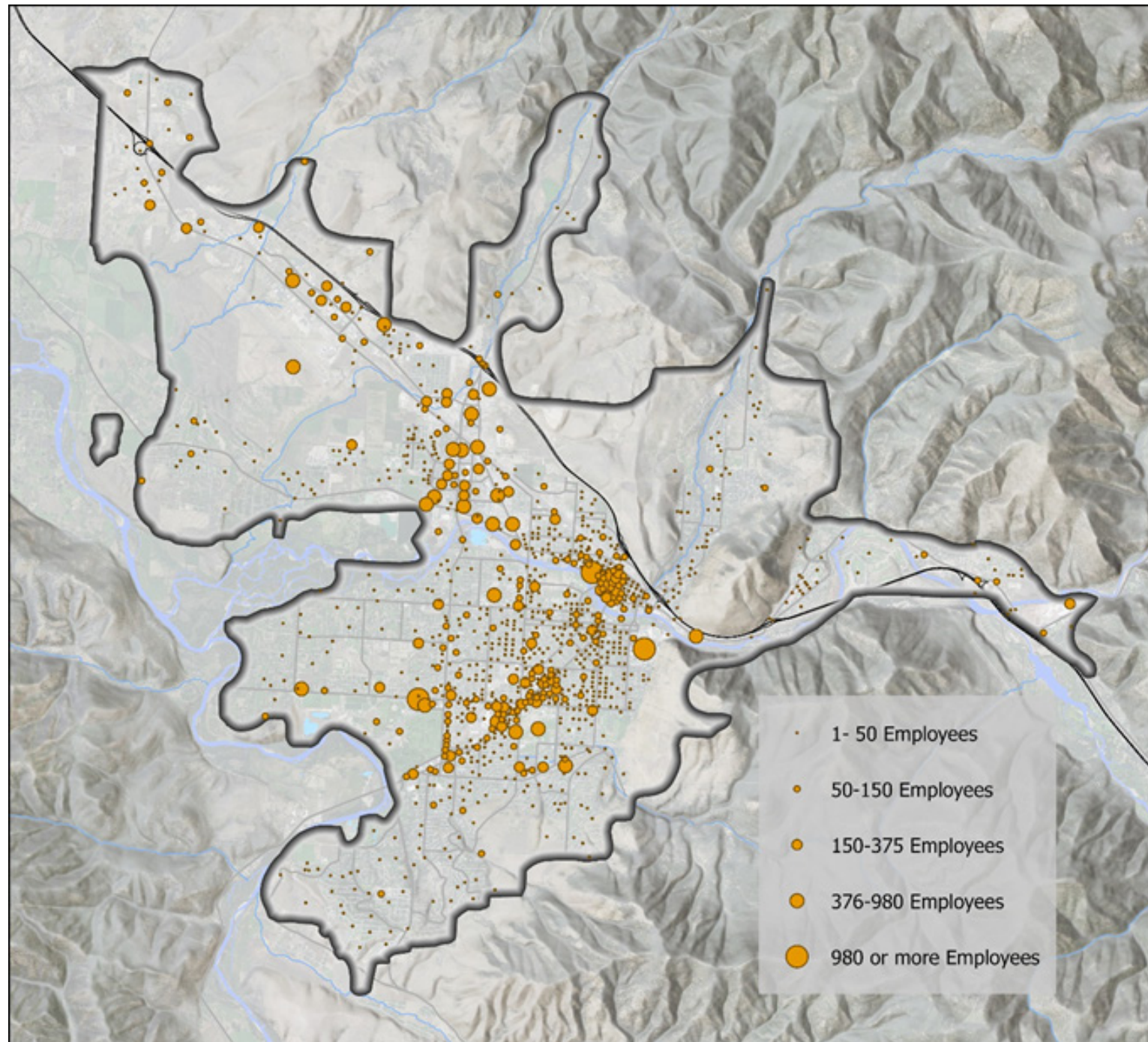
Industry	Growth Rate	Total New Employees
Information	+ 39%	+ 1,356
Retail Trade	+ 30.1%	+ 1,046
Professional, Scientific, and Tech. Services	+ 29.6%	+ 1,030
Construction	+ 25.7%	+ 895
Manufacturing	+ 17.7%	+ 616
Public Administration	+ 16.7%	+ 579
Healthcare & Social Assistance	+ 11%	+ 381
Finance & Insurance	+ 10.6%	+ 370
Real Estate, Rental, & Leasing	+ 5%	+ 174
Agriculture, Forestry, Fishing & Hunting	+ 1.6%	+ 54
Wholesale Trade	+ 1.4%	+ 48
Mining, Oil, & Gas Extraction	+ 0.4%	+ 13
Transportation & Warehousing	- 0.4%	- 15
Company & Enterprise Management	- 0.5%	- 16
Utilities	- 0.9%	- 32
Other Services (Not Public Administration)	- 3.9%	- 136
Arts, Entertainment, & Recreation	- 6.3%	- 220
Accommodation & Food Services	- 10.5%	- 365
Administration Support & Waste Remediation	- 14.4%	- 499
Educational Services	- 15.4%	- 534

Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Location of Employees | Workforce Trends

Employees are spread throughout the Land Use Plan area, but are generally located along major and minor arterials, such as Reserve St, Brooks St, Broadway Ave, Higgins Ave. Specific areas around the region that have higher numbers of employees correspond to the [location of the largest employers](#) along with the central business district and the University of Montana.

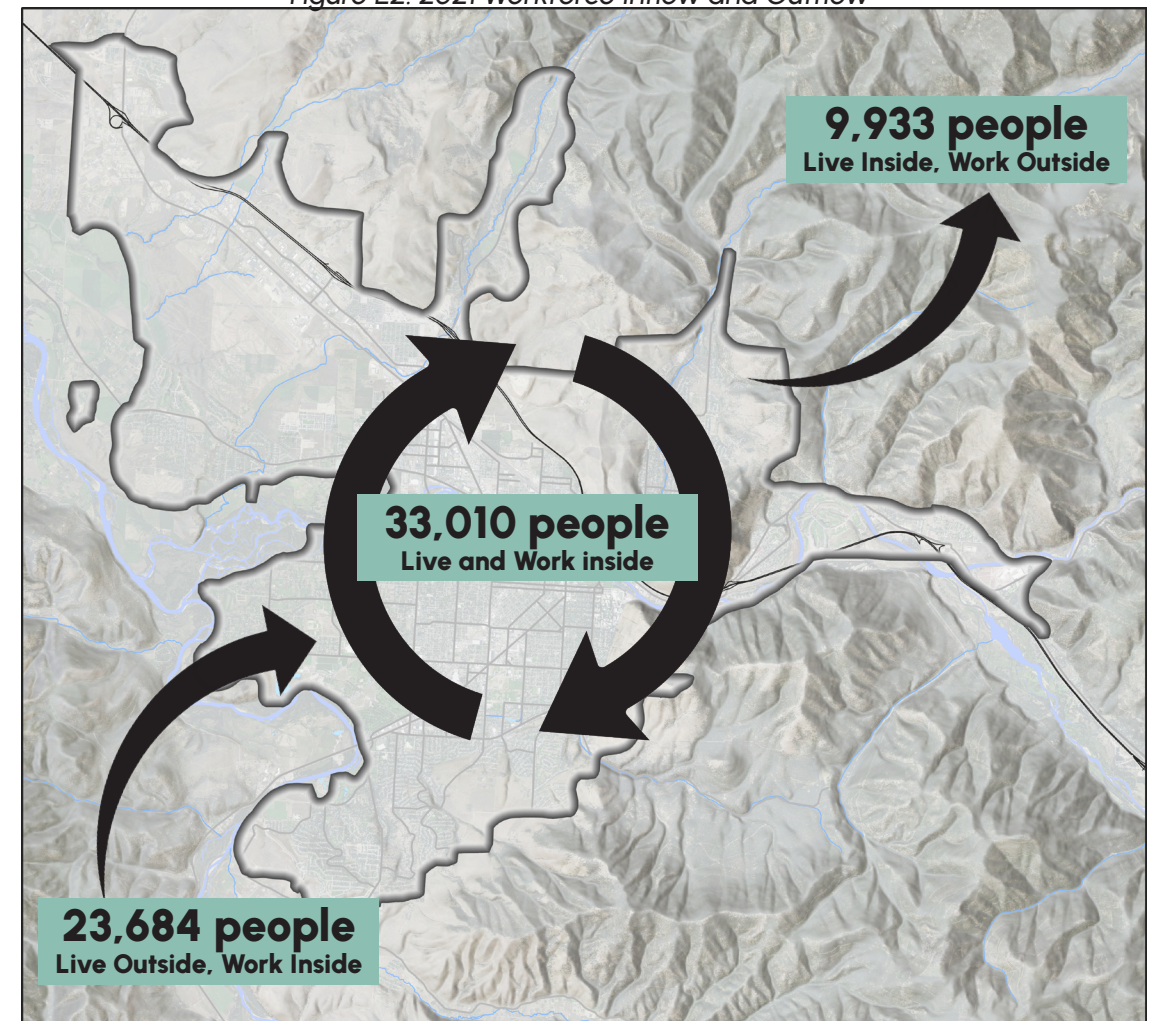
Figure E1: Employees by Census Block, 2021



Source: Center for Economic Studies & US Census Bureau

Workforce Inflow/Outflow | Workforce Trends

Figure E2: 2021 Workforce Inflow and Outflow

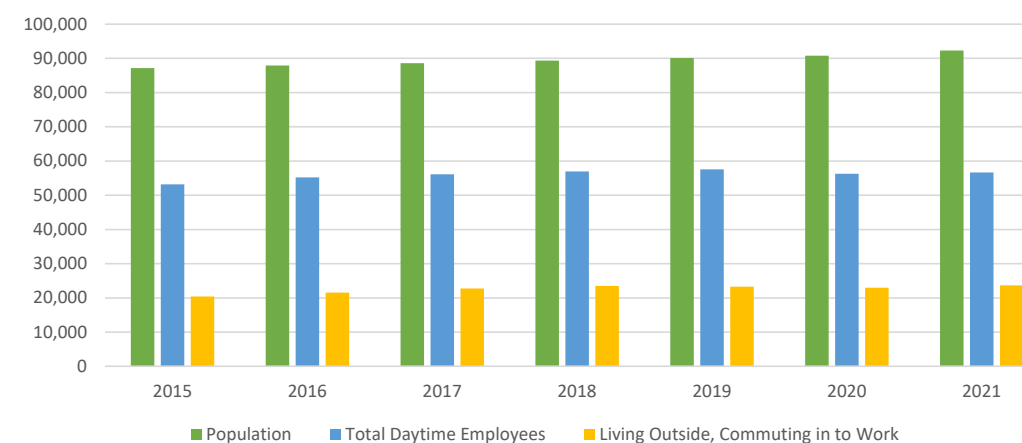


Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

As outlined in the Employment by Industry section, the Land Use Plan area has many industries that attract and rely on workers from outside of the area. These workers commute from either inside of Missoula County or from neighboring counties such as Sanders, Mineral, Ravalli, Granite, and Powell Counties.

According to the Longitudinal Employer-Household Dynamics, Origin-Destination Employment Statistics (LODES) approximately 42% of all people employed within the Land Use Plan area commuted in from outside of the area. Because of the rural nature of the region surrounding the Land Use Plan area active commuting is

Chart E3: Workforce Inflow and Outflow



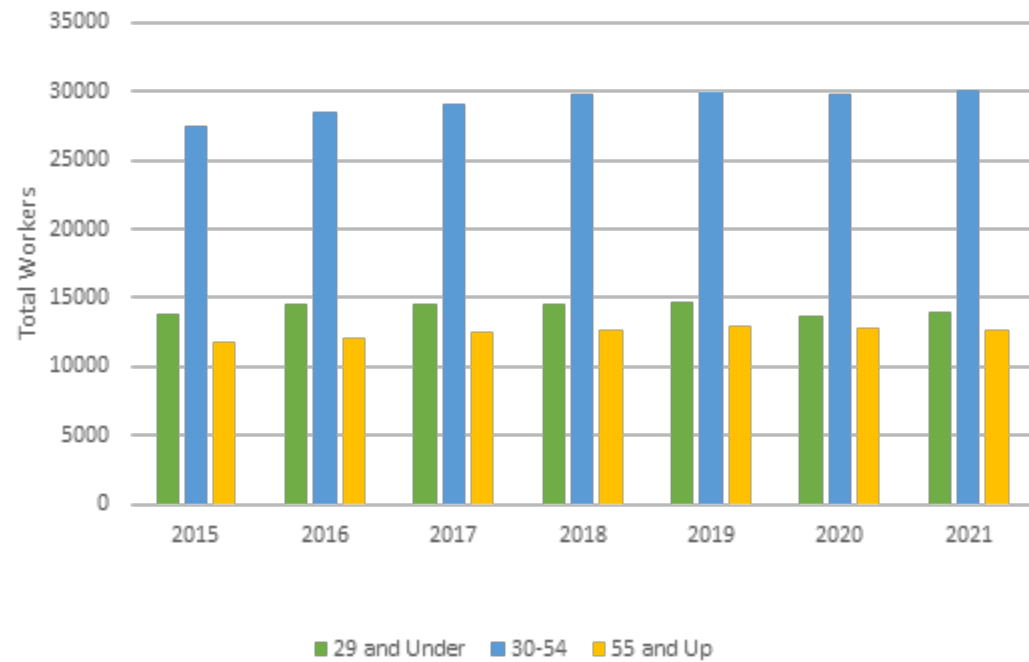
Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

the primary source of travel for these workers. This percentage of workers commuting from outside of the Growth Policy area has risen since 2015 when these workers accounted for 38.5% of the total workforce. Chart E3 shows the total workforce within the Land Use Plan area and the number of workers who commute from outside of the area.

Workforce Age | Workforce Trends

Aging workforce has been a common term since the adoption of Missoula's Growth Policy in 2015. There are many reasons why the workforce is gradually becoming older, lack of savings, lack of retirement plans, and the raising of the federal retirement age are all contributing factors. The Land Use Plan area is not an exception to this trend. Workers aged 55 and up contributed to 23.5% of the total workforce increase since 2015. Workers 29 and under contributed to 3.5% and workers aged 30-54 contributed to 73% of the increase.

Chart E4: Workforce Age in Land Use Plan area (2015-2021)



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

The percentage of the total workforce within the Land Use Plan area that is aged 29 or under has dropped from 26.1% in 2015 to 24.7% in 2021. Workers aged 30 to 55 and 55 and Over have increased the percentages of the total workforce within the same timeframe. Table E2 shows the total number of employees in each age group for the Land Use Plan area.

Table E2: Workforce Age in Land Use Plan area

Age Group	2015	2016	2017	2018	2019	2020	2021
29 & Under	13,878	14,564	14,523	14,539	14,640	13,656	13,999
30 to 55	27,523	28,551	29,138	29,738	30,014	29,841	30,061
55 and Over	11,816	12,125	12,454	12,720	12,900	12,759	12,634
Total	53,217	55,240	56,115	56,997	57,554	56,256	56,694

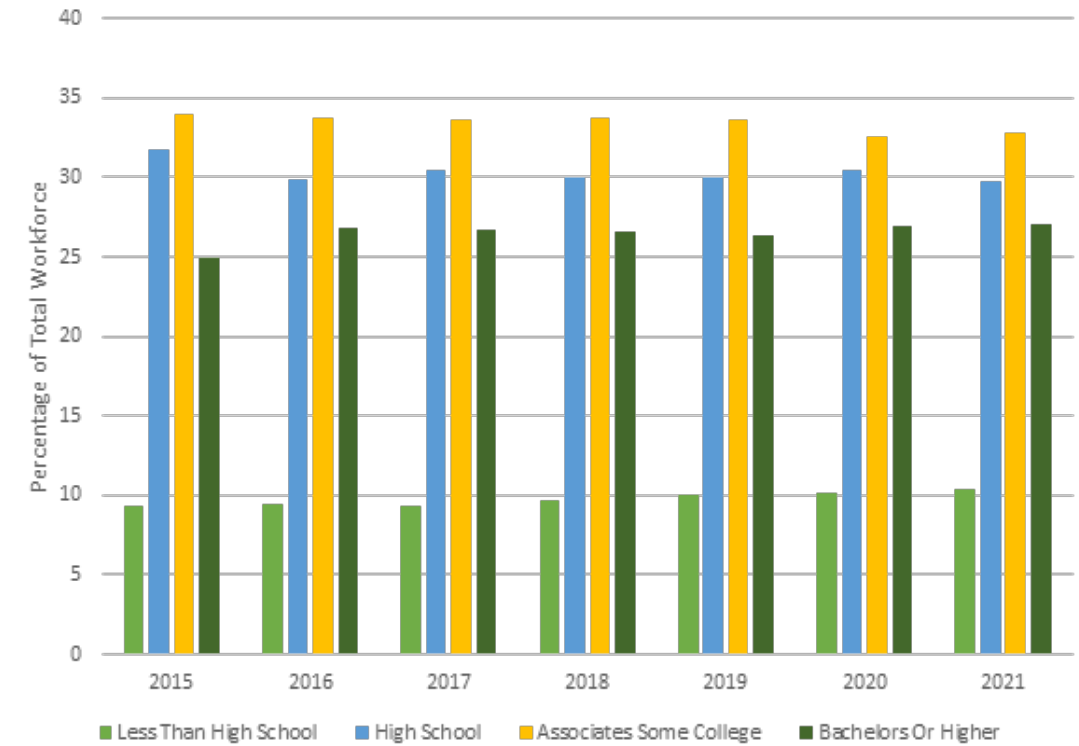
Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Workforce Education | Workforce Trends

The Land Use Plan area's workforce educational attainment is separated into four categories, Less than High School, High School Graduate, Associates with some College, and Bachelor's Degree or Higher. Since 2015 growth in the workforce has primarily been driven by workers with a bachelor's degree or higher, with 51.5% of the increase associated with this educational level. Workers with an educational attainment of less than high school have contributed to 23% of the increase, Associates with some college contributed to 19% of the increase, and workers with a high school education have contributed to 6.5% of the increase.

Table E3 and Chart E5 represent the workforce by what educational attainment the worker has.

Chart E5: Workforce Education in Land Use Plan area (2015-2021)



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Table E3: Workforce Education in Land Use Plan area

Education	2015	2016	2017	2018	2019	2020	2021	% of Total Growth
Less than High School	9.3%	9.5%	9.7%	9.7%	10%	10.2%	10.4%	23
High School	31.7%	29.9%	30.4%	30%	30%	30.4%	29.7%	6.5
Associates, Some College	34%	33.8%	33.6%	33.7%	33.6%	32.6%	32.8%	19
Bachelors or Higher	25%	26.8%	26.7%	26.6%	26.4%	26.9%	27%	51.5
Total Workforce	53,217	55,240	56,115	56,997	57,554	56,256	56,694	

Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

As stated in the Population and Demographic's section of this report the Land Use Plan area has a higher level of education than the surrounding region. This creates a skilled workforce that has enabled companies to start and maintain employees in a range of industries including the Biotechnology, IT, Tech Consulting, and Software Development fields. New or notable firms that have taken advantage of the area's workforce are OnX Back-country, ATG (Advanced Technology Group), AxiomIT, and Workiva have either gotten their start in the area or have been able to open up new office locations with benefit from the region's highly-skilled workforce.

Workforce Compensation | Workforce Trends

According to the American Community Survey 5-Year estimates, workers within the Land Use Plan area had a median annual income of \$41,935 in 2021, up from \$33,346 in 2016. Using the [US Bureau of Labor and Statistics Consumer Price Index Inflation Calculator](#) this is an estimated 8.9% increase in wages for between 2016 and 2021.

The median income for a worker that lives in the Land Use Plan area is 7.3% lower than the national median income. Seven out of the 13 major NAICS codes have a lower median annual income than the national average with some making significantly lower than the national median income. One example is the Information sector, in which workers within the Land Use Plan area have a median annual income 166% less than their national median. Workers who were classified under the NAICS Code Other services, except public administration have a median annual income that is 54% higher than the national average.

Table E4 has the 13 major NAICS Categories and their corresponding annual median income associated with them.

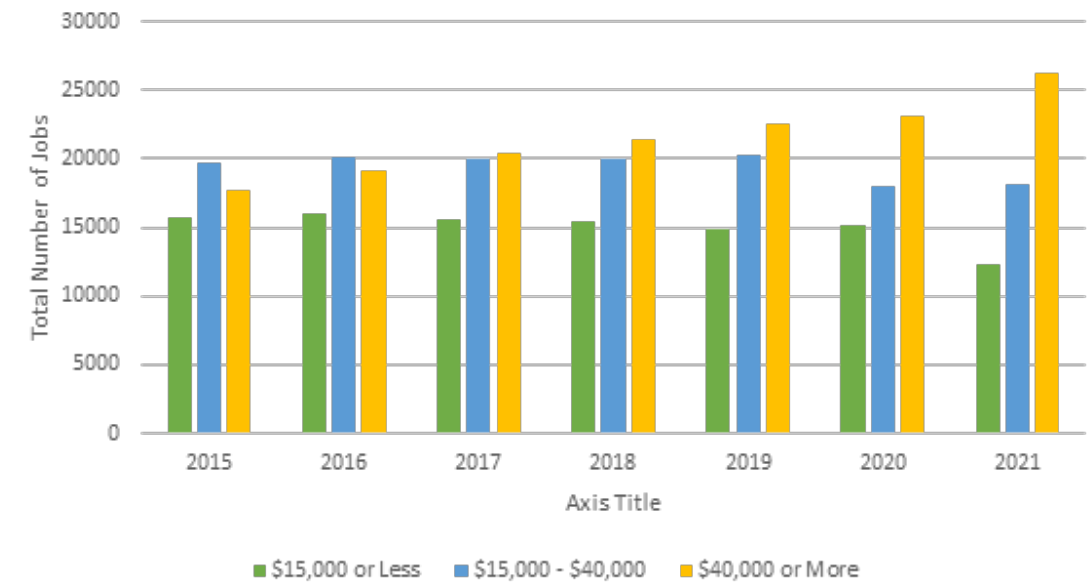
Table E4: Median Annual Income per NAICS Category for the Land Use Plan area

	2011	2016	2021	2021 National Average Wage	2021 Montana Average Wage
Agriculture, Forestry, Fishing, Hunting, and Mining	\$28,880	\$48,213	\$44,821	\$39,787	\$41,299
Construction	\$40,624	\$30,673	\$48,381	\$44,287	\$43,945
Manufacturing	\$22,464	\$36,473	\$38,691	\$51,585	\$43,563
Wholesale Trade	\$50,792	\$29,517	\$60,175	\$51,301	\$44,630
Retail Trade	\$21,191	\$16,626	\$22,842	\$26,757	\$26,247
Transportation, Warehousing, and Utilities	\$37,247	\$32,786	\$52,758	\$47,132	\$51,974
Information	\$25,659	\$31,608	\$23,028	\$61,268	\$40,880
Finance, Insurance, and Real Estate	\$22,823	\$48,423	\$40,813	\$58,868	\$42,036
Professional, Scientific, Management, Administrative, and Waste Services	\$34,205	\$42,252	\$27,552	\$54,097	\$43,243
Educational Services, Healthcare and Social Assistance	\$26,063	\$30,011	\$41,206	\$42,404	\$36,117
Arts, Entertainment, Recreation, Accommodation, and Food Services	\$14,234	\$13,205	\$20,873	\$19,649	\$16,801
Other Services	\$32,452	\$31,753	\$65,149	\$29,481	\$27,473
Public Administration	\$62,986	\$41,964	\$58,862	\$61,644	\$52,177

Source: ACS 5-Year Estimates

Workforce Compensation | Workforce Trends

Chart E6: Annual Wages in Land Use Plan area



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Employees who earn \$40,000 or more annually within the Land Use Plan area have been increasing since 2015. In 2015 37% of the workforce within the Land Use Plan area made between \$15,000 and \$40,000 annually. In 2021 employees in this wage bracket has dropped to 32% and the largest income category has become \$40,000 or more annually accounting for 46.2% of the total workforce.

According to the [Massachusetts Institute of Technology \(MIT\) living wage methodology](#) the living wage for Missoula County residents is between \$28,080 and \$33,987 per year and minimum wage is \$9.88 which is the equivalent of making approximately \$20,000 annually. Chart E5 indicates that approximately 21% of people employed within the Land Use Plan area are making annual wages below the State's minimum wage if the person worked full-time which is still between \$10,000-\$13,000 less than a living wage.

This wealth inequality is measured by the US Census Bureau and is called the [GINI coefficient](#). This coefficient ranges from 0 to 1, with 0 meaning perfect wage equality where everyone receives an equal share and 1 meaning perfect inequality where 1 person or group of people have all the wealth. The Census Bureau estimates that Missoula County's GINI coefficient is 0.475 in 2021, this means that 20% of all households within the County account for approximately 52% of all income and another 20% of all households account for approximately 3% of all income. Out of the six major counties in Montana Missoula County's Gini Coefficient ranks the most inequitable, followed by Yellowstone County at 0.466 and Gallatin County at 0.466.

Table E5: 2021 Gini Income Inequality within 6 Major Montana Counties

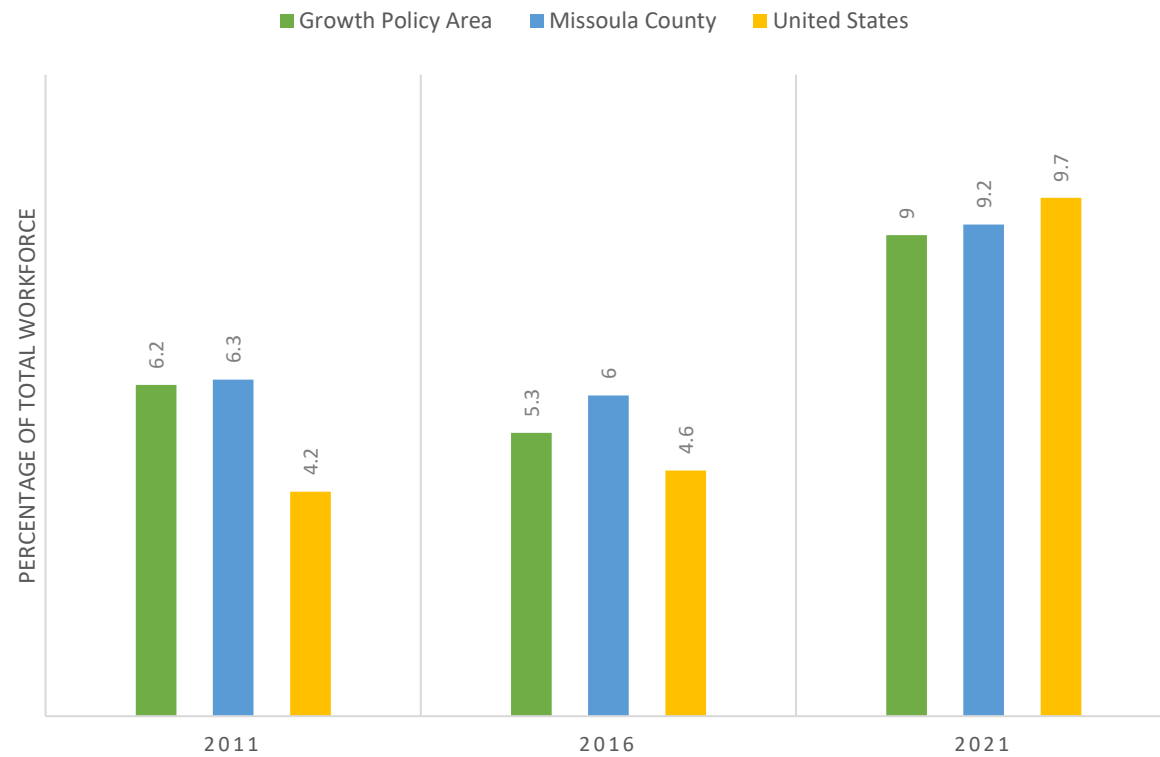
County	Gini Coefficient
Missoula	0.475
Yellowstone	0.469
Gallatin	0.466
Flathead	0.450
Cascade	0.444
Lewis & Clark	0.434

Source: ACS 5-Year Estimates

Work from Home Trends | Workforce Trends

The COVID-19 pandemic ushered in a large wave of companies offering work from home options. This option allows employees more choice in where to live, instead of having to be within commuting distance to physical offices. The Land Use Plan area's workforce that is able to work from home has increased dramatically since 2016 which coincides with national trends. In 2021 approximately 9% of the workforce works from home which is roughly a 45% increase since 2016.

Chart E7: Work from Home Trends



Source: ACS 5-Year Estimates

This trend of more employees working from home affects not only the actual business in the Land Use Plan area, but also lowers commuter traffic, lessens the physical demand of office spaces, and has contributed to housing price increases outside of major metropolitan areas.

Employer Trends

According to data aggregation completed through ESRI's Business Analyst as of 2023 there are a total of 6,143 businesses within Missoula County and 5,456 of those businesses are within the Land Use Plan area. These businesses range in size, roughly 25% of all businesses in the County have less than 20 employees and around 50% have over 100 employees. Larger businesses are typically located in the Downtown Place Type and along major and minor arterials such as Reserve Street, Brooks Street, and Broadway Avenue.

The Place Type designation that holds the largest amount of commercial businesses within the Land Use Plan area is Urban Mixed-Use Low which has approximately 28% of all land developed for commercial uses. This is followed by Suburban Mixed-Use with has 24% of all land within the Growth Policy area that is developed for commercial purposes. While these places have the most amount of land for commercial uses, the Urban Center has the densest Floor Area Ratio for commercial uses with an average of 96% of each parcel utilized for commercial uses.

- 1 Firm Size**
 Largest Private Employers = Community Medical Center, St Patrick's Hospital, & Wal-Mart
 Small Businesses = 50% of all businesses employ 50 people or less
- 2 Retail Trends**
 National E-Commerce Sales (2000) = 1.9% of all retail sales
 National E-Commerce Sales (2023) = 14-17% of all retail sales
- 3 Business Formation**
 Missoula County average yearly business applications (2005-2022) = 1,592
 Missoula County year-over-year growth (2005-2022) = 3.67%
- 4 Commercial Properties**
 Largest average SqFt needed = Grocery Store
 Smallest average SqFt needed = Restaurant
- 5 Square Feet per Employee**
 Place Type with largest average SqFt per employee = Industrial & Employment
 Place Type with smallest average SqFt per employee = Downtown
- 6 Floor Area Ratio for Commercial Development**
 Place Type with largest FAR = Downtown
 Place Type with smallest FAR = Industrial & Employment

Firm Size | Employer Trends

Missoula County's businesses range in sizes, approximately 50% of all businesses or employment centers have 100 people or less and 50% of all businesses have 100 people or more that work in the company. These percentages have stayed relatively stable over time and can be expected to continue into the future. *Table E6* provides the percentage of workers within the firm size that they work for.

Table E6: Firm Size in Missoula County

Employees per Firm	2015	2016	2017	2018	2019	2020	5-Year Average
Under 5	7.2%	6.86%	7.12%	7.05%	7.16%	7.18%	7.1%
5-9	8.34%	8.98%	8.29%	8.34%	8.1%	8.11%	8.3%
10-19	10.03%	10.06%	10.67%	10.23%	10.19%	9.96%	10.2%
20-99	24.2%	23.71%	24.49%	24.33%	24.48%	24.05%	24.2%
100-499	17.53%	18.32%	18.84%	20.2%	18.41%	19.43%	18.8%
500 & more	32.7%	32.07%	30.59%	30.59%	31.65%	31.26%	31.4%

Source: US Census County Business Patterns

There are three private companies that employ over 500 people, Community Medical Center, St Patrick Hospital, and Wal-Mart. Other large employment centers within the Land Use Plan area include the University of Montana and Federal, County, and City government agencies. Large private employment centers account for approximately 50% of Missoula County's employment and are highlighted in *Table E7*.

Table E7: Largest Private Employers in Missoula County, 2021

Business Name	Number of Employees
Community Medical Center	1,000 and over
St Patrick Hospital	1,000 and over
Wal-Mart	500-999
Albertsons	250-499
Allegiance Benefits	250-499
Costco	250-499
DirectTV Customer Service	250-499
Good Food Store	250-499
Opportunity Resources Inc.	250-499
Southern Home Care Services	250-499
Western MT Mental Health Center	250-499
YMCA	250-499
Consumer Direct Management Solutions	100-249
First Security Bank	100-249
Jackson Contractor Group	100-249
Neptune Aviation	100-249
Puritan Commercial Cleaning	100-249
Town Pump	100-249
UPS	100-249
Western MT Clinic	100-249

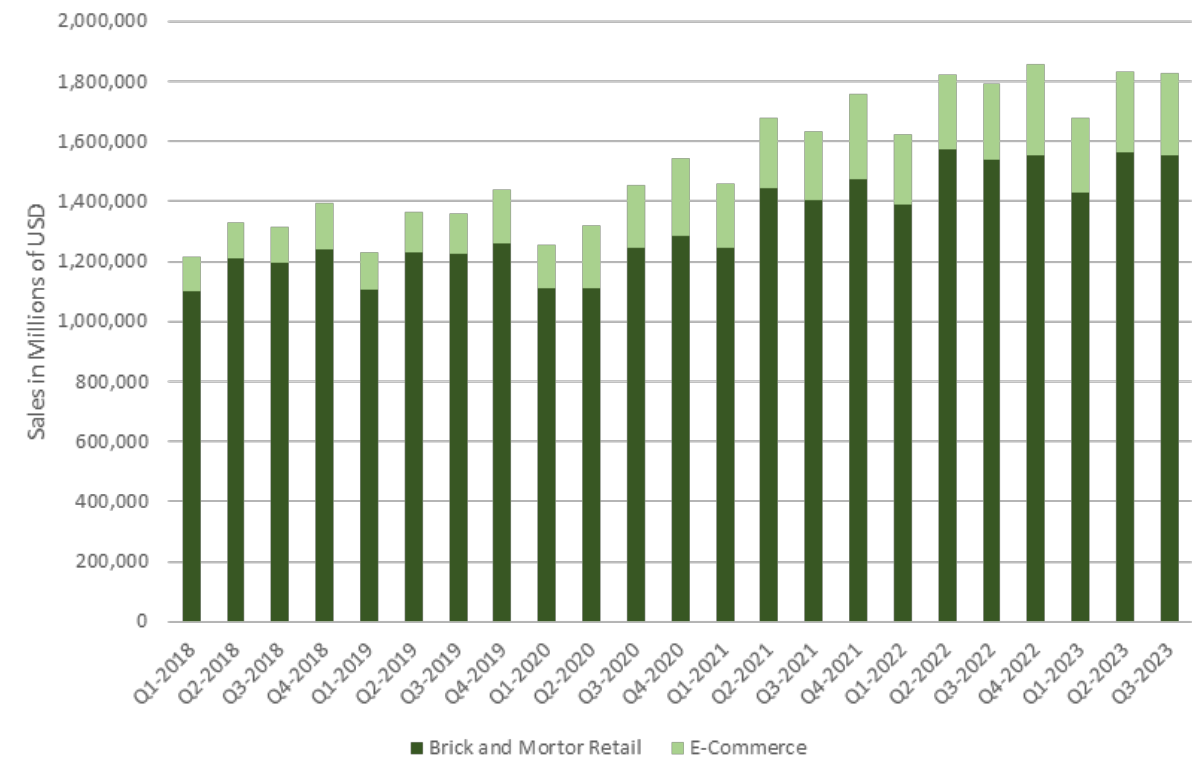
Source: Montana Department of Labor and Industry

Retail Trends | Employer Trends

Retail markets have shifted dramatically since the turn of the century, greatly impacted by the rise in e-commerce, the COVID-19 pandemic, and declining brick-and-mortar store sales. These trends have impacted the size needed for retail stores, employment trends, and retail chain consolidations both locally and nationally.

At the beginning of the century sales through e-commerce accounted for roughly 1.9% of total retail sales in the US, since then it has steadily increased to account between 14-17% of the total retail market sales. *Chart E8* shows the quarterly sales reports (excluding gas and auto sales) for brick-and-mortar stores and the rise in e-commerce sales since 2018.

Chart E8: 2018 - 2023 Quarterly US Retail Sales



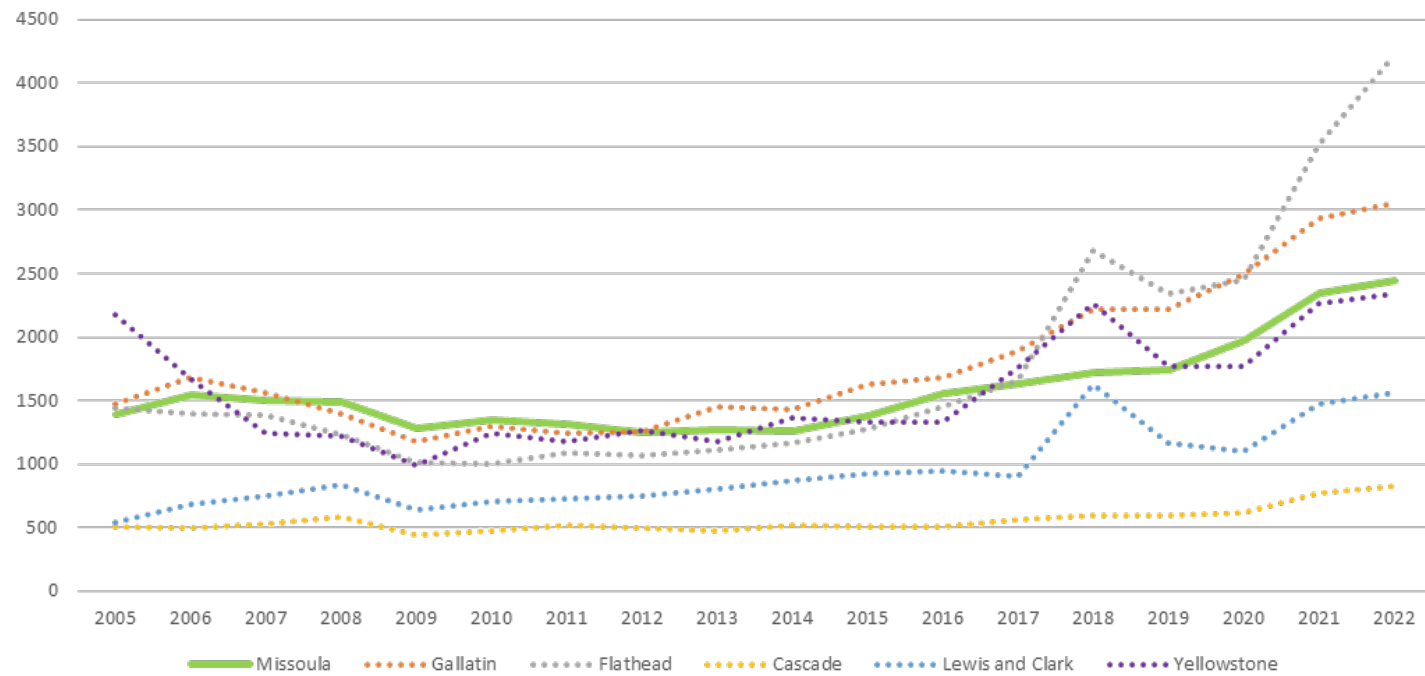
Source: US Department of Commerce

Business Formation | Employer Trends

Since 2005 Missoula County has averaged 1,592 new business applications every year. Year over year growth depends on external factors such as the rise in e-commerce sales, the national economy, interest rates, or worldwide pandemics.

Since 2005, the average year-over-year economic growth for the county is 3.67%. Compared to the six largest counties in the state Missoula County ranks 5th in its year-over-year growth. However, Missoula County has the lowest volatility in year-over-year growth, with its lowest decrease of 13.5% in 2009 during the height of the Great Recession, while the other five largest counties averaged a 20.1% decrease in growth during the same year.

Chart E9: Business Formation Statistics for the Six Largest Counties in Montana



Source: Center for Economic Studies & US Census Bureau

Commercial Properties | Employer Trends

Commercial properties within the Land Use Plan area have been categorized into eight categories utilizing the Department of Revenue's Cadastral Service. These categories are Grocery Stores, Hotel/Motels, Industrial/Warehouse, Mixed Use, Office Space, Restaurant, Retail, and Service Commercial/Miscellaneous as shown in Table E8.

The largest square footage used for commercial properties are parcels classified as Grocery Stores. The minimum square footage of a grocery store within the Land Use Plan area is Orange Street Food Farm at 19,000 square feet and the largest grocery store is WinCo Foods at 103,964 square feet. The average floor area used for this type of commercial property is 51,981 square feet.

The smallest square footage used for commercial properties in the Land Use Plan area are parcels classified as restaurants. The smallest business in this category takes up 96 square feet and the largest square footage restaurant is 15,844 square feet. The average square footage for all commercial properties classified as restaurants is 4,132 square feet.

Table E8: Square Feet of Commercial Properties, 2021

Commercial Property Type	Minimum Sq.Ft.	Maximum Sq.Ft.	Average Sq.Ft.
Grocery Store	19,000	103,964	51,981
Hotel/Motel	3,560	161,789	40,538
Retail	140	368,617	13,755
Industrial/Warehouse	574	128,173	10,510
Mixed Use	100	192,406	9,418
Office Space	96	156,936	6,648
Service Commercial	448	48,879	6,187
Restaurant	96	15,844	4,132

Source: Montana Department of Revenue

The five Place Types that house the overwhelming majority of Commercial Services within the Land Use Plan area are shown in Table E9 to the right. While small-scale neighborhood commercial services are being allowed in all residential place types these palces are still expected to remain primarily residential in character.

Table E9: Place Types & Commercial Property Square Feet

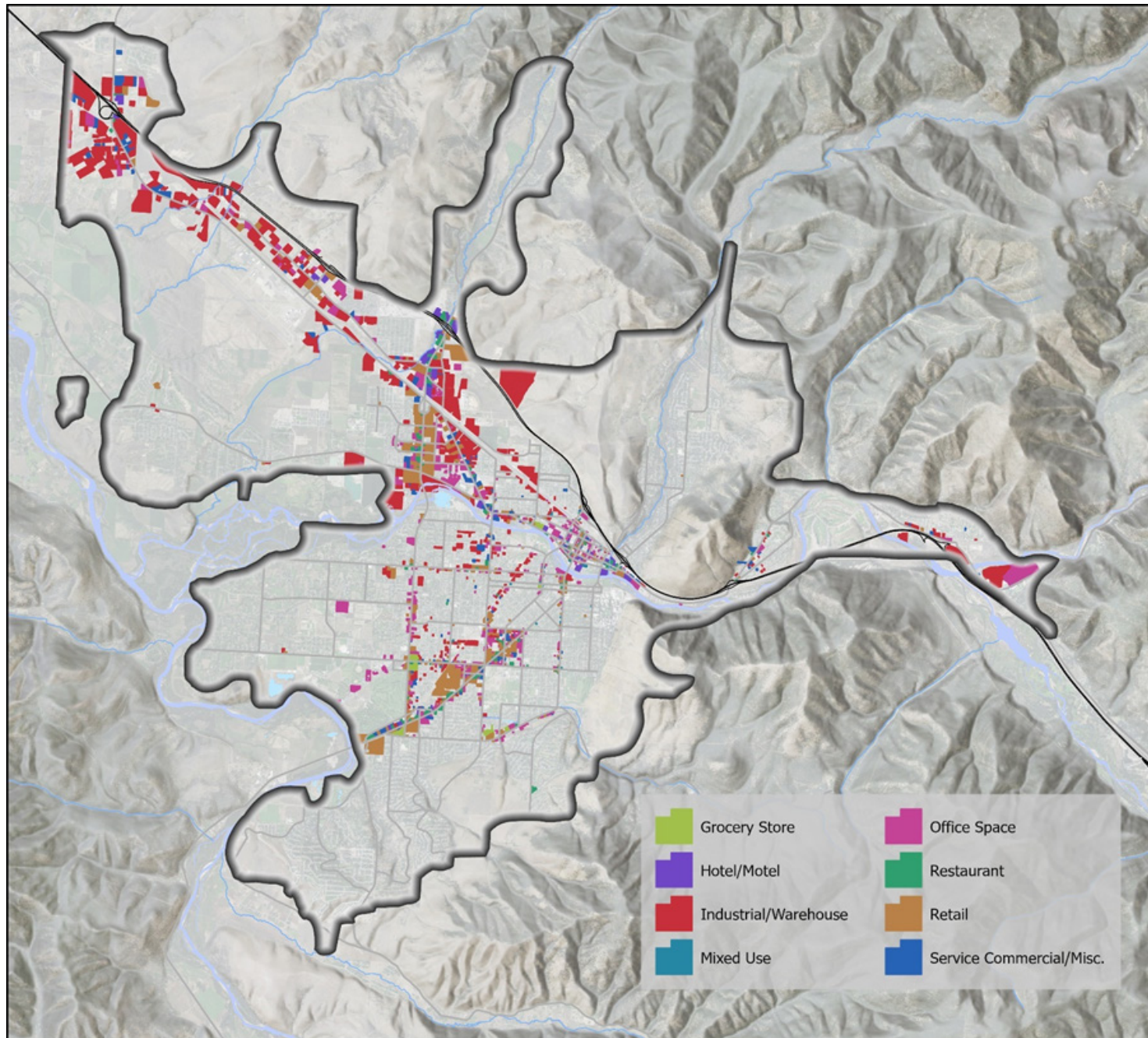
Land Use	Total Sq.Ft.	% of Total Commercial Property
Downtown	4,266,689	18.6
Industrial & Employment	2,630,891	11.5
Suburban Mixed-Use	5,608,926	24.5
Urban Mixed-Use High	3,863,090	16.9
Urban Mixed-Use Low	6,518,056	28.5

Source: Montana Department of Revenue & City of Missoula

Commercial Properties | Employer Trends

Properties that are categorized as Industrial or Warehouse require more land area due to buffering requirements from residential and different land uses because of sound and air quality challenges associated with this category. Because of the large land area necessary for this usage, it is primarily located within large parcels around the urban fringes and along West Broadway Avenue and North Reserve Street. The other commercial categories are spread out evenly throughout the region along roadways categorized as primary arterials and inside of the Downtown Business District. *Figure E3* showcases all commercial properties within the Land Use Plan area.

Figure E3: Commercial Properties within the Land Use Plan area



Source: Montana Department of Revenue & City of Missoula

Square Feet per Employee | Employer Trends

Place Type designations have corresponding zoning districts, which in turn have permitted uses on land within the Land Use Plan area. The Place Type designations that allow commercial uses are the Downtown, Industrial & Employment, Suburban Mixed-Use, Urban Mixed-Use High, Urban Mixed-Use Low, as well as all Residential Place Type designations.

Each of these land use designations allow different commercial uses, with the Residential Place Types being the most restrictive and only allowing Small-Scale Neighborhood Commercial Services, for this reason these place types are left out of the following analyses. The Place Type that has the largest amount of commercial space within it is Urban Mixed-Use Low with 6,518,056 square feet followed by Suburban Mixed-Use with 5,608,926 square feet of commercial space. *Table E10* shows each Place Type with its corresponding square feet of commercial space and the number of employees as of 2021.

Table E10: Place Types and Average Square Feet per Employee

Place Type	SqFt of Commercial Area	Employees	Average SqFt per Employee
Downtown	4,266,689	8,511	509
Industrial & Employment	2,630,891	2,791	942
Suburban Mixed-Use	5,608,926	6,922	810
Urban Mixed-Use High	3,863,090	7,578	509
Urban Mixed-Use Low	6,518,056	8,183	796

Source: LODS Dataset, City of Missoula, & Montana Department of Revenue

Figure E4: Place Types that allows Commercial Uses

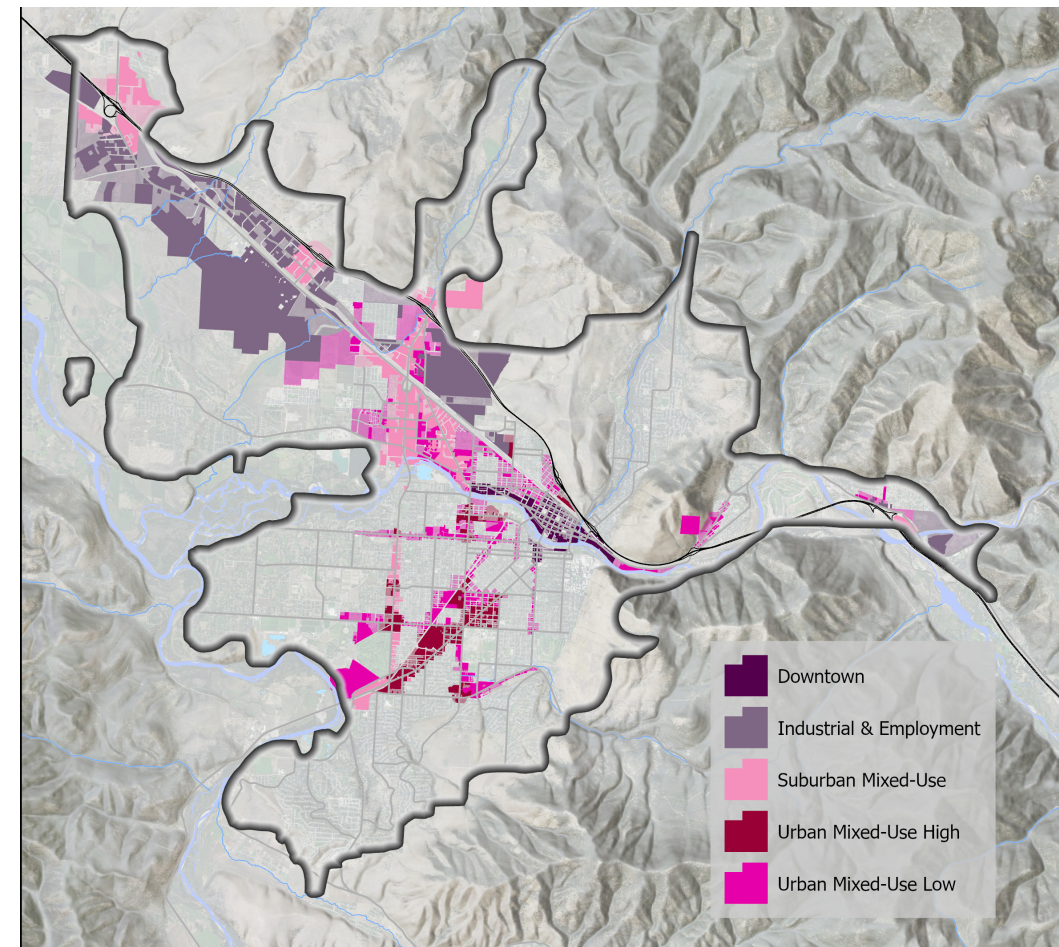


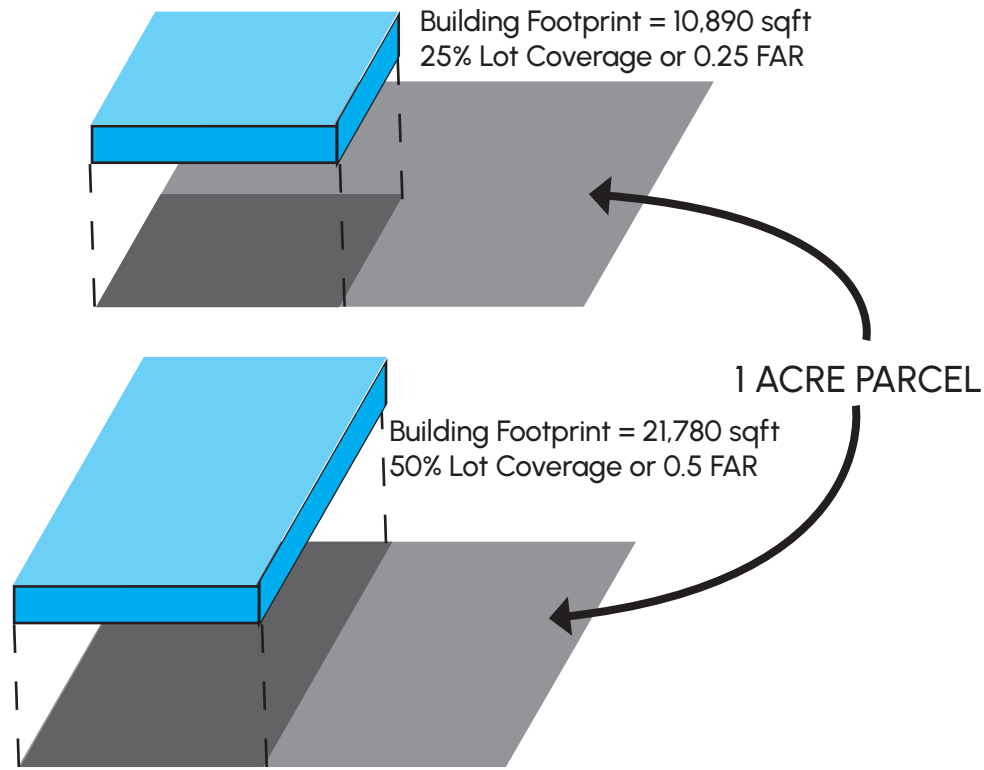
Figure E4 shows each of these Place Types within the Land Use Plan area. The light colors represent the land use designations that allow commercial uses. The darker or more saturated areas are parcels that contain are categorized in the previous page in *Figure E2*.

Source: Montana Department of Revenue & City of Missoula

Floor Area Ratio of Commercial Uses | Employer Trends

Floor Area Ratio or FAR is a measurement of development density on a piece of land. Figure E4 shows a visual of what different ratios of FAR look like and also how this calculation is used in this section.

Figure E5: Floor Area Ratio (FAR) Calculation on 1-acre parcel



The Place Type designation of Downtown, which is located within the Heart of Missoula Neighborhood and along Broadway Avenue in the Westside Neighborhood has the highest average FAR for commercial properties at 0.9. The land use designation with the lowest FAR is Industrial & Employment, with a FAR of 0.05, because of the buffer spaces needed for noise and air quality issues associated with commercial properties within this land use designation. Table E11 provides the breakdown of FAR within each land use designation that allows commercial uses.

Table E11: Average Commercial Property FAR present in Place Type Designations

Land Use	Floor Area Ratio
Downtown	0.9
Industrial & Employment	0.05
Suburban Mixed-Use	0.2
Urban Mixed-Use High	0.33
Urban Mixed-Use Low	0.3

Source: Montana Department of Revenue & City of Missoula

Economic Projections

The Growth Policy area is the economic hub of not only Missoula County but the surrounding counties as well. Based on the anticipated population growth documented in the Population and Demographics section of this report the area should expect to experience an increase of the workforce of approximately 28,481 people by 2045. Assuming that work from home practices remain at a stable rate, this would mean that the Growth Policy region will need to accommodate 25,918 employees within commercial properties by 2045.

Land within the Growth Policy area is available to develop or redevelop for commercial services. The largest parcels that may be developed are along the fringes of the area while the smaller parcels that are able to be redeveloped are located along the primary roadways through the city and in the urban center. Using Montana Department of Revenue's cadastral service 2,124 parcels have been highlighted that are able to be developed or redeveloped into commercial uses. In total there are approximately 2,452 acres within the area that are able to be used for commercial services.

Economic Development does face constraints within the Land Use Plan area. The [Missoula Economic Partnership \(MEP\)](#) organization analyzes current conditions and trends in the [Comprehensive Economic Development Strategy \(CEDS\)](#) document on a regular basis. In the 2021 document MEP worked with several groups comprised of community leaders, government officials, and business leaders within Missoula County. These groups came together and evaluated constraints that businesses and organizations face within the County which revolve around transportation, workforce housing, inflation, and government regulations.

- 1 Employee to Population Ratio**
 Land Use Plan area average Employee to Population Ratio (2015-2021) = 0.626
 2045 anticipated number of workers within the Land Use Plan area = 85,175
- 2 Developable Commercial Land**
 Areas with most developable Land = Sx^wtpqyen Area, Wye, and Northside Neighborhood
 Acres within Land Use Plan area available for development = 2,452.23
- 3 Employment Capacity**
 2045 anticipated new number of workers (excluding Work from Home) = 25,918
 Present employment capacity of developable lands = 33,084
- 4 Constraints to Economic Development**
 Main constraints facing economic development = housing cost, workforce availability, inflation, land availability, transportation, and government regulations
- 5 Economic Feasibility**
 There are 7 City TIF Districts within the Land Use Plan area
 There are 6 County TIF Districts within the Land Use Plan area

Employee to Population Ratio | Economic Projections

Measuring the employee to population ratio in the past provides an insight as to how many jobs the Land Use Plan area will likely see with the anticipated population growth. Development of future employment assumes that the employee to population ratio will remain constant in the future. From 2015-2021 the employee to population ratio has stayed between 0.63 and 0.61 employees to total population. Table E12 shows this ratio over time.

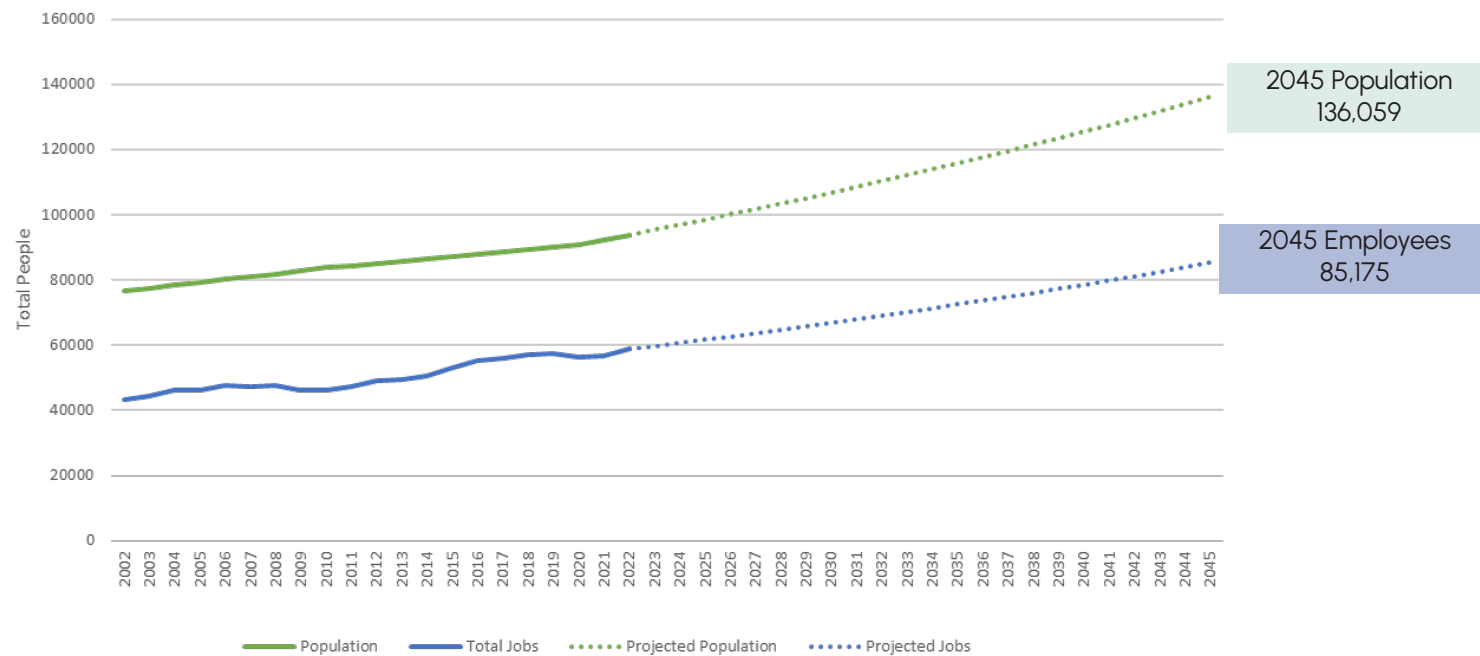
Table E12: Employee to Population Ratio

Year	Population	Employees	Employee to Population Ratio
2015	87,201	53,217	0.6103
2016	87,913	55,240	0.6283
2017	88,631	56,115	0.6331
2018	89,355	56,997	0.6379
2019	90,085	57,554	0.6389
2020	90,820	56,256	0.6194
2021	92,300	56,694	0.6142
2015-2021	+ 5,099	+ 3,477	0.626

Source: LODES Datasets, ACS, & City of Missoula

Using the information in Table E12 the average employee to population ratio for the last six years is 0.626. Chart E10 uses this average along with the projected population from the Population and Demographic's section to project the total number of employees expected to be working within the Land Use Plan area.

Chart E10: Employment Projection



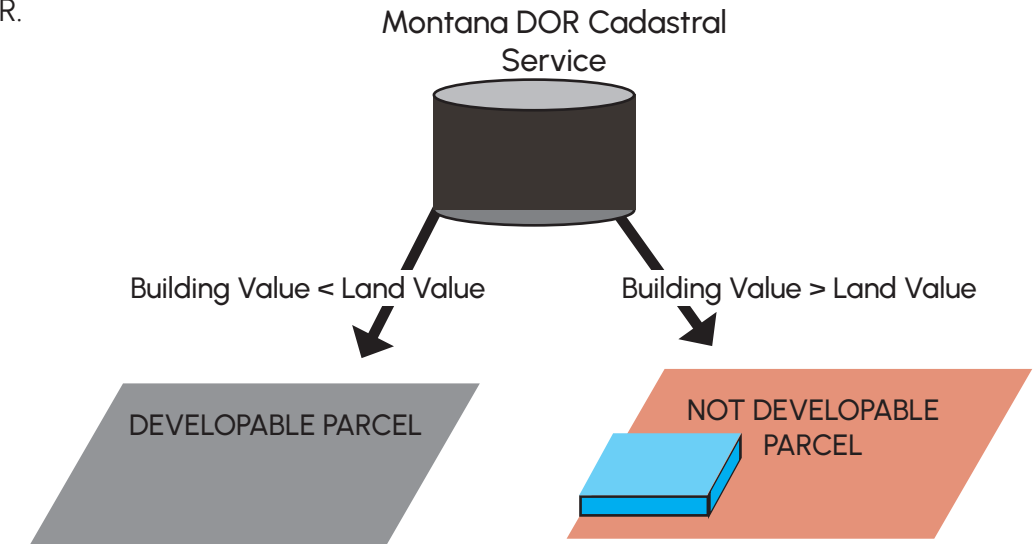
Source: LODES Datasets & City of Missoula Population Projection

The Land Use Plan area is anticipated to grow from a 2021 population of 92,300 people to 136,059 people by 2045. Using the 0.626 employee to population ratio the area should expect to grow its employment from 2021 estimate of 56,694 to 85,175 employees. This will add an additional 28,481 new employees and assuming that the average number of people who work from home remains constant the area will need to accommodate approximately an additional 25,918 employees in commercial spaces by 2045.

Developable Commercial Lands | Economic Projections

Improvement to Land Ratio

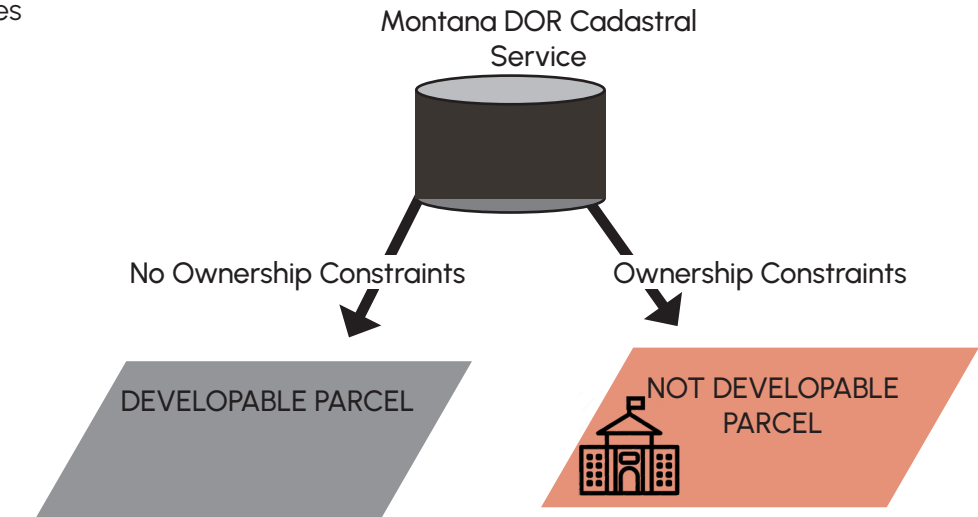
The first step to calculate whether a parcel is developable for commercial uses Montana Department of Revenue Cadastral data must be joined to the parcel. The cadastral dataset has each parcel's taxable land value and if there is a building on the parcel it also has the building's taxable value. A parcel is determined to be developable if the taxable land value is worth more than the building value. This is called the improvement to land ratio or ILR.



Ownership Constraints

The second step for determining whether a parcel is developable is to use the *Property_Type* field. Because of this ownership/use category a parcel is deemed not developable if it meets any of the following criteria:

- Government Properties
- Religious Centers
- Cemeteries
- Schools
- Utilities



Place Type Designation

The final step for this analysis is to overlay the proposed Place Type map on top of the parcels determined to be developable by the first two steps. If the parcel overlays a Place Type designation that allows commercial uses it then used to determine the total number of parcels available to develop or redevelop into commercial properties. The Place Types that allow the majority of commercial uses are listed below:

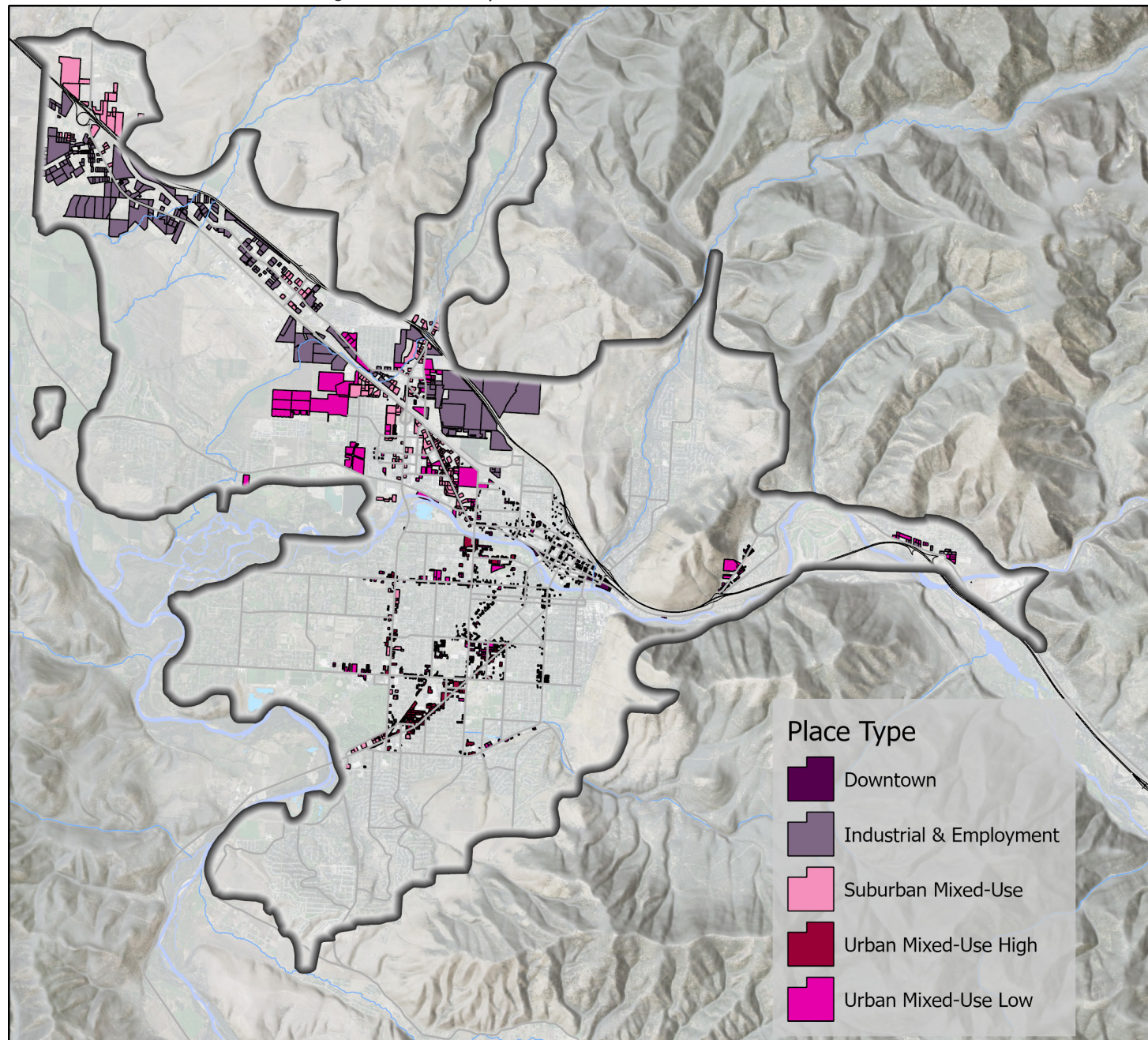
- Downtown
- Industrial & Employment
- Suburban Mixed-Use
- Urban Mixed-Use High
- Urban Mixed-Use Low

Developable Commercial Lands | Economic Projections

Large tracts of developable land for commercial uses still exist along the fringes of the urban area. The largest amount of developable land exists in the Sx^{mt}payen Area, Wye region, and part of the Northside Neighborhood known as the North Reserve Scott Street Master Planned area.

Smaller parcels that have the potential to be redeveloped or developed exist along major and minor arterials such as North Reserve Street, Brooks Street, and West Broadway. The more developed downtown region also has smaller parcels with the potential of redevelopment. Parcels known as the Riverfront Triangle, Sleepy Inn, and the site of the old Missoulian Building are just a handful of sites for potential redevelopment of parcels that can serve as employment and commercial service centers. Figure E6 shows the location of these parcels and the land use designation that they fall under.

Figure E6: Developable Parcels for Commercial Uses



Source: Montana Department of Revenue & City of Missoula

Employment Capacity | Economic Projections

The Floor Area Ratio (FAR) and average square footage per employee by Place Type is used to determine the number of employees that can be accommodated within the potential developable or redevelopable lands inside of the Growth Policy boundary. Using these calculations, the Land Use Plan area has the capacity to accommodate the number of employees expected based on population increases. If current building and planning practices continue into the future then the area has the capacity to accommodate approximately 26,467 new employees. Figure E6 shows this relationship and how the calculations were used to determine the capacity of each Place Type.

Figure E7: Place Type Employee Prototype

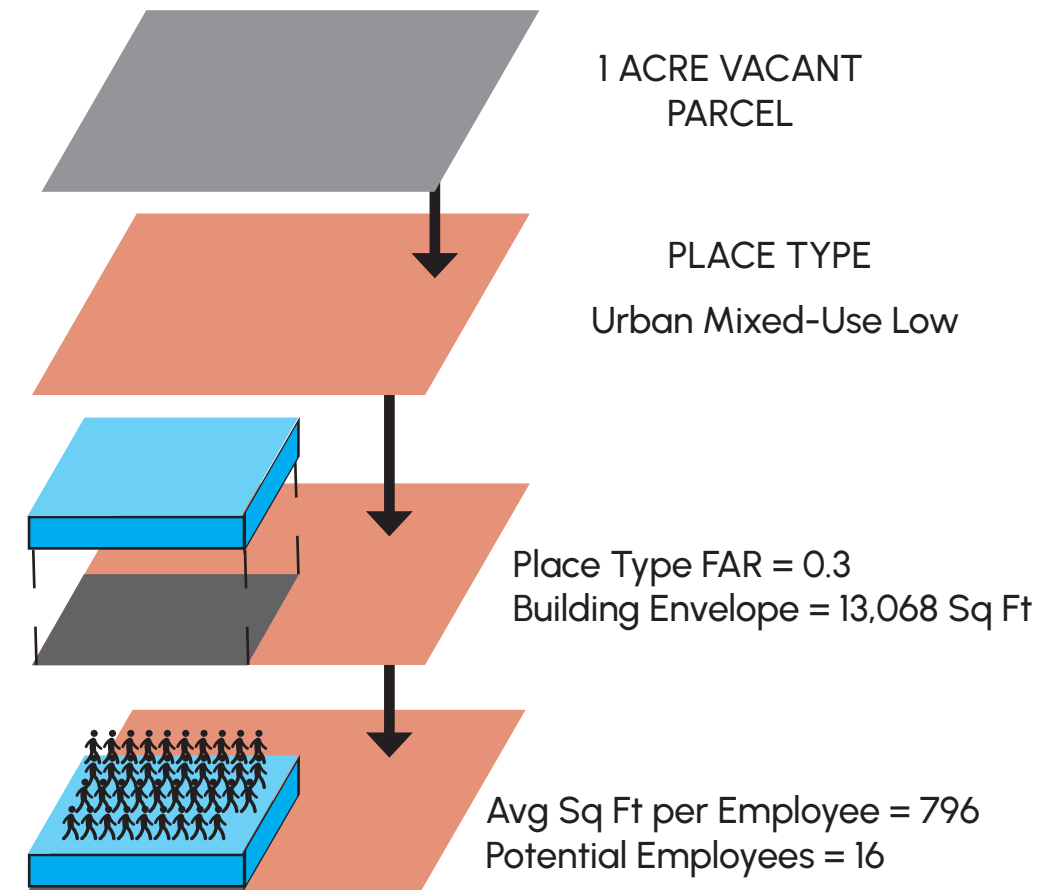


Table E13 shows the capacity of each Place Type in terms of employment potential based on current development patterns. If development patterns change and the Floor Area Ratio for employment centers increases then the employment capacity of the Land Use Plan area will also increase.

Table E13: Land Use Employment Capacity

Land Use	Total Developable Acres	Avg. SqFt per Employee	Avg.FAR	Employment Capacity
Downtown	81.92	501	0.9	5,703
Industrial & Employment	866.45	942	0.05	5,852
Suburban Mixed-Use	633.46	810	0.2	5,568
Urban Mixed-Use High	273.03	509	0.33	4,379
Urban Mixed-Use Low	597.38	796	0.3	11,582
TOTAL	2,452.24	712	0.34	33,084

TAKING OUT 20% DUE TO RESIDENTIAL DEVELOPMENTS 26,467

Source: LODS Datasets & City of Missoula

Constraints to Economic Development | Economic Projections

The City of Missoula has partnered with the Missoula Economic Partnership (MEP) which has in turn developed the [Missoula County Comprehensive Economic Development Strategy \(CEDS\)](#). The 2021 document outlined the main constraints to economic development within Missoula County which are listed below:

Housing cost and availability

As stated in the Projected Housing Needs section of this report, the Land Use Plan area has underproduced between 2,700-3,700 residential units as of 2021. This has impacted the ability of commercial development by constraining workers' ability to live within the Land Use Plan area and has negatively impacted the ability of new businesses to attract the workforce necessary to thrive in the area.

Workforce skill and availability

Housing demand within the Land Use Plan area has significantly increased since 2015. This has inhibited population growth. Stagnant or non-competitive wages when compared to nation-wide averages have also impacted the ability of commercial enterprises to attract a skilled workforce necessary for the growth of industry sectors such as Information, Scientific and Professional Services, Education Services, and Healthcare and Social Assistance.

Rising costs of goods and materials

Inflation has caused an increase in goods and materials necessary to businesses nationwide and within the Land Use Plan area. This affects not only new commercial development but also goods needed to manufacture products and the supply of residential units needed to house the necessary workforce.

Declining availability of office and industrial sites

Compared to past development trends there are not as many sites for redevelopment or initial development within the Land Use Plan area for commercial development. However, the analysis described in the Developable Commercial Land section of this report indicates that there is enough land available to accommodate the growing population and economic needs of the Land Use Plan area.

Limited transportation and access to international markets

Being a remote city, the Land Use Plan area does not have ready access to international markets. However, as lined out in the [Long-Range Transportation Plan](#), new infrastructure improvements including Transit routes, bike paths, and roadway improvements will increase capacity on multi-modal and car transportation corridors.

The Missoula Montana Airport (MSO) is also going through improvements in the upcoming years which will increase freight and passenger capacity at this regional hub. The master planning process for airport improvements is currently underway and will become available as soon as March 2024.

Complex local and state government regulations

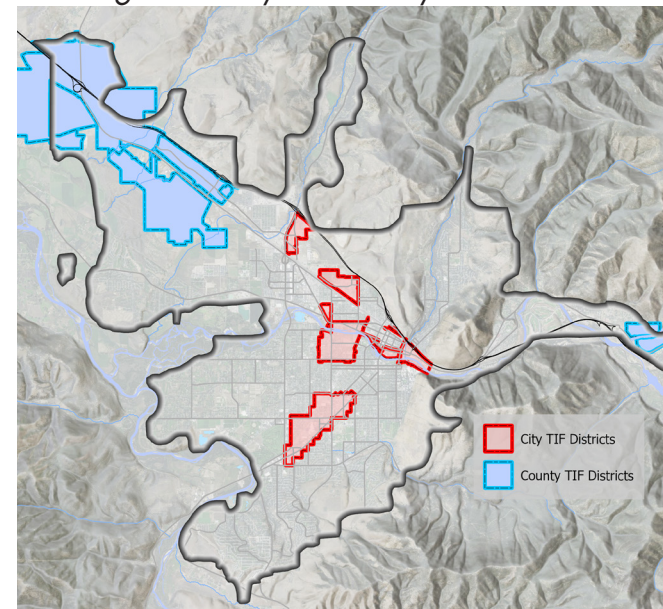
State and local regulations regarding commercial development can have a large impact on where a business can be located, which can ultimately have an impact on its viability of succeeding. The City of Missoula is undergoing an update to its development code and looking at areas where all its regulations and code can be simplified so that developers will have more transparency on what can be developed and where.

Economic Feasibility | Economic Projections

The City of Missoula has several different ways to spur economic development within the Land Use Plan area. One way that the City spurs on economic development is financially supporting organizations such as Missoula Economic Partnership, Missoula Downtown Organization, and the Midtown Association. These organizations provide funding, support, and master planning documents regarding specific areas and industries within the Land Use Plan area and greater region.

A more direct way of spurring on economic development in specific regions of the Land Use Plan area is through Tax-Increment Financing (TIF). TIF is a redevelopment tool that allows cities and counties, through creation of special districts (Urban Renewal, Industrial Infrastructure, Technology Infrastructure, and Aerospace Transportation) to make public improvements within those districts that will improve the quality of life as well as generate private-sector investment. In 2013, the Montana Legislature combined the latter three districts above into "Targeted Economic Development Districts." *Figure E8* shows the TIF districts within the Land Use Plan area that the City of Missoula and Missoula County maintains.

Figure E8: City and County TIF Districts



Source: City of Missoula and Missoula County

TIF does not increase property taxes. Rather, it only affects the way that new taxes, once collected, are distributed. At the creation of a TIF district, the tax base is "frozen" at the pre-district level. Property taxes continue to be paid, but taxes derived from increased assessed values (the tax increment) resulting from new development are reinvested in the district to leverage future growth. TIF is one of the few mechanisms that local governments have to encourage investment and to diversify tax base. The creation of a TIF district fosters thoughtful land use planning. The enabling statutes specifically indicate that TIF districts must be found to be in accordance with a jurisdiction's Growth Policy and associated zoning regulations.

Counties may only form Targeted Economic Development TIF Districts (TEDDs) which are based on providing infrastructure for "value-adding" industries that create new jobs. Incorporated municipalities may create both TEDDs

and Urban Renewal TIF Districts which are intended to promote private redevelopment of urban areas subject to conditions defined in state law as "blight." Montana state law requires that all TIF districts expire 15 years following their adoption unless there are outstanding bonds for which tax increment has been pledged. In that case, the District must continue to exist until the bonds are paid off.

The City of Missoula also supports economic development through two federal grant funding streams that it uses to support local redevelopment and economic development projects. The Community Development Block Grant program, funded by the U.S. Department of Housing & Urban development and received on a formula basis annually, is used to target and support housing and consumers through programs operated by subrecipient organizations. The City uses the Brownfields program, funded by the Environmental Protection Agency, to target the environmental assessment and cleanup of underutilized properties within the city limits to spur reuse and redevelopment.

In addition to local resources and investments to spur economic growth, local businesses, often with the Missoula Economic Partnership serving as a liaison, take advantage of statewide economic development resources. These include Big Sky Economic Development Trust Fund Grants, Incumbent Worker Training Grants, state Community Development Block Grants, and access to financial capital through our state and local Community Development Finance Institutions.

Natural Resources

From the late 1800s, when the first western settlements were established in the Land Use Plan area until the 1970s, natural resource utilization and extraction were the primary economic drivers within the region. The prevalent resource that was extracted in and around the region was timber. From the 1970's until the present, the local economy has transitioned into healthcare, education, arts & entertainment, and a retail based economy.

In the last 50 years, the resources that the Land Use Plan area and surrounding natural environment provide through recreation use have become more of a priority than the resources that can be extracted from it. Local government and private organizations have partnered to conserve and provide access to public lands, including natural areas like Mount Dean Stone, Marshall Mountain, and the Bluebird Preserve. This has provided the Growth Policy area there are roughly 110 miles of trails and 7,190 acres of public lands.

1 Agricultural Lands and Water Users

Neighborhoods with Agricultural Land Designations:
Sx^wtpqyen Area, Grant Creek, Upper Rattlesnake, Orchard Homes, Miller Creek, and Wye

2 Agricultural Land Development

39% of new residential development (2016-2022) occurred on Prime Farmland if Irrigated
23% of new residential development (2016-2022) occurred on Farmland of Local Importance

3 Forestry Lands

374 acres within the Land Use Plan area classify as Forestry Lands
All are being utilized as Open Space or Public Lands

4 Sand & Gravel

Land Use Plan area has 3 active Gravel Pits
Land Use Plan area has very accessible sand and gravel deposits due to GLacial Lake Missoula

5 Mineral Deposits

No active mines within the Land Use Plan area
19 historical mining sites that are inactive as of 2023

6 High Groundwater

High Groundwater exists along the creeks and rivers within the Land Use Plan area

7 Aquifer

The Land Use Plan area consists of 3 different types of aquifers
Missoula has an EPA designated sole-source aquifer.

8 Natural Resources & Economy

Mining, Oil, and Gas Extraction industry has the lowest number of employees within the area
Resource Extraction industry has grown by 13 jobs from 2015-2021

Agricultural Lands & Water Users | Natural Resources

The Natural Resources Conservation Service (NRCS) provides a mapping program that identifies whether an area is designated as Prime Farmland. This land is designated by the US Department of Agriculture (USDA) Farmland Protection Act by identifying areas that have the best physical and chemical characteristics to enable food production on it.

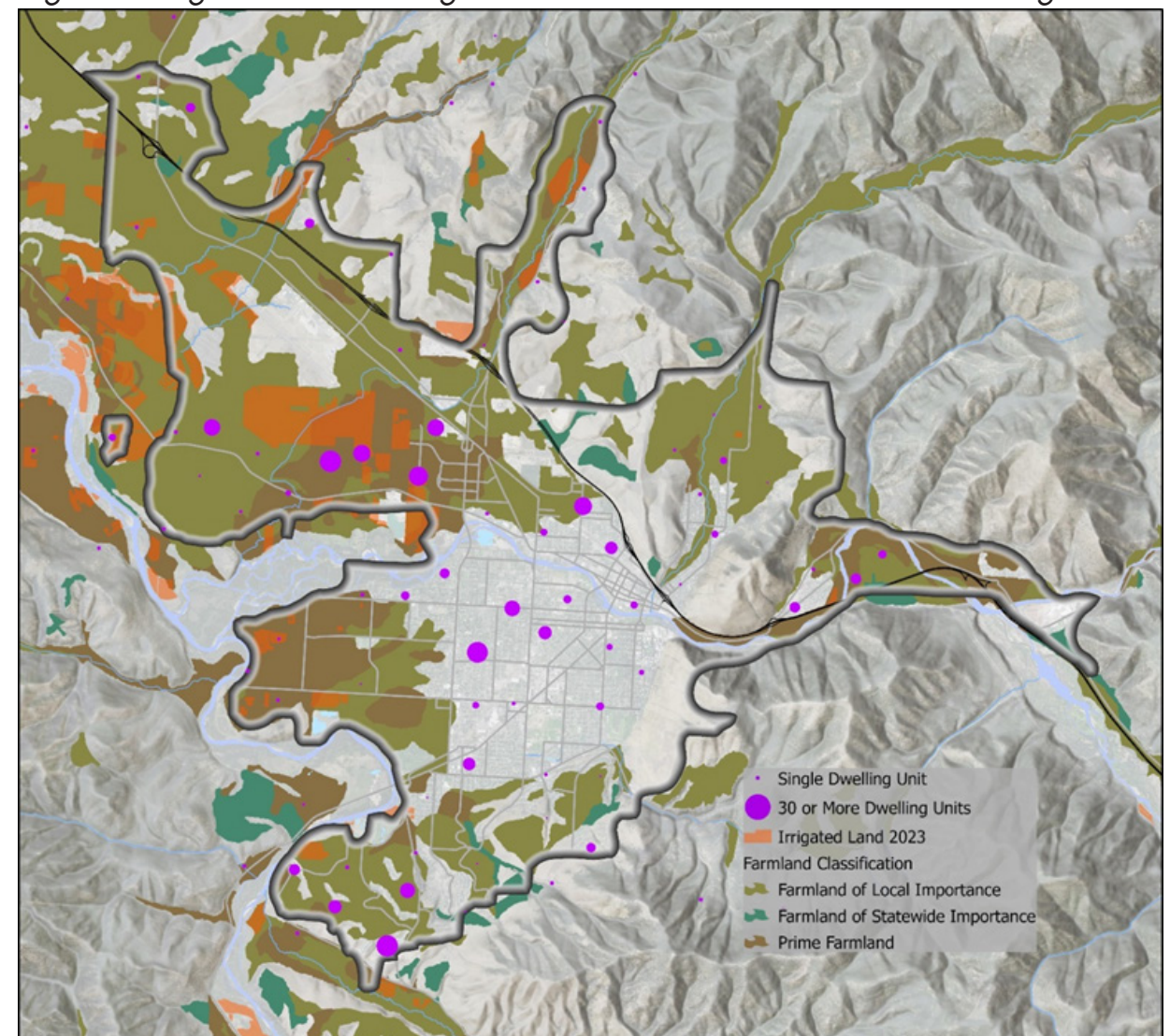
Lands designated with these farmland classifications does not mean that it is being utilized as such. Because of the region's arid landscape, irrigated lands provide insight into how this much land is used as farmland within the area. Since 2015, 39% of all new residential units have been built on land designated by the USDA Farmland Protection Act as prime farmland. However, over 90% of those permitted units are not located on land that was being irrigated or utilized as farmland. Table NRI provides further breakdown of residential building permits that have been permitted on land designated by the Farmland Protection act.

Land Designation	% of New Units
Prime Farmland	39%
Not Prime Farmland	37%
Farmland of Local Importance	23%
Farmland of Statewide Importance	< 1%

Source: NRCS, 2016-2022 Residential Building Permits

Figure NRI below depicts agricultural soils as designated by the Farmland Protection Act with Irrigated Land and Residential Building Permit Activity from 2016-2022 overlaid on top.

Figure NRI: Agricultural Land, Irrigated Land and 2016-2022 Residential Building Permits



Source: NRCS, 2016-2022 Residential Building Permits, Ketchum, D., Jencso, K., Maneta, M.P., Melton, F., Jones, M.O. and Huntington, J., 2020. IrrMapper: A machine learning approach for high resolution mapping of irrigated agriculture across the western US. Remote Sensing, 12(14), p.2328.

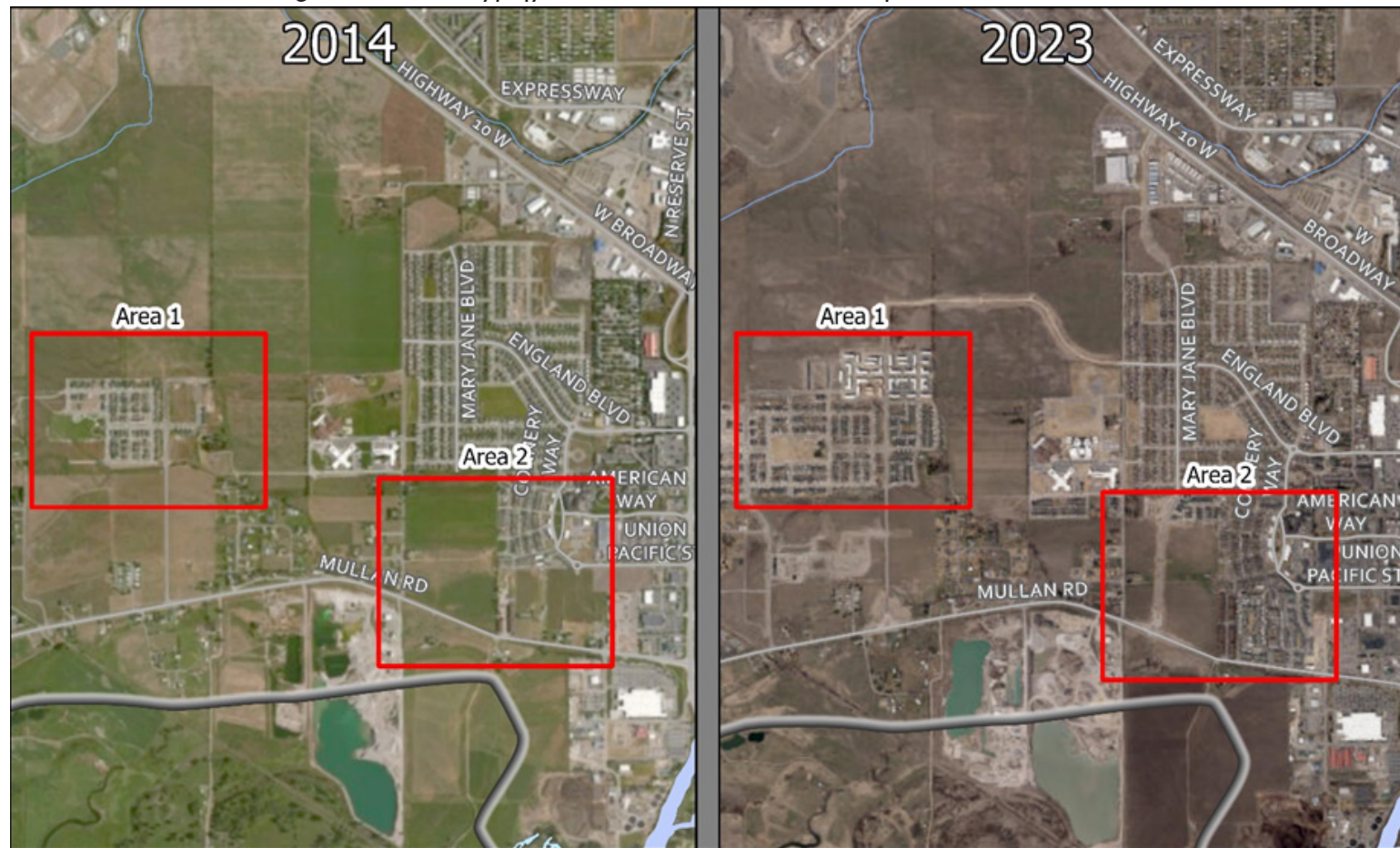
Development & Agricultural Lands | *Natural Resources*

The majority of residential development on vacant or under-utilized farmland is primarily occurring in the Sx^wtpqyen and Miller Creek areas. *Figure NR2* below illustrates the transformation of the Sx^wtpqyen area. The image on the left was taken 2014, before the 2015 Growth Policy adoption and the image to the right was taken Spring 2023, after the adoption of the Sx^wtpqyen Master Plan and Form-Based Code.

Area 1 has been designated as Prime Farmland by the NRCS and USDA. This area has been converted from potential agricultural uses into single family homes and a large multi-dwelling apartment complex with over 500 units. This has happened over the course of approximately 10 years and is part of a master planned area to provide additional development in the future.

Area 2 has been designated as Prime Farmland as well as Farmland of Local Importance by the NRCS and USDA. The eastern half of this area has been converted into multi-dwelling apartment complexes and condominiums accounting for just over 900 dwelling units. The rest of Area 2 that is vacant as of 2023 is planned to be developed into residential units in the near future.

Figure NR2: Sx^wtpqyen Area Residential Development 2014 to 2023

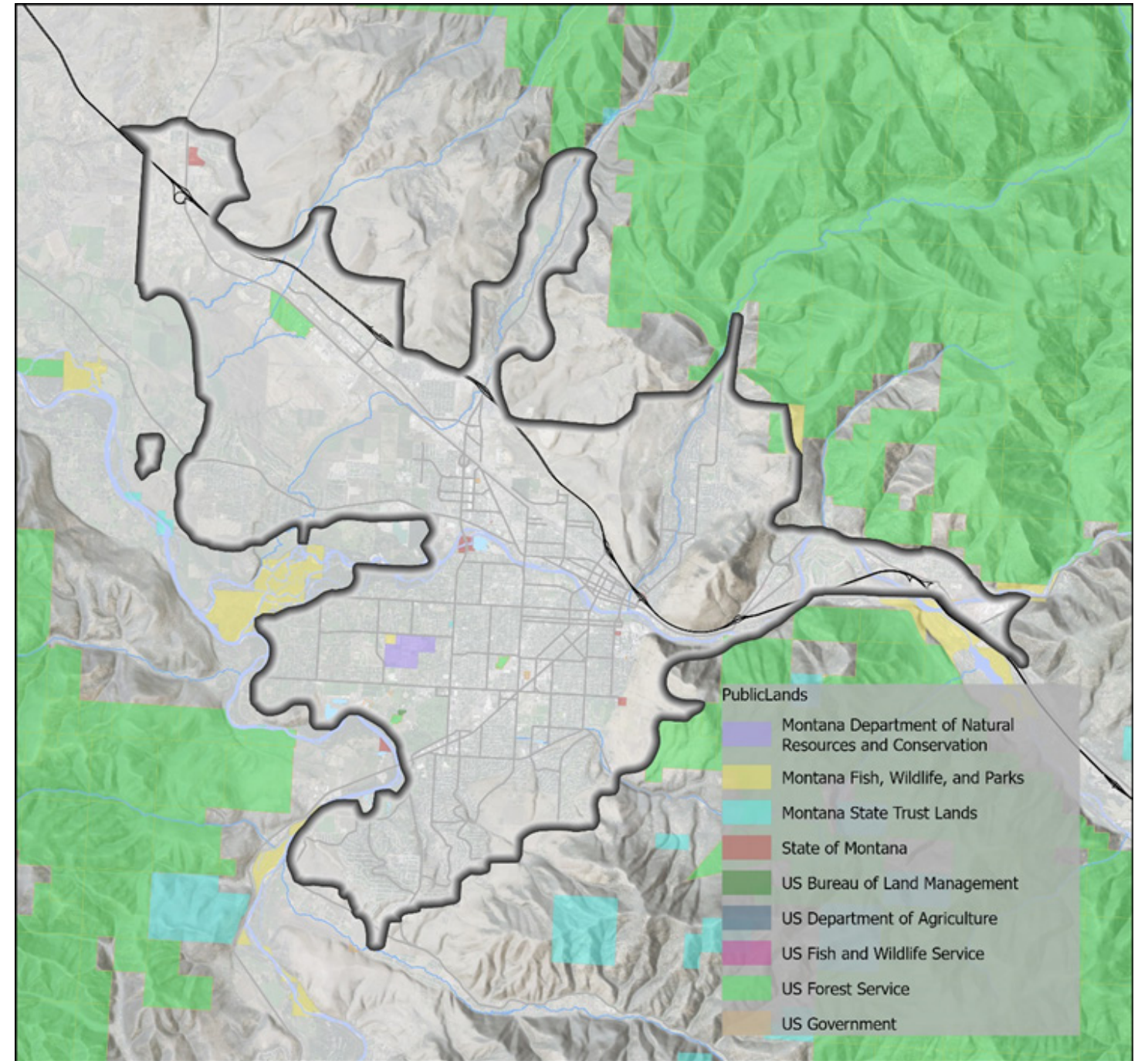


Source: ESRI Way Back Imagery

Forestry Lands | *Natural Resources*

The map of vegetation classes of the Land Use Plan area as shown in the Natural Environment section does not contain extensive forests available for logging. The area surrounding the Land Use Plan area contains many acres owned by government agencies and private logging companies that can be utilized for logging and timber resources. This is visualized in *Figure NR3* below.

Figure NR3: Forestry Lands by Ownership



Source: Montana State Library Cadastral Service

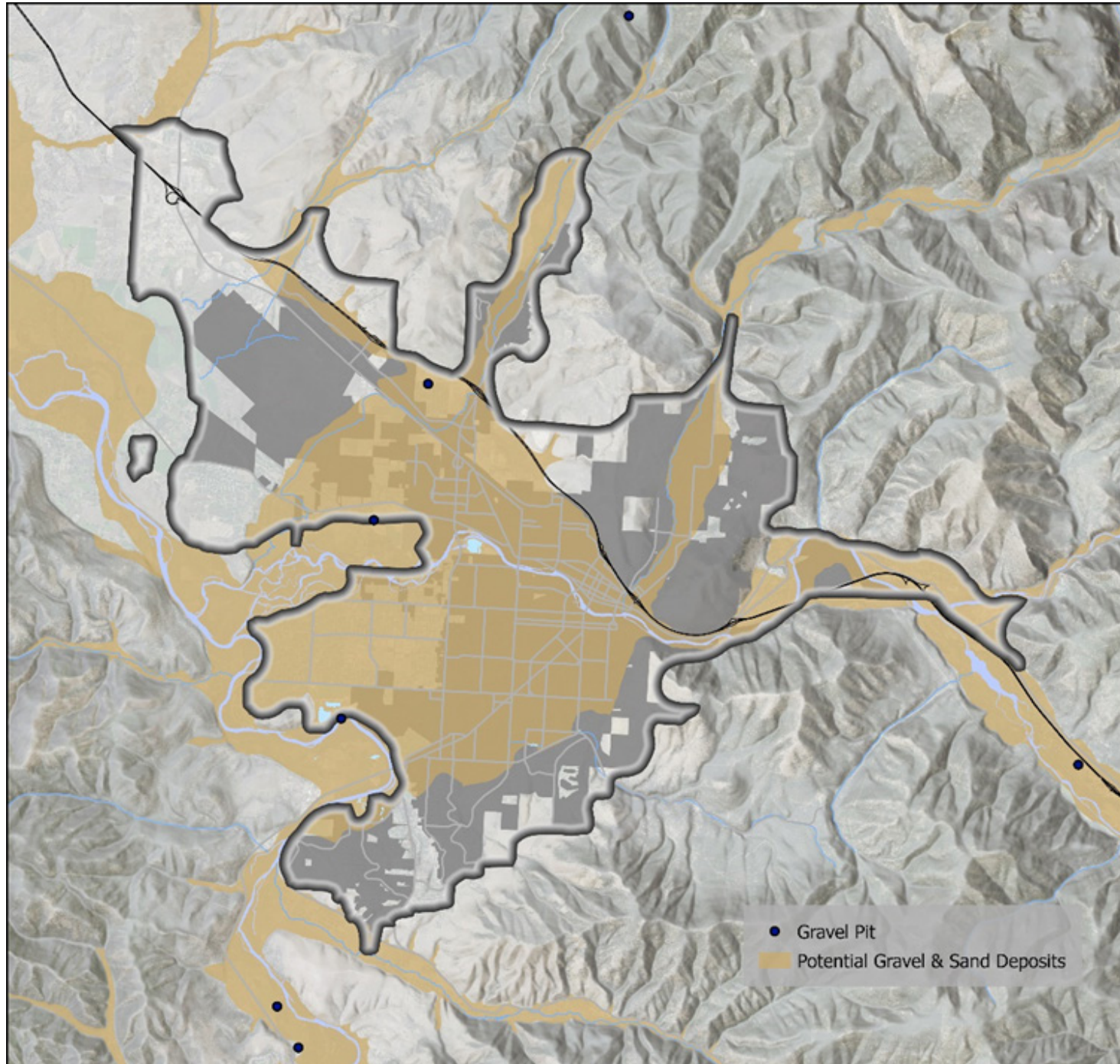
Forest land is defined as contiguous land of 15 or more acres in one ownership that can produce commercial quantities of timber and is producing. The Land Use Plan area currently has 4 parcels that meet these criteria totaling 374 acres but are not currently being used for timber production and is instead being used as open space and for recreational purposes.

Sand & Gravel | Natural Resources

Nearly 15,000 years ago Glacial Lake Missoula extended well-beyond the Land Use Plan area, southwards into the Bitterroot Valley and west to near the Idaho border. This ice age lake resulted in a rich lakebed that has left behind large and easily accessible deposits of sand and gravel within the region.

Figure NR4 below shows the extent of potential gravel and sand deposits within the Land Use Plan area as well as gravel pits that are still active within the region. Other, inactive gravel pits are shown as inactive mines in the following Mineral Deposits section.

Figure NR4: Potential Sand & Gravel Deposits



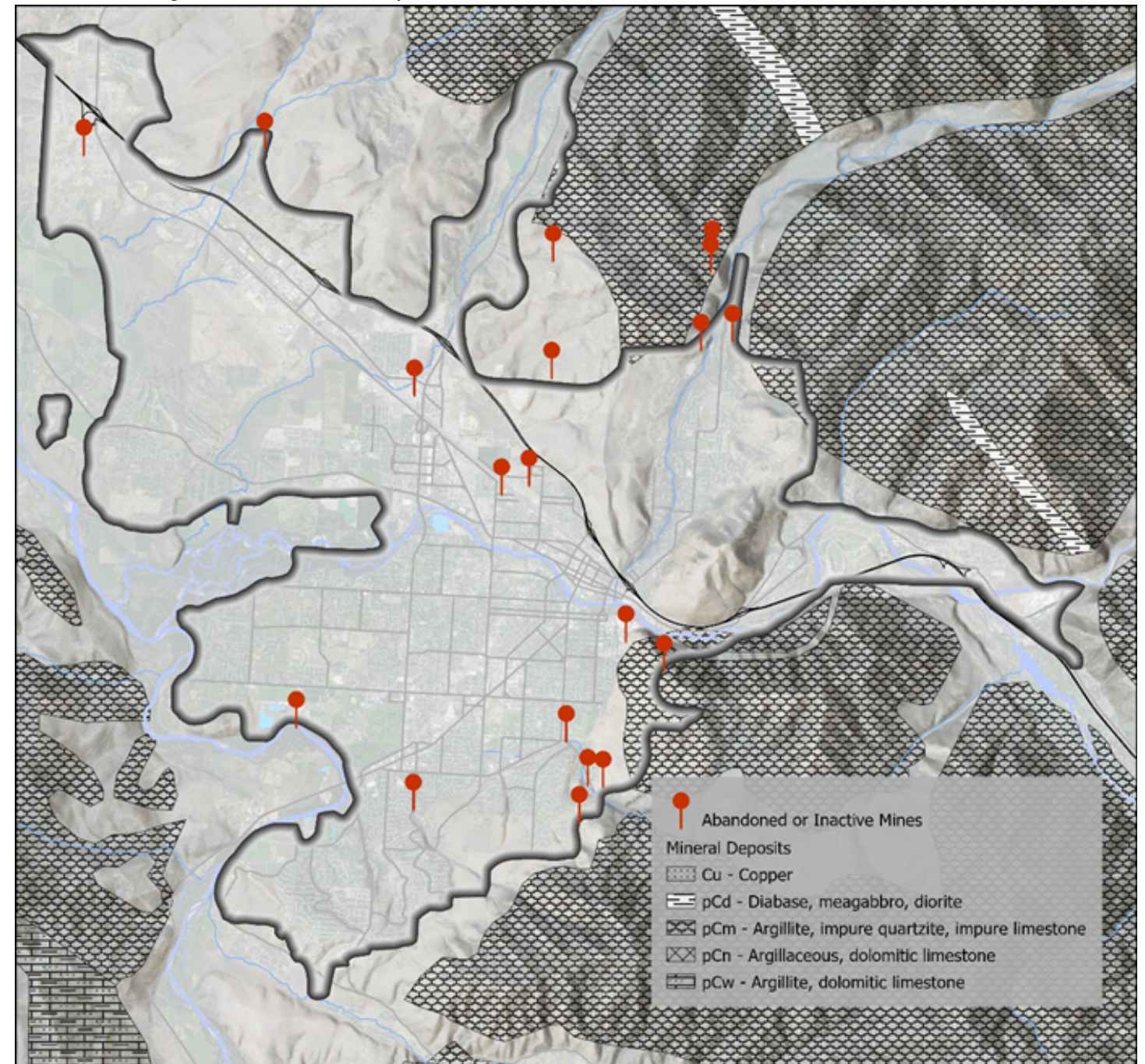
Source: US Geologic Survey & Montana Department of Environmental Quality

Mineral Deposits | Natural Resources

There are few geologic features within the region that are suspected to contain valuable mineral resources. The primary bedrock within the Land Use Plan area is sedimentary rock, which often has little to no value.

Shown on Figure NR5 below are rock types in the region that may contain valuable mineral resources. Two small portions of pCm deposits, containing Argillite, impure quartzite, and impure limestone, exist within the eastern and northeastern sections of the Land Use Plan area. Also shown on the map are abandoned or inactive mine sites which produced commodities in barium, clay, coal, gold, lead, pumice, zinc, and or sand/gravel. These sites did not produce enough of these commodities to justify continuing, which is why they are abandoned today. There were 19 total mine sites within or just outside of the Land Use Plan area.

Figure NR5: Mineral Deposits and Mines in and around the Land Use Plan area



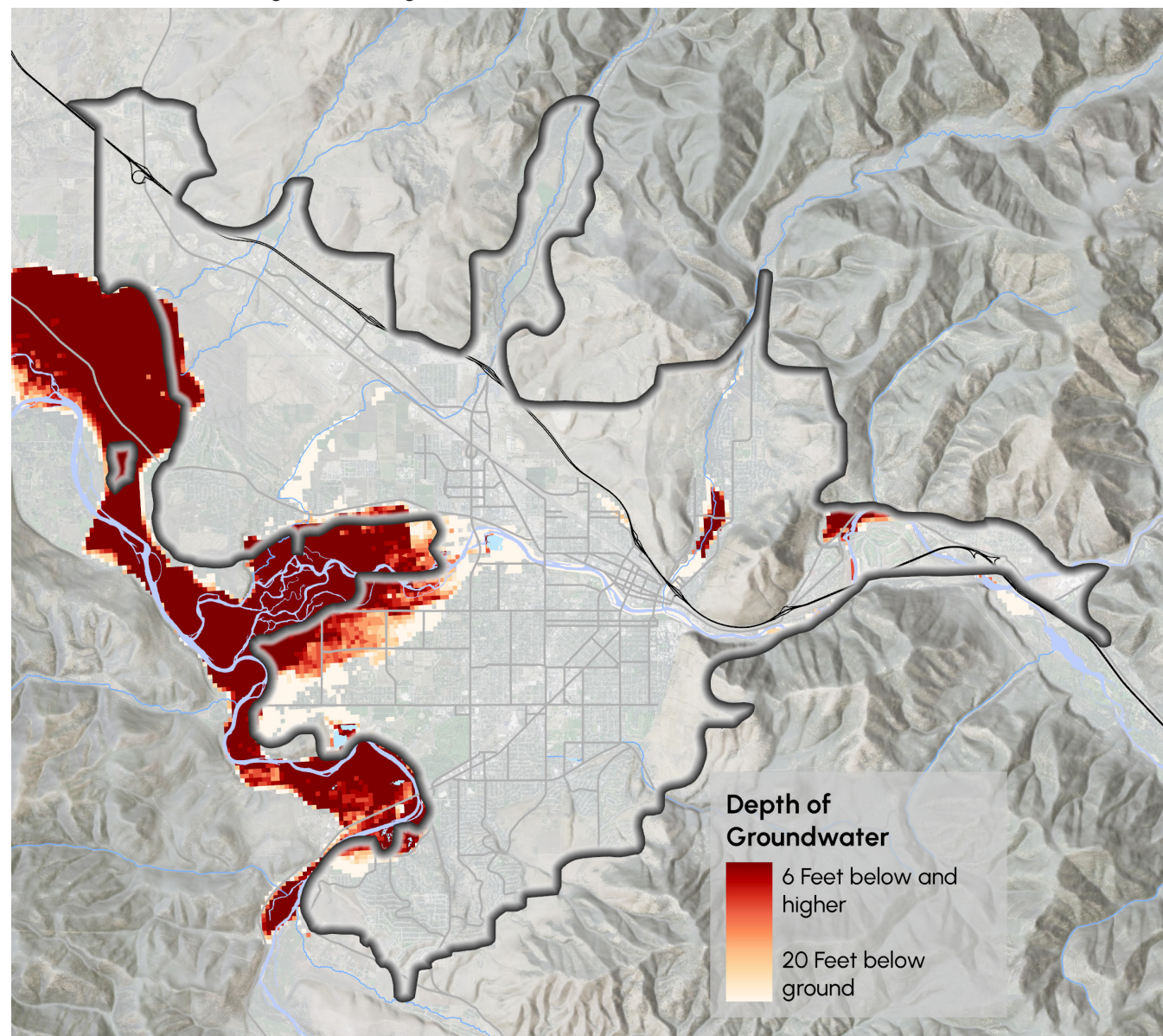
Source: US Geologic Survey and Montana Bureau of Mines and Geology

High Groundwater | Natural Resources

Because the Land Use Plan area has multiple rivers and creeks running through it, there are several parts with high groundwater potential. Developing in areas where groundwater is less than 20 feet below the surface can be problematic due to the engineering, environmental, and health challenges it poses. Typical issues associated with development in high groundwater areas include:

- Flood Risk and Drainage Issues: Large impervious surfaces can exacerbate flooding when water is unable to percolate further into the ground, increasing the potential for waterlogging.
- Foundation Stability: Persistently waterlogged soils can affect the stability of foundations, increasing the likelihood of structural damage over time.
- Basement/Crawlspace Construction: This is particularly challenging when groundwater is higher than 15 feet below the surface. The City of Missoula has subdivision and code requirements that prohibit basements or crawlspaces in areas where high groundwater levels could impact them.
- Infrastructure Impacts: High groundwater can damage septic systems or wastewater lines, posing health risks if contaminants leach into groundwater and affect the Land Use Plan area's drinking water.
- Environmental Concerns: Creating large impervious surfaces over areas with high groundwater can disrupt natural water cycles, reducing the filtration process that helps clean water before it reaches surface water or the aquifer.

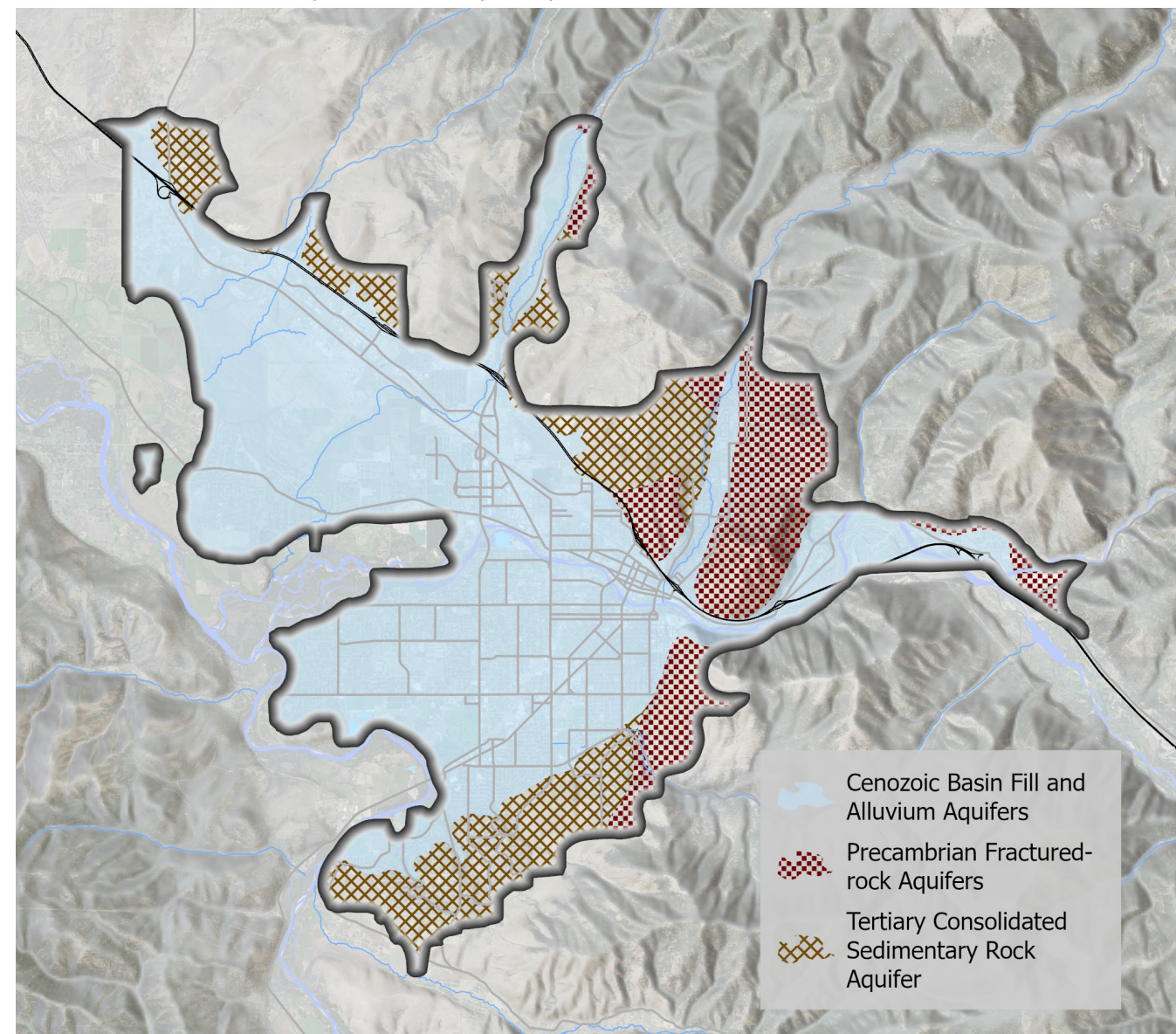
Figure NR6: High Groundwater within the Land Use Plan area



Source: City of Missoula

Aquifers | Natural Resources

Figure NR7: Principal Aquifers in the Land Use Plan area



Source: USGS & City of Missoula

The Missoula Valley Aquifer is a very pure source of clean water. Because it is constantly being replenished by the Clark Fork River, Bitterroot River, and Rattlesnake Creek it is not immediately vulnerable to drought conditions. However its relatively close proximity to the surface makes it susceptible to contamination from urban activities.

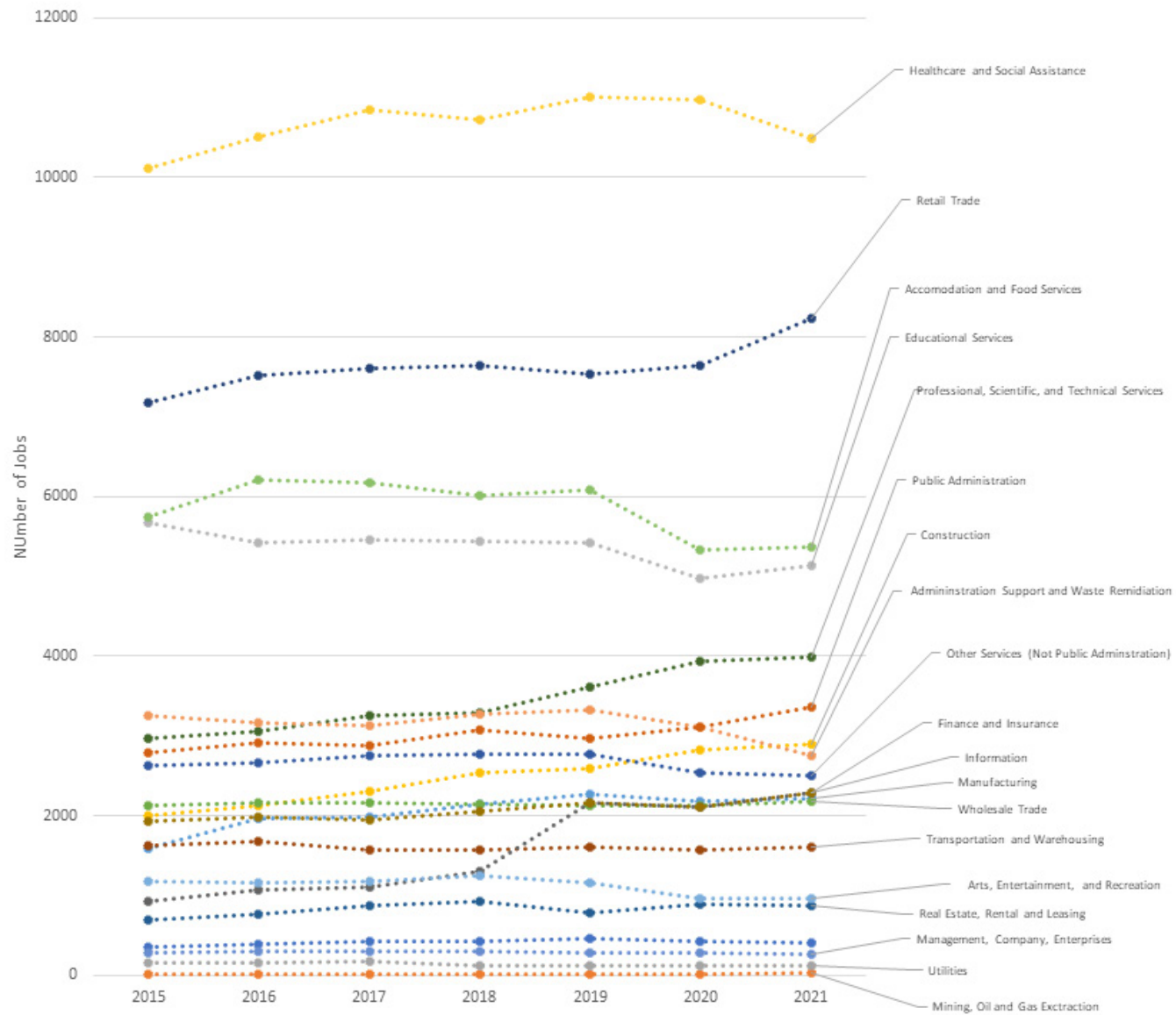
In addition to historic industrial and mining contamination of groundwater, which have been responsible for huge cleanup costs in the Missoula area, the urban area ground water is also susceptible to contamination from landfills, urban storm water runoff, septic system drain fields, spills and leakages, and household hazardous wastes. These threats however, are greatly reduced in areas serviced by sewer systems. Missoula Water routinely monitors its ground water wells which currently meet all current State and Federal contaminant requirements.

As development pushes out from this aquifer shown in blue in Figure NR7 there are more groundwater issues associated with wells in the fractured bedrock. When development occurs here wells should be tested for high levels of arsenic and nitrates in addition to testing regularly for bacteria contamination.

Natural Resources & Economy | Natural Resources

The breakdown of employment and businesses by industry is provided in the Economic Development Section of the Community Profile. Using those economic trends to extrapolate future trends in Natural Resource Utilization, the data shows that this industry of natural resource use is not expected to grow as fast as other industries that are present in the region. While the percentages of agriculture, forestry, fishing and hunting, and mining, oil, and gas extraction industries have increased minimally since the beginning of the century, other industries have increased at a much higher rate.

Chart NRI: Employment Growth in Land Use Plan area by Industry Classification



Source: Longitudinal Employer-Household Dynamics (LODES) Dataset

Tourism plays a much larger role in the City's and Missoula County's economy than the resource utilization and extraction industries. According to Destination Missoula's '22-'23 annual report, there are approximately 4,687 jobs that are reliant on people visiting the natural resources and culture that the region provides. The tourism industry brings in an economic impact of approximately \$390.4 million dollars a year into the county and brings in \$29.4 million in state and local taxes. This is an increase in revenue and jobs from the '18-'19 Destination Missoula annual report which stated that there were 3,580 jobs reliant on tourism, an economic impact of \$307 million, and approximately \$18.1 million in state and local taxes.

Natural Environment

The natural environment within the Land Use Plan area ranges from valley floors, mountain peaks, major rivers with feeder creek corridors. The following pages describe the existing natural environment, the animals that call this region home, and the human impacts to the natural environment. All of these elements play large roles in land use planning by influencing which land is used and which land is preserved in its wild state.

1 Wildlife Habitat

Neighborhoods with the Most Likely Wildlife Habitat:
Upper Rattlesnake, Bonner-Milltown, East Missoula, and Grant Creek

2 Wildland Urban Interface

FWP estimates 150-200 bears live within the Wildland-Urban Fringe
49% of all Human-Bear interactions between 2018-2021 centered around unsecured garbage

3 Endangered or Threatened Species

Endangered or Threatened Species within the Growth Policy area:
Grizzly Bears, Canadian Lynx, Wolverines, and Bull Trout

4 Migratory Birds

Over 190 Bird species live and migrate through the Land Use Plan area
Land Use Plan area is a well established migratory pathway for raptors

5 Wetland & Riparian Areas

Major riparian areas: Rattlesnake & Grant Creek, Kelly Island, and Fort Missoula

6 Natural Vegetation

Most predominant vegetation class: Herbaceous
Deciduous and Coniferous Forest classes also exist within the Land Use Plan area

7 Threats to the Natural Environment

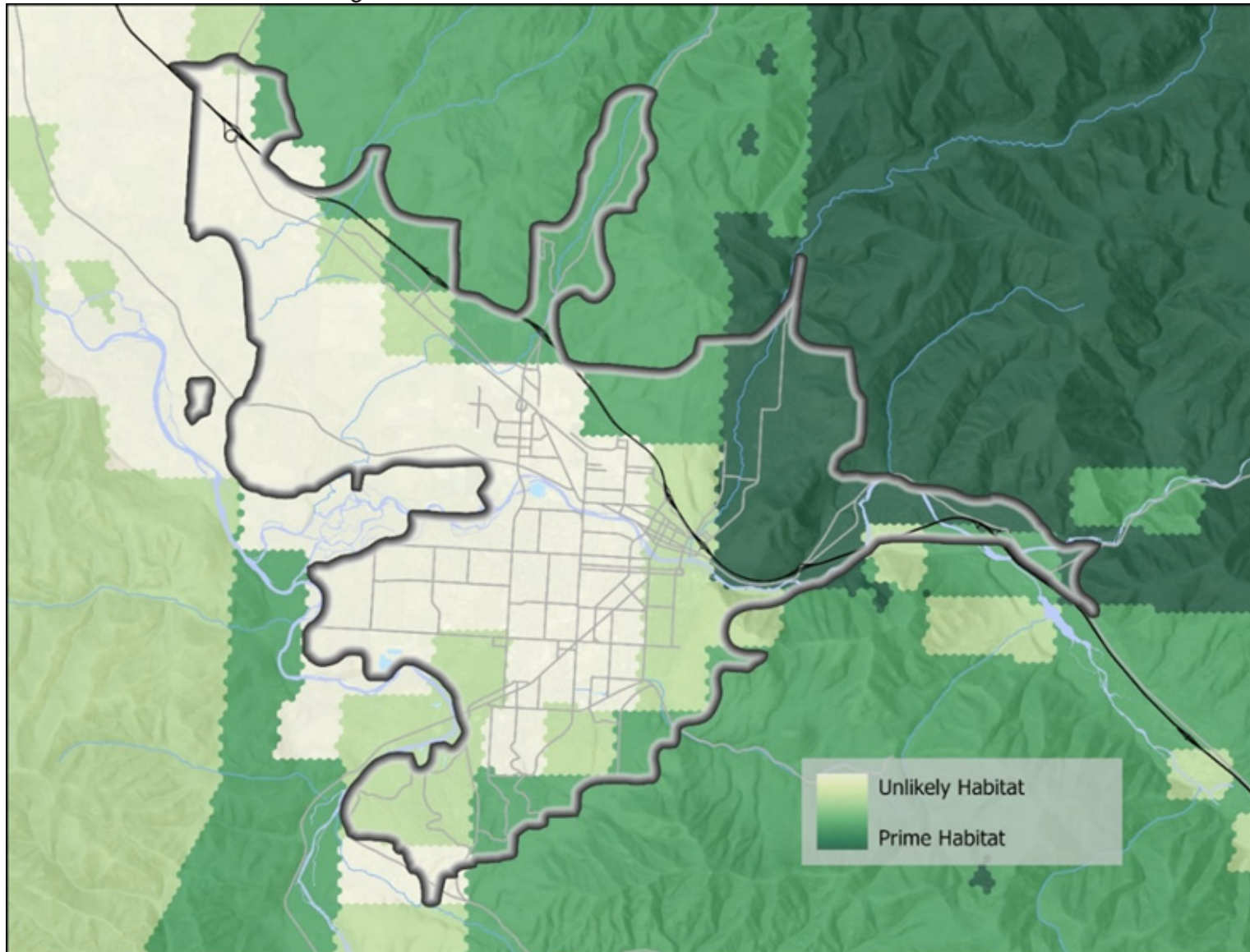
Number of Federal Superfund sites: 2
Number of State Superfund sites: 37

Wildlife Habitat | *Natural Environment*

The Land Use Plan area provides critical habitat and migration corridors to an abundance of wildlife including large carnivores, omnivores, ungulate species, and migrating birds. The majority of this habitat is located along river corridors and the edges of the region's boundary.

Figure NE1 below represents critical habitat for wildlife, including those listed above, that call this region home. The darker the color the more animals have the propensity of using that area as habitat.

Figure NE1: Wildlife Habitat within the Land Use Plan area

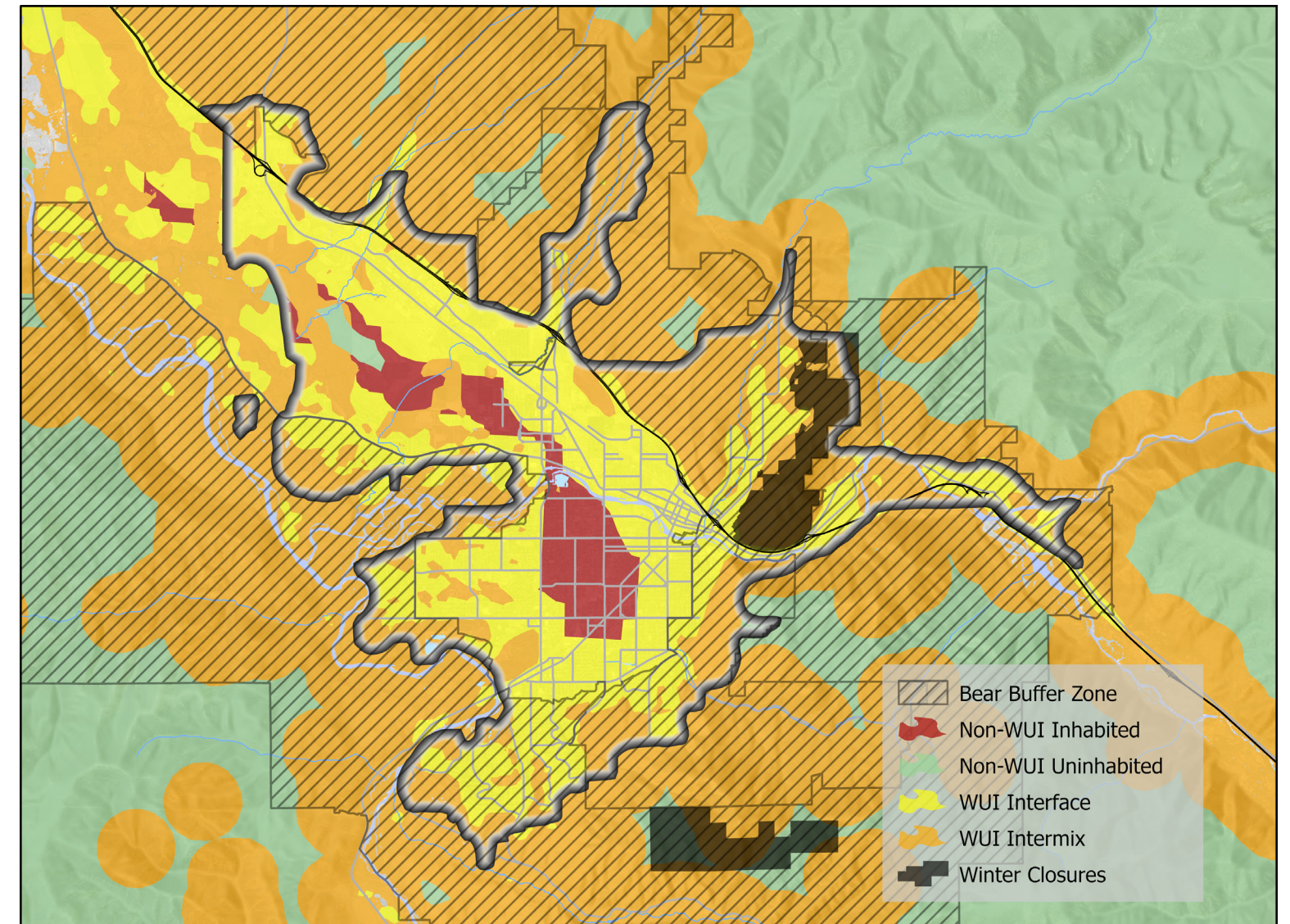


Source: Montana Fish and Wildlife

Wildland Urban Interface | *Natural Environment*

Ungulate populations live and thrive within the City's core as well as within the wildland-urban interface (WUI). These species include Big-Horned Sheep, Mule Deer, White Tailed Deer, and Elk. City protections are in place to provide elk wintering habitat that include full winter closures on Mount Jumbo and an area to the northeast of the Growth Policy area on Mount Dean Stone.

Figure NE2: Wildland Urban Interface & Bear Buffer Zone



Source: Missoula County GIS Services & US Fish and Wildlife

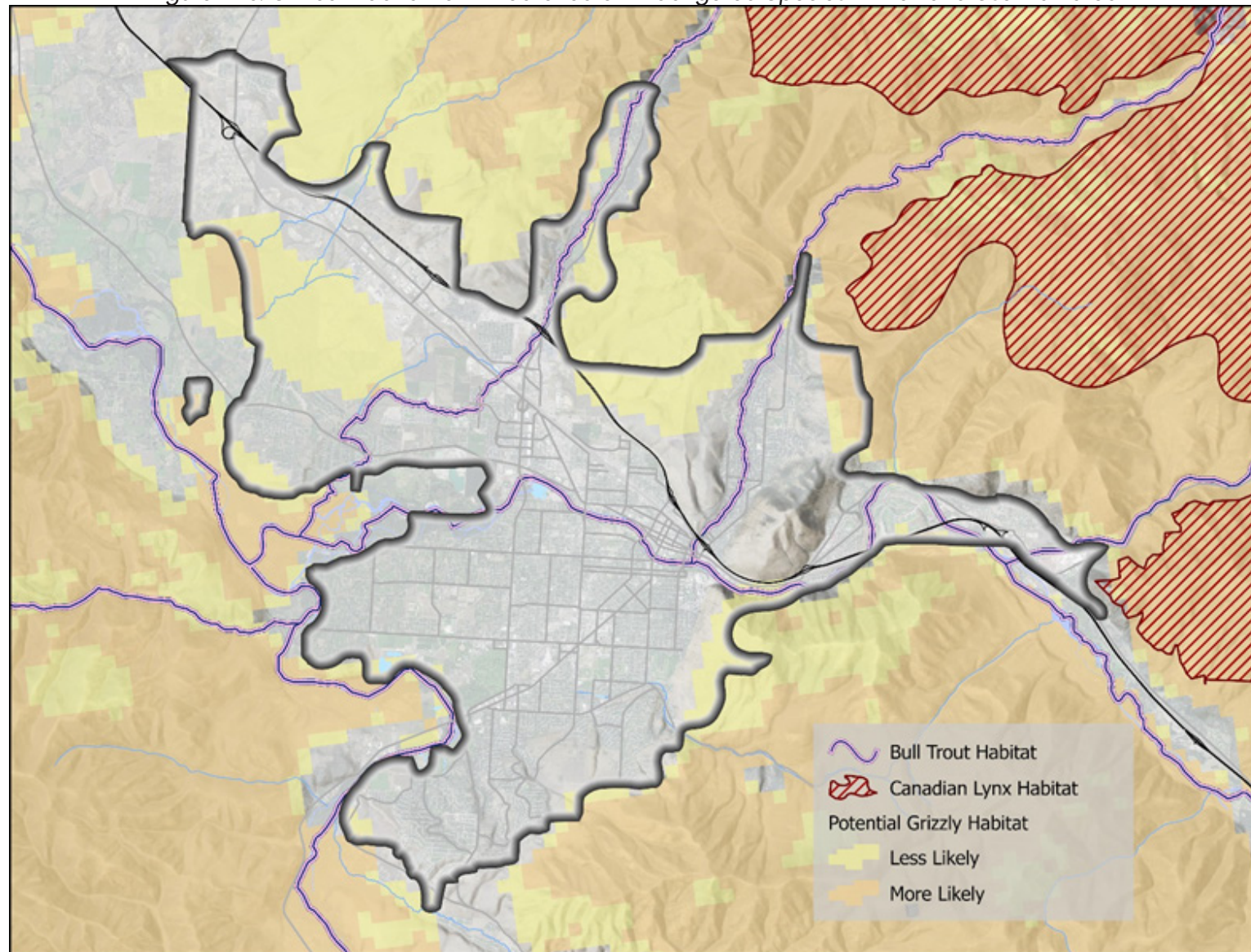
Large omnivore and carnivore species that exist within the Land Use Plan area include Grizzly Bears, Black Bears, Mountain Lions, and Wolverines. According to Montana Fish Wildlife and Parks, the population of black bears living in and around the region is estimated to be at around 150-200 bears. They reside in this area because it is part of their historic natural habitat and is plentiful in fruit trees, berries, and unsecured trash. According to the Bear Hazard Assessment, from 2018-2021 49% of all human-bear interactions centered around unsecured garbage. This prompted the City Council to adopt a Bear Smart resolution in 2022 with an update in 2023 to help protect these species and the public from any harmful human-bear interactions that may occur within the WUI. This resolution, aimed at providing awareness of bears living and traveling within residential neighborhoods, identifies what residents can do to mitigate harmful interactions with bears that migrate into and live within the region and mandates secure garbage containers in the Bear Buffer Zone.

Endangered or Threatened Species | Natural Environment

Grizzly bears, a species listed as threatened in the Endangered Species Act, do not permanently reside within the Land Use Plan area, though multiple individual bears have been documented migrating and moving throughout the surrounding area. Migration corridors have been analyzed and mapped by the US Fish, Wildlife, and Parks Service so that regional plans and development activity can allow this threatened species to expand into the territories they have historically inhabited.

Other threatened or endangered species present with the region include Bull Trout and Canadian Lynx. Critical habitat areas have been identified by the US Fish, Wildlife and Parks Service so that local and regional entities can take these species into consideration when developing policies and prescribing land uses.

Figure NE3: Critical Habitat for Threatened or Endangered Species in the Land Use Plan area



Source: US Fish Wildlife & Parks, Sells et al. (2023) modeled grizzly bear pathways based on sex in western Montana. We used Female_Directed and reclassified the top 33% of values as suitable. Reference: Sells, S. N., Costello, C. M., Lukacs, P. M., Roberts, L. L., & Vinks, M. A. (2023). Predicted connectivity pathways between grizzly bear ecosystems in Western Montana. *Biological Conservation*, 284, 110199. <https://doi.org/10.1016/j.biocon.2023.110199>

Migratory Bird Routes | Natural Environment

Both the Land Use Plan area and surrounding region provide a key piece of a much larger migratory bird highway. Migratory raptors such as the Golden Eagle, Turkey Vulture, and Prairie Falcons all inhabit this area, using it for hunting grounds and layovers on their migration paths that range from Alaska to as far south as Central America.

Waterfowl such as Canadian Geese and Tundra Swans, while not as prevalent as raptors, also use this area as a highway or stop on the way to their final destinations further south or north (depending on the time of year). The waterfowl using this area typically overwinter in the Great Basin of California and spend their summers in the arctic tundra in Alaska and Canada.

Figure NE4 below, created by the Audubon Society, utilizes data from dozens of agencies and private observations to track thousands of bird movements throughout the world. Over 190 bird species call the region home or utilize the natural environment within their migratory paths between their summer and winter grounds. This resource can be viewed in closer detail here: <https://explorer.audubon.org/>.

Figure NE4: Migratory Bird Routes over Western Montana



Source: Smith, Melanie A., John Mahoney, Erika J. Knight, Lotem Taylor, Nathaniel E. Seavy, O'Connor H. Bailey, Marco Carbone, William DeLuca, Nicolas S. Gonzalez, Miguel F. Jimenez, Gadalia M. W. O'Bryan, Nalini Rao, Chad J. Witko, Chad Wilsey, and Jill L. Depp. 2022. *Bird Migration Explorer*. National Audubon Society, New York, NY. Accessed on 10/20/2023 at birdmigrationexplorer.org.

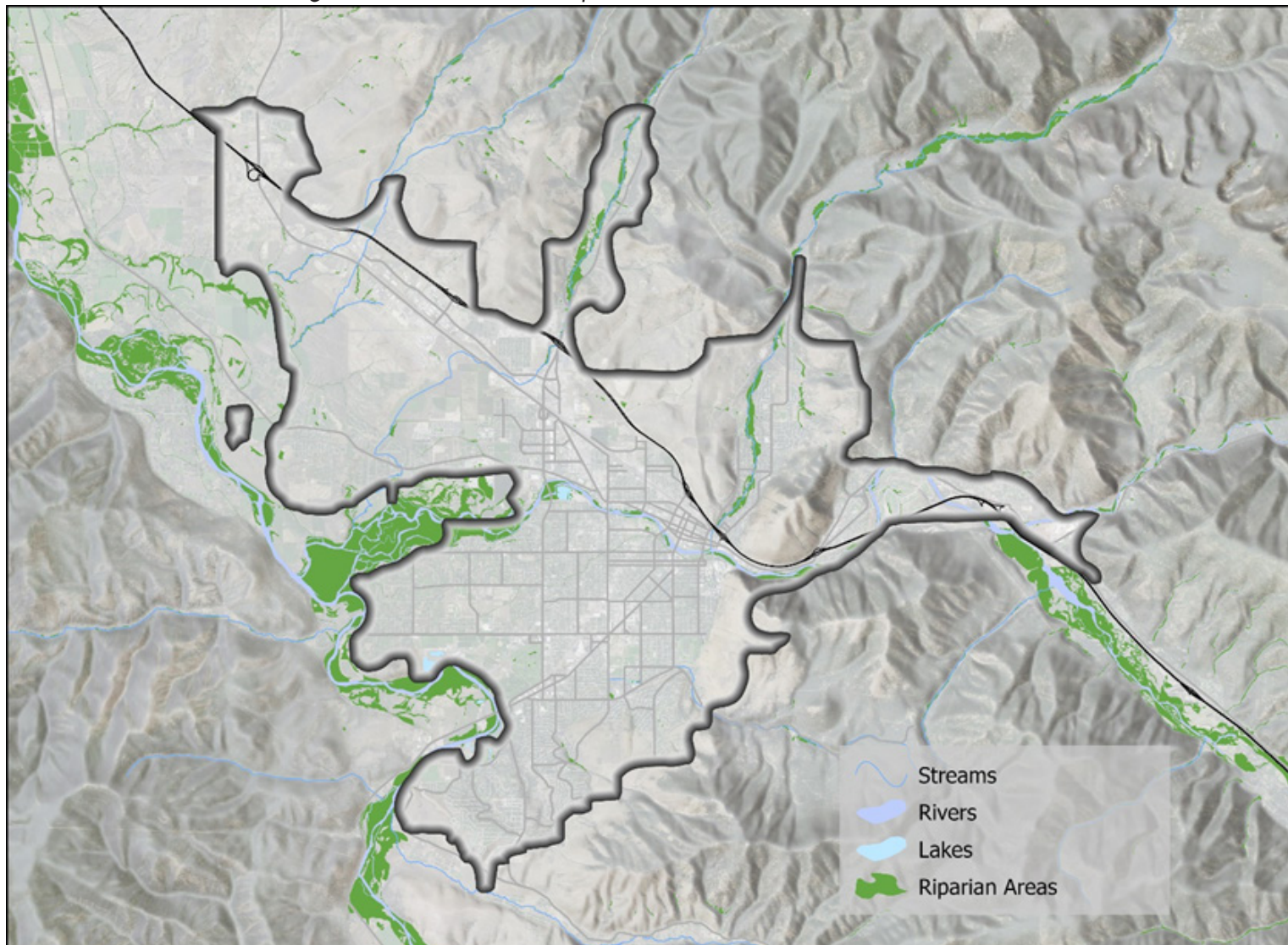
Wetland & Riparian Areas | Natural Environment

Riparian and wetland areas within and around the Land Use Plan area provide numerous benefits to the residents of the area. They provide wildlife corridors and habitat, recreational opportunities like hiking, fishing, and hunting, and because of their ability to store water, they also provide protection to residents and development from flooding and drought related disasters.

The riparian corridors of the Rattlesnake Creek, Grant Creek, Clark Fork River, and Bitterroot River provide excellent habitat and corridors for movement of large carnivores such as black bears, grizzly bears, and mountain Lions. Riparian areas around the Growth Policy Region provide both nesting and migratory habitat for over 178 species of birds. There are also 11 Bat species present in the region, seven of which are listed as species of concern, that rely on these riparian corridors to hunt and nest.

Figure NE5 showcases riparian corridors within the region. For more information on the unique classifications of these areas, please visit the Montana Natural Heritage Program's website: [Montana Wetland and Riparian Mapping Center \(mtnhp.org\)](https://www.mtnhp.org/)

Figure NE5: Wetland and Riparian Areas within Land Use Plan area



Source: Montana Natural Heritage Program

Natural Vegetation | Natural Environment

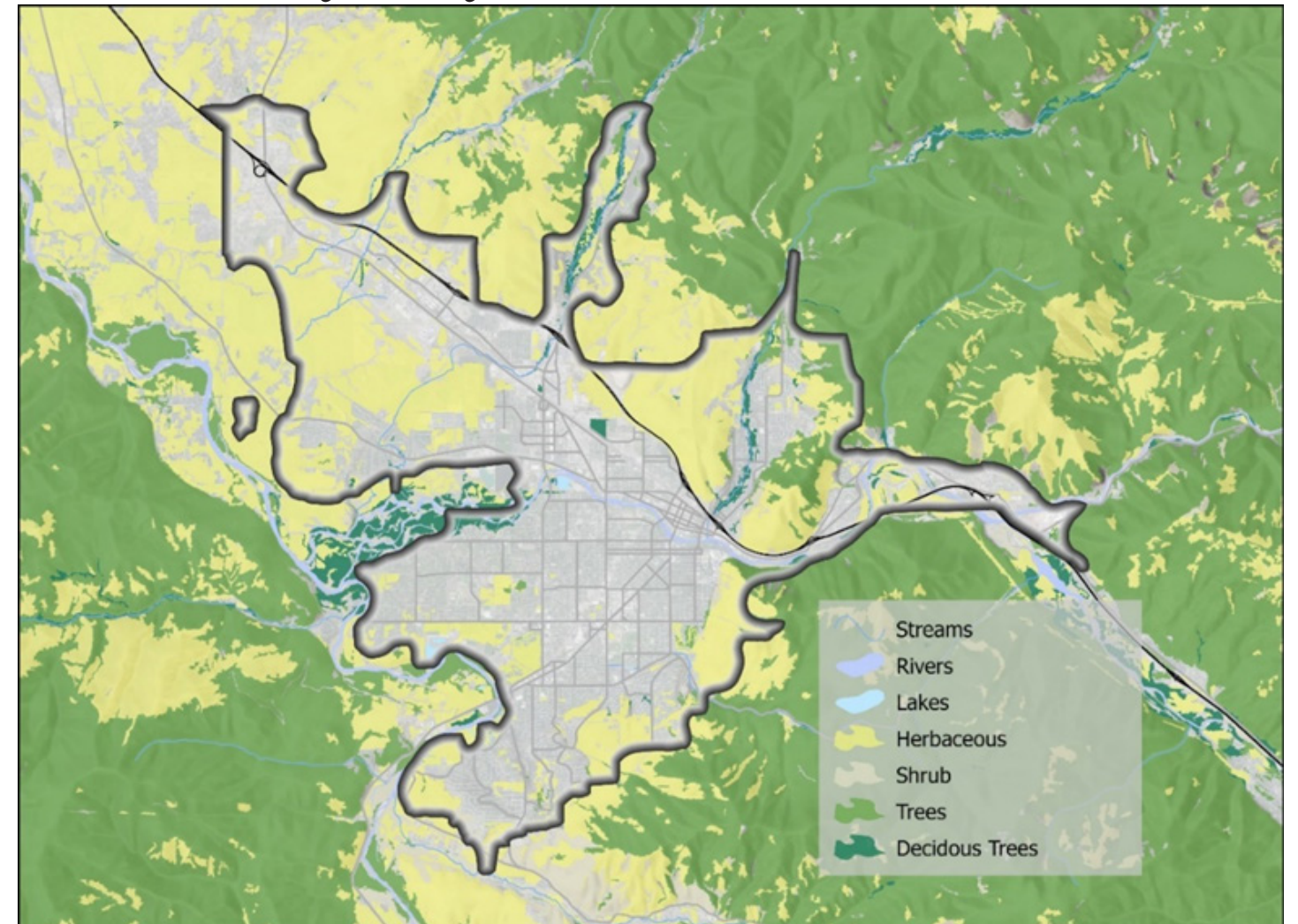
The Land Use Plan area hosts hundreds of native plant species. The landscape of the state can be broken down into four main categories: herbaceous areas, coniferous forests, deciduous forests, and shrublands. The herbaceous category includes vegetation within the low-lying area in the valley floor and just above on the hillsides surrounding the valley. This broad category is the most predominant and encompasses the majority of the natural open space within the region.

The second largest category of native plant species inside of the Land Use Plan area is deciduous forests. These exist within riparian corridors, specifically around the Clark Fork River, Grant Creek, and Rattlesnake Creek. This vegetation class includes cottonwood and aspen trees, willows, currants, dogwoods, alder, and many native berry species. Herbivores and omnivores within the area rely on deciduous forests for food throughout the spring, summer, and fall.

The third category that exists within the Land Use Plan area is coniferous forests. This vegetation class is found throughout all elevations within the area, from the valley floor on the Kim Williams Trail all the way up to the summit of Mount Jumbo, Mount Sentinel, and Mount Dean Stone. Plants in this category include Douglas Fir, Ponderosa Pine, Lodgepole Pine, Engelmann Spruce, and Western Larch trees, which are accompanied by an understory of native grasses and berries.

Figure NE6 below shows where the vegetation classes listed above can be found throughout the region. This was produced through the [US Forest Service's Vegetation Mapping Program](https://www.fs.fed.us/vegetation/).

Figure NE6: Vegetation Classes within the Land Use Plan area



Source: Region 1 - Geospatial Data (usda.gov)

Threats to the Natural Environment | *Natural Environment*

Historically, Montana's primary economic driver was the resource extraction industry. Before the federal and state governments started putting restrictions on these industries to protect the environment, there was and continues to be a large amount of extraction-based environmental pollution that impact the region. Because of this, the Land Use Plan area has become the home of several federally and state designated superfund sites.

There are two federal superfund sites located inside of the Land Use Plan area: the Milltown Dam and the Stimson-Bonner Mill PCB site. The Milltown Dam site, located upstream on the Clark Fork River, was decommissioned in 2008-2009. Since then, sediment buildup behind the dam has been cleaned up and this former toxic site has become one of Montana's largest state parks. It is now set up to provide recreational opportunities for the region.

The second federal superfund site within the region, the Stimson-Bonner Mill PCB site, is located on the Blackfoot River in the Bonner industrial center. This site has also been remediated and is now in the process of being continually monitored. This site is now home to the Bonner Industrial Park which includes various employers.

The Montana State Department of Environmental Quality (DEQ) may also designate sites for investigation and cleanup of hazardous materials. The DEQ maintains several different types of superfund sites within the Growth Policy Region.

- CECRA sites are designated by the Comprehensive Environmental Cleanup and Responsibility Act and are not addressed by federal Environmental Protection Agency (EPA). These sites are categorized by priority and whether they have been through the remediation phase of the process. The region has three high priority sites within it: White Pine Sash, Hart Oil Refinery, and the Burlington Northern Facility. The White Pine Sash site is going through a remediation and maintenance process now and in the future is planned to be developed into a residential area.

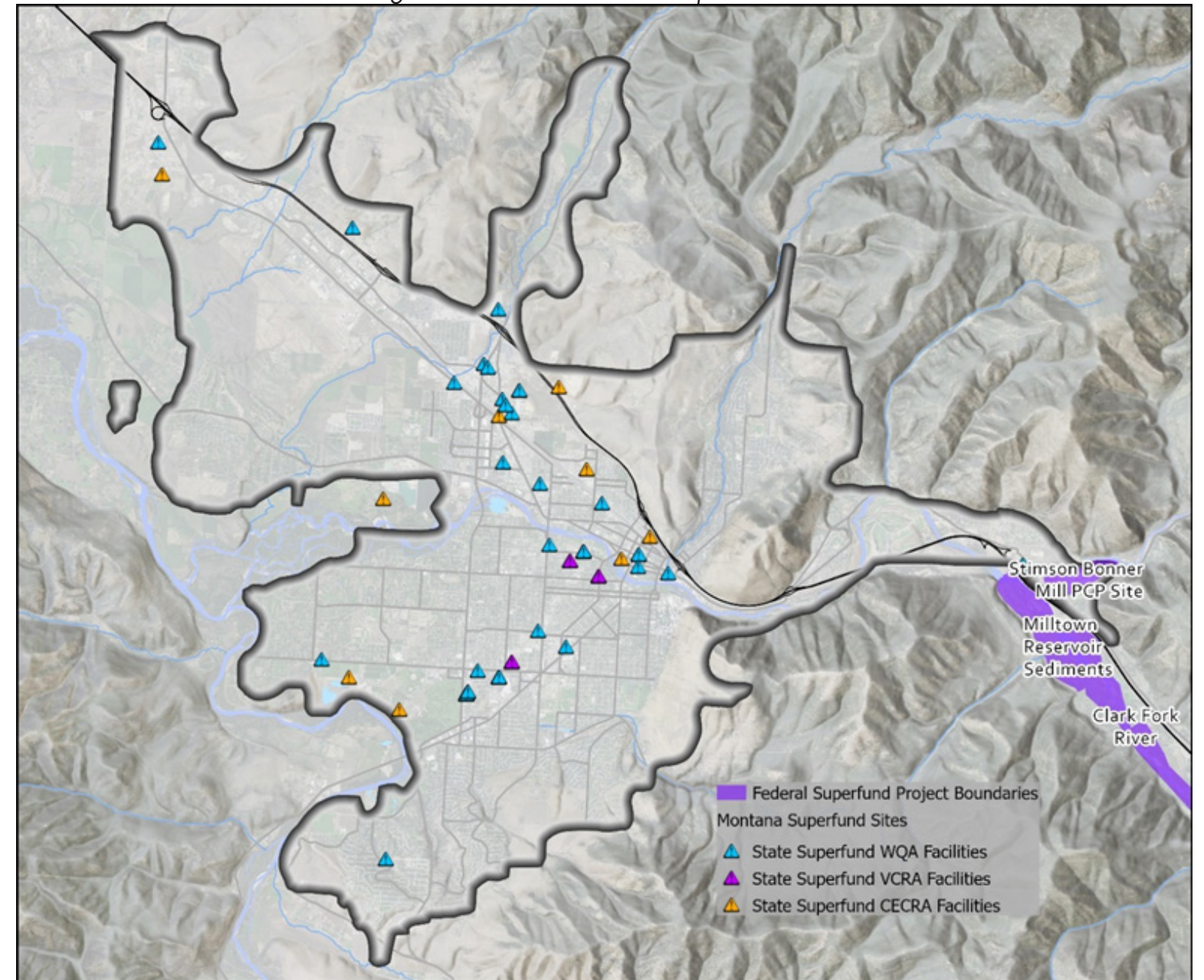
- VCRA sites are designated by the Voluntary Cleanup and Redevelopment Act. This act offers several incentives to parties that perform voluntary cleanups of these sites. One notable site included in this designation are the Montana Rail Link West Facility, which has become the Montana Rail Link Park and includes green space, a dog park, and community gardens.

- WQA sites are designated by the Water Quality Act. These sites assigned by the DEQ are also ranked by priority level (e.g., maximum, high, medium, or low) like the CECRA superfund sites. The only high priority WQA site within the district is Pacific Steel and Recycling Center. An existing remediated WQA site in the region is the Missoula Sawmill site. This site has been remediated and has now begun to develop into a residential and mixed-use neighborhood.

Threats to the Natural Environment | *Natural Environment*

Figure NE7 showcases federally and state designated superfund sites within and around the fringe of the Land Use Plan area.

Figure NE7: Federal and State Superfund Sites



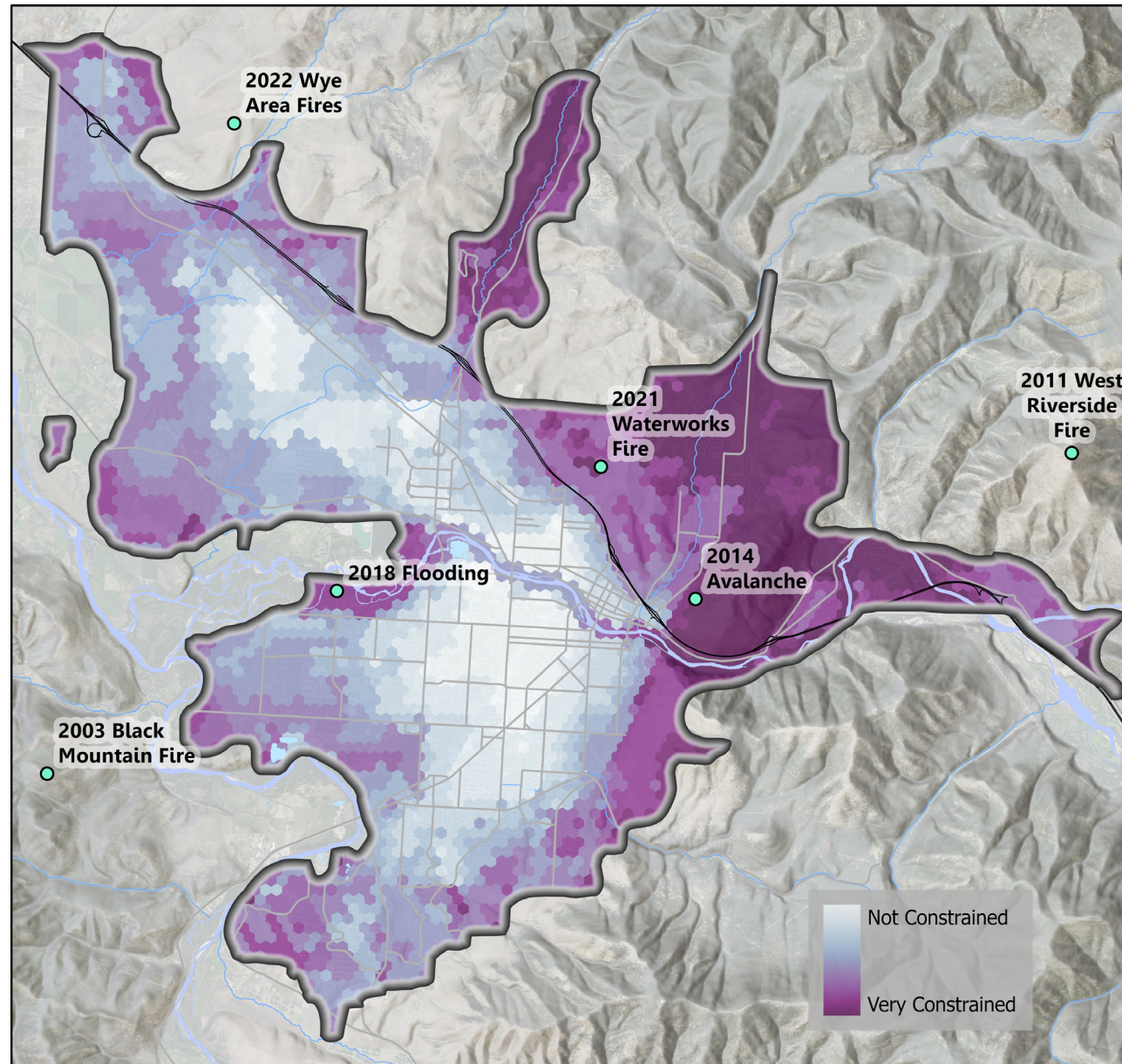
Source: Montana Department of Environmental Quality Accessed 2023

Natural Hazards

Bounded by three major rivers and mountains that rise from the valley to elevations of 6,000 feet, Missoula's buildable area is physically constrained by natural features and environmental hazards. These hazards were evidenced by the 2018 floods that surged past levees just west of South Reserve Street, and in the 2014 avalanche off of Mount Jumbo that ran into a residential neighborhood in the Lower Rattlesnake. The Land Use Plan area has also been subject to multiple disaster declarations from wildfires, including the 2011 West Riverside fire and the 2007 Black Cat fire that burned just west of the Growth Policy area.

Environmental hazards have and will continue to constrain life and development within the Plan area. *Figure NHI* below shows how much a section of the area is constrained by flooding threats, steep slopes, earthquakes, geologic threats, and wildfire threats. Areas around the Rattlesnake, Mount Jumbo, Mount Sentinel, Grant Creek, and the Clark Fork and Bitterroot Rivers are typically the most environmentally constrained land within the region.

Figure NHI: Environmentally Constrained Lands within the Land Use Plan area



Source: City of Missoula

Natural Hazards

The region has multiple ways of protecting its residents, economy, and structures from natural hazards, including strategies relating to loss mitigation and prevention. Another applicable strategy focuses on community adaptation and education on how to live with these environmental threats so that residents in the region can still lead healthy and meaningful lives in the face of these hazards.

Hazard mitigation strategies include providing direct protection from environmental hazards, such as building levees, prohibiting development within floodways, prescribing buffer spaces between the wildland-urban interface, or avoiding construction on soils that are highly susceptible to liquefaction during seismic activity.

Hazard adaptation methods involve providing the public with resources to live and cope with these hazards. These include thinning practices when development occurs in the wildland-urban interface, building practices that involve raising buildings on stilts or using fill when building in a floodplain, or installing underground supports when building in an area susceptible to liquefaction.

1 Climate Change

City of Missoula Climate Team: <https://www.ci.missoula.mt.us/3063/Climate-and-Sustainability>

2 Flooding

The Department of Natural Resources (DNRC) has recently completed a remapping of Floodplain and Floodway within the Land Use Plan area

3 Steep Slopes

Steep Slopes constrain development along the flanks of Mount Jumbo, Mount Sentinel, Grant Creek Neighborhood, and the South Hills

4 Earthquakes & Geologic Events

The Land Use Plan area is not susceptible to large destructive earthquake and geologic events

5 Wildfires

Look for guidance on Wildfire preparation in the [Community Wildfire Protection Plan \(CWPP\)](#)

6 Air Stagnation Zone

Missoula's Air Stagnation Zone incorporates the entirety of the Land Use Plan area

Climate Change Hazard | Natural Hazards

Climate change will likely affect all aspects of the region, from environmental impacts and energy consumption to racial and social inequities.

According to the Vulnerability Assessment completed by Climate Ready Missoula in 2019, climate change will impact our region's natural environment. These impacts will produce:

- More frequent and intense wildfires,
- Increase in wildfire smoke,
- Higher temperatures,
- Wetter winters/springs and increase in flooding,
- Drier summers and longer droughts ,
- Climate variability from year to year, with no new 'normal', and
- Climate migration

For more information regarding impacts to the region due to climate change see the latest Climate Smart Missoula's Vulnerability Assessment (Impacts + Vulnerabilities (climateredymissoula.org)).

Climate Change Adaptation & Mitigation | Natural Hazards

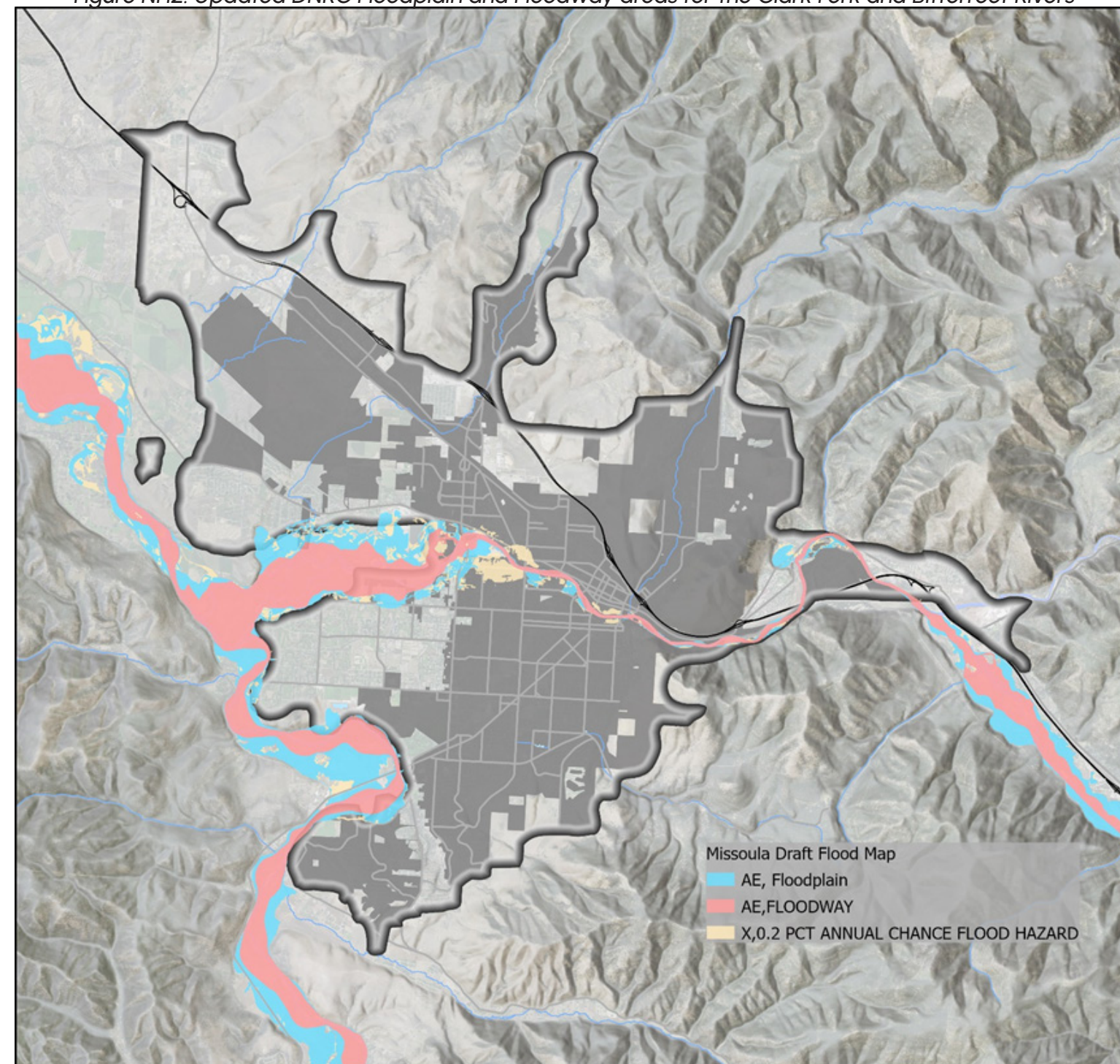
The City of Missoula has adopted initiatives to both help mitigate the damage and to adapt to a changing climate. These strategies are outlined in the adopted 2015 [Missoula Community Climate Smart Action Plan](#) and further explored in the adopted [2020 Climate Ready Missoula Plan](#).

These plans provide implementation strategies to which the City of Missoula, Missoula County, and partner organizations are committed. These strategies include and are not limited to providing air filtration units, improving tree canopy on sidewalks and walking paths, expanding local food production, incentivizing multi-modal transportation, enhancing water conservation, and transitioning to renewable energy and energy efficient electrification of buildings and transportation .

Flooding Hazard | Natural Hazards

The Bitterroot and Clark Fork Rivers pass through the Land Use Plan area and are buffered by subsequent floodways and floodplains. The Montana Department of Natural Resources and Conservation (DNRC) re-mapped these floodways and floodplains in 2022 and highlighted levees within the region that are either not designed properly or are in disrepair and would be compromised during large 100-year flooding events.

Figure NH2: Updated DNRC Floodplain and Floodway areas for the Clark Fork and Bitterroot Rivers



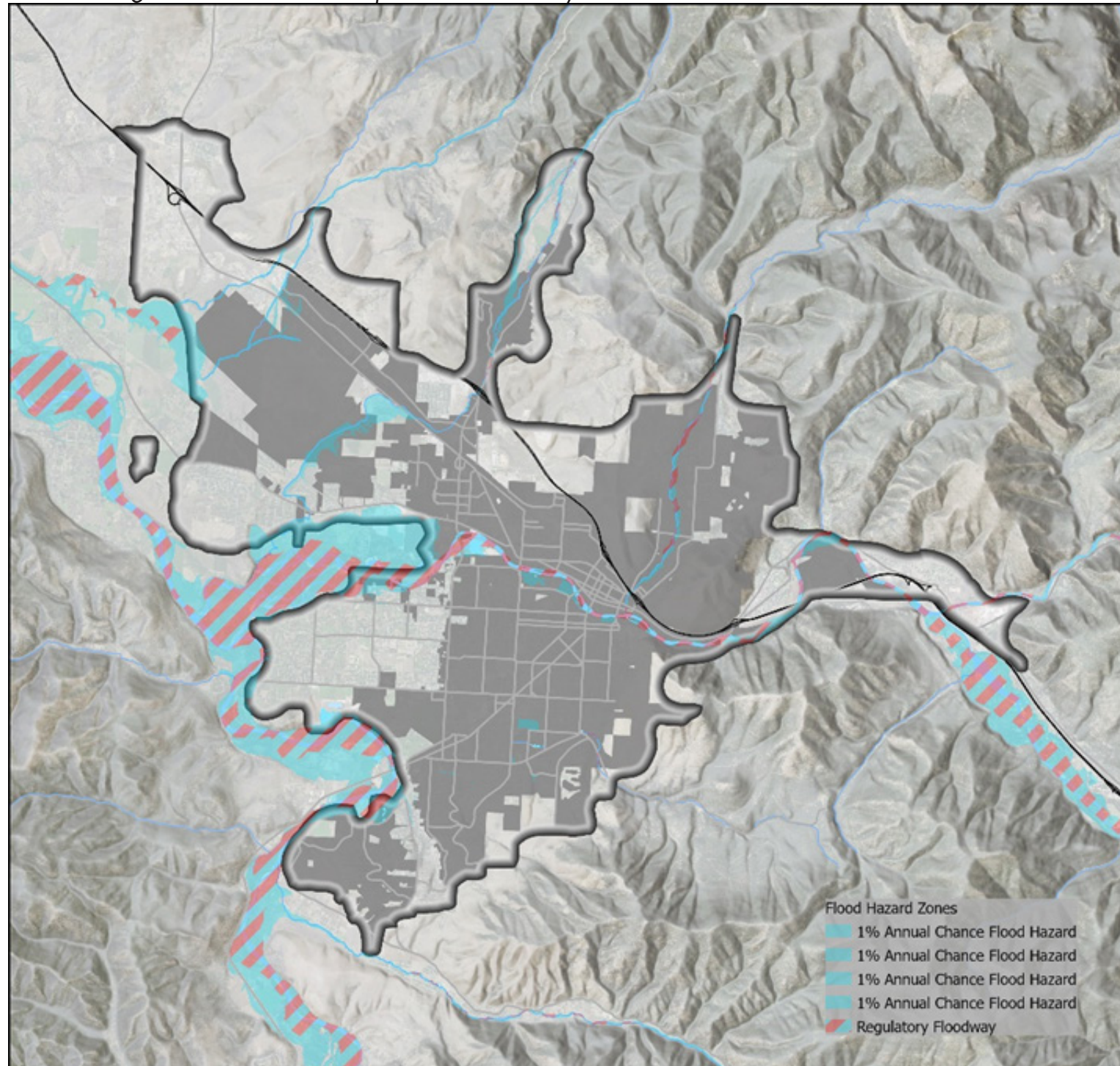
Source: Montana Department of Natural Resources and Conservation

Flooding is also associated with high groundwater, which is described in more detail in the high groundwater section later in this report.

Flooding Hazard | Natural Hazards

Grant Creek and Rattlesnake Creek, tributaries to the Clark Fork River, pass through the Growth Policy area and are also prone to flooding. While these are smaller feeder streams, they do have large riparian areas that are flood prone and include floodway and 100-year floodplain zones. These were not mapped during the recent DNRC Floodplain update, so the floodplain data for these creeks is represented in Figure NH3.

Figure NH3: Current Floodplain and Floodway Areas: Grant Creek and Rattlesnake Creek



Source: Montana Department of Natural Resources and Conservation

Flooding Adaptation & Mitigation | Natural Hazards

The City has adopted zoning and building regulations aimed at mitigating hazards from flooding. These regulations reside in Title 18 of City Municipal Code. The purpose of these regulations is to promote public health, safety, and general welfare of residents and to minimize public and private losses due to flooding in hazard prone areas.

Many land uses are prohibited within floodways to protect residents and structures. Section 6 of Title 18 prohibits building any structure for residential or non-residential uses, any object subject to flotation or movement, solid and hazardous waste disposal sites, and any burial grounds in the floodway. These uses are meant to prevent alterations to the floodway as a result of development.

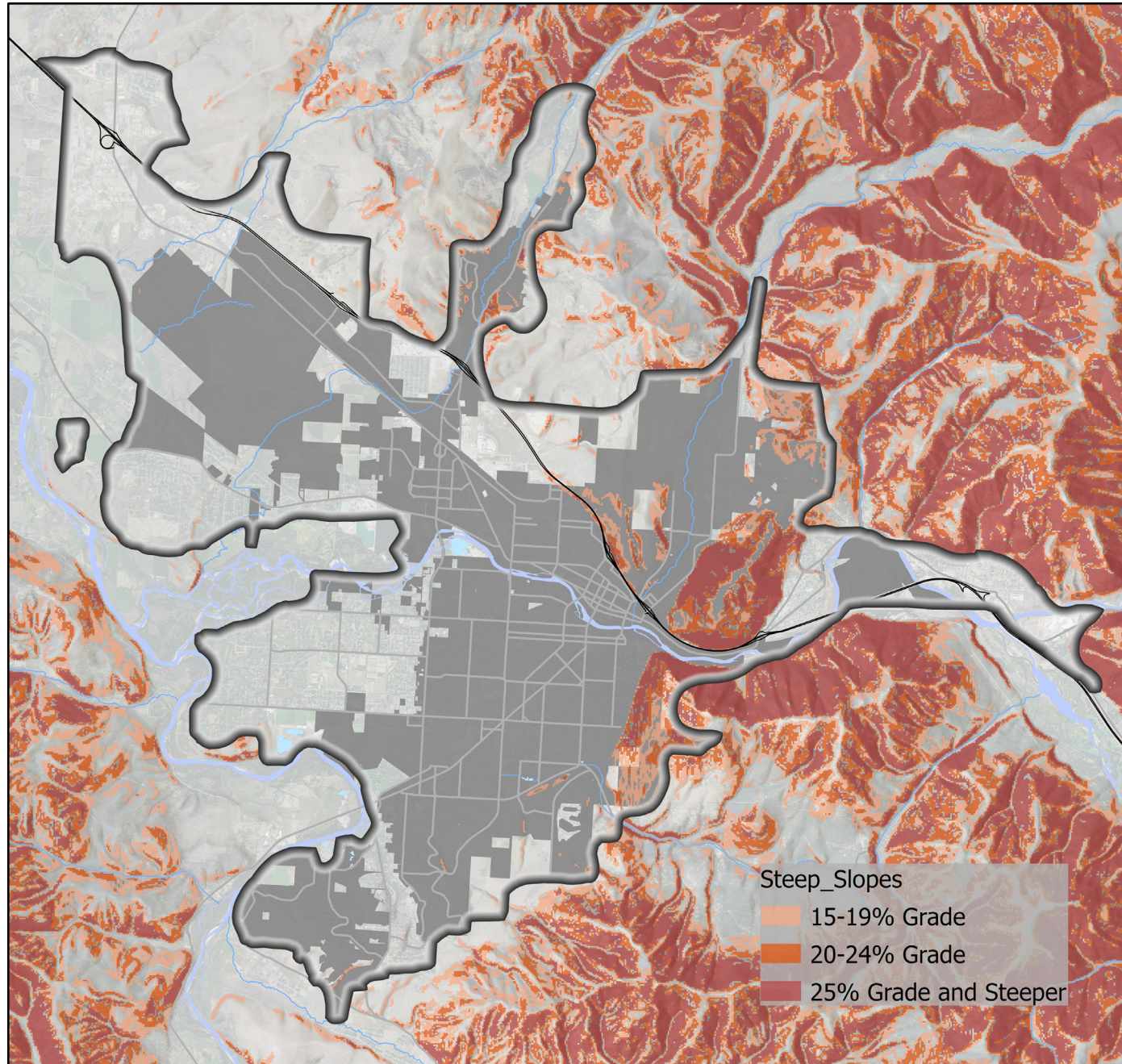
Many of the same land uses are prohibited in the 100-year floodplain, however, residential, and non-residential uses are permitted if the development is not designed to be a critical facility (such as a school, nursing home, hospital, or emergency services provider). Development of lands within the 100-year floodplain must be reviewed and approved by the City through a floodplain permit application that demonstrates where the floodplain exists and how the development meets the design criteria and construction standards to mitigate the effects of flooding.

Steep Slope Hazard | Natural Hazards

Steep slopes are another factor that constrain development and pose a threat within the Land Use Plan area. Development is not always feasible on hillsides with slopes measuring over 15 degrees, due to issues pertaining to cost of materials or excavation, soil stability, or environmental impact. There is also danger of avalanches on steep slopes during high snow years that can reach residences. The areas where these risks are most prominent are in the Grant Creek drainage and around the flanks of Mount Jumbo, Mount Sentinel, and Woody Mountain.

Smaller areas of steep slopes are allowed to be developed within the City using mitigation methods involving re-grading land and erecting retaining walls. A small scale 30-meter resolution geospatial layer was used to calculate and visualize the steep slopes around the region.

Figure NH4: Current Floodplain and Floodway Areas: Grant Creek and Rattlesnake Creek



Source: City of Missoula & 30m Digital Elevation Model

Steep Slope Adaptation & Mitigation | Natural Hazards

The City of Missoula has regulations for mitigating the effect of development on steep slopes in Title 20 of Missoula Municipal Code. The intent of these regulations is to ensure development occurs safely, mitigate air quality by preventing disruption of the topsoil, preserve wildlife habitat, avoid slumping on hillsides, and encourage construction techniques that mitigate destruction of environmentally sensitive areas.

These mitigation strategies include requiring a Geotech Report and following the recommendations in the report, or designating slopes at or exceeding 25% grade as "No Build / No Improvements Zones" to prevent disturbances and protect residents. Encouraging development to occur on the portion of a parcel with slopes less than 25% grade or ensuring the recommendations of a Geotech Report are followed ensures development on hillsides occurs safely.

Earthquake & Geologic Hazards | *Natural Hazards*

While the Land Use Plan area is not near a major fault and is not considered an earthquake hot spot, the Missoula area does experience earthquakes from time to time. These range from magnitudes of 3 up to 6 on the Richter scale. Generally, earthquakes need to reach magnitudes above 4 and 5 to be destructive in nature. Eighty-Six percent of all earthquakes since 1900 that have been felt by the region have been in between magnitudes 3 and 4.

Secondary to actual first line damage from earthquakes is what is called liquefaction. This happens when loosely packed and wet soils lose their cohesion with each other and become fluid during seismic events that reach a magnitude of 5. This can cause buildings to settle and infrastructure damage like cracked roads and underground pipes/storage tanks to be damaged. The majority of the Land Use Plan area has low susceptibility to liquefaction. However, areas north of the airport along I-90 and West Broadway are at a higher risk for this hazard because of the soil types present there.

Earthquake & Geologic Adaptation & Mitigation | *Natural Hazards*

The hillside protection section of the City's zoning regulations is intended to help mitigate threats from earthquakes

To prevent liquefaction, City regulations focus on either outright prohibition of development on soils prone to this hazard or requiring the installation supports deep into the ground that can help to maintain the structure. Geologic hazards have not historically posed a threat to the region and are not expected to increase in the future, making the need for this adaptation strategy unnecessary on a widespread scale.

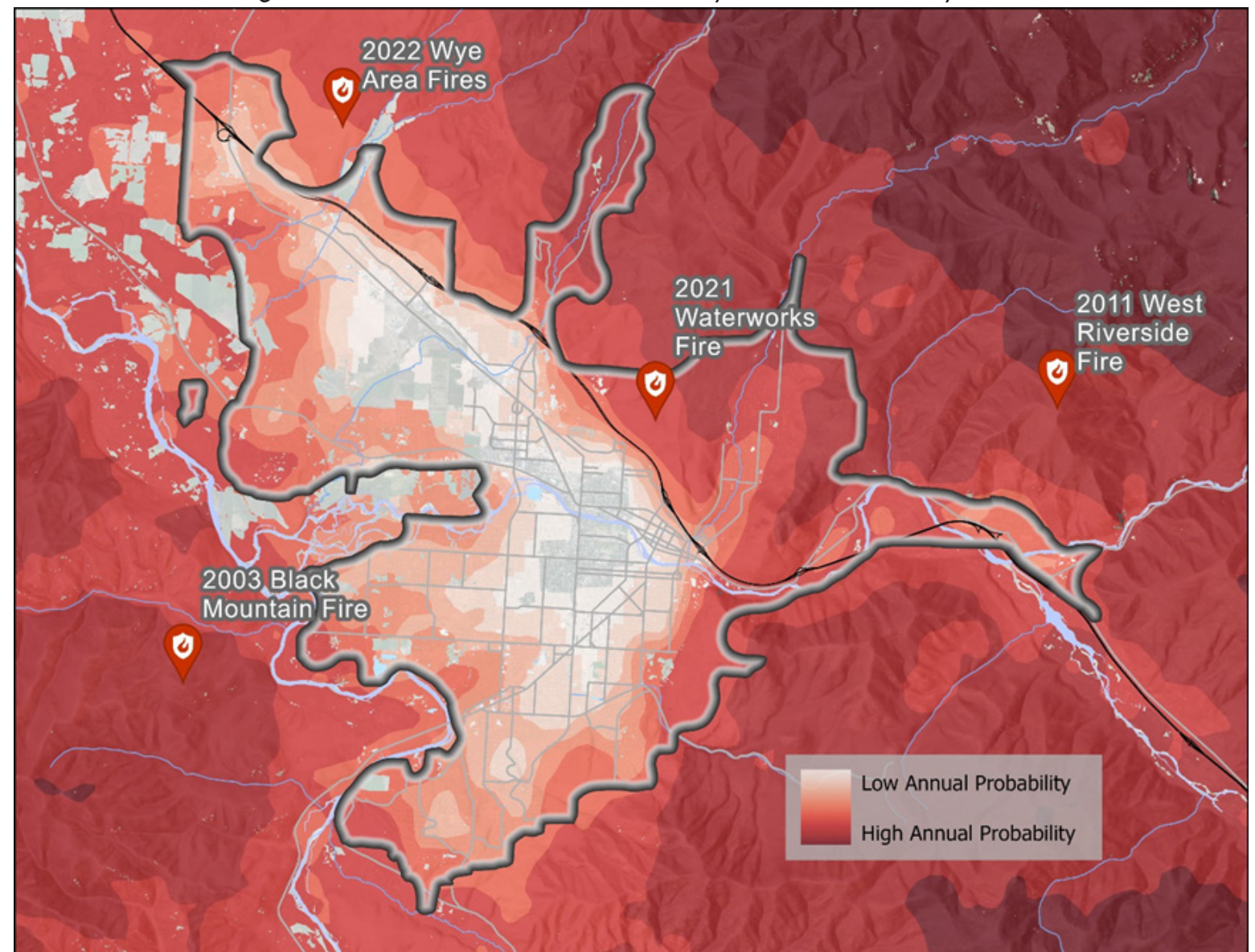
Wildfire Hazard | *Natural Hazards*

As the region's climate changes, climate scientists are predicting hotter and drier summers causing an expansion of the wildfire season into early and late fall. This will increase wildfire danger along the fringes of the urban area and will increase the prevalence of wildfire smoke during these months.

The Montana Department of Natural Resources (DNRC) determines wildfire risks by looking at four different aspects of the environment and community: (1) the probability of a fire starting, (2) the intensity of the fire once it has started, (3) the exposure to structures, and (4) the susceptibility of those structures or community to a wildfire if one were to occur. Combining these, the DNRC created an analysis of the entirety of Montana that determines the wildfire risk of any given area.

Wildfire burn probability is very low within the core of the urban built environment. The annual burn probability increases towards the urban fringes. The areas that are most susceptible to wildfire include the Rattlesnake and Grant Creek drainages with a moderate to high annual burn probability.

Figure NH5: Annual Wildfire Burn Probability in the Growth Policy Area



Source: Montana Department of Natural Resources and Conservation

Wildfire Adaptation & Mitigation | Natural Hazards

The City of Missoula collaborates with [Missoula County Office of Emergency Management \(OEM\)](#) and the Montana Department of Natural Resources and Conservation (DNRC) on emergency plans for if or when a wildfire should occur within the region. This collaboration also extends into mitigation strategies that include thinning around structures, studying wildfire behavior, prescribed burning, and building techniques along the wildland-urban interface (WUI). The result of this collaboration is the [Community Wildfire Protection Plan \(CWPP\)](#). This plan is updated regularly and provides residents and land developers with resources to mitigate wildfire threats.

COMMUNITY WILDFIRE PROTECTION PLAN MISSOULA COUNTY, MONTANA



FEBRUARY 2018, Update

Air Stagnation Zone | Natural Hazards

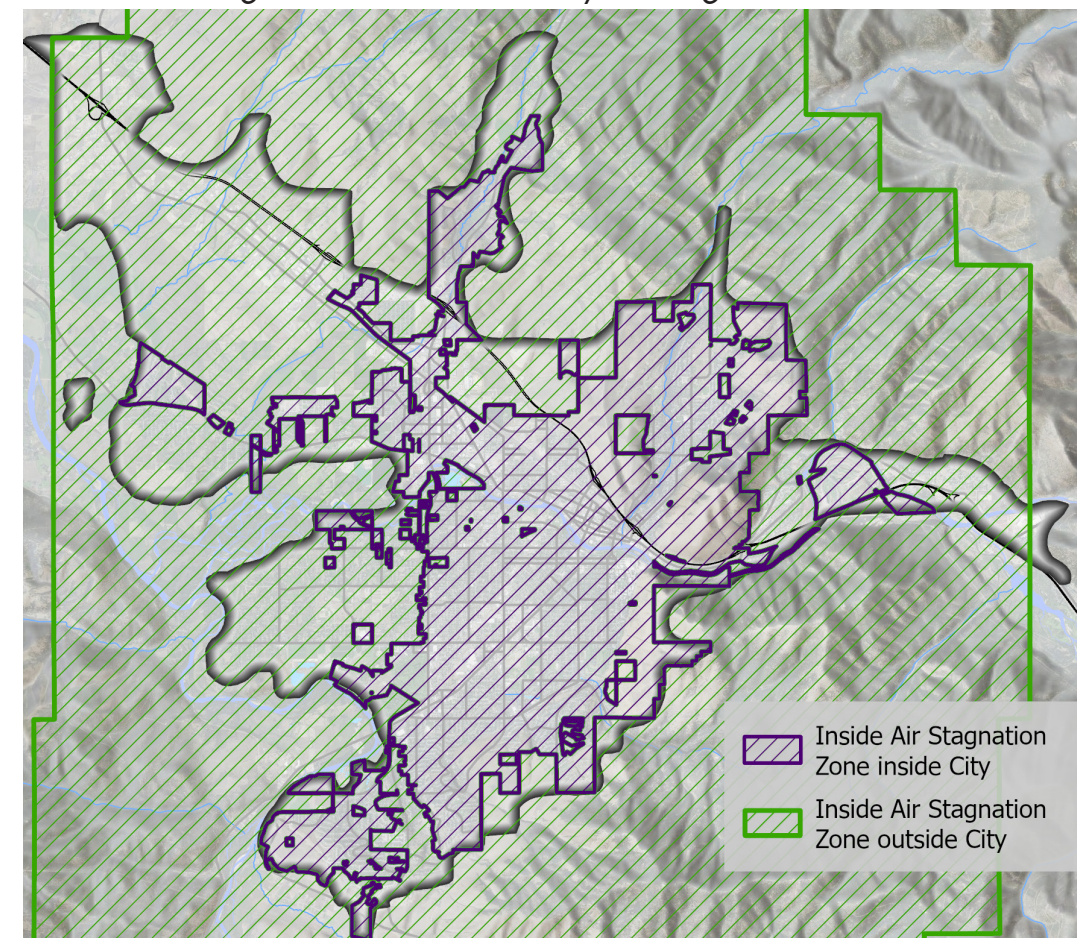
Carbon monoxide is highly monitored because of its severe effects on human health, such as unconsciousness, dizziness and even death. Carbon monoxide levels in the air have dropped to less than half of the 1998 levels and are about one third of the NAAQS. Missoula last exceeded the NAAQS in 1991 and discontinued monitoring for CO on March 31, 2011.

Particulate matter includes coarse particles that arise from dust and wind-blown soil and fine particles produced from combustion-related activities such as fuel burned in automobiles, power plants, factories, and wood stoves. High levels of particulate matter can cause respiratory health problems. Levels of atmospheric particulate matter of 10 micrometers or less (PM10) in Missoula are stable and well below the national standard. Levels of particulate matter of 2.5 micrometers or less have also declined and Missoula has been in compliance with the daily PM2.5 NAAQ Standards since 2006.

Several factors that help limit particulate matter concentrations include the woodstove removal program, the use of deicer in place of street sand on many streets, timely street sweeping in the spring and regulations that require most new vehicle use areas to be paved inside the Air Stagnation Zone. Because of Missoula's mountain valley topography and growing population, ways to limit and reduce air pollution in the valley will continue to be important if we wish to maintain and improve on the air quality gains made in the past.

Given Missoula's geography it is more susceptible to inversions and prone to trapping smoke in the valley. Therefore, there are also outdoor burning restrictions in place to protect Missoula's air quality.

Figure NH6: Missoula Valley Air Stagnation Zone



Source: Missoula County

Residential Suitability Index

The Residential Suitability Index was first developed in 2018 to categorize residential development into areas that reflect the ideals of the City of Missoula's Growth Policy. This analysis highlighted the City's core as being highly suitable for residential development. This document conducts this analysis again, based on data acquired in 2022 and 2023.

Since the indicators and data used in this analysis change over time (IE: new infrastructure is built), *Figure RS6* looks at how different places in the Land Use Plan area have increased in the suitability of specific region. Studying how an area changes and how quickly it does based on this data, the City can use this layer to highlight areas that would prove most beneficial for reinvestment and provide it's residents with a more livable and walkable neighborhood to live in.

1 Sewer and Water

Health & Safety Policy Objective: "Provide safe and efficient water supply, wastewater, and storm water infrastructure."

2 Commercial Services

Economic Health Policy Objective: "Integrate certain small-scale neighborhood commercial services within residential areas to provide walkable access to daily needs and foster social connections between neighbors. Manage potential impacts through development regulations."

3 Multi-Modal Transportation

Community & Quality of Life Policy Objective: "Ensure that zoning increases housing opportunities in residential areas that have sufficient access to services and amenities by walking, biking and transit."

4 Schools and Parks

Community & Quality of Life Policy Objective: "Ensure equitable access to parks, and open space to ensure community well-being, access to recreation, and community cohesion."

5 Local Food Production

Environmental Quality & Climate Resilience Policy Objective: "Encourage the preservation of agricultural areas to support local food production by incentivizing clustered development to support small local producers."

6 Composite Suitability Index

Focus Inward Policy Theme: "Focus compact development and infill within the utility service area to minimize strain on infrastructure and prevent sprawl into sensitive and constrained lands."

7 Suitability over the Years

Focus Inward Policy Theme: "Manage growth by monitoring key performance indicators and using data-driven practices."

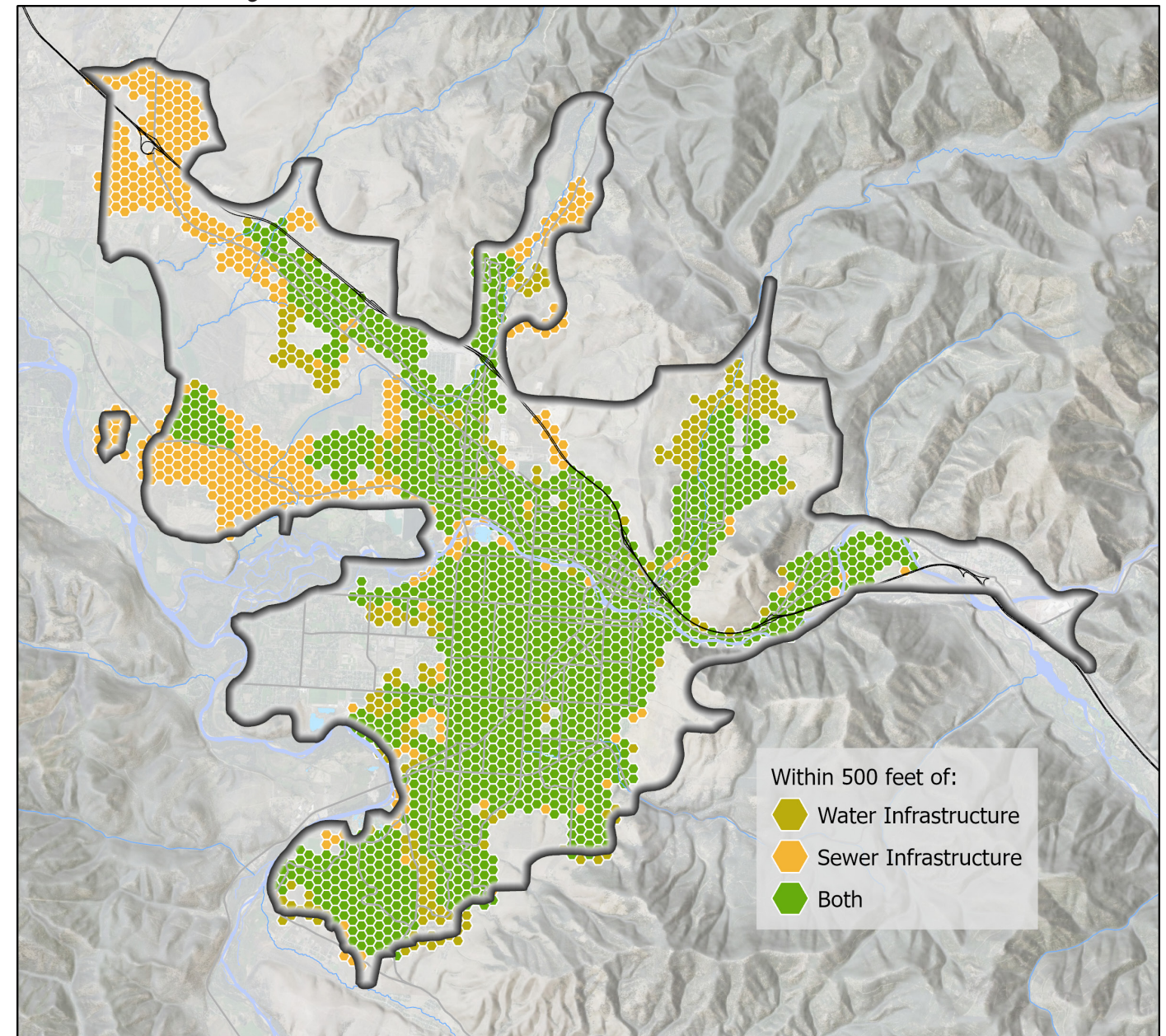
Sewer and Water | Suitability

Figure RS1 shows areas that are within 500 feet of public sewer and/or water mains. This is considered a reasonable distance for making new connections where they do not already exist. Prioritizing development where sewer and water infrastructure already exist or can be easily extended could help keep construction and housing costs down while limiting the distance between new residential developments and other services that the City provides.

The Land Use Plan specifically lines out policy and actions items that encourage development in these areas. Health & Safety Policy Objective: "Provide safe and efficient water supply, wastewater, and storm water infrastructure."

Sewer and Water infrastructure spreads across the Land Use Plan area with access to this infrastructure limited in the Orchard Homes, Bonner/Milltown, Wye, and West Mullan regions.

Figure RS1: Areas within 500 feet of Sewer and Water Infrastructure



Source: City of Missoula

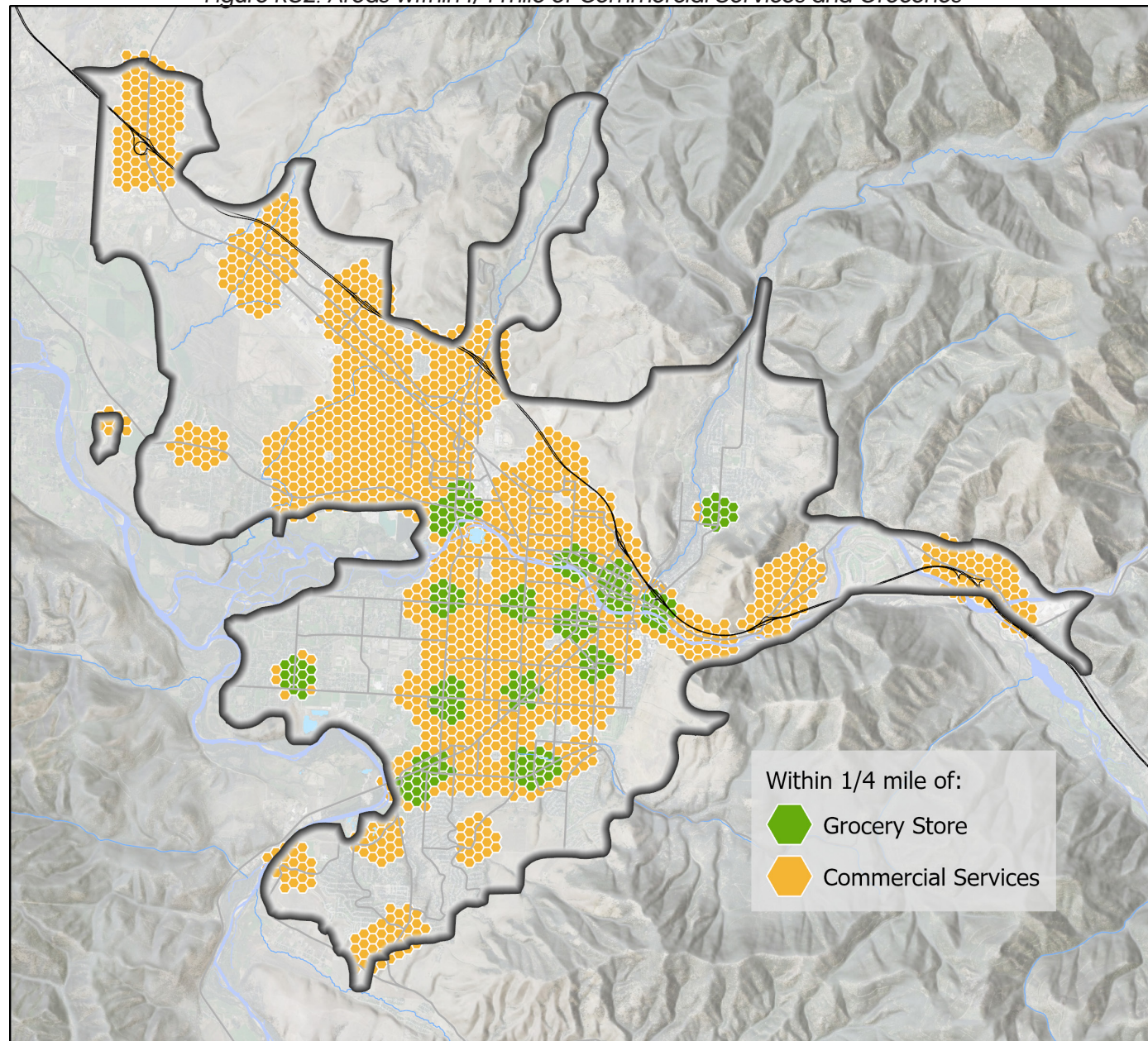
Commercial Services and Groceries | Suitability

Figure RS2 shows areas that are within a quarter mile of zoning that allows commercial uses and/or current grocery store locations. Grocery stores were used that carry a variety of goods, are not a specialty food store, and are open to customers without a subscription service.

Areas where Commercial Services are permitted within City and County Zoning contain a wide mix of uses assumed to contain various commercial services and serve the diverse needs of the residents of the Growth Policy area.

The Land Use Plan specifically calls for developing near services in multiple areas but is highlighted in Economic Health Policy Objective: "Integrate certain small-scale neighborhood commercial services within residential areas to provide walkable access to daily needs and foster social connections between neighbors. Manage potential impacts through development regulations."

Figure RS2: Areas within 1/4 mile of Commercial Services and Groceries



Source: City of Missoula

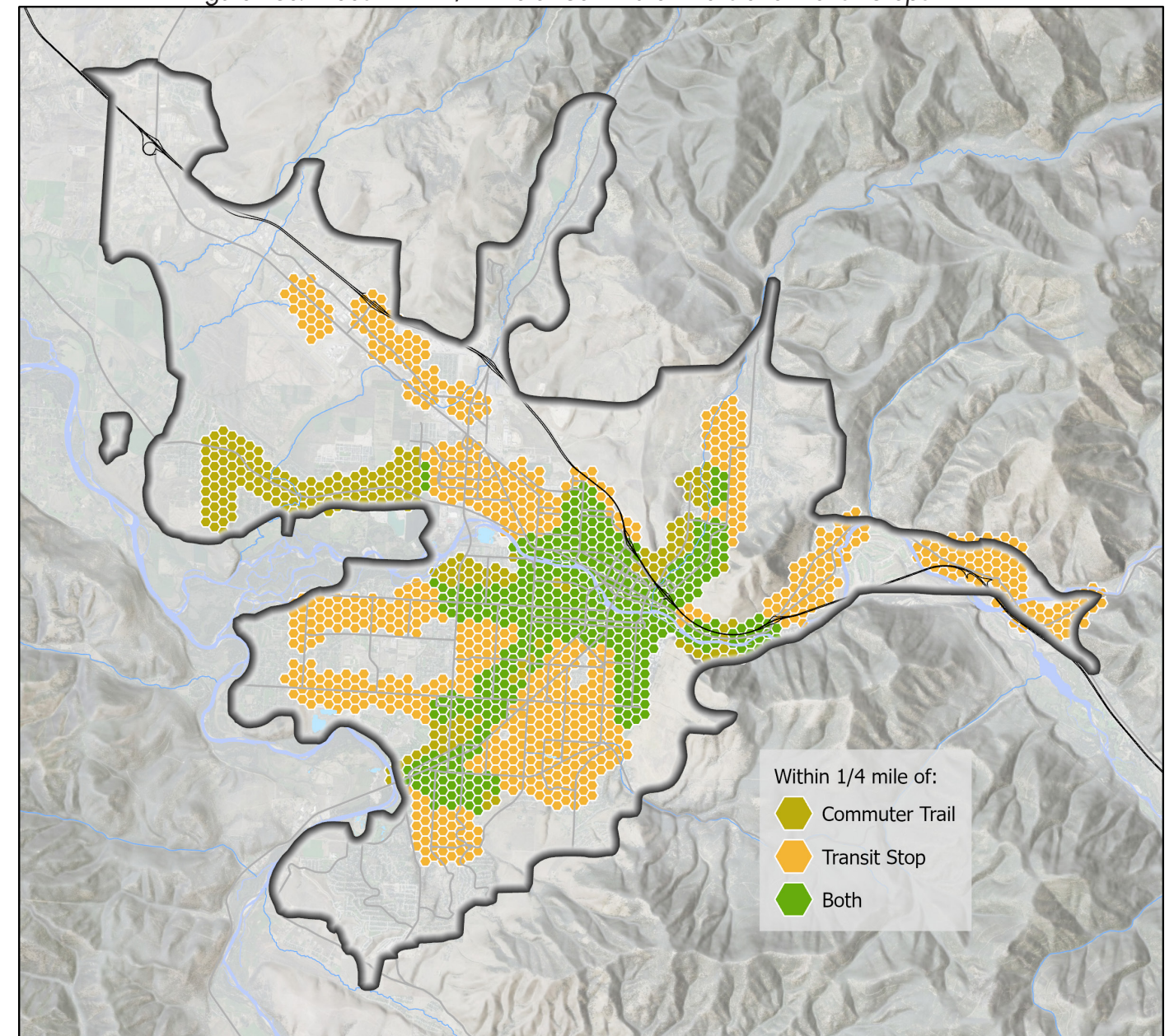
Multi-Modal Transportation | Suitability

Figure RS3 shows areas that are within a quarter mile of current Mountain Line and UDash transit stops. Areas are also shown that are within a quarter mile of trails that are categorized as primary and secondary commuter trails. Encouraging development to happen near multi-modal infrastructure helps create neighborhoods that are less automobile-dependent and promotes healthy lifestyles of residents and creates more affordable and walkable neighborhoods.

The Land Use Plan contains multiple policy objectives that encourage residential development to be located in proximity to multi-modal transportation options:

- Community & Quality of Life Policy Objective: "Ensure that zoning increases housing opportunities in residential areas that have sufficient access to services and amenities by walking, biking and transit."
- Environment Quality & Climate Resiliency Policy Objective: "Continue to integrate Land Use planning with Transportation and Transit Planning to support sustainability goals, such as reducing emissions, enhancing green infrastructure, and building climate-resilient infrastructure."

Figure RS3: Areas within 1/4 mile of Commuter Trails and Transit Stops



Source: City of Missoula and Mountain Line

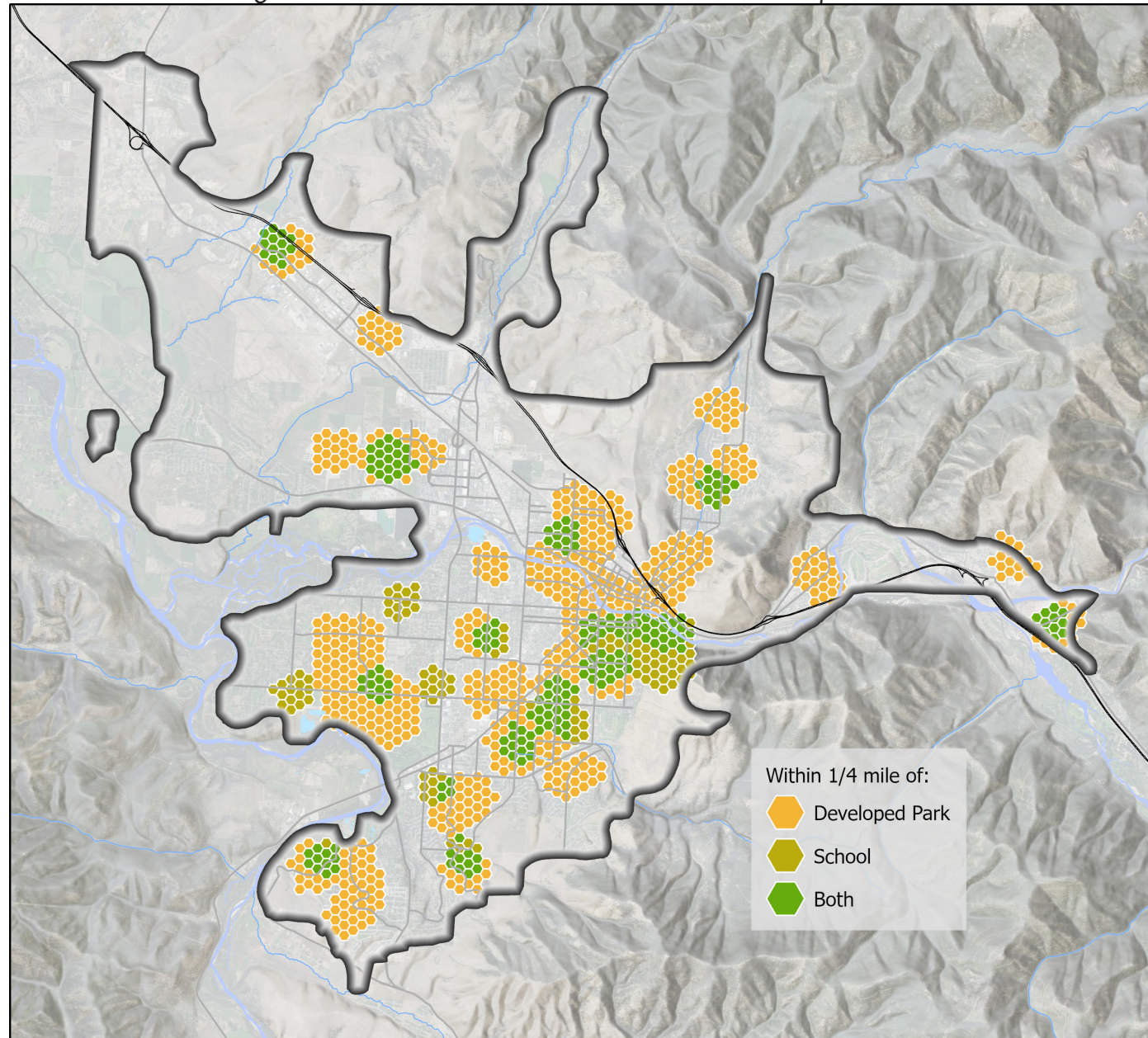
Schools and Developed Parks | Suitability

Figure RS4 shows areas that are within a quarter mile of current public schools and parks. Parks that are used in this analysis are identified as those that have activity areas such as fields or playgrounds and are available to the general public.

The Land Use Plan contains many policy objectives that support residential development to be located within proximity to parks and schools:

- Community & Quality of Life Policy Objective: "Ensure equitable access to parks, and open space to ensure community well-being, access to recreation, and community cohesion."
- Community & Quality of Life Policy Objective: "Enable community access to opportunity as well as social, cultural, recreational, and public amenities."

Figure RS4: Areas within 1/4 mile of Schools and Developed Parks



Source: City of Missoula

Local Food Production | Suitability

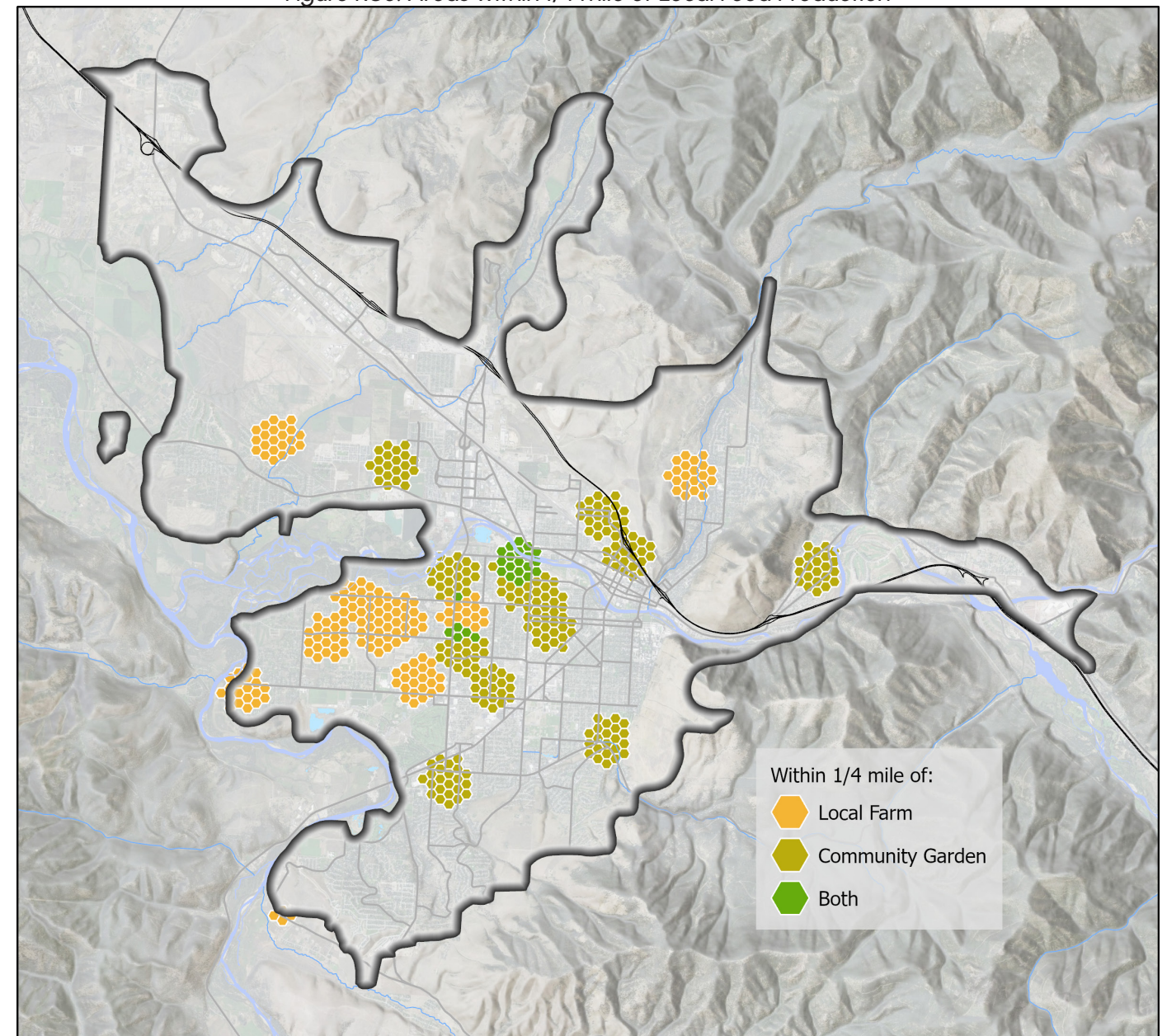
Figure RS5 shows areas that are within a quarter mile of Local Farms identified through the non-profit Abundant Montana or Community Garden Spaces.

Policy direction from the Land Use Plan, Climate Ready Missoula, and the Sx^wtpqyen Neighborhood Master Plan encourages the preservation of sites that serve residents with local food and prime agricultural lands. Access to gardening spaces and local food production not only helps with the sustainability and resiliency goals that the City of Missoula has but also has proven to have intangible benefits that promote sense of place and community.

The Land Use Plan contains multiple action items and goals that encourage local food production:

- Environmental Quality & Climate Resilience Policy Objective: "Encourage the preservation of agricultural areas to support local food production by incentivizing clustered development to support small local producers."
- Community & Quality of Life Policy Objective: "Enable community access to opportunity as well as social, cultural, recreational, and public amenities."

Figure RS5: Areas within 1/4 mile of Local Food Production



Source: City of Missoula, Garden City Harvest, and Abundant Montana

Composite Suitability Index | Suitability

When all the maps on the previous pages of this section are layered together a Composite Suitability Index map is the result. Any land outside of the five tiers listed below is currently considered unsuitable for higher density of residential development. However, this index is a dynamic layer and with proper planning and investments in infrastructure areas can raise in suitability. This change is explored further in *Figure RS6*.

Tier 1: "Minimally Suitable" hexagons are within 500 feet of public sewer and water. Infrastructure costs can be a burden on development, so developing where infrastructure already exists helps lower construction overhead and should translate to improved affordability.

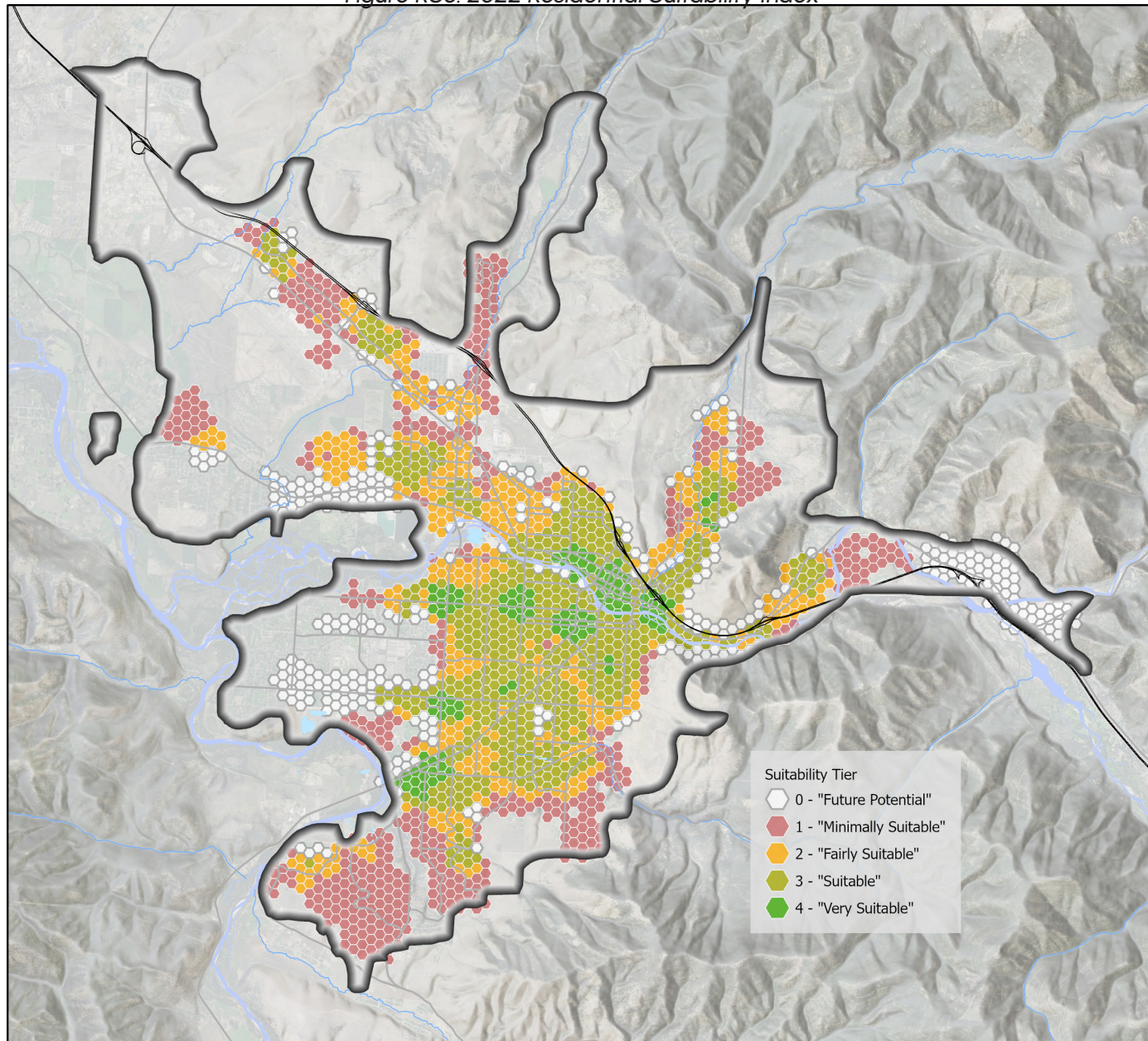
Tier 2: "Fairly Suitable" hexagons are within a quarter mile distance of any two of the following suitable features: commercial service areas, grocery stores, transit stops, commuter trail, parks, or schools.

Tier 3: "Suitable" hexagons have a similar criteria to Tier 2, but require that three or more features are within a quarter mile.

Tier 4: "Very Suitable" hexagons are within walking distance of a commercial service area, a grocery store, a commuter trail, and a transit stop. This strict criteria shows the top tier of suitability inside the core.

Tier 0: "Future Potential" hexagons have future suitability in either Tier 2 or 3 once they receive sewer, water, or both.

Figure RS6: 2022 Residential Suitability Index



Source: City of Missoula and Mountain Line

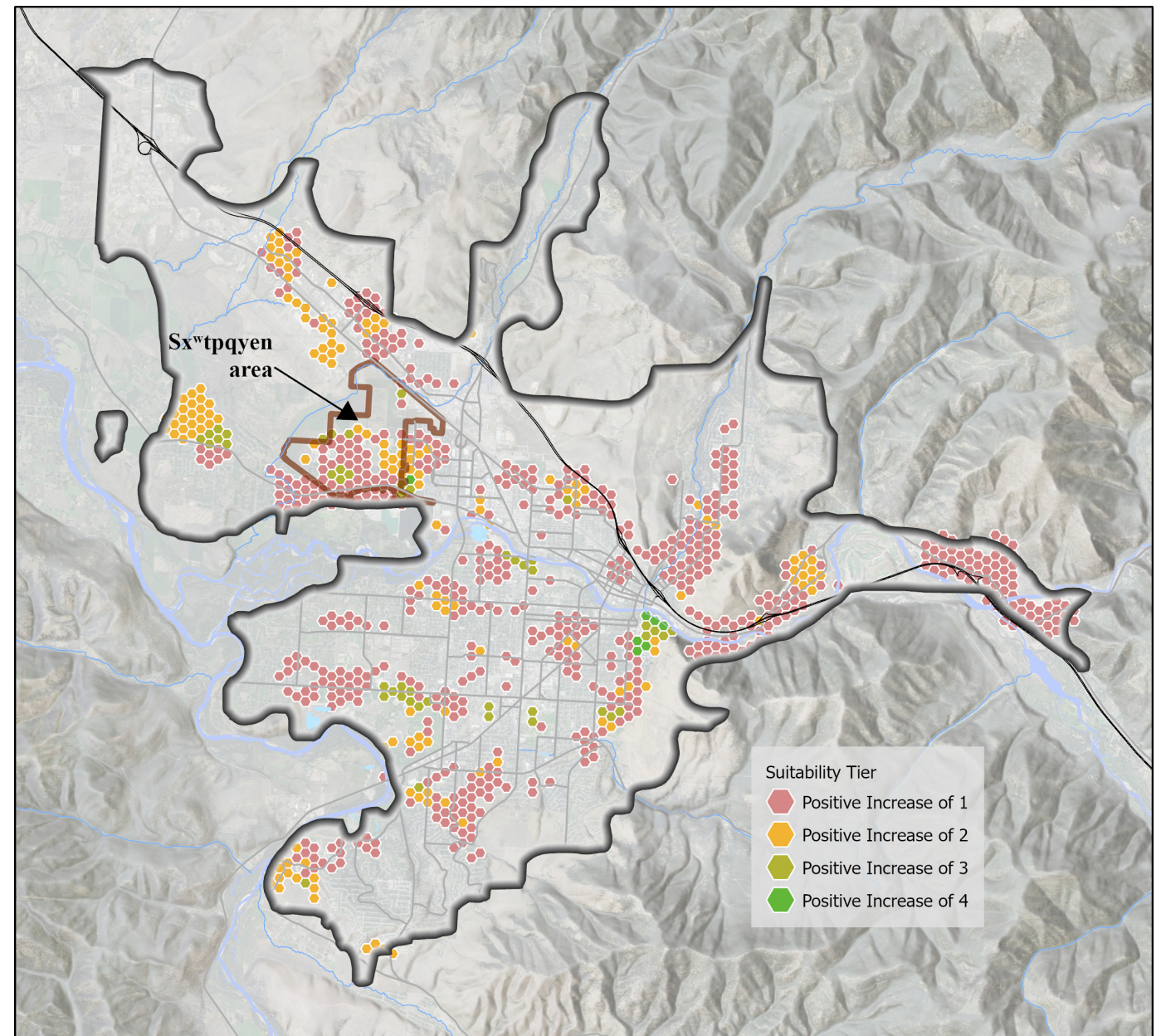
Suitability Over the Years | Suitability

The tiers of the Residential Suitability Index change over time depending on the amenities and/or infrastructure that is built out. *Figure RS7* shows the increases in the Index from 2018 to 2022. The large majority of the increases have been a positive increase in 1 suitability tier, however there are regions of the Land Use Plan area that have increased at a much more rapid rate.

Larger increases (positive increases of 2-4 tiers) are primarily focused in areas that have either seen large new residential development and/or part of a larger master planning process. A prime example of this is the master planned area west of North Reserve Street known as the Sx^wtpqyen area, which is highlighted on *Figure RS6*. Another area that saw large increases in suitability is just west of the Sx^wtpqyen area in an area known as the Ranch Club. This is due to expansion of the sewer and water system as well as new County Zoning that designates commercial zoning in that area.

As evident in the figure below Residential Suitability is expanding in both inside and outside of what is deemed the 'core' of the City. Areas that are experiencing large amounts of residential development and neighborhood planning efforts are also experiencing rising suitability.

Figure RS7: 2018-2022 Suitability Index Change



Source: City of Missoula and Mountain Line