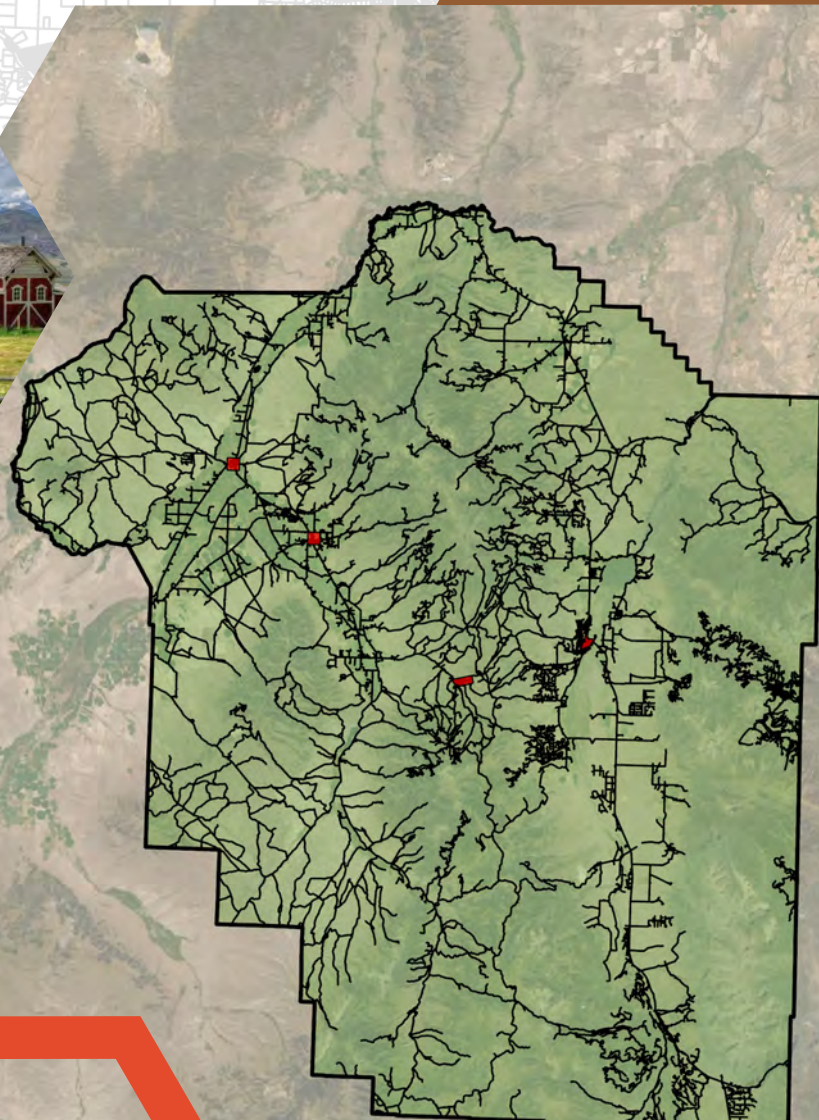


**HOUSING NEEDS
ASSESSMENT: 2023**
FOR MADISON COUNTY,
MONTANA



Planning Report

Madison County Housing Needs Assessment

Madison County, Montana

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Madison County

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2 Executive Summary

General Overview of Housing in Montana

The COVID-19 pandemic had an impact on the housing market across Montana. Housing prices sky-rocketed, especially in Western Montana, because of the increased ability for remote work and low interest rates. This was the case in Madison County. Madison County's population grew by 2.4% from the start of the pandemic based off the American Community Survey Data (ACS)¹. This influx in population has driven up housing prices and increased competition for housing units. The Big Sky Community is not in this review due to their recent adoption of a community specific Housing Needs Assessment. Please reference the Big Sky Housing Needs Assessment for specific questions.

Governor's Task Force

In response to the housing crisis in Montana multiple agencies have invested their time and resources to try and solve this issue. Governor Greg Gianforte created a housing task force on July 14th, 2022. The purpose of this group was to develop a list of recommendations for the 2023 legislature to consider. These recommendations aim to aid with regulatory review of housing projects, potentially open more funding to housing projects, and streamline the review process.

Raise in Prices

Madison County has seen a 122% increase in the average house price, rising from \$262,677 (2017) to \$428,167 (2022)². With an area median income in the county of \$55,892 this puts a house outside of the price range of Madison County residents³. However, based on the per capita income of \$35,668 and an average family size of 2.84, with the assumption that there

¹ "Madison County Population Mt - Google Search."

² "Madison County, Montana Housing Market Report October 2022 - RocketHomes."

³ "Income, Madison County, Mt - Census Bureau Search."



are two incomes in the home, raises the housing affordability range. This range of values is still well below the median house price in Madison County. Therefore, efforts to increase the available housing stock, provide flexibility in housing options, and maintain existing assets is a priority in Madison County.

Aging Housing Stock

Madison County has an aging housing stock with 42% of houses built before 1980 and 72% of houses built prior to 2000⁴. The average age of residential structures in Madison County is 24.87 years⁵. As a structure gets older, they require more maintenance causing a greater economic burden.

Infrastructure

This document analyzed the impacts of central infrastructure and on-site systems to residential development. These elements have varying levels of impact on residential development in Madison County.

Central Water

In general terms central water systems do not directly limit residential development in Madison County. There are certain communities that have existing capacity but do not have an excess of capacity. Refer to Section 8.1 for a further breakdown of the central water system in Madison County. Appendix J provides the individual responses from the operators of the systems in Madison County.

Central Sewer

Central sewer systems do impact residential development in Madison County. From the information gathered the sewer systems have the greatest impact on residential development in Madison County. Some communities have excess capacity in their systems while other have limited or no capacity. Refer to Section 8.2 for a further breakdown of the sewer systems in

⁴ United States Census Bureau, "American Community Survey Data for Madison County, MT."

⁵ United States Census Bureau.



Madison County. Appendix K also provides the individual responses from the operators of the systems in Madison County.

On-site Systems

On-site systems create infrastructure for residences that do not have the ability to connect to central systems. These systems consist of wells and septic systems. The variability of conditions in Madison County makes a broad generalization of impacts is difficult. This document covers the available generalizations for the County.

On-site Septic

Analyzing septic systems in Madison County is more difficult than wells. The unique conditions of each lot make it impossible to generalize about the condition of septic systems nor their placement. While each lot will require independent review, at this time there is not a concern that septic systems limit residential development. Refer to Section 8.3.1 for more details regarding septic systems in Madison County.

On-site Wells

Generally, there is good availability of close to the surface groundwater in the County. Therefore, the use of wells to provide residential water does not have an impact on residential development in Madison County. Refer to Section 8.3.2 for a further breakdown of wells in the County and individual communities. Appendix L and Appendix M provide community maps looking at the output of these wells and the Static Water Level in feet.



3 Introduction

3.1 Purpose

The purpose of this document is to provide Madison County with information and data regarding housing units in the County. This information should help inform housing decisions in Madison County. The document can help influence decisions on active applications submitted to the County, what grants to pursue, and potentially, County funded projects. The data presented in this document is lagging, meaning the available data came from 2019 to present. While the data in this document is useful to the county updates should occur as new data is available to the County.

3.2 Scope

Housing unit data provided the basis for this document. This analysis looked at number of units, number of short-term rentals, mapping of existing multi-dwelling units, and other information as available. This document will provide residents and decision makers in Madison with a better understanding of housing conditions.

Available special data created the shapefiles and maps for the Housing Needs Assessment. This includes the creation of GIS data regarding short term rentals, existing housing units, and existing multi-dwelling units. The layers created for this project are available at the Madison County GIS Department.

3.3 Infrastructure

Infrastructure availability plays a key role in where new residential growth occurs. For this document the infrastructure reviewed was residential water and residential wastewater. This document reviews capacities, deficiencies, and adopted plans in Madison County. Individual system operators provided the data for the following communities. Subsequent chapters will look



at individual communities more in depth. As you precede through this document there will be maps of relevant housing information in each community included in the appendices:

- Alder
- Cameron
- Ennis
- Harrison
- Jefferson Island
- Laurin
- McAllister
- Norris
- Pony
- Sheridan
- Silver Star
- Twin Bridges
- Virginia City/Nevada City

A water and wastewater survey asked each community questions about their system. Appendix I includes a blank copy of the survey questions. Appendix J (Water) and Appendix K (Wastewater) provide each communities' notes from the survey. This survey covered existing capacity, identified limitations, existing conditions of the system, and adopted plans or documents for maintenance or expansion. The operators of each system filled out the survey which provided the information for this report.

3.4 Big Sky Housing Needs Assessment

The Big Sky Community recently updated their Housing Needs Assessment. Any questions or ideas concerning the Big Sky Community's housing concerns are in Appendix Q. The Big Sky Community Housing Needs Update: 2022 does include portions of Gallatin County in its assessment. The Madison County Commissioners voted to not duplicate the efforts that Big



Sky had already gone through. This is why this Housing Needs Assessment excludes the Big Sky Community in other sections. While most of this document excludes Big Sky it is a critical community in Madison County.



4 Location and Site Information

The study area for this document includes all of Madison County except for Big Sky. Madison County is a rural county in Western Montana with a population of 8,917. The County seat is in Virginia City. Madison County has four incorporated areas: Ennis, Sheridan, Twin Bridges, and Virginia City. These four incorporated areas include 25% of the population of Madison County⁶. Most of the rest of the population of the County lives near one of these four incorporated areas.

5 Analysis

5.1 Methods

The comparisons in this document come from various data sets primarily from 2019-current as 2019 was the beginning of the COVID-19 pandemic. Data from 2017 shows the longer trends in the Madison County housing market. The purpose of this document is to provide insight into the current housing issues in Madison County. This document will provide Madison County with the information they need to make informed decisions regarding housing for their future.

⁶ United States Census Bureau.



6 Housing

Housing is a concern across the entire State of Montana. There are shortages of workforce housing across the state, however most of this pressure occurs in Western Montana. As prices have risen, wages have not kept pace making affording a house a difficult task for the residents of Western Montana, and specifically Madison County. This document looks to provide insight into the existing conditions, pricing, and deficiencies of the housing stock in Madison County.

6.1 Current Units

There are currently 6,391 housing units in Madison County. It was not possible to entirely exclude the Big Sky area from these totals because of the datasets that are available. This is an increase of 137 units from 2019. Of these units 2,853 (approximately 77%) are owner occupied with 854 (approximately 23%) used as rentals. These housing units house 3,707 households. This means that there are 0.58 households per unit in Madison County⁷. This suggests that many of the homes are secondary homes or potentially short-term rentals, which do dilute the number of households per residential unit. This is an important piece of information because it allows review of ownership of existing units in Madison County and future housing needs. Figure 1 shows the location of residential structures mapped by the Montana State Library in Madison County.

⁷ United States Census Bureau.

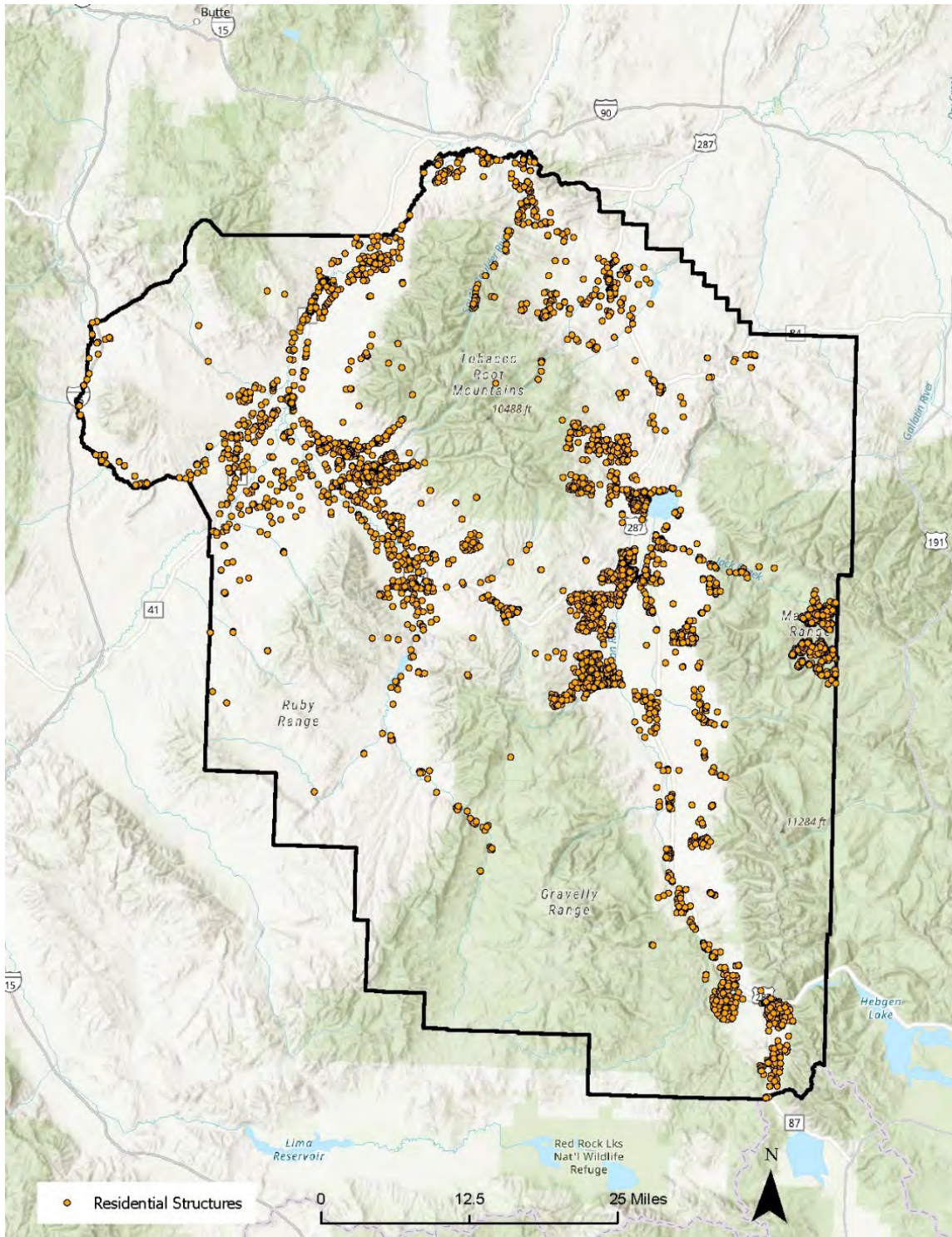


Figure 1: Residential Structures, Madison County⁸

⁸ Montana State Library, "Montana Spatial Data Infrastructure."



6.2 Population

The population in Madison County has increased by 2.4% since 2019⁹. This equates to 211 new residents moving to Madison County within a 3-year span. The ability for increased remote work resulted in Montana receiving an influx of new residents. Residents who work from home has risen from 405 to 482, a 19% increase, in Madison County¹⁰. Housing units have not kept pace with this population increase.

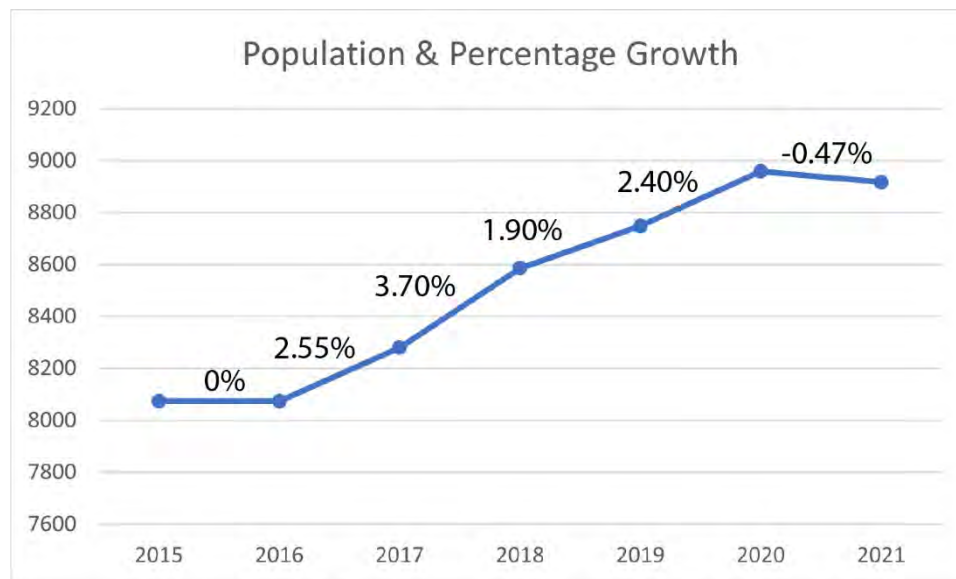


Figure 2: Population and Percentage Growth, Madison County ¹¹

6.3 People per household

The average household size has risen in Madison County from 2.24 in 2019 to 2.84 in 2022, showing that more people are living in the same or fewer units. Since 2019 there has been

⁹ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

¹⁰ United States Census Bureau.

¹¹ United States Census Bureau.



a decrease in the number of single occupant households, most notably in the owner-occupied category¹². Table 1 below reflects this data.

Table 1: Household Size in Madison County. Bold values show a decrease¹³

Household Size 2019-2021	Total Change	Total Change Percent	Owner Occupied Change	Owner Occupied Percent Change	Renter Occupied Change	Renter Occupied Percent Change
1-person household	-46	-4%	-89	-9%	43	15%
2-person household	133	8%	144	11%	-11	-3%
3-person household	5	2%	-1	-1%	6	10%
4-or-more-person household	45	10%	51	16%	-6	-4%

6.4 Residents per Room

The number of residents per bedroom has increased in Madison County since 2019. There is a greater number of residents, which matches the population increase in the County, but there is also an increase of occupants per room in Madison County. This suggests that there are more people in the County and that the number of units did not match pace with this growth. Table 2 below reflects this increase:

¹² United States Census Bureau.

¹³ United States Census Bureau.

Table 2: Occupants per Bedroom, Madison County¹⁴

All Housing Units Occupants Per Room	Total Housing Units 2019	Total Housing Units 2021	Change
1.00 or less occupants per room	3,524	3,656	132 3.75%
1.01 to 1.50 occupants per room	24	25	1 4.16%
1.51 or more occupants per room	22	26	4 18.19%
Owner Occupied Occupants Per Room	Owner Occupied Housing Unit 2019	Owner Occupied Housing Unit 2021	Change
1.00 or less occupants per room	2,713	2,829	116 4.28%
1.01 to 1.50 occupants per room	24	16	-8 -33.33%
1.51 or more occupants per room	11	8	-3 -27.27%
Rental Occupants Per Room	Renter Occupied Housing Unit 2019	Renter Occupied Housing Unit 2021	Change
1.00 or less occupants per room	811	827	16 1.97%
1.01 to 1.50 occupants per room	0	9	9 N/A
1.51 or more occupants per room	11	18	7 63.64%

The only categories that had a decrease in the number of occupants per room was owner occupied housing units. There are multiple possibilities for why this could have occurred, such as an exodus of families, graduation and moving out of college age students, or death. It is hard to make a completely accurate characterization of what caused this reduction in occupants per room, as the individual situation is not known.

The increase in the number of people living in a single room could correspond to more families or that more people have moved into Madison County and had to move into a previously occupied unit, but it is unclear from the available data. The data shows that there is current pressure for not only affordable units but more units in general.

¹⁴ United States Census Bureau.



6.5 Household Size

The average household size in Madison County decreased in single occupant households, dropping 3.65%. Four or more person households have seen the greatest increase at almost 10%¹⁵. Table 3 shows the data below.

Table 3: Household Size, Madison County¹⁶

All Unit Types Household Size	Total Housing Units 2019	Total Households Units 2021	Change
1-person household	1,259	1,213	-46 -3.65%
2-person household	1,607	1,740	133 8.28%
3-person household	240	245	5 2.08%
4-or-more-person household	464	509	45 9.69%
Owner Occupied Household Size	Owner Occupied Housing Unit 2019	Owner Occupied Housing Unit 2021	Change
1-person household	884	973	-89 -9.15%
2-person household	1,418	1,274	144 11.30%
3-person household	181	182	-1 -0.55%
4-or-more-person household	370	319	51 15.99%
Renter Occupied Household Size	Renter Occupied Housing Unit 2019	Renter Occupied Housing Unit 2021	Change
1-person household	286	329	43 15.03%
2-person household	333	322	-11 3.30%
3-person household	58	64	8 13.79%
4-or-more-person household	145	139	-6 4.14%

¹⁵ United States Census Bureau.

¹⁶ United States Census Bureau.



6.6 Multi-Unit Dwellings

Multi-unit dwellings allow for more efficient use of infrastructure. While this generally reduces the per-unit cost of infrastructure, most people prefer their own home as shown by the higher percentage of single-family homes than multi-family units. There are currently 166 parcels identified by Montana Cadastral as either an Apartment, Townhouses, Manufactured Home Park/RV Park, or Condominium¹⁷. The maps, found in Appendix B show the location of multi-unit dwellings. Figure 3 below shows Multi-Unit Dwellings in Madison County.

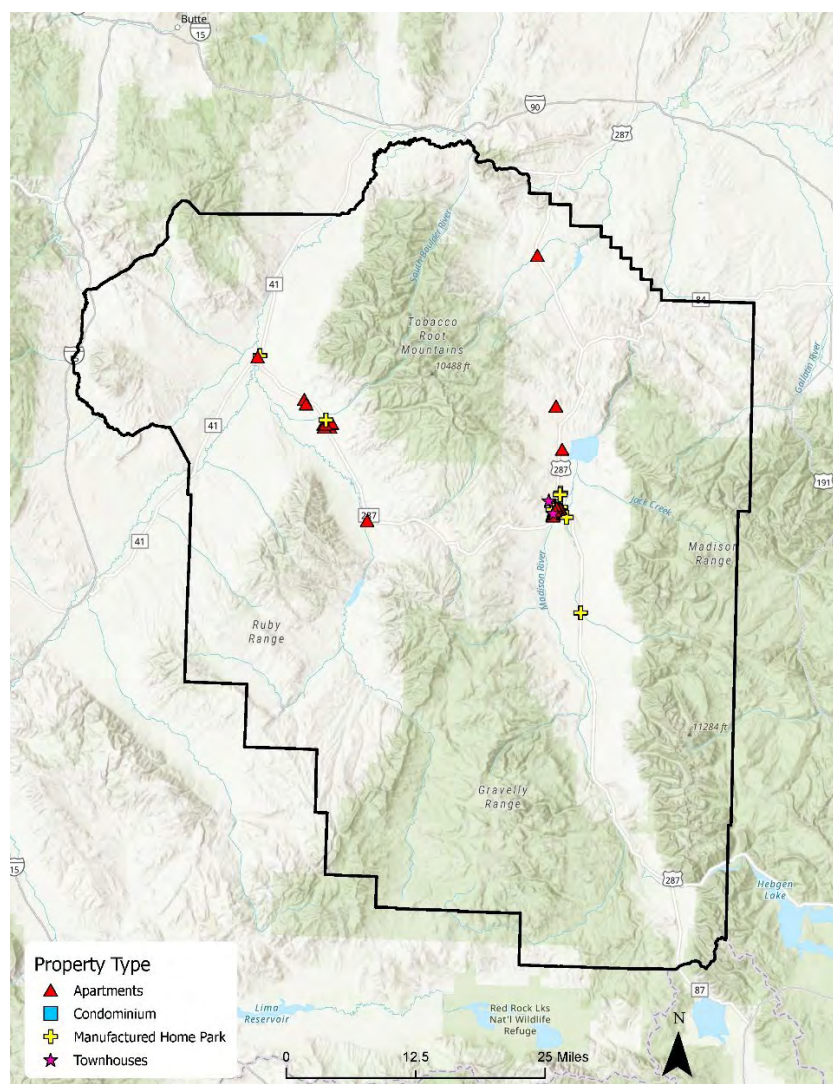


Figure 3: Multi-Unit Dwelling Location, Madison County¹⁸

¹⁷ Montana State Library, "Montana Cadastral Data."

¹⁸ Montana State Library, "Montana Spatial Data Infrastructure."



6.7 Single-Family and Multi-Family Units

Table 4 below shows unit number counts; therefore, a duplex count as 2 unit and so on. Table 4 shows the County wide makeup of the types of units that could be available depending on occupancy. Appendix C provides the community level maps of these unit types.

Table 4: Unit Count and Type, Madison County^{19 20}

Owner Occupied Housing Unit 2021	Count	Percent
Single Family Residence	4,793	84%
Townhouse	69	1%
Condominium	415	7%
Mobile Home	435	8%
Rental Unit Type 2021	Count	Percent
Single Family	15	4%
Duplex	76	21%
Triplex	36	10%
4-plex	28	8%
Mixed Residential and Commercial	11	3%
Apartments (3 stories & less)	40	11%
Townhouse/Rowhouse	5	1%
Boarding/Rooming House	4	1%
Mobile Home/Manufactured Home Park	145	41%

6.8 Short Term Rentals

In Madison County Short Term Rentals (STRs) have very different impacts across the county. Short Term Rentals are units that rent for a period of less than 30 days²¹. The Madison Valley Area sees greater pressure from short term rentals than the rest of the County. There are 173 of the 262 STRs in the Madison Valley Area (66%)²². While this assessment excludes Big Sky there are a large amount of STRs on the Madison County side of Big Sky. Appendix D shows the community level maps. The Madison County STRs, excluding Big Sky, is Figure 1.

¹⁹ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

²⁰ Montana State Library, “Montana Cadastral Data.”

²¹ “Short-Term Residential Rentals.”

²² “Air DNA Data.”



housing market. They do provide a property owner flexibility in utilizing their property to generate income and can serve a purpose in a community.

6.9 Existing Physical Limitations

There are existing physical limitations and restrictions within Madison County. The regulatory floodplain, Wildland Urban Interface, and steep slopes impacts the location and home design of residents in Madison County. The regulatory floodplain and the Wildland Urban Interface are areas that are more susceptible to natural disasters. The regulatory floodplain in Madison County consists of 3 zones as shown on the maps. These zones are Zone A, Zone AE, and Zone X. The Zone A and Zone AE are the 100-year floodplain, the difference is knowledge of the base floodplain elevation, which limit development. Zone X is the 500-year floodplain and has limited to no restrictions on development. The floodplain is difficult to see on the County map therefore refer to Appendix E for community maps. The Wildland Urban Interface map, created in 2011, for Madison County shows areas susceptible to wildland fire risk. Madison County is actively working to update their map. An update to this document will occur after adoption of the new WUI map. Madison County restricts development of any kind on slopes greater than 25%²⁴. Appendix E provides the individual maps of communities. It is best when working to address the housing concerns in Madison County to reduce the number of homes built on steep slopes, the floodplain, and the Wildland Urban Interface. Table 5, below, details the acres that fall within these three restrictions.

Table 5: Acres with Physical Restrictions, Madison County²⁵

Area	Acres	% of Acres
Steep Slopes	303,259	13.15%
Wildland Urban Interface	1,045,940	45.36%
Floodplain	1,937	0.08%

²⁴ County, "Madison County Subdivision Regulations."

²⁵ "FEMA Flood Map Service Center | Welcome!"; Madison County, "Madison County Wildland Urban Interface Map"; "TNM Download V2."

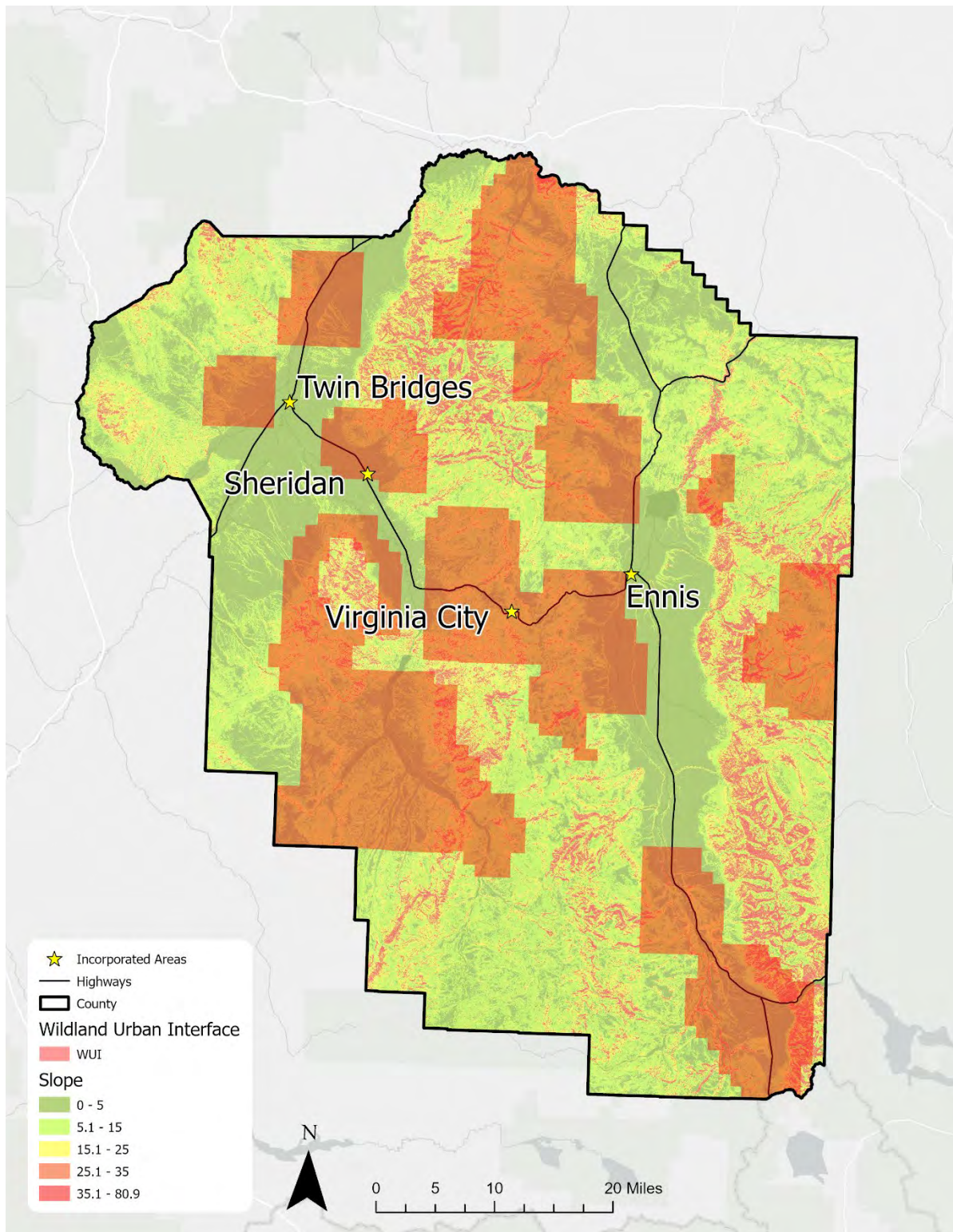


Figure 5: Physical Limitations to Residential Development, Madison County²⁶

²⁶ Montana State Library, "Montana Spatial Data Infrastructure."



6.10 Conservation Easements and Public Lands

Madison County has many acres that limits development including conservation easements and public land. These areas make up 1,500,973 acres in the county with 296,331 acres in conservation easements and 1,204,642 acres of public land. This makes up 65% of the land in Madison County²⁷. For the purposes of this document public land is any parcels held by a school, government entity, religious institute, cemetery, sewer and water district, or fire department. Due to efforts to preserve the natural beauty of Madison County and provide essential community services these restrictions are key to maintaining the character of the County. These lands are not available to address the housing concerns in Madison County. Appendix F provides the community level maps. Table 6 provides publicly held acreage for Madison County.

Table 6: Publicly Owned Acres, Madison County²⁸

Ownership 2021	Acres	% Acres of Madison County
United States Forest Service	796,886	34.56%
Bureau of Land Management	251,485	10.91%
State of Montana	128,968	5.59%
Department of Natural Resources and Conservation	16,860	0.73%
United States of America	8,744	0.38%
Madison County	744	0.03%
Department of the Interior	553	0.02%
Montana Fish Wildlife and Parks	201	0.01%
Sheridan	58	0.00%
Virginia City	42	0.00%
Religious Institute	29	0.00%
Sheridan	24	0.00%
Ennis	19	0.00%
Twin Bridges	17	0.00%
Montana Department of Transportation	12	0.00%
Sheridan Parks and Recreation	0.25	0.00%
Total	1,204,642	52.24%

²⁷ Montana State Library, "Montana Cadastral Data."

²⁸ Montana State Library.



6.11 Combined Physical and Regulatory Restrictions

Looking at the physical restrictions and the regulatory restrictions separately does not paint the full picture. One must combine both the regulatory and physical conditions to evaluate which lands could potentially accommodate additional housing. These limitations restrict a total of 1,804,232 acres of land in Madison County. After removing already developed parcels there remains 316,720 acres that could accommodate housing units. The availability of infrastructure further limits these areas. Multiple additional factors influence these areas' ability to provide solutions. Figure 6 shows the physical and regulatory restrictions in Madison County.

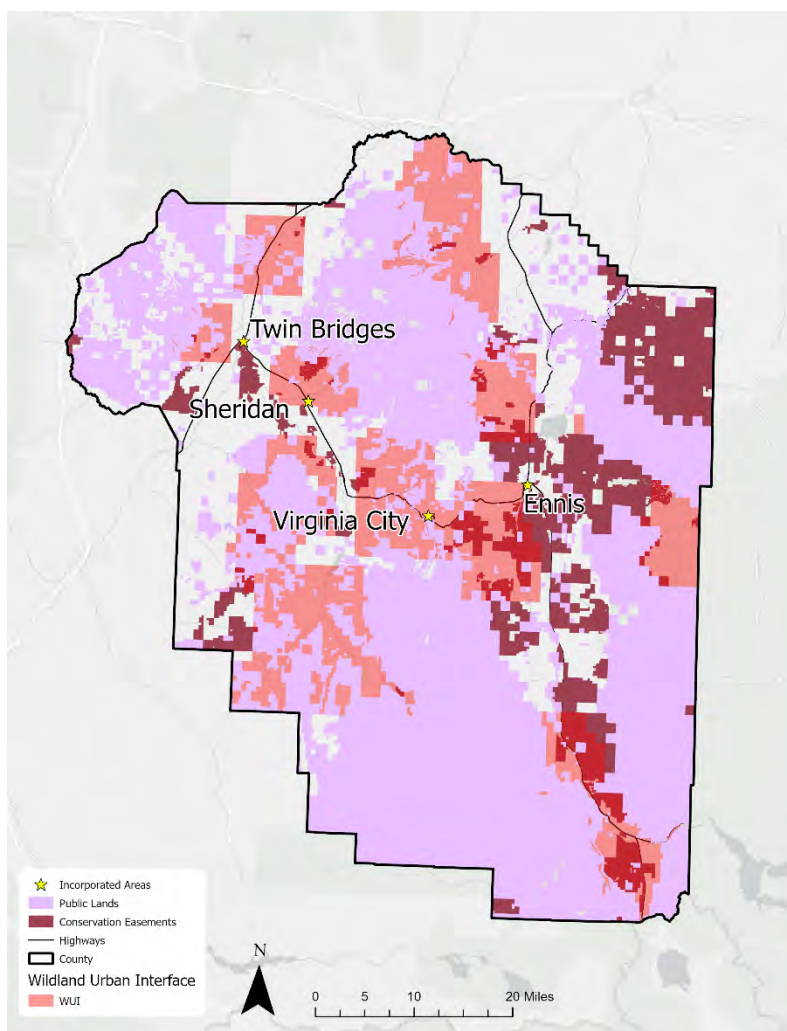


Figure 6: Physical and Regulatory Limitations to Residential Development, Madison County²⁹

²⁹ Montana State Library, "Montana Spatial Data Infrastructure."



7 Pricing

Using data from the MLS, compiled by Rocket.com, one can look at the current pricing of houses in Madison County and compare it to historical data. The current, November 2022, median house price in Madison County is \$599,000. This is over 59% higher than it was in 2021³⁰.

Madison County has seen a 122% increase since January of 2017 in the median market rate house price rising from \$262,677 (2017) to \$428,167 (2022)³¹. The Multiple Listing Service for Madison County provides this data. With an area median income in the county of \$55,892 this puts a house outside of the price range of residents of Madison County³². Based on the median income people can afford a home between \$133,666 to \$212,454³³. The median income in Madison County provided the information to create this affordability range. This calculator uses the standard 30% of gross income spent on housing rule but provides an upper end of 50% of the gross income for comparison³⁴. This also assumes a down payment of 20% of the purchase price, for the upper end of this range that would be \$55,382, which would take considerable time to save on an income of \$55,892. However, based on the per capita income of \$35,668, and an assumption of two working adults in the home, the price rises to \$175,659 to \$269,531, but this value is still below the median house price at market values³⁵. Simply put housing in Madison County is outside of the normal budget for the people who live here.

³⁰ "Madison County, Montana Housing Market Report October 2022 - RocketHomes."

³¹ "Madison County, Montana Housing Market Report October 2022 - RocketHomes."

³² United States Census Bureau, "American Community Survey Data for Madison County, MT."

³³ "How Much House Can I Afford?"

³⁴ "How Much House Can I Afford?"

³⁵ United States Census Bureau, "American Community Survey Data for Madison County, MT"; "How Much House Can I Afford?"



7.1 Property Maintenance

Homeowners should budget up to 4% of the value of their home, for properties older than 30 years, for property maintenance³⁶. Based on this recommendation, the age of structures, and the assessed value of homes in Madison County the average cost of home maintenance would be \$1,428 monthly or \$17,136 annually. This equates to over 30% of the area median income in the County³⁷. This coupled with the cost of a mortgage on a home at the median value (\$428,167) and the median income in Madison County (\$55,892) makes affording the currently available housing stock in Madison County nearly impossible for residents.

7.1 General Income Attainability Today

Housing Affordability and Housing Attainability are big topics of discussion in Montana, with opposing views of what those terms mean and what the inclusion of these types of housing can mean for a community. For this document we will use the term attainable housing. This means 30% of a resident's gross income is what they spend on housing per month. Based on the median income in the County of \$55,892 a resident could afford to pay \$1,397.30 per month on rent or to purchase a home³⁸. The standard budgeting allowance of 30% of the gross income does not apply equally. This value is misleading however, due to several factors. This does not include the price of utilities, income taxes, property maintenance, or other external factors.

7.2 Cost of Living in Madison County

Madison County has a higher cost of living index than adjacent and comparable counties. These are important factors to remember when reviewing the affordability of housing. The table below shows data from the Economic Policy Institute and compares counties adjacent to Madison County and counties of comparable size. The data is looking at a single adult with no children,

³⁶ "The Annual Cost of Maintaining a Home."

³⁷ "The Annual Cost of Maintaining a Home"; United States Census Bureau, "American Community Survey Data for Madison County, MT."

³⁸ United States Census Bureau, "American Community Survey Data for Madison County, MT."



and this remained constant through all cost-of-living index numbers. Table 7 displays this data below.

Table 7: County Cost of Living Adjacent and Comparable Population to Madison County³⁹

County	Relationship to Madison County	Annual Cost of Living	Monthly Cost of Living
Madison		\$42,693	\$3,558
Dawson	Comparable Population	\$38,920	\$3,243
Stillwater	Comparable Population	\$36,801	\$3,067
Beaverhead	Adjacent	\$36,532	\$3,044
Butte-Silver Bow	Adjacent	\$36,141	\$3,012
Jefferson	Adjacent	\$39,114	\$3,260
Gallatin	Adjacent	\$39,924	\$3,327

As shown by the table above Madison County has the highest cost of living of all the listed counties. The primary reason for the high cost of living was **Transportation, Taxes, and Housing** costs. Table 8 shows the cost-of-living index for Madison County and Gallatin County for comparison.

Table 8: Madison County v. Gallatin County Cost of Living⁴⁰

Category	Madison County Cost per Month	Gallatin County Cost per Month
Housing	\$781	\$783
Food	\$288	\$288
Transportation	\$1,085	\$889
Health Care	\$418	\$429
Miscellaneous Necessities	\$387	\$388
Taxes	\$599	\$551
Total	\$3,558	\$3,327

7.3 Rental Costs

The median rent in Madison County is \$855 per month or \$10,260 annually. This makes up 18% of the gross income at the area median income for Madison County. The rent level, based on the 30% standard, is attainable⁴¹. It appears from the data that the cost of rent is not

³⁹ “Family Budget Calculator.”

⁴⁰ “Family Budget Calculator.”

⁴¹ United States Census Bureau, “American Community Survey Data for Madison County, MT.”



necessarily the concern, but the number of available units is. At the time of this draft there were no units available for rent in Madison County⁴². The more expensive end of the rental scale shows that rents are close to \$1,500 per bedroom⁴³. One limitation of the exclusion of Big Sky in this document is that the ACS data does not exclude the Big Sky area from its data. Table 9 below shows rental costs per bedroom in Madison County.

Table 9: Rent Costs per Room, Madison County⁴⁴

Rent Value 2021	Count
\$150 to \$199	21
\$200 to \$249	7
\$250 to \$299	0
\$300 to \$349	9
\$350 to \$399	28
\$400 to \$449	28
\$450 to \$499	36
\$500 to \$549	24
\$550 to \$599	30
\$600 to \$649	80
\$650 to \$699	17
\$700 to \$749	47
\$750 to \$799	11
\$800 to \$899	76
\$900 to \$999	47
\$1,000 to \$1,249	79
\$1,250 to \$1,499	31

7.4 Cost Burdened Households

A cost burdened household is a household that spends more than 30% of their gross monthly income on housing. Coupled with the increased cost of living in Madison County this data shows that living and working in Madison County is a financial burden to 27% of households⁴⁵.

The ACS looked at the cost per unit with and without a mortgage in Madison County. These two categories constitute the home ownership category. The ACS also looked at gross rent as a

⁴² "Madison County, Montana Housing Market Report October 2022 - RocketHomes."

⁴³ United States Census Bureau, "American Community Survey Data for Madison County, MT."

⁴⁴ "B25056: Census Bureau Table."

⁴⁵ United States Census Bureau, "American Community Survey Data for Madison County, MT."



percentage of the household income. Being housing cost burdened means that an individual household spends more than 30% of their gross income on housing. Table 10 displays this data.

Table 10: Cost Burden Household by Mortgage Status and Rental, Madison County⁴⁶

Housing unit without a mortgage 2021	Count
Less than 10.0 percent	655
10.0 to 14.9 percent	359
15.0 to 19.9 percent	149
20.0 to 24.9 percent	67
25.0 to 29.9 percent	125
30.0 to 34.9 percent	36
35.0 percent or more	108
Housing units with a mortgage 2021	Count
Less than 20.0 percent	489
20.0 to 24.9 percent	148
25.0 to 29.9 percent	167
30.0 to 34.9 percent	55
35.0 percent or more	486
Occupied units paying rent 2021	Count
Less than 15.0 percent	78
15.0 to 19.9 percent	101
20.0 to 24.9 percent	60
25.0 to 29.9 percent	98
30.0 to 34.9 percent	55
35.0 percent or more	166

Table 11 below shows these numbers as the percent of the total by mortgage status and rentals.

Table 11: Percent of Financially Burdened Households, Madison County⁴⁷

Mortgage Status or Rental 2021	Percent
Housing unit without a mortgage	9%
Housing unit with a mortgage	40%
Rental	40%

⁴⁶ United States Census Bureau.

⁴⁷ United States Census Bureau.



As expected, housing units without a mortgage are the least economically burdened category of residents. The lack of a monthly mortgage makes it is less likely that this household type would experience housing financial burden. Households with a mortgage and rentals are 40% financially burdened by their housing costs. This means that 40% of everyone in Madison County that either has an active mortgage on their home or rents in the County are financially burdened⁴⁸. The pressure from being financially burdened could cause residents to leave the County to find either higher wages or more attainable housing.

⁴⁸ United States Census Bureau.



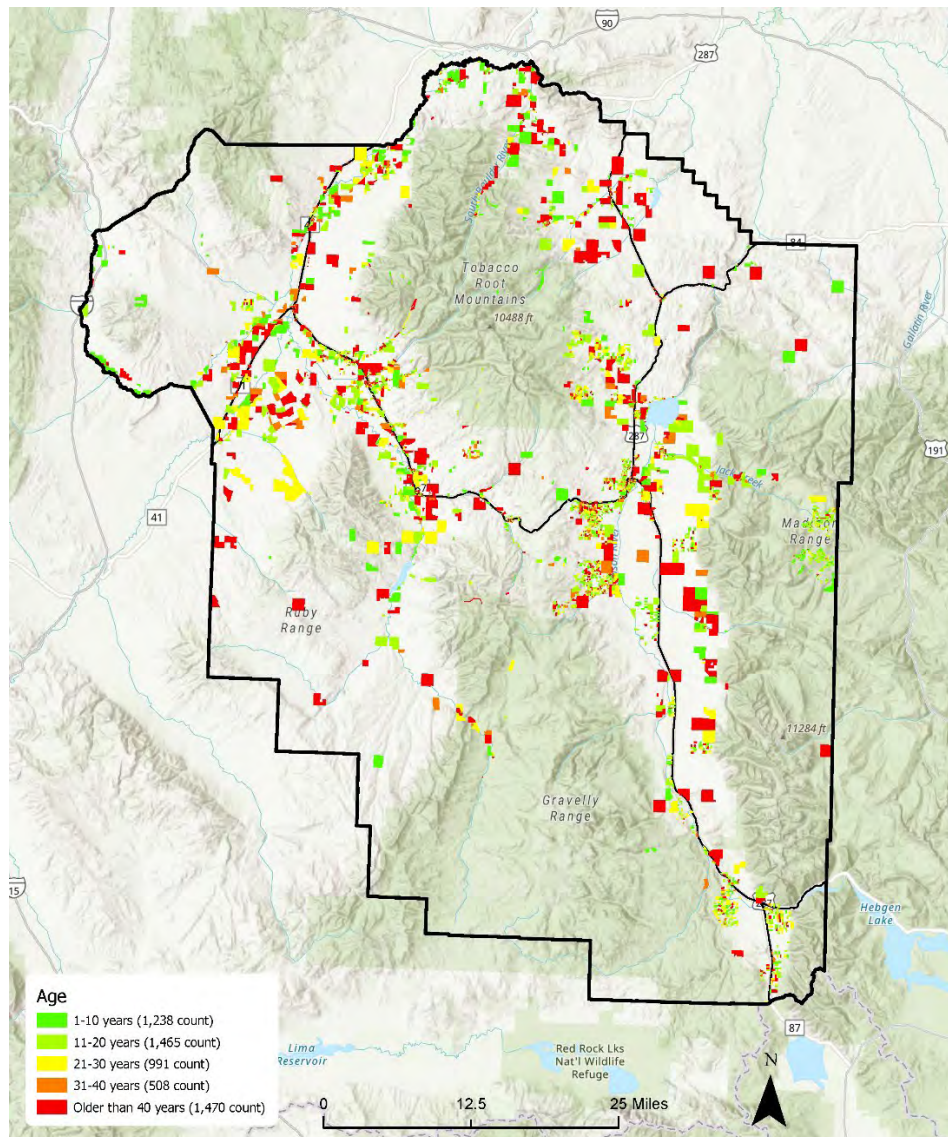
8 Conditions

A review of the condition of housing in Madison County relied on the Census data of value, Cadastral Subcategory data, and by ground research. The general condition of Madison County units was in good repair with many simply needing regular maintenance. Few structures were in such poor condition that they appear uninhabitable.

8.1 Age of Housing

The housing stock in Madison County is aging. The average residential unit age is 24.87 years⁴⁹. As units age, they require more maintenance which adds costs to owning a home or maintaining rental units. There are maps showing the age of units per community in Appendix G. Table 12 below provides the build year for the residential units in Madison County.

⁴⁹ United States Census Bureau.

Figure 7: Housing Age, Madison County⁵⁰Table 12: Build Year for Residential Structures⁵¹

Year Structure Built	Count
2014 or later	239
2010 to 2013	145
2000 to 2009	658
1980 to 1999	1,124
1960 to 1979	727
1940 to 1959	265
1939 or earlier	549

⁵⁰ Montana State Library, "Montana Spatial Data Infrastructure."

⁵¹ United States Census Bureau, "American Community Survey Data for Madison County, MT."



As expected, the physical condition improves as the average age of the home decreases. As discussed in the following sections while residential units in Madison County tend to be older, they are generally in good condition. Table 13 and Figure 8 show the relationship between time and condition of units. Cadastral Subcategory Data provides the following data.

Table 13: Physical Condition and Average Age per Physical Condition, Madison County⁵²

Physical Condition 2021	Average Age 2021
Unsound	71.3
Very Poor	54.7
Poor	52.5
Fair	41.0
Average	35.2
Good	21.9
Very Good	13.4
Excellent	6.5

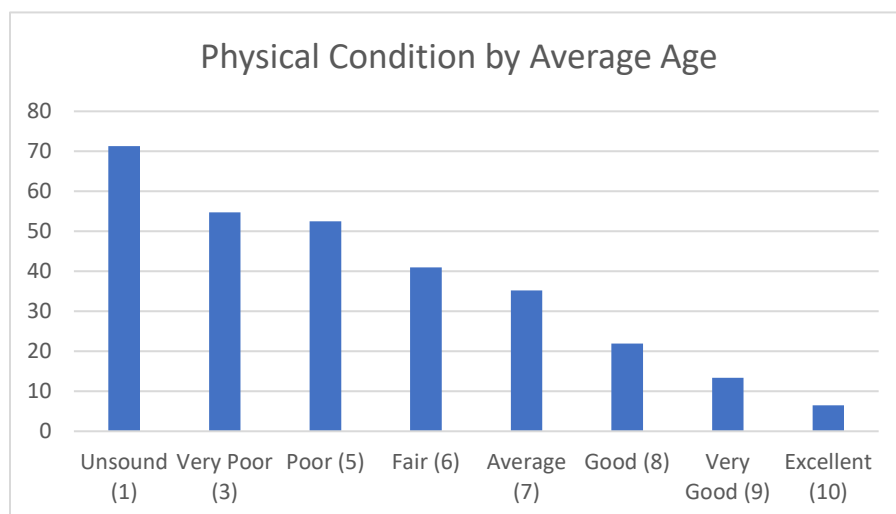


Figure 8: Physical Condition by Average Age

The addition of housing addresses both factors. New builds will be in good physical condition and would be brand new. Eventually the older homes in Madison County will need replacing. However, there are many factors that affect new builds occurring in Madison County.

⁵² Montana State Library, "Montana Cadastral Data."



Identifying available lands, price of materials and infrastructure, and available labor all have an impact on the ability to build new units. As discussed in later chapters of this document there are additional barriers to addressing the housing issue in Madison County.

8.2 Condition of Units

The review of Montana Cadastral Subcategory data and a driving survey of Madison County provided insight into the condition of residential units. This shows what housing is still in usable condition within the county and where there is an expectation that the housing units are no longer habitable. Appendix H has the community level maps of housing condition from the Montana Cadastral Subcategory data. Table 14 shows the conditions of units in Madison County from the Cadastral Subcategory Data.

Table 14: Cadastral Subcategory Data Condition Assessment⁵³

Condition 2021	Unit Count 2021
Unsound	32
Very Poor	37
Poor	73
Fair	374
Average	1,599
Good	2,021
Very Good	1,006
Excellent	530

The conditions from Cadastral data shows that most of the housing units in Madison County are Fair to Excellent, 97.5% of units in the County. With many of the units in Madison County built before 2000 (73%) residents of Madison County have done a good job maintaining their homes⁵⁴. This allows housing stock to be available to future residents of Madison County.

On November 18th, 2022 a driving survey occurred to ground truth the Cadastral data. This survey went street by street to evaluate the housing condition and rank them into 4

⁵³ Montana State Library.

⁵⁴ Montana State Library.



categories: Poor, Fair, Good, and New. The main factors that contributed to which category a unit went in was the roof condition, siding condition, windows, and general property maintenance. The categories details are below:

- Poor
 - In need of new roof
 - Missing paint or siding
 - Broken windows
 - Deterioration of exterior features (Chimneys, Siding, Doorways, etc.)
- Fair
 - Roof showing signs of aging
 - Fading or small amounts of chipped pain
 - In general need of regular maintenance
- Good
 - Home appears in good maintenance
 - No chipped or faded paint
 - Brick appears in good aesthetic condition
- New
 - New appearance
 - No visible defects

8.3 Driving Survey Data

The following table shows generalized results from the driving survey. These results come from a survey along residential streets. Observing general property quality, the road survey confirmed the other datasets. This data mirrors the Cadastral Subcategory data finding that most



units in Madison County are in the Fair-New condition⁵⁵. The numbers indicate the assessed category associated with individual streets in the area. While these numbers will not add to the exact number of roads within each study area, they give a value for relative comparison to other study areas. The driving survey did not cover Harrison, Pony, Cameron, or McAlister. Table 15 provides the Driving Survey data.

Table 15: Driving Survey Assessment, 2021⁵⁶

Area of Survey	Poor	Fair	Good	New
Harrison	1	6	3	
Pony	2	4	3	
McAlister	1	5	6	
Ennis	3	11	16	7
Cameron		2	2	
Highway 287 from Virginia City to Ennis		1	1	
Virginia City Ranches	1	1	2	2
Virginia City	3	4	7	2
Highway 287 from Nevada City to Alder		1		
Alder	3	2	5	
Laurin	1	1	1	
Highway 287 Laurin to Sheridan		1	1	1
Sheridan	1	6	9	1
Highway 287 Sheridan to Twin Bridges			1	
Twin Bridges	3	3	3	
Highway 287 Twin Bridges to Silver Star			1	
Silver Star		1	1	

⁵⁵ "Montana Cadastral Subcategory Data"; Hazelton, Driving Survey Data.

⁵⁶ Hazelton, Driving Survey Data.



While there is no true dollar value or assessed value attributed to the numbers above, they represent the count of the condition of individual streets in Madison County. This provides insight into the areas with higher quality housing stock and areas where maintenance is a concern. The following chapters will look at these same factors in the communities in Madison County. Limitations in the ACS data restricted review at some community levels. There will also be recommendations and funding sources identified that Madison County can consider to help alleviate their housing issues.



9 Infrastructure Existing Condition

Infrastructure availability and general condition directly influences the County's ability to address the housing concerns in the County. This report presents secondary data from operators of the public water and sewer systems within Madison County. Secondary data refers to information from an outside source. A survey of operators, conducted December 2022 to January 2023, provided information on the general condition, capacity, units served, and existing concerns of these systems. Appendix I, Appendix J (Water), and Appendix K (Sewer) provide the survey responses. The following communities submitted responses to the survey. This is the data provided the information to write this section of the report.

Sewer

- Alder
- Ennis
- Harrison
- Sheridan
- Twin Bridges
- Virginia City

Water

- Ennis
- Sheridan
- Twin Bridges
- Virginia City

The communities listed above provided responses to these questions either independently or through in person interviews conducted over multiple spans. The general condition of the public water and sewer systems is in good to fair condition as reported by the operator. The most common concern across the County is the capacity of these systems. Most communities either are actively working on a new Preliminary Engineering Report (PER), or beginning to start the process to assess their systems for an upgrade.



There are areas within Madison County that do not have central water and sewer. These areas without central sewer make up approximately 79% of residences. Areas without central water makes up approximately 82% of residences in Madison County. A county as large as Madison County with a generally rural nature will rely on these systems to provide services to some of its residents. These systems mostly provide services to the structure on a single parcel. The report covers the ability to place new systems, the general number of systems, and the production of these systems, based on available state and County information. Review of each community's on-site infrastructure is in the following chapters. The following is a list of communities that use on-site systems:

- Alder (Residential Wells)
- Cameron (Residential Wells & Septic)
- Harrison (Residential Wells)
- Laurin (Residential Wells & Septic)
- McAllister (Residential Wells & Septic)
- Norris (Residential Wells & Septic)
- Pony (Residential Wells & Septic)
- Silver Star (Residential Wells & Septic)

The Ground Water Information Center (GWIC) provides data about wells in Montana. A discussion of the general availability of ground water and its impacts on residential development is in the following sections. The Madison County Sanitarian also provided information for communities within Madison County regarding well availabilities impact on residential growth. Appendix L and M provide community level information regarding wells.

Septic systems provide wastewater service to many residences in Madison County. These systems replace the need for central sewer however they need more land and can need



replacement at times. The Madison County Sanitarian provided general information for these systems. However due to the varying nature of systems and ground conditions there is not the ability to give general information regarding the study areas.

9.1 Central Water Systems

Water service is an essential element of all residential development. Water provides drinking water and is essential to wastewater system. Also allowing for irrigation of landscaping. The availability of water is different across the entire county. This section presents information collected for central public water systems. Available data for this report came from the operator surveys conducted in December 2022 and January 2023.

9.1.1 County Wide Assessment

In general, the availability of water has varying impacts on residential development in Madison County. The availability of water is not a concern in most Madison County communities, but there are exceptions. For example, Ennis needs new water supplies to match the growth that it has seen since the pandemic. To review the situation in each community simply go to their chapter and review. This introduction will give a sense of the overall impacts of water on residential development in Madison County. A lack of data on commercial water uses makes the amount of available capacity is difficult to calculate for communities.



9.1.2 Ennis

The Town of Ennis pulls their water supply from groundwater wells. The general condition as reported through the survey is that the system is in “good but old” condition. Ennis does not treat their water and stores raw water in an above ground bolted steel tank. The Town does not have any on-site wells or septic systems within its service area. Water rights and physical pumping capabilities are not limiting development in Ennis. Overall, the water system for Ennis does not have a direct impact on residential development.

There are some concerns with leaks in the Ennis water system but Public Works department fixes the leaks as they become aware of them. Water main breaks are relatively rare in the Town with the most recent break occurring in summer of 2022. The Public Works Department keeps records of flows daily going back to 2015. These records are available at the Town office. Ennis has undertaken updating their Preliminary Engineering Report which will provide more detailed information about the system. Generally, water capacity and the overall condition of the system do not negatively impact residential growth in Ennis.

9.1.3 Sheridan

The Town of Sheridan gets their water supply from groundwater wells. The general condition of the system as reported by the Town is “in need of updating” with other elements are “in good condition”. The biggest concerns to move the entire system into a good condition is the ability to increase physical pumping capacity. The town does have two on-site wells and septic near the incorporated area. The Town also maintains a 300,000-gallon storage tank that provides fire flow. Currently there is the expectation of drilling an additional well and including two more potential wells spurred by development in the Town. While water is not a major concern to residential development the Montana Department of Environmental Quality has identified the need for updates to the system in case of a well failure.



One of Sheridan's wells needs rehab to maintain service to its residents. Water leaks can occur in the Town interrupting service to residents. The operator stated that these can occur approximately every 5-6 years. There are multiple planning documents available to the Town to help plan and address issues with the system as they arise.

Overall water availability currently has no impacts to residential development in Sheridan. However, it could become a concern in the future. While there is a plan for some development, there are issues that need addressing with the water system to keep it up to standard. Further upgrades will need evaluation in the future to provide high levels of service to any future development.

9.1.4 Twin Bridges

Twin Bridges receives their water supply from two deep wells that provide ample water supply. The overall system is in good but old condition as reported by the operator. The wells for Twin Bridges have both recently undergone a Preliminary Engineering Report to look for ways to update them to continue to provide service. Currently the Town stores water in a 300,000-gallon tank. Twin Bridges has two such tanks, however one tank went out of service in 2000 due to the excessive cost to fix the tank.

To accommodate for future growth reviewing the decommissioned tank for use could be beneficial to Twin Bridges. In 2021 the Preliminary Engineering Report began to influence decisions in the Town. Expected system updates could increase service to residents and the ability to accommodate growth.

This system overall does not appear to be limiting residential development in Twin Bridges. However, the system does appear to need updates in the future. Water system updates will require thoughtful prioritization to avoid limitations on residential growth in the future.



9.1.5 Virginia City

Virginia City pulls their water supply from groundwater springs. The general condition as reported through the survey is that the system is in “excellent” condition. Virginia City treats their water with minimal chemicals (chlorine) to comply with the State of Montana standards. There is limited capacity available to Virginia City. Current estimates state that approximately 25 more equivalent dwelling units maybe added to the system before capacity expires.

There are possible impacts to future residential development from water rights. To ensure that water rights do not become an issue in the future it is best that the City acts proactively in securing additional water rights. There is no raw water storage in Virginia City currently, this again could be an issue in the future and analysis of the addition of raw water storage may prohibit future limitations.

The operator of the system stated that the general condition of this system is excellent and that the piping network receives updates as funding and time allows. There is currently a Preliminary Engineering Report from 2015 that guides system updates.

Water availability could become an inhibitor to residential development in the future in Virginia City. There is some excess capacity available in the short-term, and system upgrades could increase this capacity to match growth with the appropriate planning.

9.2 Central Wastewater Systems

Wastewater capacity is a concern, in varying degrees, across Madison County. This report will look at central sewer systems and limited information about private septic systems. Available data for this report came from the operator surveys and the Madison County Sanitarian.



Wastewater capacity and systems play a major role in influencing residential development in Madison County. Compared to water availability, wastewater is the biggest factor affecting residential growth. There are currently six communities that have a central sewer system that provides service to residential and commercial customers. The following is a list of the communities reviewed:

- Alder
- Ennis
- Harrison
- Sheridan
- Twin Bridges
- Virginia City

Based on the responses to the survey the general condition of systems in Madison County are good to excellent. The largest identified concern is the capacity for new services. Several communities have excess capacity however this capacity is not extensive. Wastewater capacity hampers some communities to a greater degree. For example, Harrison has limits on development caused by wastewater capacity. Figure 9 below outlines existing capacities compared to current flows of these communities in Madison County.

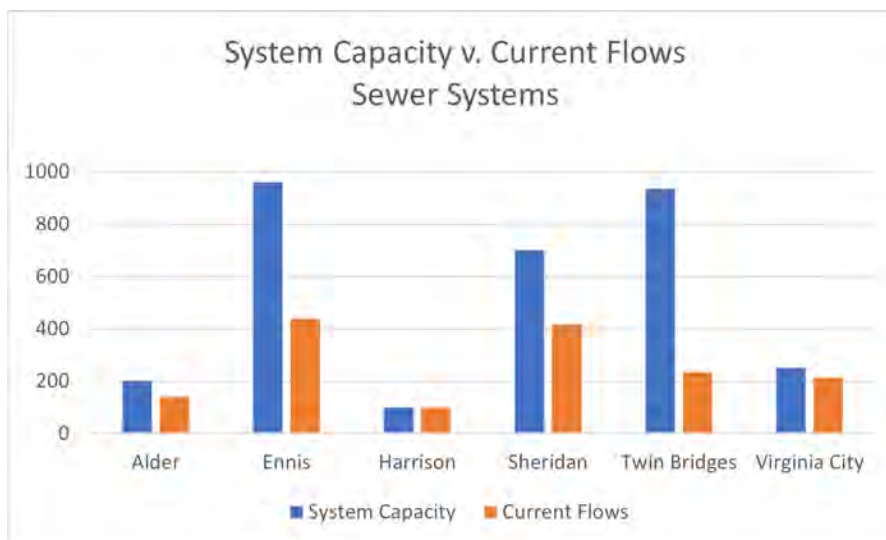


Figure 9: Sewer Capacity and Current Flows, Madison County Communities⁵⁷

9.2.1 Alder

Alder is an unincorporated community located 9 miles west of Virginia City, along Montana Highway 287. The current population of Alder is 135 residents⁵⁸. Alder does have a central sewer system that provides service to its residents. There is currently capacity for an additional 60 equivalent dwelling units for the Alder sewer system. This provides the ability for the system to take on additional residences or businesses. Alder does not have a Department of Environmental Quality discharge permit as the system discharges through land application. The lagoons for Alder are located east of the community in the Garnett, USA mine operation. These are facultative lagoons that provide treatment for ultimate disposal via land application.

Alder is currently preparing a Preliminary Engineering Report which will provide a more detailed look at the systems condition. The operator of the system stated that while the system could take on more flow the community is currently land locked by large private landowners and there is no expectation of further residential development. Therefore, this system is not inhibiting residential development, but other elements are restricting growth.

⁵⁷ Hazelton, Water and Wastewater Survey for Madison County.

⁵⁸ United States Census Bureau, "American Community Survey Data for Madison County, MT."



9.2.2 Ennis

The Town of Ennis holds a surface water disposal permit through the Montana Department of Environmental Quality for discharge to the Madison River. Aerated lagoons provide treatment to the raw sewage before discharge and the treatment criteria are satisfied. The lagoons are located northeast of Town. As shown in Figure 9 above the Town has over twice the capacity that it needs to serve its residents. However, increasing development pressure will quickly eat into the capacity reserves that Ennis currently has. The Preliminary Engineering Report provides guidance to the Ennis Public Works Department and decision makers to address system deficiencies and prioritize projects.

There are minor concerns about seasonal infiltration from the Madison River that reduces the systems overall efficiency. Reducing the amount of infiltration from surface and groundwater would be one way to increase the capacity of the system without adding costly treatment components.

The excess capacity of the Ennis sewer system means that there are minimal negative impacts to residential development in terms of sewer for Ennis.

9.2.3 Harrison

The Harrison sewer system presents the most concerning system reviewed in the document. The original system could accommodate 100 equivalent dwelling units. The system currently serves 100 equivalent dwelling units. The system is at its maximum capacity and the district has had to deny request for hookups. The system is currently undergoing a Preliminary Engineering Report to evaluate the potential for expansion. This should be a high priority as this system extremely limits residential growth. In essence it makes it impossible in Harrison.



9.2.4 Sheridan

The Sheridan sewer system has a design capacity of 701 equivalent dwelling units and is currently serving 416. There is capacity available in Sheridan but as previously noted in the water section there are plans for residential developments in the Town. These new units will reduce the existing excess capacity soon.

The Town operates an aerated lagoon and three facultative lagoons that together provide treatment and storage. Sheridan uses land application to dispose of the treated wastewater. The system does see levels of infiltration that lower the system's efficiency, but this usually occurs during spring when there is higher groundwater. There are multiple documents that influence the management and expansion of the sewer system.

This system does not currently provide a challenge to development. As the new residential developments are ready for occupancy, they will reduce the available capacity for the Town and future expansion maybe necessary for any future growth.

9.2.5 Twin Bridges

The Twin Bridges sewer system has a design capacity of 936 equivalent dwelling units. The system currently serves 264 equivalent dwelling units. There are no proposed developments in Twin Bridges at this time which will maintain the excess capacity that the system has.

The Town maintains a surface water discharge permit from the Department of Environmental Quality; however, they currently utilize a land application system. The lagoons are located north of Twin Bridges. The lift stations need updating as they are crucial to operate the system. A Preliminary Engineering Report identified this issue and the Town is working to address this issue.

This system does not present a limitation to residential development. Updates to the lift stations will ensure that the system continues to provide high quality service to its residents.



9.2.6 Virginia City

Virginia City's system has a design capacity of 250 equivalent dwelling units. The system currently serves 214 equivalent dwelling units. There is excess capacity available in the system, however there is not a large amount of excess capacity. Currently there are no known plans for development. A facultative lagoon processes the raw sewage then the system operates a land application disposal system. There are a few known concerns with the system including infiltration of groundwater (partially addressed in 2011), and willow roots causing blockages. This system does not currently limit development, but with only 36 equivalent dwelling units available it could be a concern in the future. There is a Preliminary Engineering Report that provides further guidance about the system.

9.3 On-site Systems

Most on-site systems provide service to only the residents of the parcel in which they are located. These systems are generally located where connection to central sewer and water is infeasible. The use of on-site systems allows residents of Madison County to live the rural lifestyle that is traditionally desired in the County.

9.3.1 Septic

Residences that lack access to a central sewer system require a septic system. Septic systems are contingent upon soil percolation, depth to groundwater, distance to wells and structures, among other components. Septic systems are critical to Madison County as there are many areas without access to a central sewer system. These areas make up approximately 79% of Madison County. After discussion with the Madison County Sanitarian's Office, it was determined that a generalization of an area's ability to permit new septic systems is impossible. All new septic systems must meet the Montana Department of Environmental Quality standards. Evaluation of each site will need to occur due to the individual site conditions. Therefore, there is no current concerns about limiting residential development as it pertains to septic systems.



9.3.2 Wells

Wells provide water to residences that lack access to a central water system. The depth of groundwater and the well's ability to produce, measured in gallons per minute, are the two essential pieces of understanding how wells impact residential development. Using the Ground Water Information Center (GWIC) data a summary of well information in Madison County follows.

9.3.2.1 County Wide Assessment

Table 16 provides a breakdown of the GWIC data county wide. This information provides a general assessment and ability to review the conditions in Madison County.

Table 16: GWIC Well Summary, Madison County, 2022⁵⁹

Gallons per Minute (County Wide)	
Average	29.6 gpm
25%	15 gpm
Median	20 gpm
75%	30 gpm
Minimum	0 gpm
Maximum	1122 gpm
Static Water Level (County Wide)	
Average	69.0 ft
25%	14.0 ft
Median	34.0 ft
75%	87.0 ft
Minimum	-20.8 ft
Maximum	960.0 ft

⁵⁹ "Ground Water Monitoring."



The following graphic shows the average gallons per minute and static water level county wide compared to the analyzed communities. To provide a residence there needs to be approximately 5 gallons per minute⁶⁰. Figure 10 shows that the average output for each community is well above this mark.

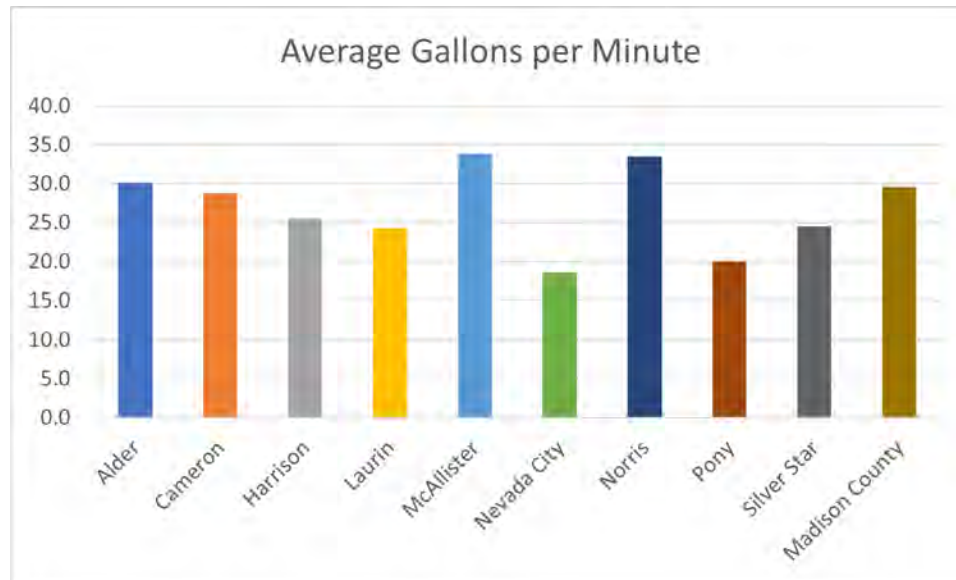


Figure 10: Average Gallons per Minute, Madison County & Communities, 2022⁶¹

⁶⁰ "Minimum FHA Loan Standards for Properties Served by Wells."

⁶¹ "Ground Water Monitoring."

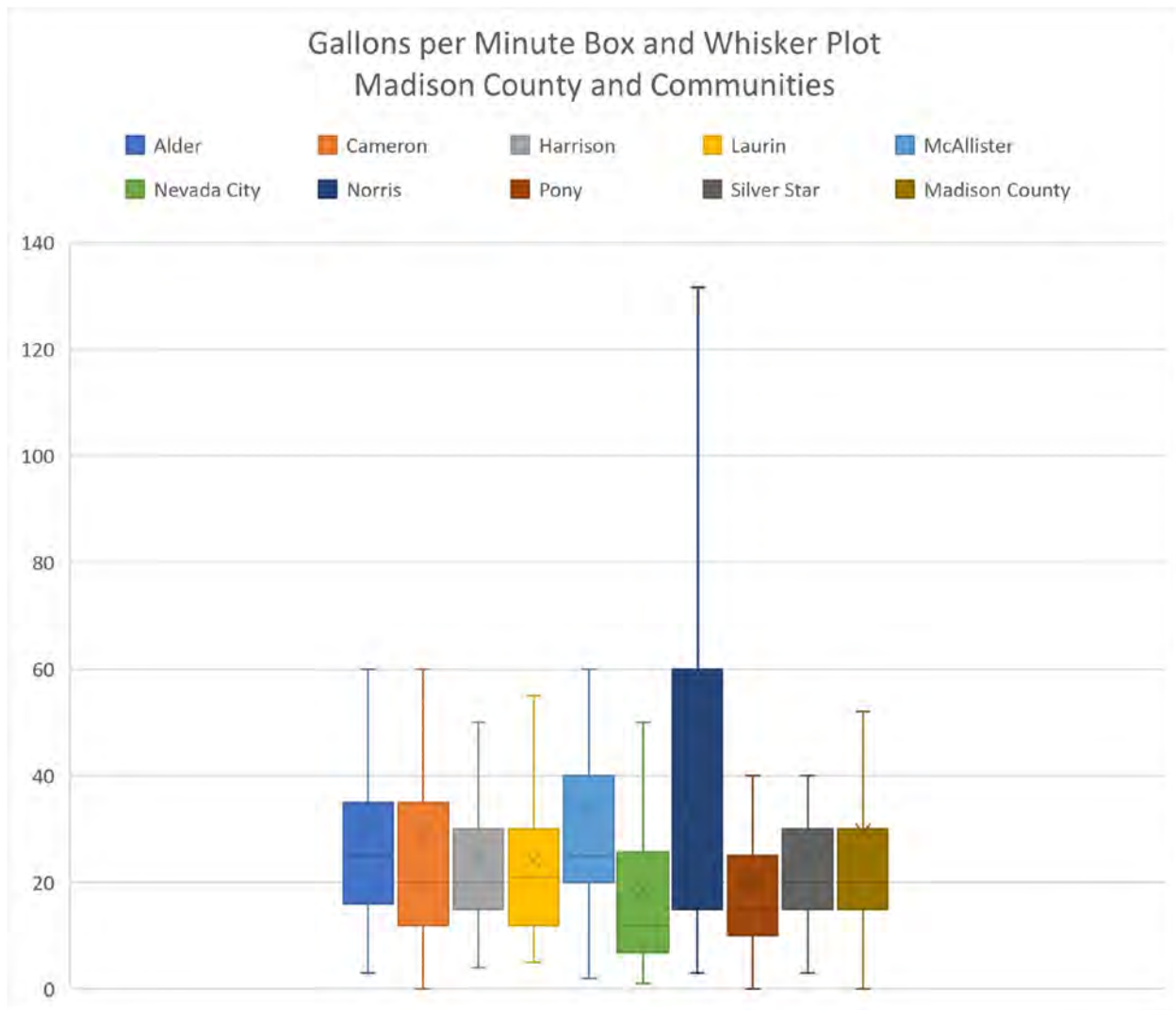


Figure 11: Gallons per Minute Box & Whisker Plot, Madison County & Communities, 2022⁶²

Figure 11 allows for the comparison of the output of wells between Madison County and its communities. From the data it appears that there is sufficient well production throughout the County. Norris provides the most productive wells to its residents, but no areas are in danger of limits from groundwater output.

⁶² "Ground Water Monitoring."

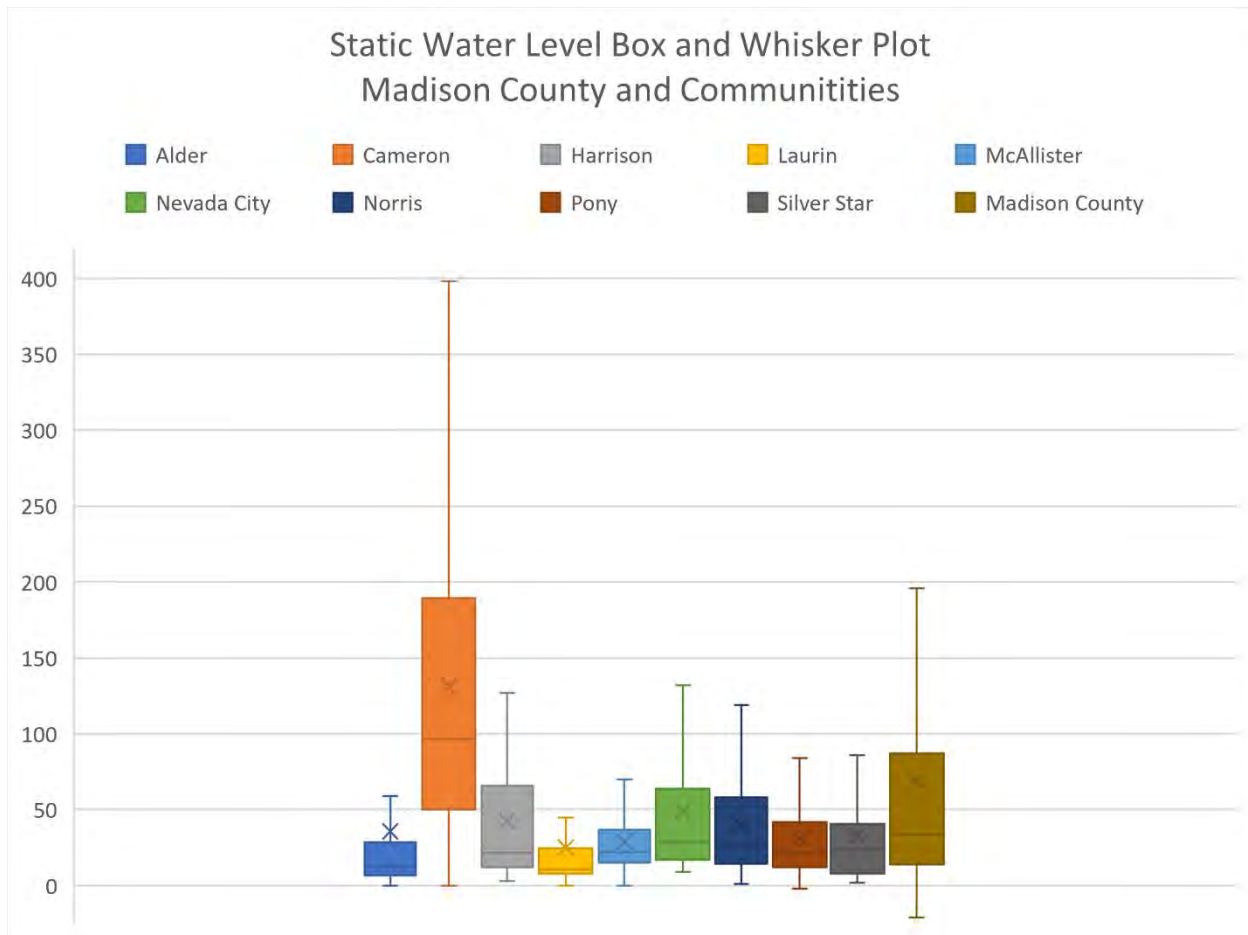


Figure 12: Static Water Level Box & Whisker Plot, Madison County & Communities, 2022⁶³

Figure 12 allows for the comparison of communities to the overall County condition of static water level. This information shows that generally ground water levels are not an inhibitor to residential growth in Madison County. There are individual instances where ground water can be a challenge, however this would be site specific and will need evaluation at the site level.

⁶³ "Ground Water Monitoring."

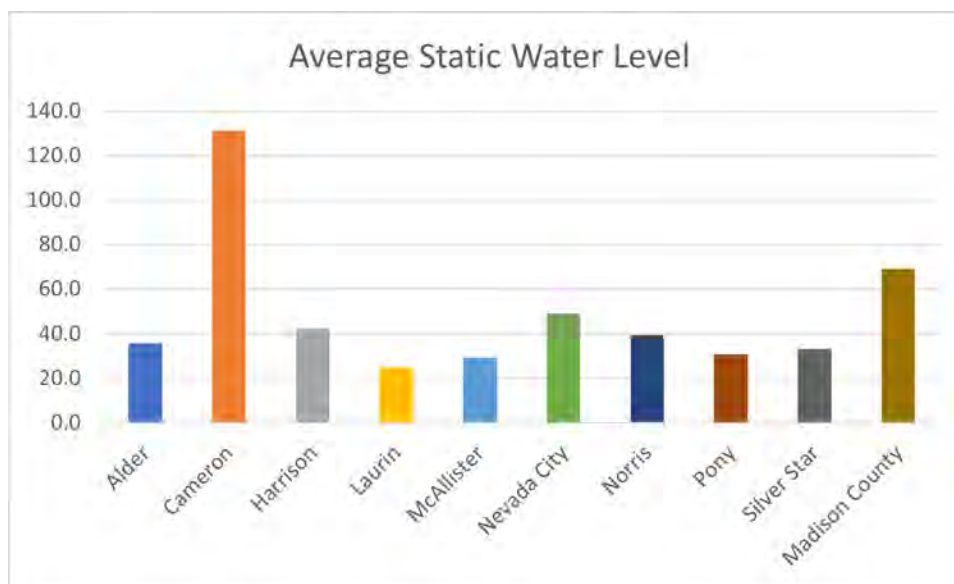


Figure 13: Average Static Water Level, Madison County & Communities, 2022⁶⁴

Figure 13 shows the average static water level in each community and Madison County. Generally, the availability of groundwater is within 60 feet. However, Cameron has a static water level of 130 feet, making it more difficult and expensive to drill a well in the Cameron area. Individual sites may have limitations on residential developments, however in a general sense groundwater does not appear to have a negative impact on residential development.

⁶⁴ "Ground Water Monitoring."



9.3.2.2 Alder

Alder is an unincorporated community located 9 miles west of Virginia City, along Montana Highway 287. The current population of Alder is 135 residents⁶⁵. Table 17 provides a breakdown of the GWIC data, in and around Alder.

Table 17: GWIC Wells Summary, Alder Area, 2022⁶⁶

Gallons per Minute (Alder Area)	
Average	30.1 gpm
25%	16.0 gpm
Median	25.0 gpm
75%	35.0 gpm
Minimum	3.0 gpm
Maximum	150.0 gpm
Static Water Level (Alder Area)	
Average	35.8 ft.
25%	7.0 ft.
Median	12.0 ft.
75%	28.5 ft.
Minimum	0.0 ft.
Maximum	310.0 ft.

The data above shows that the average production of domestic wells near Alder is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁶⁵ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁶⁶ “Ground Water Monitoring.”



9.3.2.3 Cameron

Cameron is an unincorporated community located 11 miles south of Ennis, along Montana Highway 287. The current population of Cameron project to 974. This projection uses the parcels constructed for residential purposes multiplied by an expected occupancy rate of two people per household. This was the methodology used to project population in areas where Census data was not available. Table 18 provides a breakdown of the GWIC data, in and around Cameron.

Table 18: GWIC Well Summary, Cameron Area, 2022⁶⁷

Gallons per Minute (Cameron Area)	
Average	28.8 gpm
25%	12.0 gpm
Median	20.0 gpm
75%	35.0 gpm
Minimum	0 gpm
Maximum	275.0 gpm
Static Water Level (Cameron Area)	
Average	131.2 ft
25%	50.0 ft
Median	96.5 ft
75%	189.5 ft
Minimum	0.0 ft
Maximum	960.0 ft

The data above shows that the average production of domestic wells near Cameron is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. As discussed above the average depth to static water level is the greatest in the Cameron area. This could cause challenges when digging new wells in the area. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁶⁷ "Ground Water Monitoring."



9.3.2.4 Harrison

Harrison is an unincorporated community located along Highway 287, 27 miles north of Ennis. The current population of Harrison is 33 residents⁶⁸. Table 19 provides a breakdown of the GWIC data, in and around Harrison.

Table 19: GWIC Wells Summary, Harrison Area, 2022⁶⁹

Gallons per Minute (Harrison Area)	
Average	25.5 gpm
25%	15.0 gpm
Median	20.0 gpm
75%	30.0 gpm
Minimum	4.0 gpm
Maximum	100.0 gpm
Static Water Level (Harrison Area)	
Average	42.4 ft.
25%	12.0 ft.
Median	21.6 ft.
75%	65.8 ft.
Minimum	3.0 ft.
Maximum	155.0 ft.

The data above shows that the average production of domestic wells near Harrison is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁶⁸ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁶⁹ “Ground Water Monitoring.”



9.3.2.5 Laurin

Laurin is an unincorporated community located along Montana Highway 287, 8 miles south of Sheridan. There is no Census data available for Laurin therefore the methodology detailed above projected the population of Laurin. The projected population of Laurin is currently 124. Table 20 provides a breakdown of the GWIC data, in and around Laurin.

Table 20: GWIC Wells Summary, Laurin Area, 2022⁷⁰

Gallons per Minute (Laurin Area)	
Average	24.3 gpm
25%	12.0 gpm
Median	21.0 gpm
75%	30.0 gpm
Minimum	5.0 gpm
Maximum	60.0 gpm
Static Water Level (Laurin Area)	
Average	25.0 ft.
25%	8.0 ft.
Median	10.5 ft.
75%	24.8 ft.
Minimum	0.0 ft.
Maximum	150.0 ft.

The data above shows that the average production of domestic wells near Laurin is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁷⁰ "Ground Water Monitoring."



9.3.2.6 McAllister

McAllister is an unincorporated community located just west of Ennis Lake. McAllister is 6 miles north of Ennis along Montana Highway 287. The current population of McAllister is 176 residents⁷¹. Table 21 provides a breakdown of the GWIC data, in and around McAllister.

Table 21: GWIC Wells Summary, McAllister Area, 2022⁷²

Gallons per Minute (McAllister Area)	
Average	33.9 gpm
25%	20.0 gpm
Median	25.0 gpm
75%	40.0 gpm
Minimum	2.0 gpm
Maximum	200.0 gpm
Static Water Level (McAllister Area)	
Average	29.2 ft.
25%	15.0 ft.
Median	22.0 ft.
75%	37.0 ft.
Minimum	0.0 ft.
Maximum	168.0 ft.

The data above shows that the average production of domestic wells near McAllister is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁷¹ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁷² “Ground Water Monitoring.”



9.3.2.7 Nevada City

Nevada City is an unincorporated community located along Montana Highway 287, just west of Virginia City. There is no Census data available for Nevada City therefore the methodology detailed above projected the population of Nevada City. The projected population of Nevada City is currently 24. Table 22 provides a breakdown of the GWIC data, in and around Nevada City.

Table 22: GWIC Wells Summary, Nevada City Area, 2022⁷³

Gallons per Minute (Nevada City Area)	
Average	18.6 gpm
25%	6.9 gpm
Median	12.0 gpm
75%	25.8 gpm
Minimum	1.0 gpm
Maximum	100.0 gpm
Static Water Level (Nevada City Area)	
Average	49.0 ft.
25%	17.0 ft.
Median	29.0 ft.
75%	64.0 ft.
Minimum	9.0 ft.
Maximum	274.0 ft.

The data above shows that the average production of domestic wells near Nevada City is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. If there is an expansion of growth in Nevada City there is a future potential for combining with the Virginia City systems. This would be a very long-range plan but could provide benefits to both communities. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition

⁷³ "Ground Water Monitoring."



of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

9.3.2.8 Norris

Norris is an unincorporated community located along Montana Highway 287, 16 miles north of Ennis. The population of Norris is currently 25 residents⁷⁴. Table 23 provides a breakdown of the GWIC data, in and around Norris.

Table 23: GWIC Wells Summary, Norris Area, 2022⁷⁵

Gallons per Minute (Norris Area)	
Average	33.5 gpm
25%	15.0 gpm
Median	23.5 gpm
75%	60.0 gpm
Minimum	3.0 gpm
Maximum	130.0 gpm
Static Water Level (Norris Area)	
Average	39.5 ft.
25%	14.3 ft.
Median	26.5 ft.
75%	58.0 ft.
Minimum	1.0 ft.
Maximum	150.0 ft.

The data above shows that the average production of domestic wells near Norris is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁷⁴ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁷⁵ “Ground Water Monitoring.”



9.3.2.9 Pony

Pony is an unincorporated community in Madison County. Pony is located along Montana Highway 283 just east of the Tobacco Root Mountains. The population of Pony at the time of writing was 136 residents⁷⁶. Table 24 provides a breakdown of the GWIC data, in and around Pony.

Table 24: GWIC Wells Summary, Pony Area, 2022⁷⁷

Gallons per Minute (Pony Area)	
Average	20.0 gpm
25%	10.0 gpm
Median	15.0 gpm
75%	25.0 gpm
Minimum	0.0 gpm
Maximum	100.0 gpm
Static Water Level (Pony Area)	
Average	30.8 ft.
25%	12.0 ft.
Median	22.0 ft.
75%	41.8 ft.
Minimum	-2.0 ft.
Maximum	8.0 ft.

The data above shows that the average production of domestic wells near Pony is sufficient for residential development. However, the introduction of new domestic wells could reduce the availability of groundwater. Wells that are below 5 gallons per minute may require a cistern to properly serve a residence. This report does not look at individual sites nor the condition of groundwater outside of the available data. To determine what affect the addition of wells might have on the overall availability of groundwater will require analysis that is outside of the scope of this report.

⁷⁶ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁷⁷ “Ground Water Monitoring.”



9.3.2.10 Silver Star

Silver Star is an unincorporated community located in the northeast corner of Madison County along Montana Highway 41 North. The population of Silver Star is currently 72 residents⁷⁸. The area relies solely on on-site systems to provide water and wastewater services. Table 25 provides a breakdown of the GWIC data, in and around Silver Star.

Table 25: GWIC Wells Summary, Silver Star Area, 2022⁷⁹

Gallons per Minute (Silver Star Area)	
Average	24.5 gpm
25%	15.0 gpm
Median	20.0 gpm
75%	30.0 gpm
Minimum	3.0 gpm
Maximum	100.0 gpm
Static Water Level (Silver Star Area)	
Average	33.0 ft.
25%	8.0 ft.
Median	23.5 ft.
75%	40.8 ft.
Minimum	2.0 ft.
Maximum	430.0 ft.

⁷⁸ United States Census Bureau, “American Community Survey Data for Madison County, MT.”

⁷⁹ “Ground Water Monitoring.”

10 Housing Demand and Supply

10.1 Bureau of Labor and Industry Statistics

Madison County is updating its growth policy so an in-depth analysis of the employment market is unnecessary in this document. It would, however, be a disservice to not mention the impacts that employment in Madison County has on the housing market. Madison County is a net importer of jobs with 2,275 people commuting to Madison County for work while only 1,358 leave Madison County. Therefore, Madison County has a net gain of 917 workers into the County daily. This statistic shows that there could be additional demand for housing in Madison County. The data further shows that there are desirable jobs in Madison County because people are willing to commute for work. Additional housing units could draw commuters to move to Madison County to reduce their transportation costs. This leads to the idea that there could be a supply issue in Madison County's housing stock.

The biggest industry is the Accommodation and Food Service Industry⁸⁰. As with some of the previous sections, it is difficult to separate the Big Sky area from County wide data. This factor could cause high concentration of service industry jobs. Due to Big Sky being a large resort area the community needs a higher concentration of

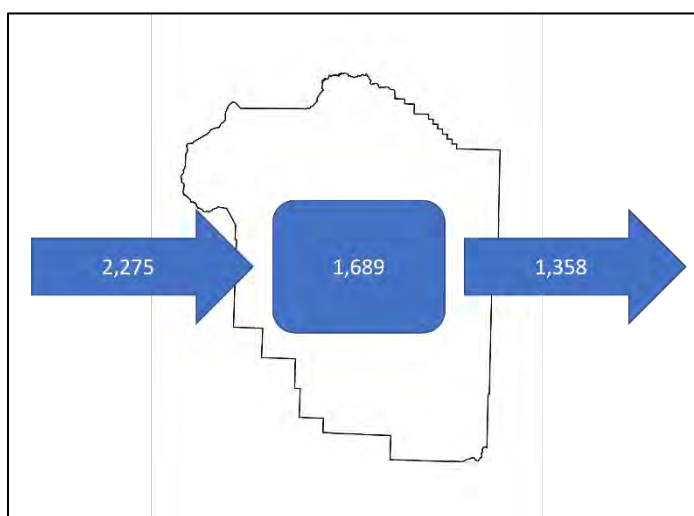


Figure 14: Commuter Patterns, Madison County

Accommodation and Food Service Industry workers to properly operate. There is some

⁸⁰ "Madison County Local Area Profiles."



uncertainty of the impacts of the commuter numbers above. These numbers could be impacted by multiple factors:

- Construction in Big Sky
- Commuters working in Madison County for a company with a Gallatin County address
- Big Sky being split by the County line

Appendix N provides community level maps with employment location and count. These locations are logical targets for workforce housing. Table 26 provides the industry sector, number of employees, and share of total jobs in Madison County of the top 10 industries. Table 26 also shows the affordability range for individual industries based on their average salary in Madison County.

Table 26: Bureau of Labor Statistics and Housing Impact, Madison County^{81 82}

Industry Sector	Count of Jobs	Share of Total Employment	Average Income within Industry Sector	Affordable Monthly Payment	Housing Affordability Value
Accommodation and Food Services	1,505	42.40%	\$37,116	\$927.90	\$87,543
Construction	318	9.00%	\$60,640	\$1,561.00	\$201,763
Health Care and Social Assistance	249	7.00%	\$49,613	\$1,240.33	\$148,222
Retail Trade	231	6.50%	\$30,197	\$754.93	\$53,948
Educational Services	219	6.20%	\$38,531	\$963.28	\$94,413
Agriculture, Forestry, Fishing and Hunting	190	5.40%	\$35,312	\$882.80	\$78,784
Public Administration	147	4.10%	\$41,304	\$1,032.60	\$107,878
Manufacturing	122	3.40%	\$35,021	\$875.53	\$77,371
Transportation and Warehousing	114	3.20%	\$40,672	\$1,016.80	\$104,809
Mining, Quarrying, and Oil and Gas Extraction	105	3.00%	\$58,197	\$1,454.93	\$189,901
Average			\$42,660.30	\$1,066.51	\$114,463.20

10.2 Residential Building Starts

There were 894 state issued construction permits issued in Madison County from 2019-2021. This includes electrical and building permits. There were 65 Building Permits and 829 residential electric permits issued. The conversion from the State's website to the map 7 building permits and 52 residential electric permits not appear on the map. Therefore, these permits are not in the legend total in Figure 15. Theoretically these permits would provide at minimum 65 new residences in Madison County. The location of these permits, as shown on Figure 15, indicates

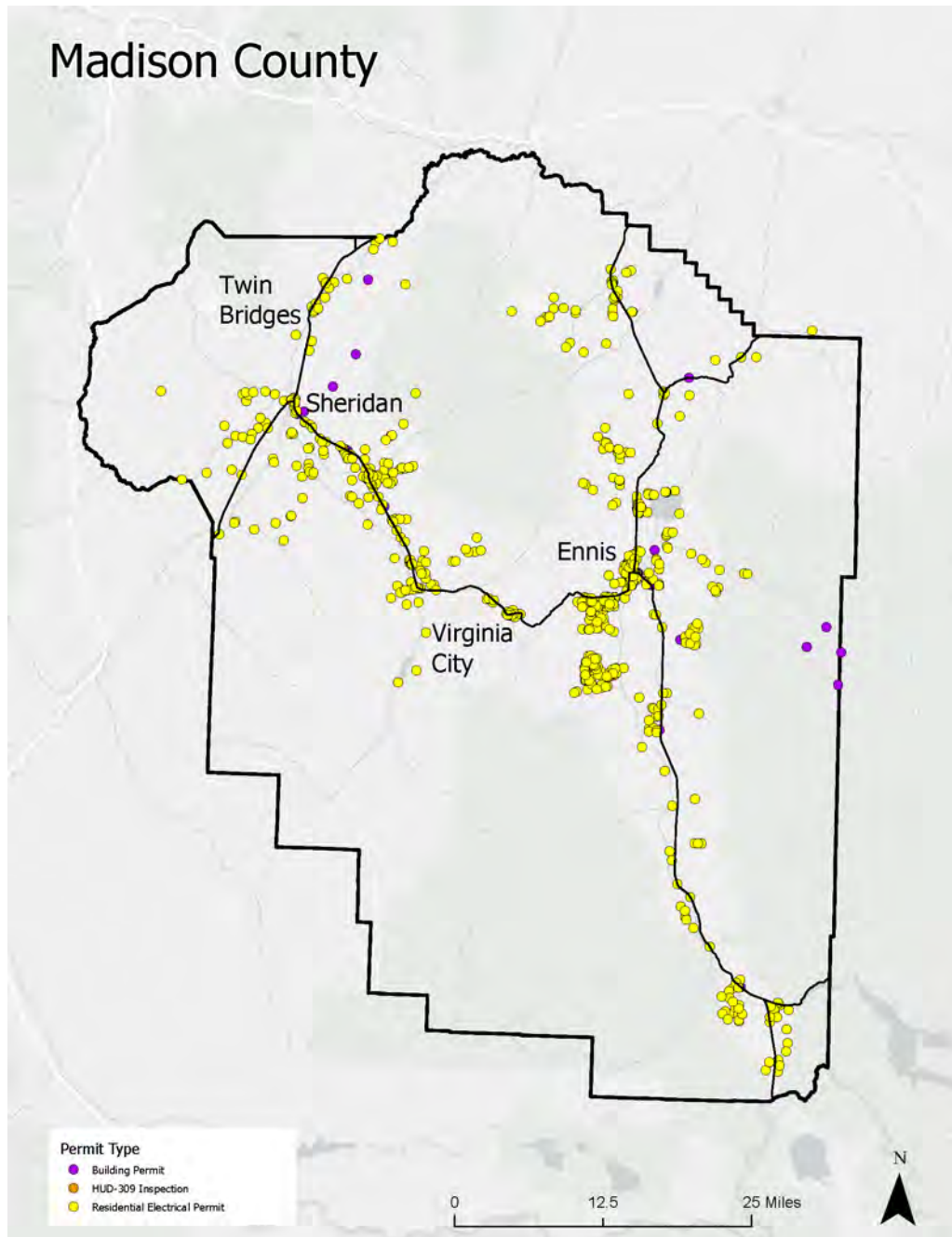
⁸¹ "Madison County Local Area Profiles."

⁸² "How Much House Can I Afford?"



that it is unexpected that these units are for general purchase. The distribution of houses appears to show that these permits were for owners that had already purchased their lots.

Figure 15: State Construction Permits, Madison County⁸³



⁸³ Montana Department of Labor & Industry, "Construction Permits."



11 Community Level Housing Analysis

Appendices A-O provide the community level data that is available from this project. This data should guide decision making within these communities. While this information is lagging data there is the assumption that most of this data will be useful for 3-5 years. The analysis presented in this chapter will look at the following communities in regards to their existing housing. Further chapters will identify areas and strategies for growth within these same communities.

- Alder
- Cameron
- Ennis
- Harrison
- Laurin
- McAllister
- Nevada City
- Norris
- Pony
- Sheridan
- Silver Star
- Twin Bridges
- Virginia City



11.1 Alder

11.1.1 Demographics

Table 27 provides quick demographics of Alder. This data came from the 2021 American Community Survey. The study area for Alder includes the entire area shown in the maps in the appendices.

Table 27: Selected Demographic Information: Alder, MT

Data Category	Value
Population	86
Median Income	\$34,000
Number of Households	54
Median Age	58.1
Percent of Owners	81.5%
Percent of Renters	18.5%

11.1.2 Development Limitations

The Alder area follows the subdivision regulations of Madison County and does not have a unique zoning district. The area is generally flat, which does not impact the community's ability to develop additional residential units. The Wildland Urban Interface, areas designated at a greater risk for hazards from wildfire, is east and west of the community. For more information on WUI restrictions contact the Madison County Department of Emergency Services.

Flood prone areas have limitations to development as regulated by Madison County and will require further consultation with the Madison County Floodplain Administrator. The Madison County Subdivision The Alder Sewer operator stated that floodplains were impacting development. The County could look to infill development or revitalization opposed to adjacent property development. Regulations require a 150' setback from the highwater mark of the Ruby River. This restriction applies to all structures. Refer to Appendix E for the community level map of the physical limitations impacting Alder.

11.1.3 Housing Age

The average age of a residential structure is 27.8 years. While in good condition as reviewed below, eventually these units will need replaced. The improvement of vacant or



abandoned units could be a good reinvestment strategy for Madison County to evaluate. Appendix G shows the Alder Residential Structure Age map. Table 27 shows the age of residential structures.

Table 28: Residential Structure Age Count & Percentage, Alder, MT⁸⁴

Alder		
Age	Count	Percentage
1-10 years	29	18%
11-20 years	35	21%
21-30 years	19	12%
31-40 years	17	10%
40+ years	65	39%

11.1.4 Housing Condition

The housing conditions appear to be in fair to excellent condition. While there are parts of town that have older structures, they seem to generally be in good condition. Appendix H shows the Alder Residential Structure Conditions Map. Table 28 shows the structure's condition.

Table 29: Physical Condition Count & Percentage, Alder MT⁸⁵

Alder		
Condition	Count	Percentage
Unsound	2	1%
Very Poor	0	0%
Poor	3	2%
Fair	21	13%
Average	62	38%
Good	50	30%
Very Good	26	16%
Excellent	1	1%

11.1.5 Pricing

Pricing data for each community comes from Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The Alder area saw the sale of 3 residential

⁸⁴ "Montana Cadastral Subcategory Data."

⁸⁵ "Montana Cadastral Subcategory Data."



properties with an average sale price of \$483,333⁸⁶. The area saw the sale of 2 parcels of vacant land sold at \$13,367 per acre⁸⁷. Alder is relatively remote location makes it difficult to get materials and construction crews into the area. The price of a residence is currently unaffordable to the workforce. Table 30 shows the pricing data of vacant parcels and residences.

Table 30: Price Data for Sales from Feb. 2022 to Feb. 2023: Alder⁸⁸

Alder	
Land	Value
Number of Sales	2
Minimum	\$2,178
Maximum	\$25,095
Median	\$13,367
Average	\$13,637
Residence	Value
Number of Sales	3
Minimum	\$230,000
Maximum	\$695,000
Median	\$525,000
Average	\$483,333

11.1.6 Housing Type

To match community character, it is important for future development to be respectful of current building type and massing. Single-family residences and manufactured homes make up 98% of units in the Alder area. A diversification in unit types, by adding duplexes or accessory dwelling units, could increase the amount of attainable housing in the Alder area. Table 31 shows the existing housing types in Alder.

⁸⁶ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

⁸⁷ Gallatin Association of Realtors.

⁸⁸ Gallatin Association of Realtors.

Table 31: Housing Type (Owner Occupied & Rentals): Alder, MT⁸⁹

Alder		
Housing Type	Count	Percentage
Single Family Residence	151	89%
Duplex	1	1%
Triplex	1	1%
Fourplex+	0	0%
Mixed Use	1	1%
Manufactured Home	16	9%
Townhouse	0	0%
Condominium	0	0%

11.1.7 Infrastructure Limitations

Alder has a central sewer system but no central water system. Residents rely on private wells to provide drinking and irrigation water. According to the infrastructure survey there are concerns with high groundwater and flood prone areas impacting the central sewer system. Alder is currently working on a Preliminary Engineering Report to increase sewer capacity. The existing system has capacity for 60 additional equivalent dwellings units. This excess capacity could be for the expansion of commercial operations or additional residences. The type of development that will likely be seen in the short-term is unknown because there are currently no proposed projects.

⁸⁹ "Montana Cadastral Subcategory Data."



11.2 Cameron

11.2.1 Demographics

The American Community Survey does not provide data for Cameron. The study area for Cameron includes the entire area shown in the maps in the appendices.

11.2.2 Development Limitations

The Cameron community follows the Madison County Subdivision Regulations and do not have a unique zoning district. The area is mostly free from any physical limitation. As development moves to the west of Highway 287 it will begin to encroach on the Wildland Urban Interface. There are no floodplains restrictions. The Madison River to the west of Cameron has a 500' setback as dictated by the Madison County Subdivision Regulations. The setback will create limitations on the placement of residences but will not have a significant impact.

11.2.3 Housing Age

Cameron has a mix of new and old construction, based on the map in Appendix G. The split appears to be even. This leads to an average age of residential structures of 23.8 years. However, like the other older structures in the County the useful life of these structures will eventually expire. The mix of new and old construction will allow for rolling construction to replace its older structures. Table 30 shows the residential structure age.

Table 32: Residential Structure Age Count & Percentage: Cameron, MT⁹⁰

Cameron		
Age	Count	Percentage
1-10 years	56	22%
11-20 years	74	45%
21-30 years	40	24%
31-40 years	26	16%
40+ years	64	39%

⁹⁰ "Montana Cadastral Subcategory Data."



11.2.4 Housing Condition

The housing condition is generally above fair. There are minor instances of poor or unsound structures. The housing mix becomes clearer as one compares the age and condition data. Appendix H shows the Cameron housing condition map. Table 33 shows the structure's condition.

Table 33: Physical Condition Count & Percentage: Cameron, MT⁹¹

Cameron		
Condition	Count	Percentage
Unsound	1	0%
Very Poor	0	0%
Poor	3	1%
Fair	17	7%
Average	75	29%
Good	126	49%
Very Good	35	14%
Excellent	3	1%

11.2.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The Cameron area saw an average sale price of \$993,143 and a median of \$619,000⁹². Note that there was a data outlier that impacted the average sale price in the area. The minimum, at \$450,000, is well above the affordability value of the Madison County workforce. Cameron may not hold a high percentage of the workforce in Madison County but potential growth of jobs and existing ranching operations will need a workforce in the future. The range in parcel price per acre is \$132,804, with a minimum of \$4,378 and a maximum of \$137,182. Table 34 shows the pricing data of vacant parcels and residences for the area.

⁹¹ "Montana Cadastral Subcategory Data."

⁹² Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

Table 34: Price Data for Sales from Feb. 2022 to Feb. 2023: Cameron⁹³

Cameron	
Land	Value
Number of Sales	18
Minimum	\$4,378
Maximum	\$137,182
Median	\$10,321
Average	\$24,982
Residence	Value
Number of Sales	7
Minimum	\$450,000
Maximum	\$2,250,000
Median	\$619,000
Average	\$993,143

11.2.6 Housing Type

The Cameron area has 100% single unit residences. This is not unexpected due to the lack of central services and the area's rural character. It is difficult to add multi-unit structures due to the factors above. Evaluation of the ability to build a few multiple unit dwellings would still be worth reviewing. Table 35 shows the existing housing type in the area.

Table 35: Housing Type (Owner Occupied & Rentals): Cameron, MT⁹⁴

Cameron		
Housing Type	Count	Percentage
Single Family Residence	238	91%
Duplex	0	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	23	9%
Townhouse	0	0%
Condominium	0	0%

⁹³ Gallatin Association of Realtors.

⁹⁴ "Montana Cadastral Subcategory Data."



11.2.7 Infrastructure Limitations

The Cameron area exclusively uses on-site systems. The detailed analysis of the on-site systems is in Section 9.3.2.3 and Section 9.3.1.



11.3 Ennis

11.3.1 Demographics

Table 36 provides overall demographics of the Town of Ennis. This data came from the 2021 American Community Survey.

Table 36: Selected Demographic Information: Ennis, MT

Data Category	Value
Population	917
Median Income	\$51,875
Number of Households	366
Median Age	58.2
Percent of Owners	71.9%
Percent of Renters	28.1%

11.3.2 Development Limitations

Ennis has multiple zoning districts and has adopted the Town of Ennis Subdivision Regulations. The zoning regulations in the Town appear to facilitate density to protect the natural areas. Ennis allows a higher density than normally seen in Madison County. By allowing a mix of densities, this creates the opportunity for officials to increase densities where it is appropriate. Allowing various densities provides Ennis the opportunity to respond to housing needs more dynamically. The Ennis Town Codes are supportive of residential development.

The area does have FEMA flood zones in the southeast part of Town. The area also has a Flood Prone area as delineated by Madison County. There is also a 500' setback from the Madison River that restricts all buildings. These factors will limit and restrict development in areas. A major factor in the flooding is ice jams. This causes water to build up and flood quickly and in unexpected areas. The areas do not cover wide swaths of Ennis; therefore, it will shift locations of development not denying it.

11.3.3 Housing Age

Ennis has experienced the highest residential growth rate in Madison County over recent years. The Madison Valley saw 58% of all building permits in Madison County since 2019. The



average age of a residential structure is 23.6 years. Table 33 shows the age of residential structures.

Table 37: Residential Structure Age Count & Percentage: Ennis, MT⁹⁵

Ennis		
Age	Count	Percentage
1-10 years	232	30%
11-20 years	138	18%
21-30 years	131	17%
31-40 years	76	10%
40+ years	194	25%

11.3.4 Housing Condition

The general condition of most residential units is in good to excellent condition. Newer homes should be in good condition and able to house residents for many years to come. The age of structures and condition of these same structures correlates as expected. Table 34 shows the structure's condition.

Table 38: Physical Condition Count & Percentage: Ennis, MT⁹⁶

Ennis		
Condition	Count	Percentage
Unsound	1	0%
Very Poor	4	1%
Poor	6	1%
Fair	30	4%
Average	178	26%
Good	322	46%
Very Good	152	22%
Excellent	78	11%

11.3.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The Ennis market was the busiest during 2022 with 54 houses sold and 75 parcels sold. This made up 49% of all sales in Madison County,

⁹⁵ "Montana Cadastral Subcategory Data."

⁹⁶ "Montana Cadastral Subcategory Data."



excluding Big Sky properties. With an average residential price of \$796,932 and an average vacant parcel price per acre of \$127,222 this puts prices highly unaffordable to its workforce.

Table 39 shows the sales price of vacant parcels and residences.

Table 39: Price Data for Sales from Feb. 2022 to Feb. 2023: Ennis⁹⁷

Ennis	
Land	Value
Number of Sales	75
Minimum	\$5,365
Maximum	\$1,120,332
Median	\$33,771
Average	\$127,222
Residence	Value
Number of Sales	54
Minimum	\$269,000
Maximum	\$2,662,500
Median	\$756,730
Average	\$619,000

11.3.6 Housing Type

Ennis has the greatest diversity of housing types in Madison County. The mix of housing typologies allows for flexibility in the market for residents to select a housing type that is more affordable. Table 40 shows the existing housing type.

Table 40: Housing Type (Owner Occupied & Rentals): Ennis, MT⁹⁸

Ennis		
Housing Type	Count	Percentage
Single Family Residence	608	73%
Duplex	26	3%
Triplex	10	1%
Fourplex+	11	1%
Mixed Use	0	0%
Manufactured Home	82	10%
Townhouse	13	2%
Condominium	80	10%

⁹⁷ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

⁹⁸ "Montana Cadastral Subcategory Data."



11.3.7 Infrastructure Limitations

The water and sewer system provide adequate service to its residents. There is excess capacity in both systems available for new development. As with most systems in Montana, there will need to be efforts to update the system continually but the system is in generally good condition. The Ennis water system is currently completing a Preliminary Engineering Report update to better plan its water service to residents in the future.



11.4 Harrison

11.4.1 Demographics

Table 41 provides overall demographics of Harrison. This data came from the 2021 American Community Survey. The Harrison study area covers the entire area shown on the maps in the appendices.

Table 41: Selected Demographic Information: Harrison, MT

Data Category	Value
Population	105
Median Income	\$54,010
Number of Households	20
Median Age	58.1
Percent of Owners	65.0%
Percent of Renters	35.0%

11.4.2 Development Limitations

The Harrison community follows the Madison County Subdivision Regulations and does not have a local zoning district. The area is mostly free from any physical limitation. There are no flood prone areas nor FEMA Flood Maps. The Wildland Urban Interface (WUI) is to the west and south of Harrison. The WUI increases the risk of wildfire but does not restrict development. For more information on WUI restrictions contact the Madison County Department of Emergency Services. The Harrison sewer system is at capacity and cannot accept any new connections. High groundwater limits the availability of septic systems impacting development. The lack of sewer capacity and high groundwater has nearly eliminated residential development.

11.4.3 Housing Age

The average age of a residential structure is 31.5 years. There is a minimal amount of new construction in the Harrison area. Table 36 shows the age of residential structures in Harrison.

Table 42: Residential Structure Age Count & Percentage: Harrison, MT⁹⁹

Harrison		
Age	Count	Percentage
1-10 years	21	19%
11-20 years	26	23%
21-30 years	17	15%
31-40 years	10	9%
40+ years	39	35%

11.4.4 Housing Condition

The condition of housing is generally in fair to average condition. Residences could benefit from general maintenance to prolong the structures usefulness. The age of the structures is a contributing cause to their condition. Table 37 shows the residential structure condition.

Table 43: Physical Condition Count & Percentage: Harrison, MT¹⁰⁰

Harrison		
Condition	Count	Percentage
Unsound	2	2%
Very Poor	0	0%
Poor	4	4%
Fair	8	7%
Average	44	40%
Good	39	35%
Very Good	14	13%
Excellent	2	2%

11.4.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The Harrison market had 3 residential sales and 4 vacant parcels sales. The area's average residential sale price was \$283,000 and the average price per acre was \$102,190. Harrison is closer to affordable for a Madison County working resident. Sales prices still exceeds the affordable values listed in 10.1 by \$82,000. Table 44 shows the pricing data of vacant parcels and residences.

⁹⁹ "Montana Cadastral Subcategory Data."

¹⁰⁰ "Montana Cadastral Subcategory Data."

Table 44: Price Data for Sales from Feb. 2022 to Feb. 2023: Harrison¹⁰¹

Harrison	
Land	Value
Number of Sales	4
Minimum	\$4,005
Maximum	\$244,813
Median	\$79,970
Average	\$102,190
Residence	Value
Number of Sales	3
Minimum	\$659,204
Maximum	\$1,203,125
Median	\$947,619
Average	\$936,649

11.4.6 Housing Type

The predominant housing type is a single unit structure. In Harrison 98% of all residential structures are single-family residences or manufactured homes. Table 45 shows the existing housing type.

Table 45: Housing Type (Owner Occupied & Rentals): Harrison, MT¹⁰²

Harrison		
Housing Type	Count	Percentage
Single Family Residence	99	87%
Duplex	0	0%
Triplex	1	1%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	13	11%
Townhouse	0	0%
Condominium	1	1%

11.4.7 Infrastructure Limitations

Lacking wastewater capacity has a huge impact on development. Their wastewater treatment system is at design capacity and can no longer take any new hookups. The sewer district has had to deny requests for connection. Harrison is currently working on a Preliminary

¹⁰¹ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹⁰² "Montana Cadastral Subcategory Data."



Engineering Report to update their system to increase capacity. The required updates to the system will take a major investment. The sewer district will need financing assistance to be able to meet future wastewater demands. Water comes from on-site wells in the community. These wells will need to pass DEQ and Madison County Sanitarian review before they can service a residence.



11.5 Laurin

11.5.1 Demographics

The American Community Survey does not provide data for Laurin. The study area covers the entirety of the area shown on the maps in the appendices.

11.5.2 Development Limitations

The Laurin community follows the Madison County Subdivision Regulations and does not have a unique zoning district. The area is mostly free from any physical limitation. The area has no floodplain restrictions. The Wildland Urban Interface (WUI) is to the west. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services.

11.5.3 Housing Age

The average age of a residential structure is 27.6 years. There is a wide age gap with approximately half the units being less than 20 years old and over 40% of the homes are over 40 years old. The housing stock in has few “middle aged” residences. Table 39 shows the residential structure age.

Table 46: Residential Structure Age Count & Percentage: Laurin, MT¹⁰³

Laurin		
Age	Count	Percentage
1-10 years	14	23%
11-20 years	12	20%
21-30 years	4	7%
31-40 years	4	7%
40+ years	27	44%

11.5.4 Housing Condition

The housing age leads one to expect similarities in the housing condition but most of the homes fall in the middle categories. Table 47 shows the structure's condition.

¹⁰³ “Montana Cadastral Subcategory Data.”

Table 47: Physical Condition Count & Percentage: Laurin, MT¹⁰⁴

Laurin		
Condition	Count	Percentage
Unsound	1	2%
Very Poor	0	0%
Poor	0	0%
Fair	8	13%
Average	24	40%
Good	16	27%
Very Good	11	18%
Excellent	1	2%

11.5.5 Pricing

There were no properties sold in Laurin sold between February 2022 to February 2023.

11.5.6 Housing Type

The housing type is 99% single-family residence or a manufactured home. There is one mixed residential and commercial unit. This is interesting as it shows that mixed residential and commercial unit work in the rural areas. This could be an easy strategy to bring in residential units to Laurin and other communities. Table 48 shows the existing housing type.

Table 48: Housing Type (Owner Occupied & Rentals): Laurin, MT¹⁰⁵

Laurin		
Housing Type	Count	Percentage
Single Family Residence	54	86%
Duplex	0	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	1	1%
Manufactured Home	8	13%
Townhouse	0	0%
Condominium	0	0%

¹⁰⁴ "Montana Cadastral Subcategory Data."

¹⁰⁵ "Montana Cadastral Subcategory Data."



11.5.7 Infrastructure Limitations

The Laurin area exclusively uses on-site systems. The detailed analysis of the on-site systems is in Section 9.3.2.5 and Section 9.3.1.



11.6 McAllister

11.6.1 Demographics

Table 49 provides quick demographics of McAllister. This data came from the 2021 American Community Survey. The McAllister study area covers the entire area shown on the maps in the appendices.

Table 49: Selected Demographic Information: McAllister, MT

Data Category	Value
Population	278
Median Income	\$38,530
Number of Households	103
Median Age	77.8
Percent of Owners	100%
Percent of Renters	0%

11.6.2 Development Limitations

The McAllister community follows the Madison County Subdivision Regulations and does not have a unique zoning district. Most of the area has some form of physical limitations. There are no floodplain restrictions in the area. The Wildland Urban Interface (WUI) covers most of the area to the west. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There are also steep slopes to the north that will limit development in certain areas.

11.6.3 Housing Age

The average age of a residential structure is 26.8 years. McAllister has the lowest average age of residential structures in Madison County. The Madison Valley has had the greater share of the development than the Ruby Valley. Therefore, the average residential structure age should be younger. Table 50 shows the age of residential structures.

Table 50: Residential Structure Age Count & Percentage: McAllister, MT¹⁰⁶

McAllister		
Age	Count	Percentage
1-10 years	34	17%
11-20 years	42	21%
21-30 years	52	26%
31-40 years	21	10%
40+ years	52	26%

11.6.4 Housing Condition

The physical condition of residential structures should be in good-excellent condition, due to their age. The data matches this assumption. These structures will need regular maintenance to keep them in good repair. Table 51 shows the structure's condition.

Table 51: Physical Condition Count & Percentage: McAllister, MT¹⁰⁷

McAllister		
Condition	Count	Percentage
Unsound	0	0%
Very Poor	2	1%
Poor	3	2%
Fair	14	7%
Average	58	29%
Good	110	55%
Very Good	12	6%
Excellent	2	1%

11.6.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The McAllister area had 18 sales; 9 residences and 9 vacant parcel sales. The average price for a residence was \$759,573. The average price per acre for vacant ground was \$154,187. Unfortunately, this follows the general trend of being unaffordable for the Madison County workforce. Table 52 shows the pricing data of vacant parcels and residences.

¹⁰⁶ "Montana Cadastral Subcategory Data."

¹⁰⁷ "Montana Cadastral Subcategory Data."

Table 52: Price Data for Sales from Feb. 2022 to Feb. 2023: McAllister¹⁰⁸

McAllister	
Land	Value
Number of Sales	9
Minimum	\$9,901
Maximum	\$610,403
Median	\$33,554
Average	\$154,187
Residence	Value
Number of Sales	9
Minimum	\$440,000
Maximum	\$1,148,000
Median	\$669,000
Average	\$759,573

11.6.6 Housing Type

The McAllister area consists of 99% single-family residences and manufactured homes. There are a lot of units in the area, but the affordability of these units puts home ownership out of the reach of the workforce. Potential inclusion of higher density housing options will ease the economic burden of housing on the workforce. Table 53 shows the existing housing type in the area.

Table 53: Housing Type (Owner Occupied & Rentals): McAllister, MT¹⁰⁹

McAllister		
Housing Type	Count	Percentage
Single Family Residence	188	91%
Duplex	1	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	16	8%
Townhouse	0	0%
Condominium	1	1%

¹⁰⁸ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹⁰⁹ "Montana Cadastral Subcategory Data."



11.6.7 Infrastructure Limitations

The McAllister area exclusively uses on-site water and sewer systems. The detailed analysis of the on-site systems is in Section 9.3.2.6 and Section 9.3.1.



11.7 Nevada City

11.7.1 Demographics

The American Community Survey does not provide data for Nevada City. The study area includes a portion of Virginia City. The maps in the appendices show the study area.

11.7.2 Development Limitations

The Nevada City community follows the Madison County Subdivision Regulations and does not have a unique zoning district. There are no floodplain restrictions in the area. The Wildland Urban Interface covers the entire area. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There will not be a restriction on development due to these physical limitations, but there are steep slopes throughout the entire area that would pose challenges. Any development will need to adequately respond to the physical limitation that are present and this would come at additional cost.

11.7.3 Housing Age

The average age of a residential structure is 31.6 years. Nevada City has very a low permanent population and the homes are quite old. These homes appear to be in good condition for their age. Table 54 shows the residential structure age.

Table 54: Residential Structure Age Count & Percentage: Nevada City, MT¹¹⁰

Nevada City		
Age	Count	Percentage
1-10 years	14	18%
11-20 years	24	32%
21-30 years	6	8%
31-40 years	2	3%
40+ years	30	39%

¹¹⁰ "Montana Cadastral Subcategory Data."



11.7.4 Housing Condition

The general condition of residential structures is in fair to very good condition. In general, regardless of age, most structures in Madison County are in good shape, and Nevada City is no exception. Table 55 shows the structure's condition.

Table 55: Physical Condition Count & Percentage: Nevada City, MT¹¹¹

Nevada City		
Condition	Count	Percentage
Unsound	1	1%
Very Poor	1	1%
Poor	5	7%
Fair	13	17%
Average	18	24%
Good	12	16%
Very Good	26	34%
Excellent	0	0%

11.7.5 Pricing

There were no properties sold in Nevada City between February 2022 and February 2023.

11.7.6 Infrastructure Limitations

The Nevada City area uses on-site systems. The detailed analysis of the on-site systems is in Section 9.3.2.7 and Section 9.3.1. A potential future connection to the Virginia City water and/or sewer systems could provide benefit in the future.

¹¹¹ "Montana Cadastral Subcategory Data."



11.8 Norris

11.8.1 Demographics

Table 56 provides overall demographics of Norris. This data came from the 2021 American Community Survey. The study area covers the entire area shown on the maps found in the appendices.

Table 56: Selected Demographic Information: Norris, MT

Data Category	Value
Population	46
Median Income	\$55,000
Number of Households	10
Median Age	53.8
Percent of Owners	100%
Percent of Renters	0%

11.8.2 Development Limitations

The Norris community follows the Madison County Subdivision Regulations and does not have a unique zoning district. The area has very few physical limitations. There are no floodplain restrictions in the area. The Wildland Urban Interface is not present in this area. There are steep slopes throughout the entire area that will limit development. It is unclear why there has not been more investment in this community.

11.8.3 Housing Age

The average age of a residential structure is 36.2 years. Approximately 50% of structures in Norris are 40+ years old. There was one house built in 2022. Previously Norris had not seen a new residence built since 2011. Table 57 shows the age of residential structures.

Table 57: Residential Structure Age Count & Percentage: Norris, MT¹¹²

Norris		
Age	Count	Percentage
1-10 years	1	4%
11-20 years	4	15%
21-30 years	3	12%
31-40 years	5	19%
40+ years	13	50%

11.8.4 Housing Condition

The housing condition is in average condition. This is because of good maintenance, regardless of the structures age. Structures have longer useful lives due to proper maintenance. Norris could be an area for investment in workforce housing. Table 58 shows the structure's condition.

Table 58: Physical Condition Count & Percentage: Norris, MT¹¹³

Norris		
Condition	Count	Percentage
Unsound	2	8%
Very Poor	0	0%
Poor	0	0%
Fair	6	23%
Average	12	46%
Good	5	19%
Very Good	1	4%
Excellent	0	0%

11.8.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. There was one residence and one vacant parcel sold. Based on the price per acre the vacant parcel will likely not foster residential

¹¹² "Montana Cadastral Subcategory Data."

¹¹³ "Montana Cadastral Subcategory Data."



development. However, that is purely an assumption. The single structure that sold in Norris went for nearly 4 times the affordable range of the Madison County workforce. Table 59 shows the pricing data of vacant parcels and residences.

Table 59: Price Data for Sales from Feb. 2022 to Feb. 2023: Norris¹¹⁴

Norris	
Land	Value
Number of Sales	1
Minimum	\$2,009
Maximum	\$2,009
Median	\$2,009
Average	\$2,009
Residence	Value
Number of Sales	1
Minimum	\$800,000
Maximum	\$800,000
Median	\$800,000
Average	\$800,000

11.8.6 Housing Type

The Norris area mostly consists of single-family residences and manufactured homes. The cadastral subcategory data does show a condominium. Condominiums could be an easy way to bring housing to a rural area. Table 60 shows the existing housing type.

Table 60: Housing Type (Owner Occupied & Rentals): Norris, MT¹¹⁵

Norris		
Housing Type	Count	Percentage
Single Family Residence	20	77%
Duplex	0	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	5	19%
Townhouse	0	0%
Condominium	1	4%

¹¹⁴ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹¹⁵ "Montana Cadastral Subcategory Data."



11.8.7 Infrastructure Limitations

The Norris area exclusively uses on-site water and wastewater systems. The detailed analysis of the on-site systems is in Section 9.3.2.8 and Section 9.3.1.



11.9 Pony

11.9.1 Demographics

Table 61 provides quick demographics of Pony. This data came from the 2021 American Community Survey. The study area covers the area shown on the maps in the appendices. While there is not a large workforce in the Pony area it is important to plan for growth. There also needs to be thought given to the existing workforce regardless of number of workers.

Table 61: Selected Demographic Information: Pony, MT

Data Category	Value
Population	127
Median Income	\$46,875
Number of Households	52
Median Age	49.7
Percent of Owners	86.5%
Percent of Renters	13.5%

11.9.2 Development Limitations

The Pony community follows the Madison County Subdivision Regulations and does not have a unique zoning district. There are no floodplain restrictions in the area. The Wildland Urban Interface (WUI) covers the entire area. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There are also steep slopes throughout the entire area that will limit development. Any development will need to adequately respond to the physical limitation that are present and this would come at additional cost.

11.9.3 Housing Age

The average age of a residential structure is 32.1 years. Over two thirds (2/3) of residential structures are over 30 years. Table 62 shows the age of the residential structures.

Table 62: Residential Structure Age Count & Percentage: Pony, MT¹¹⁶

Pony		
Age	Count	Percentage
1-10 years	4	4%
11-20 years	1	1%
21-30 years	3	3%
31-40 years	13	12%
40+ years	57	54%

11.9.4 Housing Condition

Pony, has a greater range of housing conditions. The condition data is more varied between the categories, this is not entirely unexpected. The age of a structure factors into its condition and many residential structures are quite old. Most units are in fair to good condition, regardless of the greater condition diversity. Table 63 shows the structure's condition.

Table 63: Physical Condition Count & Percentage: Pony, MT¹¹⁷

Pony		
Condition	Count	Percentage
Unsound	4	4%
Very Poor	1	1%
Poor	3	3%
Fair	13	12%
Average	57	54%
Good	21	20%
Very Good	6	6%
Excellent	3	3%

11.9.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. The average price of a residence in Pony is a surprising number: \$1.2 million. There were two sales in 2022. These were not large acre purchases, both below 30 acres of land. The lack of options in Pony for housing could have driven these values up. Table 64 shows the pricing data of vacant parcels and residences.

¹¹⁶ "Montana Cadastral Subcategory Data."

¹¹⁷ "Montana Cadastral Subcategory Data."

Table 64: Price Data for Sales from Feb. 2022 to Feb. 2023: Pony¹¹⁸

Pony	
Land	Value
Number of Sales	4
Minimum	\$6,897
Maximum	\$124,031
Median	\$10,530
Average	\$37,997
Residence	Value
Number of Sales	2
Minimum	\$990,000
Maximum	\$1,450,000
Median	\$1,220,000
Average	\$1,220,000

11.9.6 Housing Type

Residential structures are mostly single-family residences and mobile homes. These housing types make up 93% of the housing. The rural nature and lack of central services makes it unlikely for higher density development to be feasible in the area. Table 65 shows the existing housing type.

Table 65: Housing Type (Owner Occupied & Rental): Pony, MT¹¹⁹

Pony		
Housing Type	Count	Percentage
Single Family Residence	96	87%
Duplex	0	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	2	2%
Manufactured Home	7	6%
Townhouse	0	0%
Condominium	5	5%

11.9.7 Infrastructure Limitations

The Pony area exclusively uses on-site systems. The detailed analysis of the on-site systems is in Section 9.3.2.9 and Section 9.3.1.

¹¹⁸ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹¹⁹ "Montana Cadastral Subcategory Data."



11.10 Sheridan

11.10.1 *Demographics*

Table 66 provides quick demographics of the Town of Sheridan. This data came from the 2021 American Community Survey.

Table 66: Selected Demographic Information: Sheridan, MT

Data Category	Value
Population	694
Median Income	\$73,021
Number of Households	374
Median Age	56.0
Percent of Owners	85.9%
Percent of Renters	14.1%

11.10.2 *Development Limitations*

The Sheridan community follows the Madison County Subdivision Regulations and does not have a unique zoning district. The area has restrictions from physical features. There are no floodplain restrictions in the area. The Wildland Urban Interface (WUI) covers the majority of Town from the north. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There are no steep slopes that will limit development. Any development will need to adequately respond to the physical limitation that are present and this would come at additional cost.

11.10.3 *Housing Age*

The average age of a residential structure is 33.2 years. There is development planned in the area. This will lower the average age of housing. With proper maintenance these new homes should be able to serve Madison County residents for many years to come. Table 67 shows the age of the residential structures.

Table 67: Residential Structure Age Count & Percentage: Sheridan, MT¹²⁰

Sheridan		
Age	Count	Percentage
1-10 years	29	8%
11-20 years	50	14%
21-30 years	63	17%
31-40 years	35	10%
40+ years	186	51%

11.10.4 Housing Condition

Residences are in average or good condition. The anticipated development should contribute to the overall condition of houses. Table 68 shows the structure's condition.

Table 68: Physical Condition Count & Percentage: Sheridan, MT¹²¹

Sheridan		
Condition	Count	Percentage
Unsound	4	1%
Very Poor	2	1%
Poor	0	0%
Fair	24	7%
Average	135	38%
Good	167	47%
Very Good	26	7%
Excellent	5	1%

11.10.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. There were 23 residences and 20 vacant parcels sold in the Sheridan market. The average price of a residence was \$511,005 and the average price per acre was \$74,683. Some of the vacant parcels are slated for residential development. These values are outside of the affordable range for the workforce of Madison County. The GMA Garnet Mine is a large employer in the area. During the Sheridan Stakeholder Meeting one of the representatives stated that the mine had several job openings. She also stated

¹²⁰ "Montana Cadastral Subcategory Data."

¹²¹ "Montana Cadastral Subcategory Data."



it was difficult to recruit and retain employees due to housing issues. Table 69 shows the sales price of vacant parcels and residences.

Table 69: Price Data for Sales from Feb. 2022 to Feb. 2023: Sheridan¹²²

Sheridan	
Land	Value
Number of Sales	20
Minimum	\$4,700
Maximum	\$870,862
Median	\$30,920
Average	\$74,683
Residence	Value
Number of Sales	23
Minimum	\$200,000
Maximum	\$1,350,000
Median	\$440,000
Average	\$511,005

11.10.6 Housing Type

The housing type is 98% single-family residence and manufactured homes. There are two multi-unit dwellings and two mixed use units. Increasing these types of units, to increase options in the market, could influence affordability. Table 70 shows the existing housing type.

Table 70: Housing Type (Owner Occupied & Rental): Sheridan, MT¹²³

Sheridan		
Housing Type	Count	Percentage
Single Family Residence	335	90%
Duplex	4	1%
Triplex	0	0%
Fourplex+	2	1%
Mixed Use	2	1%
Manufactured Home	30	8%
Townhouse	0	0%
Condominium	0	0%

11.10.7 Infrastructure Limitations

¹²² Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹²³ "Montana Cadastral Subcategory Data."



Sheridan currently has excess capacity in its central water and wastewater systems. The expected developments along the west side of town will decrease this excess capacity. The Town should work to recapture this capacity through system upgrades. This would help the Town to have capacity for future developments. The Montana Department of Environmental Quality (DEQ) requires redundancy in the water system of municipalities. Sheridan is actively working to meet the redundancy requirement of the DEQ.



11.11 Silver Star

11.11.1 *Demographics*

Table 71 provides quick demographics of Silver Star. This data came from the 2021 American Community Survey. The study area includes the area shown on the maps in the appendices.

Table 71: Selected Demographic Information: Silver Star

Data Category	Value
Population	46
Median Income	\$41,250
Number of Households	15
Median Age	54.0
Percent of Owners	80.0%
Percent of Renters	20.0%

11.11.2 *Development Limitations*

The Silver Star community follows the Madison County Subdivision Regulations and do not have a unique zoning district. The area has some physical limitations. There are no floodplain restrictions in the area. The Wildland Urban Interface covers the entire area. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There are also steep slopes throughout the entire area that will limit development. Any development will need to adequately respond to the physical limitation that are present and this would come at additional cost.

11.11.3 *Housing Age*

The average age of a residential structure is 33.6 years. Over half of the residential structures are over 40 years old. As discussed in previous sections, home maintenance will cost the owner a higher proportion of their income every month as the home ages. Table 72 shows the age of residential structures.

Table 72: Residential Structure Age Count & Percentage: Silver Star, MT¹²⁴

Silver Star		
Age	Count	Percentage
1-10 years	6	11%
11-20 years	8	14%
21-30 years	7	12%
31-40 years	7	12%
40+ years	29	51%

11.11.4 Housing Condition

Residences are generally in the average category. This matches the trend in the rest of Madison County. Most residential structures appear to be in good upkeep regardless of their age.

Table 73 shows the structure's condition.

Table 73: Physical Condition Count & Percentage: Silver Star, MT¹²⁵

Silver Star		
Condition	Count	Percentage
Unsound	0	0%
Very Poor	0	0%
Poor	2	4%
Fair	7	13%
Average	31	55%
Good	12	21%
Very Good	4	7%
Excellent	1	2%

11.11.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. There was a single residence sold in Silver Star. The home sold for the lowest average price in the County but once again exceeded the affordability of the workforce in Madison County. Table 74 shows the pricing data of residences.

¹²⁴ "Montana Cadastral Subcategory Data."

¹²⁵ County, "Madison County Subdivision Regulations"; County.

Table 74: Price Data for Sales from Feb. 2022 to Feb. 2023: Silver Star¹²⁶

Silver Star	
Land	Value
Number of Sales	0
Residence	Value
Number of Sales	1
Minimum	\$225,000
Maximum	\$225,000
Median	\$225,000
Average	\$225,000

11.11.6 *Housing Type*

There is one townhouse in the Silver Star area. The Madison County Housing Board stated that the structure is a short-term rental. The County has a small mix of these different housing types throughout. They appear to work well throughout Madison County and could provide relief by increasing density where infrastructure allows. Table 75 shows the existing housing type.

Table 75: Housing Type (Owner Occupied & Rental): Silver Star, MT¹²⁷

Silver Star		
Housing Type	Count	Percentage
Single Family Residence	52	90%
Duplex	1	2%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	4	7%
Townhouse	1	2%
Condominium	0	0%

11.11.7 *Infrastructure Limitations*

The Silver Star area exclusively uses on-site systems. The detailed analysis of the on-site systems is in Section 9.3.2.10 and Section 9.3.1.

¹²⁶ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹²⁷ "Montana Cadastral Subcategory Data."



11.12 Twin Bridges

11.12.1 *Demographics*

Table 76 provides quick demographics of the Town of Twin Bridges. This data came from the 2021 American Community Survey.

Table 76: Selected Demographic Information: Twin Bridges, MT

Data Category	Value
Population	330
Median Income	\$41,250
Number of Households	124
Median Age	60.7
Percent of Owners	70.2%
Percent of Renters	29.8%

11.12.2 *Development Limitations*

The Twin Bridges community follows the Madison County Subdivision Regulations and has their own unique zoning districts. The zoning code focuses on Town aesthetics and public safety. There is very little regulation of lot size or desired development pattern. The lack of regulation makes it easier to build housing. The lack of regulation does pose the possibility that development could occur without proper planning. The area has physical limitations. There are FEMA flood zones and Flood Prone areas designated by Madison County. A major factor in the flooding is ice jams. This causes water to build up and flood quickly and in unexpected areas. Any development will need to adequately respond to the physical limitation that are present and this would come at additional cost. The floodplain poses challenges to residential development but good design and proper permitting can address these challenges.

11.12.3 *Housing Age*

The average age of a residential structure is 38.8 years. This is the oldest average age of residential structures for a community in Madison County. Table 77 shows the age of residential structures.

Table 77: Residential Structure Age Count & Percentage: Twin Bridges, MT¹²⁸

Twin Bridges		
Age	Count	Percentage
1-10 years	12	7%
11-20 years	15	8%
21-30 years	19	10%
31-40 years	25	14%
40+ years	111	61%

11.12.4 Housing Condition

The housing conditions are varied. There are properties in various conditions throughout the Town. There is a possibility that without remodeling or general maintenance some homes may have a shortened useful life. Table 78 shows the structure's condition.

Table 78: Physical Condition Count & Percentage: Twin Bridges, MT¹²⁹

Twin Bridges		
Condition	Count	Percentage
Unsound	2	1%
Very Poor	3	2%
Poor	3	2%
Fair	27	15%
Average	91	50%
Good	44	24%
Very Good	12	7%
Excellent	0	0%

11.12.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. There were 14 residences sold and 6 vacant parcels sold in Twin Bridges. The average price for a residence was \$498,036 and the average price per acre for a vacant parcel was \$72,033. These values exceed the affordability for the workforce for Madison County. The minimum sale price in the area was \$270,000. This value still

¹²⁸ "Montana Cadastral Subcategory Data."

¹²⁹ "Montana Cadastral Subcategory Data."



exceeds the affordability range of the Madison County workforce. Table 79 shows the pricing data of vacant parcels and residences.

Table 79: Price Data for Sales from Feb. 2022 to Feb. 2023: Twin Bridges¹³⁰

Twin Bridges	
Land	Value
Number of Sales	6
Minimum	\$1,266
Maximum	\$416,444
Median	\$2,343
Average	\$72,033
Residence	Value
Number of Sales	14
Minimum	\$270,000
Maximum	\$1,000,000
Median	\$397,500
Average	\$492,321

11.12.6 Housing Type

Twin Bridges' residences are primarily single-family homes and manufactured homes. There is one duplex and two mixed use units. Promoting these types of units through updates to subdivision regulations or zoning codes could increase the affordability. Increasing density, even slightly, could make more units available without causing sprawl. Table 79 shows the existing housing type.

Table 80: Housing Type (Owner Occupied & Rental): Twin Bridges, MT¹³¹

Twin Bridges		
Housing Type	Count	Percentage
Single Family Residence	160	86%
Duplex	1	1%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	2	1%
Manufactured Home	22	12%
Townhouse	0	0%
Condominium	0	0%

¹³⁰ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹³¹ "Montana Cadastral Subcategory Data."



11.12.7 *Infrastructure Limitations*

Twin Bridges currently has sewer and water excess capacity. As development comes into Town this capacity is available for new units. The Town should continue to look at ways to expand their capacity long term so that they will be able to always maintain excess capacity in a proactive way. The Town recently completed a Preliminary Engineering Report for their water system. This document will help to prioritize improvements to the water system.



11.13 Virginia City

11.13.1 Demographics

Table 81 provides quick demographics of the Town of Virginia City. This data came from the 2021 American Community Survey.

Table 81: Selected Demographic Information: Virginia City, MT

Data Category	Value
Population	219
Median Income	\$68,750
Number of Households	55
Median Age	63.7
Percent of Owners	87.3%
Percent of Renters	12.7%

11.13.2 Development Limitations

The Virginia City community follows the Madison County Subdivision Regulations and has unique zoning districts. There are no floodplain restrictions in the area. The Wildland Urban Interface (WUI) covers the entire area. The WUI increases the risk of wildfire but does not restrict development from occurring. For more information on WUI restrictions contact the Madison County Department of Emergency Services. There are also steep slopes throughout the entire area that will limit development.

The vacant properties in Virginia City are mostly City property and therefore are not available for development. The release of some of this property for residential development could be beneficial. Careful planning will be critical for the successful addition of new residences. A potential strategy is to use the sale of City owned property to finance system upgrades to replace the infrastructure capacity that the new development would use.

11.13.3 Housing Age

The average age of a residential structure is 30.0 years. A third of the residences are over 40 years old. Unlike most of the communities in Madison County over 50% of the residences are less than 20 years old. These homes will need continued maintenance to continue the trend of



longevity of residential structures in Madison County. Table 82 shows the age of residential structures.

Table 82: Residential Structure Age Count & Percentage: Virginia City, MT¹³²

Virginia City		
Age	Count	Percentage
1-10 years	20	11%
11-20 years	74	42%
21-30 years	13	7%
31-40 years	6	3%
40+ years	64	36%

11.13.4 Housing Condition

Virginia City has a spread of residential condition. General maintenance could prolong the homes that are on the age of usefulness. Home that are unsound or very poor could serve as places of reinvestment. Demolition and rebuilding of structures that are past rehabilitation could provide additional units. To prolong the use of these residences potential programs to facilitate general maintenance could prove beneficial. Table 83 shows the structure's condition.

Table 83: Physical Condition Count & Percentage: Virginia City, MT¹³³

Virginia City		
Condition	Count	Percentage
Unsound	3	2%
Very Poor	2	1%
Poor	7	4%
Fair	24	14%
Average	44	26%
Good	29	17%
Very Good	63	37%
Excellent	5	3%

11.13.5 Pricing

Pricing data for each community comes from the Gallatin Area Realtors MLS data. The data ranges from February 2022 to February 2023. There were 3 residential sales with an average

¹³² "Montana Cadastral Subcategory Data."

¹³³ "Montana Cadastral Subcategory Data."



price of \$373,167 and 5 land sales with an average price of \$92,689 per acre. These prices are outside of the affordability of the workforce. Table 84 shows the pricing data of vacant parcels and residences.

Table 84: Price Data for Sales from Feb. 2022 to Feb. 2023: Virginia City¹³⁴

Virginia City	
Land	Value
Number of Sales	5
Minimum	\$8,605
Maximum	\$196,942
Median	\$92,593
Average	\$92,689
Residence	Value
Number of Sales	3
Minimum	\$137,000
Maximum	\$617,500
Median	\$365,000
Average	\$373,167

11.13.6 *Housing Type*

Virginia City has a wider distribution of housing types in Madison County. The City also has the lowest percentage of single-family residences in Madison County. This is somewhat encouraging information for the affordability of housing. The City seems to have a general acceptance of these denser unit types. Table 85 shows the existing housing type.

Table 85: Housing Type (Owner Occupied & Rental): Virginia City, MT¹³⁵

Virginia City		
Housing Type	Count	Percentage
Single Family Residence	130	73%
Duplex	0	0%
Triplex	0	0%
Fourplex+	0	0%
Mixed Use	0	0%
Manufactured Home	1	1%
Townhouse	27	15%
Condominium	19	11%

¹³⁴ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹³⁵ "Montana Cadastral Subcategory Data."



11.13.7 *Infrastructure Limitations*

Infrastructure does not actively limit development. There is not a large excess of capacity in either system. With the existing capacity of the systems there is a potential for development. Physical limitations however play an important factor. There will need to be careful and thoughtful design work to bring additional units. There could be potential to rehab some properties to increase density or add Accessory Dwelling Units.



11.14 Countywide Comparison of Key Factors

This section of the document is going to compare key housing factors at a community scale across the entirety of Madison County. This differs from the previous chapters the review is not about Madison County as a whole, but a comparison of individual communities within Madison County.

11.14.1 Residences

This data shows where residences are in Madison County. Most residences in the County are outside of the defined community centers in this document (58%). Ennis has the greatest number of residences in its community, containing 13% of the total residences in the County. This is a quarter of the residences that are in a community as defined by this analysis.

Table 86: Residences in Madison County by Community¹³⁶

Community	Count	Percentage
Alder	186	3%
Cameron	278	4%
Ennis	825	13%
Harrison	140	2%
Laurin	85	1%
McAllister	212	3%
Nevada City	60	1%
Norris	24	0%
Pony	88	1%
Sheridan	407	6%
Silver Star	54	1%
Twin Bridges	180	3%
Virginia City	134	2%
Madison County	3636	58%

11.14.2 Short Term Rentals

Short Term Rentals (STRs) are in every community in Madison County except for in Norris. They have a differing impact on communities across the County. Nearly a quarter of STRs are in the Ennis area. The Town of Ennis requires a business license and an inspection of the property

¹³⁶ Montana State Library, "Montana Cadastral Data."



for short term rental use. While STRs provide greater use of property for the property owner they can restrict the available units in the rental and ownership market. Communities can limit the impacts of STRs through thoughtful zoning while maintaining private property rights. The concern with this approach is that there is no zoning in a majority of Madison County so there is not a convenient mechanism for such regulation. The reduction of short terms rental impacts could occur by allowing only certain amounts of STRs in new subdivisions through the Subdivision Regulations of Madison County.

Table 87: Short Term Rentals by Community¹³⁷

Community	Count	Percentage
Alder	5	2%
Cameron	23	9%
Ennis	58	22%
Harrison	1	0%
Laurin	2	1%
McAllister	10	4%
Nevada City	7	3%
Norris	0	0%
Pony	9	3%
Sheridan	9	3%
Silver Star	7	3%
Twin Bridges	5	2%
Virginia City	17	6%
Rest of Madison County	109	42%

11.14.3 Pricing

The Gallatin Association of Realtors' Multiple Listing Service provides the average price of a residential structure and cost of land per acre in Figure 16, Figure 17, Table 88, and Table 89. This data shows that Silver Star has the cheapest price per residential structure while Norris has the cheapest price per acre for vacant land. For areas with central sewer or water the cheapest residential structure is in Harrison and the cheapest property is in Alder, both areas with only with central sewer systems. If the query is restricted to incorporated areas, then Virginia City

¹³⁷ "Air DNA Data."



has the cheapest residential structure and Twin Bridges has the cheapest per acre price for vacant land.

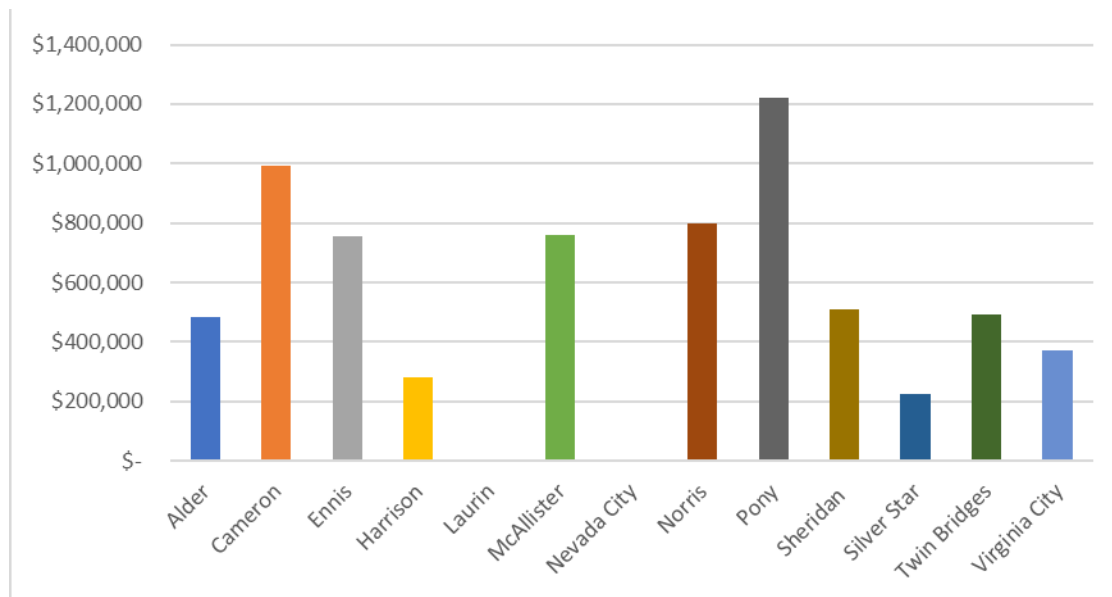


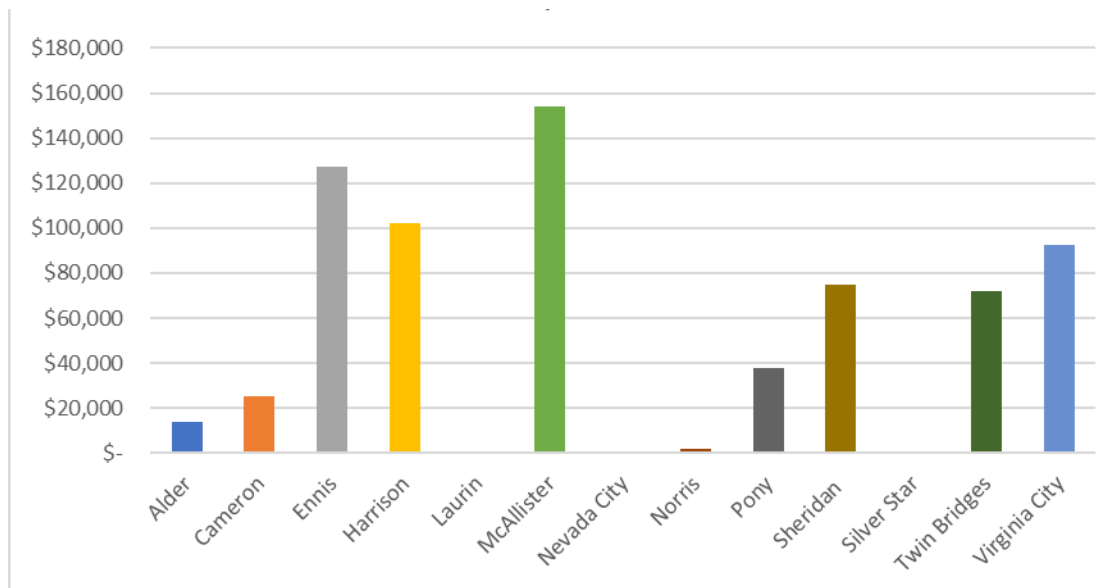
Figure 16: Residential Average Sales Price in Madison County by Community¹³⁸

Table 88: Residential Average Sale Price in Madison County by Community¹³⁹

Community	Number of Units Sold	Percentage of Sales	Average Residential Sales
Alder	3	3%	\$483,333.00
Cameron	7	6%	\$993,143.00
Ennis	54	45%	\$756,730.00
Harrison	3	3%	\$283,000.00
Laurin		0%	-----
McAllister	9	8%	\$759,573.00
Nevada City		0%	-----
Norris	1	1%	\$800,000.00
Pony	2	2%	\$1,220,000.00
Sheridan	23	19%	\$511,005.00
Silver Star	1	1%	\$225,000.00
Twin Bridges	14	12%	\$492,321.00
Virginia City	3	3%	\$373,167.00
Madison County	120		\$530,559.38

¹³⁸ Gallatin Association of Realtors, "Gallatin Area Multiple Listing Service."

¹³⁹ Gallatin Association of Realtors.

Figure 17: Vacant Land Average Sale Price per Acre in Madison County by Community¹⁴⁰Table 89: Vacant Land Average Sale Price per Acre in Madison County by Community¹⁴¹

Community	Number of Parcels Sold	Percentage of Sales	Average Land Sales per Acre
Alder	2	1%	\$13,637.00
Cameron	18	13%	\$24,982.00
Ennis	75	52%	\$127,222.00
Harrison	4	3%	\$102,190.00
Laurin		0%	-----
McAllister	9	6%	\$154,187.00
Nevada City		0%	-----
Norris	1	1%	\$2,009.00
Pony	4	3%	\$37,997.00
Sheridan	20	14%	\$74,683.00
Silver Star		0%	-----
Twin Bridges	6	4%	\$72,033.00
Virginia City	5	3%	\$92,689.00
Madison County	144		\$53,971.46

The most expensive real estate market in Madison County for the year 2022 was Pony.

As shown in Table 88 the average sale price in Pony was \$1.2 million. The concern with where

¹⁴⁰ Gallatin Association of Realtors.

¹⁴¹ Gallatin Association of Realtors.



prices currently stand and how to remedy this issue is complex. The addition of houses could stay at the same purchase point, further exasperating the workforce community. These units could also cause additional sprawl that would extend into agriculture land or other natural areas that are a critical component of Madison County. But without additional units the Madison County workforce could need to move to more affordable areas. It is a dueling problem that a single solution will not fix the issue nor satisfy all the concerned stakeholders. The sales price in Madison County ranges from \$225,000 to \$1,220,000 - a range of nearly \$1 million. This is an incredibly wide range of sales. The median sales price shows that most of all sales were outside of the affordability range of Madison County. These rural areas of the County are feeling the pressures of the housing market.

Ennis was the busiest real estate market. It is easier to source building materials and potential contractors in Ennis than other communities in Madison County. The land prices still put Ennis outside of affordable for residents using the standard metrics. Sheridan was the next busiest real estate market in 2022. However, the third busiest vacant parcel sale market was Cameron and the third busiest built home market was Twin Bridges. Figure 18 shows the average and minimum housing prices by each community along with the affordability level for a member of the Madison County workforce. Only one property sold for an attainable price in Madison County in 2022. It is not an easy thing to come to understand the long-term impacts of this housing boom. The immediate impacts are clear as rural homes are selling for \$1.2 million.

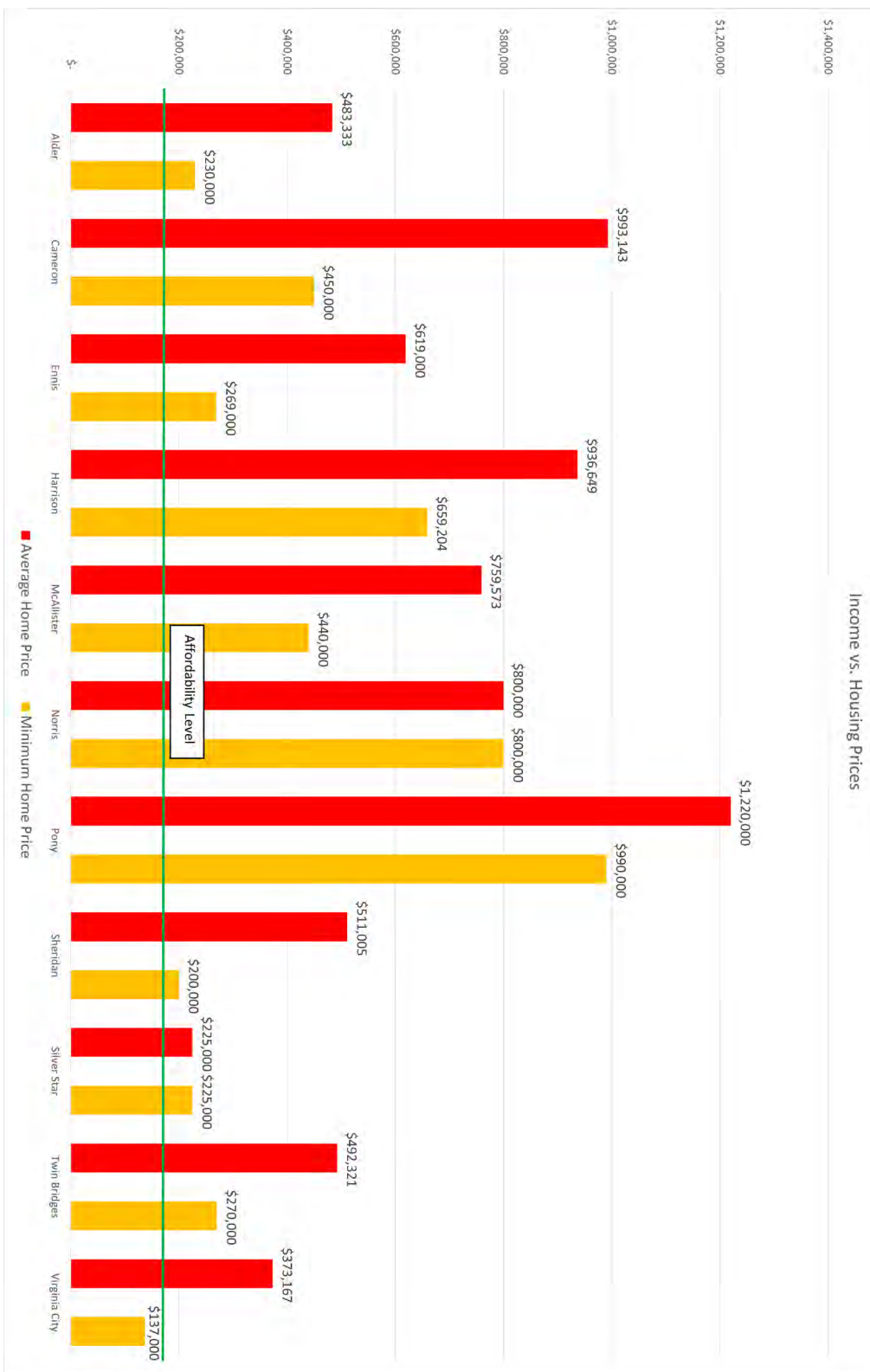


Figure 18: Minimum and Average Home Price Compared to Affordability¹⁴²

¹⁴² Gallatin Association of Realtors.



11.14.4 **Structure Types Owner Occupied and Rentals**

The dominant housing type in Madison County is a single-family residence with over 80% of all housing units being single-family residences. This is not surprising given the rural nature of the County. As efforts occur to develop new attainable housing, projects should work to match the form and massing of a single-family residence to not be in contrast with the rest of the community. Table 90 shows that there are other types of housing. These units are primarily in Ennis and Virginia City. These communities have a greater flexibility in zoning and infrastructure. These denser units have appearance to the other single-family residences in the communities. This is a good strategy for increasing density in rural communities. These units add units to the community without violating the general appearance of a community. This could be a successful strategy for Madison County.

Table 90: Housing Unit Types: Madison County, MT¹⁴³

Madison County		
Housing Type	Count	Percentage
Single Family Residence	2191	83%
Duplex	34	1%
Triplex	12	0%
Fourplex+	13	0%
Mixed Use	8	0%
Manufactured Home	228	9%
Townhouse	48	2%
Condominium	115	4%

11.14.5 **Construction Permits**

There have been 894 construction permits issued by the State of Montana in Madison County from 2019 to 2023. Madison County does not review building permits; therefore, the State of Montana would issue any required permits. Communities in Madison County generally saw an even dispersal of the construction permits. Ennis and Cameron saw the highest share of the permits. East of Virginia City had 61% of the construction permits while west of Virginia City had

¹⁴³ "Montana Cadastral Subcategory Data."



39% of permits. Table 91 shows the number percentage of construction permits by community in Madison County from 2019 to 2023.

Table 91: Construction Permits in Madison County by Community¹⁴⁴

Community	Count	Percentage
Alder	40	5%
Cameron	65	8%
Ennis	135	16%
Harrison	20	2%
Laurin	20	2%
McAllister	31	4%
Nevada City	4	0%
Norris	5	1%
Pony	8	1%
Sheridan	45	5%
Silver Star	8	1%
Twin Bridges	30	4%
Virginia City	20	2%
Rest of Madison County	405	48%

¹⁴⁴ Montana Department of Labor & Industry, "Construction Permits."



12 Stakeholder Meetings

These meetings added a critical piece to this document - local input. While the document has useful data and information throughout, the document is less effective without input from local stakeholders. The issues that discussed were similar across all communities. This section includes an introduction to some solutions for communities. A later section will provide more details about these solutions.

Each of these community groups had spirited conversations regarding housing concerns and solutions. One easy way for these communities to make some progress on their concerns is for this group to continue to meet to share ideas and issues that they face with housing. While a time investment by community members, there is not a financial burden with this idea. It also would benefit the community because solutions would come from residents. There will need to be some grass roots efforts to address housing issues successfully. The questions used to guide the discussion are in Appendix R.



12.1 Ennis

12.1.1 Stakeholder Members and Background

The stakeholders for Ennis represent a diverse background that have a vested interest in the housing concerns of their community. The group consisted of business owners, builders, and representation from the Town. The stakeholders met on March 6th, 2023 to discuss housing in Ennis. The discussion focused on current issues, solutions that are currently working, and possible future solutions for Ennis.

12.1.2 Community Needs

The stakeholders expressed multiple concerns regarding housing during the discussion. The concern that permeated the conversation was pricing. This is a difficult item to address due to the private markets influence on price and availability. There are still strategies to mitigate this concern. The potential to leverage federal and states funds to provide infrastructure received discussion multiple times. This is a good strategy for the County to investigate. The cost of infrastructure is one of the most expensive steps in the development process, and is something that local agencies can influence directly in many cases. This strategy does not only help the developers as new infrastructure would add efficiency to the overall public system.

The discussion also raised other concerns such as the availability of land for development, local pushback on increased density, short term rentals, and updates to zoning. These issues are easier to work on than pricing due to the ability to educate and participate in these solutions. The availability of land is the most difficult of these additional concerns. However, looking at opening unused or underutilized city or county property could provide land for housing development. Other strategies would be to incentivize development on vacant lots within Town.

The public perception of housing appears to be generally negative towards growth. It is important to remember that one of the key community assets for all Madison County communities



is their rural nature. This is a critical piece to consider when looking at any housing solutions. There will need to be more housing or denser housing added to fix these issues.

While growth is a scary proposition for residents to realize, there is a path forward with thoughtful design and fostering a community within these developments that could mitigate this issue. We cannot stress the point enough in this document that there are serious concerns about the availability and affordability of workforce housing. Madison County is not at a point where they must sacrifice the rural nature of the County for the sake of growth. There can be solutions that achieve both goals but they will need to be creative and collaborative. Change will happen to address these concerns but this change does not have to alter the community character of Ennis.

Short Term Rentals (STRs) were also a concern. As documented in other sections of this Needs Assessment, the Ennis areas has most of Madison County's STRs. There are conflicting ideas on STRs. The discussion centered around the benefits and drawbacks of STRs. While they provide an important tourist amenity to the Town, they also take units out of the long-term rental and ownership markets. There are multiple strategies available to manage STRs: putting a cap on the amount of STRs in a community, only allowing them in certain zoning areas, or requiring that the owner lives on the property to use the property as a STR. All these methods will increase the amount of tracking and records that Ennis Town Staff will need to maintain. There are benefits from having STRs in Ennis as well. It allows lodging options in the community that do not break community character, like a large hotel might. They also allow for property owners to generate revenue from their properties. This is a debate that goes back and forth about STRs and one that the legislature is trying to answer. Much like zoning concerns strategies for handling STRs may need to wait until there is direction from the state.

The final major concern that the stakeholders brought up was updating the Ennis Zoning Code. The Town said that they are waiting on direction from the state before updating their code, like many communities across Montana. Changes at the state level will have impacts on housing and on the community. This is another area where thoughtful code design and districting will be



critical to allow for more units while maintaining the community character. It will be up to the Town to properly draft their zoning code and zone map to allow for increased housing that maintains the community character.

12.1.3 Community Perception of Housing

The discussion regarding the perception of new housing in Ennis was varying depending on the style of project discussed. Single-family developments do not receive as much community push back as do denser developments. Residents generally want any new development to match what is existing. This viewpoint has costly side effects. This can lead to sprawl and expensive housing. Single-family residences are generally more expensive than other housing types. This is where most of the difficulties arise when looking to increase housing in rural communities. Density increases came up as the most economical but least accepted potential solution. Rural communities are a special place in America; however, some change will occur. This change will help to keep these rural communities alive. This growth needs to be properly designed and reviewed to ensure that the development does not impact community character.

12.1.4 Path Forward for Community

There will need to be major investments in infrastructure, community code updates, and project review to ensure that projects meet the desires of the community while also responding to housing needs. Discussion centered around leveraging federal and state dollars to build housing land trusts, infrastructure, or other community housing projects like Valley Housing. The inclusion of Valley Housing in Ennis shows that there is local adoption of this model of housing project. The County could reach out to the United State Department of Agriculture, or other federal funding sources, to potentially bring in more housing units like this development.



12.2 Sheridan

12.2.1 Stakeholder Members and Background

The stakeholders for Sheridan represent a diverse background that have a vested interest in the housing concerns of their community. The group consisted of business owners, builders, and elected officials from the Town. The stakeholders met on March 13th, 2023 to discuss housing in Sheridan. The discussion focused on current issues and difficulties of achieving future success for Sheridan.

12.2.2 Community Needs

The conversation mirrored the Ennis discussion in the concerns over pricing. Pricing is a major concern in Madison County, however the conversation in Sheridan focused more on the price to construct new units in Town. The Sheridan estimated construction price was approximately \$200 a square foot. There were general concerns about infrastructure and ability to build new units that are cost effective.

12.2.3 Community Perception of Housing

There are many concerns regarding housing in the Sheridan area. There was a general feeling of uncertainty in the group. This is not to say that the group did not feel like solutions could happen, but they realize the complexity and size of the problem. The conversation focused on the availability of developable land, infrastructure availability, and impacts to the community character of Sheridan. The Town wants to grow just enough to provide workforce housing without relinquishing the community character that makes Sheridan special. Their small-town identity is of the utmost importance and there are fears that if they grow to add workforce housing this could slip away from them. This is a critical piece to remember when looking for solutions to housing concerns not only in Sheridan but in all County communities. The cost of construction, infrastructure, and negative impacts of sprawl make expansion at the existing density a potentially risky solution.



There was general concern that this document will not lead to action. This is a concern of many long-range plans. An investment to draft a plan occurs but no change comes of it. This is something that Madison County should be aware of and not fall into this habit. This document will help inform where specific problems are and identify the resources and next steps for Madison County to begin working on the housing issues. This document lists the needs, resources, and ideas identified to begin meeting these needs. Action will need to occur after the adoption of this document to realize the full value of the investment that Madison County has made.

12.2.4 Path Forward for Community

There were specific discussions about what the Town and employers could do to help alleviate some of the housing issues in Sheridan. The group members discussed increasing density in existing units as a quicker fix. The group came to the consensus that they would need major investments from outside sources, whether they be grants or private investments, to meet their housing needs. The group estimated that it would cost roughly \$250,000 per unit to add housing and that the addition of ten new units would be a good place to start. Therefore, Sheridan will need approximately \$2.5 million to start working on their housing needs. This is a large sum of money but combining federal and state grants and identifying a quality private partner could provide housing relief to Sheridan. While there is currently a proposed development along the west side of Sheridan updated flood maps and conditions of approval have slowed the progress on the development of these homes.



12.3 Twin Bridges

12.3.1 Stakeholder Members and Background

The stakeholder for Twin Bridges consisted of elected officials, realtors, and bankers from the Twin Bridges area. All these community members came together to look for solutions to their housing issues. This group was energetic and has multiple active projects to begin to address the housing issues in Twin Bridges. The group met on March 10th, 2023.

12.3.2 Community Needs

The stakeholders expressed similar needs and concerns as the rest of Madison County. Availability of developable property and affordability were the top concerns mentioned by the stakeholders. There were concerns about the availability of infrastructure on the south end of Town. The group discussed looking for areas for infill and increasing residential options in the downtown. Residential units above a downtown area have been a successful strategy in other communities. This would be an easy way for the community to add housing without disrupting the existing community character.

This group specifically discussed that to effectively address housing concerns there will need to be an increase in unit density where it is appropriate. To make adding units cost effective to developers and end users alike the addition of duplexes and triplexes might prove the most effective way to provide the needed units in Twin Bridges. The Town representatives discussed zoning town and potential procurement of property to place a housing land trust along the east side of Town. The housing land trust is a successful strategy in many communities throughout Montana. This is a long process that will need investment between public and private partners to accomplish, but would ensure long term affordability of the units.



12.3.3 Community Perception of Housing

The group was aware of concerns regarding adding houses and adding density. As stated earlier, this ties back to the idea of loss of community character. It is important to remember several things about community character. The built environment has an impact on the community aesthetics but has less of an impact on community character. A way to lessen the impacts on community aesthetics while preserving character as well is to build denser development that matches the style of the existing housing. The recommendations that come from this document are supposed to help solve housing issues for the residents of Madison County and have a higher focus on workforce housing.

We raise this issue to say that these homes are to be for the members of the community that are present. The addition of these units helps ensure that local teachers can live in the district they work in, so that the people who work at local stores do not have to travel from out of the County. Through careful regulation, covenants, and deed restrictions the Town could ensure that these homes go to people who work in their communities.

12.3.4 Path Forward for Community

The Town of Twin Bridges is actively working on several projects to address the housing issues in their community. It is extremely important that the community continues this momentum to look at all possible solutions. Hopefully, the community can realize some quick wins to address housing and will be able to parlay that into more grant funds and spin off projects. It is a well-researched and proven fact that investment in a community spurs more investment. The current efforts by the Town could be the initial spark to full housing solutions while maintaining the rural character of Twin Bridges.



12.4 Virginia City

12.4.1 Stakeholder Members and Background

12.4.2 Community Needs

12.4.3 Community Perception of Housing

12.4.4 Path Forward for Community



13 Strategies for the Future

13.1 Future Need in Madison County

The growth in Madison County has shown that there is change coming. The County should be prepared for this growth. This section goes into population projections, housing unit projections, and programs or funding to accommodate this growth.

13.1.1 Population Growth and Units Needed

Madison County has experienced rapid growth over the last three years. Growth in the County will continue but is unlikely to continue at the rate it has been. To properly plan for this growth the County should evaluate its expected growth and the housing units needed to accommodate this growth. This growth will need somewhere to live and based on existing occupancy rates a projection of units needed and land is below.

The projected population for Madison County in 2060 is 10,963¹⁴⁵. This is a growth of 2,046 residents over the next 37 years. This means that on average 55 people would move to Madison County every year. This equals a growth rate of 0.52%. To plan for multiple scenarios a more robust growth rate, of 0.84% which was based on world population growth, provided estimates¹⁴⁶. This estimate helps lay out multiple planning scenarios for Madison County. This resulted in the addition of 6,023 people, or 163 people per year. Table 92 outlines the steps taken to project the unit count needed to accommodate the expected population increase by 2060.

¹⁴⁵ "Montana Population Projection."

¹⁴⁶ "World Population Clock."

Table 92: Units Needed by 2060¹⁴⁷

	Conservative Estimate	Aggressive Estimate
Project Population	10,963	14,940
	-	
Existing Population	8,917	8,917
	=	
Growth Amount	2,046	6,023
	/	
Occupancy Rate	2.84	2.84
	=	
Units Needed	720	2,121

Based on these population projections there is a need for between 720 housing units and 2,121 housing units. This is a major investment within Madison County over the next 37 years. It will be important for proper planning principles to guide the County in making important decision regarding this growth in the future.

13.1.2 Population Density and Acres Developed

Density could help to protect the environment and rural character of Madison County. Adoption of greater density would allow for less structures and developed acres to meet the needs of the future. Obviously just increasing density as a blanket statement is not reasonable. Increasing density has a time and a place, but should not be wholesale adopted. Further local review will help decide where these areas should exist.

The population density of Madison County, excluding uninhabitable parcels (i.e., floodplains, water bodies, etc.) is 7.2 people per square mile in 2022. Table 93 is the population density by square miles of areas in Madison County.

¹⁴⁷ "Montana Population Projection."



Table 93: Population Densities in Madison County

Community	Population Density (People/sq. mile)
Ennis	1,242 people/sq. mile
Sheridan	686 people/sq. mile
Twin Bridges	325 people/sq. mile
Virginia City	230 people/sq. mile
Madison County	7.2 people/sq. mile

Table 94 shows the land needed to accommodate the expected growth between 2023 and 2060 based on the population densities of the incorporated communities.

Table 94: Land Required for Project Growth 2023-2060

Community	0.52% Growth Rate	0.84% Growth Rate
Ennis	1.6 sq. miles	4.8 sq. miles
Sheridan	3.0 sq. miles	8.8 sq. miles
Twin Bridges	6.3 sq. miles	18.5 sq. miles
Virginia City	8.9 sq. miles	26.2 sq. miles
Madison County	284.2 sq. miles	836.5 sq. miles

Obviously, this growth would come over a span of 37 years and will not be subject to any single density as it exists in Madison County today. The purpose of Table 93 and Table 94 is to illustrate that this change could have large impacts on Madison County. The existing densities of Madison County communities help with visualizing what this growth's impacts could be.

13.2 Areas for Potential Development

The location of these units will be critical in conserving public investments and being respective of physical limitations. Figure 19 is a map of Madison County that shows the areas most suitable for residential development. Community level maps are in Appendix P. The following section outlines the factors that contributed to the end maps.

A tessellation program created 5-acre blank hexagons across Madison County. This provided blank geometries that certain housing characteristics could attach.



The next step was to remove the areas that are not feasible for residential development. This was to ensure that investments would not occur in areas that could never hold any residential units. Excluded areas include:

- Conservation Easements,
- Floodplains,
- Grazing Areas Exceeding 50 Acres,
- Public Lands, and
- Watercourse Setback.

These restrictions are in the Madison County Subdivision Regulations, Madison County Floodplain Regulations, and public and private restrictions on land. Areas that were close to the following positive elements received a score based on distance to these elements. Positive elements regarding housing were:

- Roads,
- Central Infrastructure Systems,
- Rural Fire Districts.

It is imperative to understand that these maps are only a guide and no regulatory decision should be based on this map. This map should help locate areas for potential County projects. It would not be appropriate to evaluate private developments based on this map.

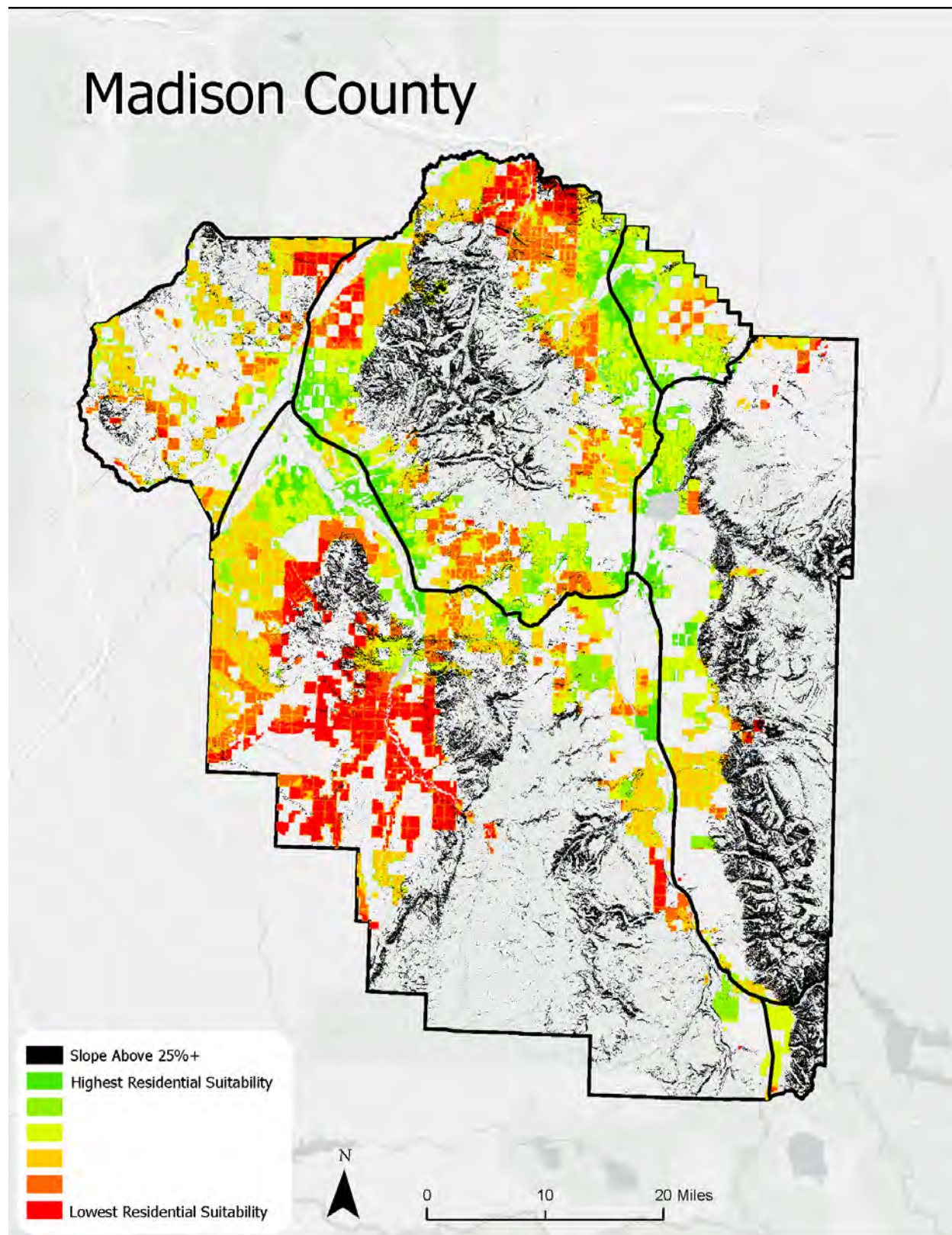


Figure 19: County Wide Suitability Map



14 Tax Dollar Funding Strategies

These are strategies that could provide benefits to Madison County that does not require any direct increase in taxes. These strategies come from the existing tax base and allow for creativity in tax dollar expenditures.

14.1.1 TIFF

Tax Increment Financing Districts (TIFs) provide a means for financing infrastructure improvements and investment in a designated district. Recently the State of Montana Legislature authorized workforce housing as an appropriate use of TIF funds. A TIF creates a district within an incorporated area where tax distributions remain constant at a certain value for 15 years. However, as investment occurs in the area any money that exceeds the initial value goes back into projects for the district. The projects focus on infrastructure or workforce housing. Table 95 and Figure 19 demonstrate the function of a TIF district.

Table 95: Tax Increment Financing Example

Year	Frozen Value	Year Tax Revenue	TIF Funds Available for Reinvestment
2023	\$1,000	\$1,000	\$0
2024	\$1,000	\$1,250	\$250
2025	\$1,000	\$1,500	\$750
2026	\$1,000	\$1,500	\$1,250
2027	\$1,000	\$1,500	\$1,750
2028	\$1,000	\$2,000	\$2,750
2029	\$1,000	\$2,500	\$4,250
2030	\$1,000	\$3,000	\$6,250

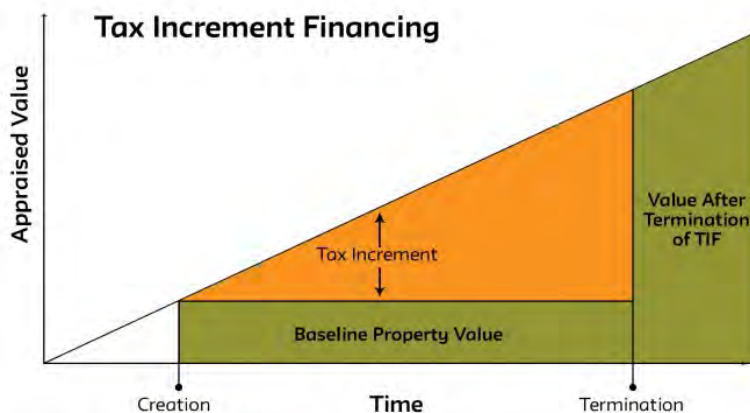


Figure 20: Tax Increment Financing Graph¹⁴⁸

The values above are just an example to illustrate the value of a TIF District. These do not represent real values. However, the general principal remains. Taxes would increase naturally and all parties receive the same tax base that they did initially. As the area sees investment and the taxable value for the district increases, that “surplus” is set aside for additional investment in the area. At the end of the TIF district the distribution of taxes would revert to the original distribution schedule. The taxing districts would recoup the rise in value in the investment came from the TIF dollars invested in the district.

14.1.2 TEDD

A Targeted Economic District (TED) functions in the same manner as a TIF. The difference between the two is that a TED district is in a county while TIF is in incorporated areas. The County Commissioners have been in discussions with the creation of a TED district in the Big Sky area to provide workforce housing. Decisions regarding expenditure of funds would remain with the Madison County Commissioners for all TED districts created within Madison County. These tax funding strategies could be very beneficial to Madison County if managed properly.

¹⁴⁸ “What Is Tax Increment Financing (TIF)?”



15 Grants

Grants allow the County to pursue projects without having to repay the money expended. These funding sources come primarily from the state and the federal government. Housing is a concern nationwide and there are additional funds that can help solve these issues. One of the easiest and best ways to get assistance with a grant program is to contact the administrators of the grant. As a rule, the County should create a list of potential projects or problems that they are trying to solve before contacting a grant agency. The following provides general information about granting agencies and the types of projects they fund. These agencies will serve as the best points of contacts to begin working on these projects for Madison County.

While this document will identify certain funding sources the availability of funds can change from year to year. It will be important for someone to stay as up to date as possible regarding any federal or states funds allocated for housing projects.

15.1 United States Department of Housing and Urban Development

The United States Department of Housing and Urban Development provides a variety of funding opportunities and programs to provide affordable workforce housing. The variety of programs that HUD offers changes annually but some programs have been running for many years. HUD can provide individuals with assistance or can help on larger local government sponsored projects.

15.2 United States Department of Agriculture Rural Development

The United States Department of Agriculture Rural Development (USDA RD) program helps fund housing projects and purchases across the United States. Madison County qualifies for USDA RD programs because of the rural character of the County. This program can aid individual home purchasers or can help fund larger infrastructure or housing projects. The USDA RD program has many uses and many programs specifically focused on creating growth in rural



areas. This program could be a wealth of investment for Madison County to pursue new housing options in the area.

15.3 State of Montana Department of Commerce

Through the 2023 legislature the State of Montana is looking to provide additional resources to local government to pay for housing. These funds can provide infrastructure to areas, assist with long range planning, and make investments in the trade schools to provide qualified workers. There is still work needed for these projects to begin, but there is optimism that some if not all these options will be available to Montana communities.

There are currently available programs through the state that help with housing issues long range planning or actual construction. The Montana Department of Commerce administers and reviews these projects. It would be best practice for Madison County to develop a project and concern list and meet with a representative of the Department of Commerce, especially after the Legislative Session of 2023. The legislature is currently reviewing House Bill 825 that would establish a \$200 million dollar fund, specifically for funding housing projects.

15.4 Headwaters Resource, Conservation, & Development

Headwaters Resource, Conservation, & Development (Headwaters RC&D) is a non-profit organization that does a variety of work throughout southwestern Montana. They provide resources to eight counties in Southwest Montana. Headwaters RC&D can be a great resource for Madison County as they have various funding and educational programs available to the County. Through development of this Housing Needs Assessment project, they have provided educational programming, funding, and general support for Madison County.

Headwaters can help the County interact with some of the previously mentioned agencies. They can assist the County with identifying opportunities put forth from these state and federal programs to assist with housing concerns.



Headwaters is looking to expand their offering to southwestern Montana and can be a quality resource for Madison County. The extensive nature of their services and varying changes in federal funding programs make a detailed description of individual opportunities inefficient. However, the best path forward for working with Headwater RC&D is to contact the organization. The County should discuss their housing concerns with Headwaters RC&D and see where their resources align. They serve as a funding and educational expert for Madison County and strengthening the relationship between the two organization could mitigate.



16 County Projects and Programs

Funding and infrastructure drive the solutions to the housing issues present in Madison County. Madison County needs strategies and projects that can help assist with addressing the housing issues. The funding strategies and infrastructure strategies provide the potential for projects to occur, so how does this potential become actionable?

16.1 Housing Advocate Position

There has been some discussion of hiring a full-time housing advocate for the County. This person could stay up to date on all federal and state funding sources and become knowledgeable about rural housing projects. A dedicated staff person could work to identify projects, programs, and funding opportunities outside of the static contents of this document.

16.2 County Owned and Maintained Housing

The County could develop workforce housing for their employees. A major concern in hiring and retaining staff in rural communities is having adequate housing for employees. It might benefit the County to develop some denser units that they rent or provide to County employees. This helps the residents of Madison County as well because then they are not competing against County employees for housing. This could also be a major benefit in Madison County for attracting and retaining high quality County Staff.

16.3 Process for Evaluating Future Projects

Madison County should invest in developing criterion for project evaluation. This document is data laden and provides information regarding where Madison County is. The purpose of this document is to help Madison County get to where it wants to be. The needs to be continual updates and thought applied to the information in this document.

This document is not the appropriate place to develop detailed evaluation criteria. The evaluation criteria and program framework need to occur locally. There is a vast difference



between communities throughout Madison County and each community could lend itself to different review criteria. These criteria are not for review of proposed private developments. They are to evaluate potential County partnerships and projects. The benefit behind individualized criteria would be to put Madison County on a proactive course. This evaluation should involve the public with assistance from the County to incentivize this process. Through the stakeholder process it was clear that there are knowledgeable and passionate people engaged in the housing issues of Madison County. These people and other residents should participate in the process to develop this evaluation.

The question remains what are incentives or benefits that Madison County could provide? With new state funding opportunities and creative funding mechanism Madison County could develop a pool of resources. These resources could entice developers to pursue this style of development. The County could waive certain review fees, pursue grant funds, or potentially provide low interest loans to facilitate projects. These projects would match the criteria that the County develops.

The evaluation criteria need developed at the local level. This section describes what criteria could be important to consider. The criteria that are already regulatorily present, such as floodplains, slope steepness, and infrastructure availability, are not good criteria to develop. The appropriate agencies already review these factors. Items such as the following list could be key factors in this project evaluation criteria:

- Proximity to Roads
- Condition of Roads
- Impacts to County Aesthetics
- Density
- Pricing



The County can look beyond the criteria in the subdivision regulations by making the program incentive based for developers looking to partner with the County. This would not require developers to do anything additional unless they decide to partner and work with the County.

A lot of the conversation has used the term developer and we want to clarify that this program could just as easily accommodate small scale projects. Infill and densification of existing units could allow local developers an opportunity to provide more units in Madison County.

This idea of formularized review criteria is interesting to many of the housing issue concerns. A set of evaluation matrices could help Madison County select partners for Public Private Partnerships, evaluate grant funding programs, or select infrastructure investments made by the County. Developing criteria for evaluation will also allow projects partners to better understand what the County is trying to accomplish with their investments. However, there are always projects and ideas that stray beyond what formal review criteria can evaluate. It will be important for Madison County to be flexible and creative when looking for housing solutions. The recommendations in this document are not simple to institute but would put Madison County on the path of proactively working towards addressing their housing issues.

16.4 Infrastructure Strategies

There is an opportunity for a major investment in the infrastructure systems in Madison County. There is a wealth of infrastructure information available to Madison County as most communities are either in the development of a new Preliminary Engineering Report or have recently adopted a new one. These investments will put the County on the path to be prepared for the population growth projected in Section 13.1.

Infrastructure is one of the most important factors when considering growth. To prepare for orderly growth in Madison County it is important for communities to have capacity to accept these projects. The individual PERs should help guide County funding and project prioritization as they are more detailed than this report. The state provides many resources for infrastructure funding



that could fit with Madison County's needs. There are additional opportunities through the Rural Development Program of the United States Department of Agriculture. These opportunities will take an investment from the County to pull these dollars into their community.

16.5 Incentivizing Diverse Housing Types

A condominium is an ownership style and individual units or massing could be varied. This could be in the form of a multi-unit structure or multiple single units on one parcel. Madison County and its communities will need to be creative to solve the housing issue. Solutions are available in a later section of this document.



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17 APPENDICES

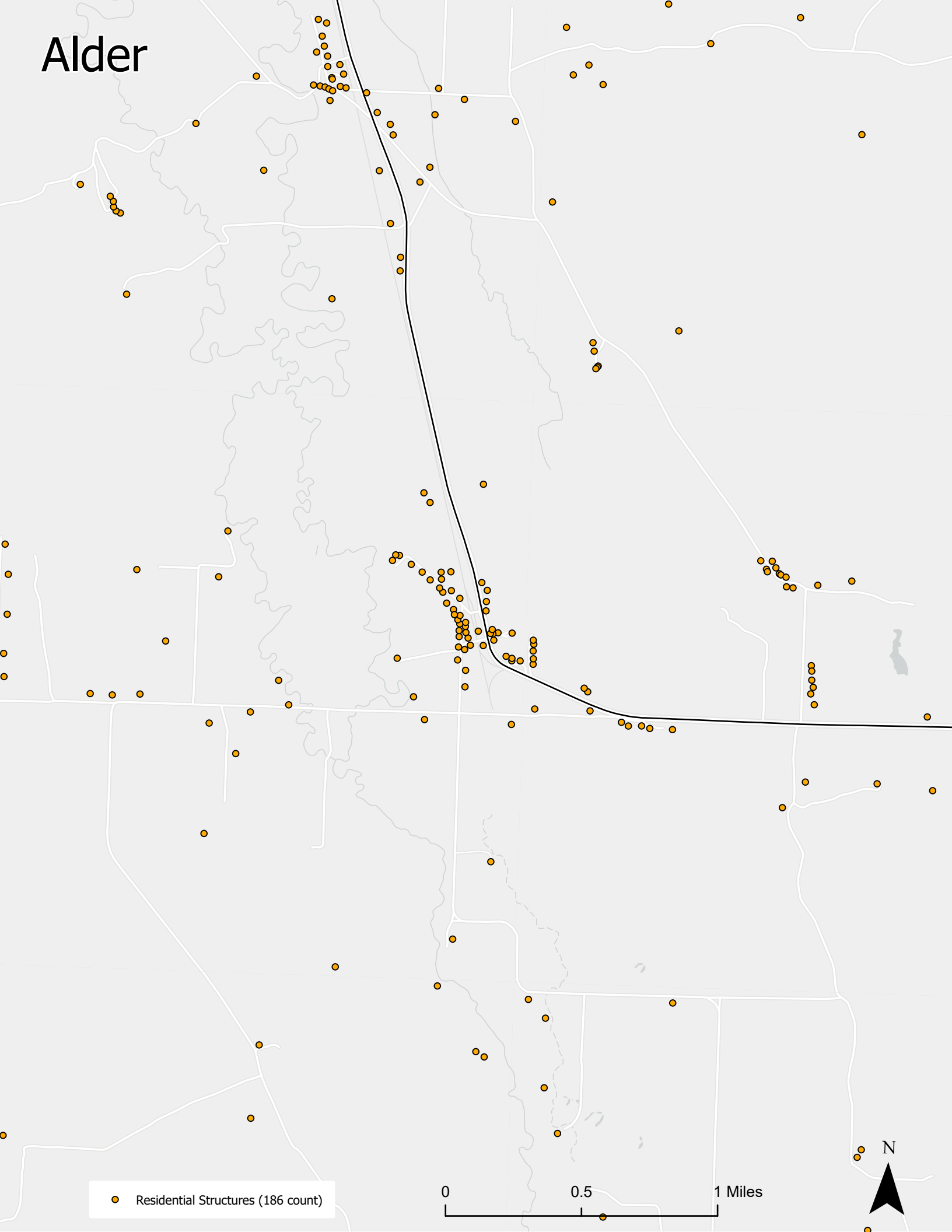
Appendix A: Residential Structures
Appendix B: Multiple Unit Dwelling Maps
Appendix C: Housing Unit Types
Appendix D: Short Term Rental Maps
Appendix E: Existing Physical Limitations
Appendix F: Conservation Easements and Public Land Maps
Appendix G: Housing Age
Appendix H: Housing Conditions
Appendix I: Blank Survey Questions
Appendix J: Survey Responses for Water
Appendix K: Survey Responses for Wastewater
Appendix L: Gallons per Minute Maps
Appendix M: Static Water Level Maps
Appendix N: Employment Location
Appendix O: Building Starts Map
Appendix P: Stakeholder Questions
Appendix Q: Big Sky Housing Needs Update: 2022

APPENDIX A

RESIDENTIAL STRUCTURES COMMUNITY MAPS

HYALITE

Alder

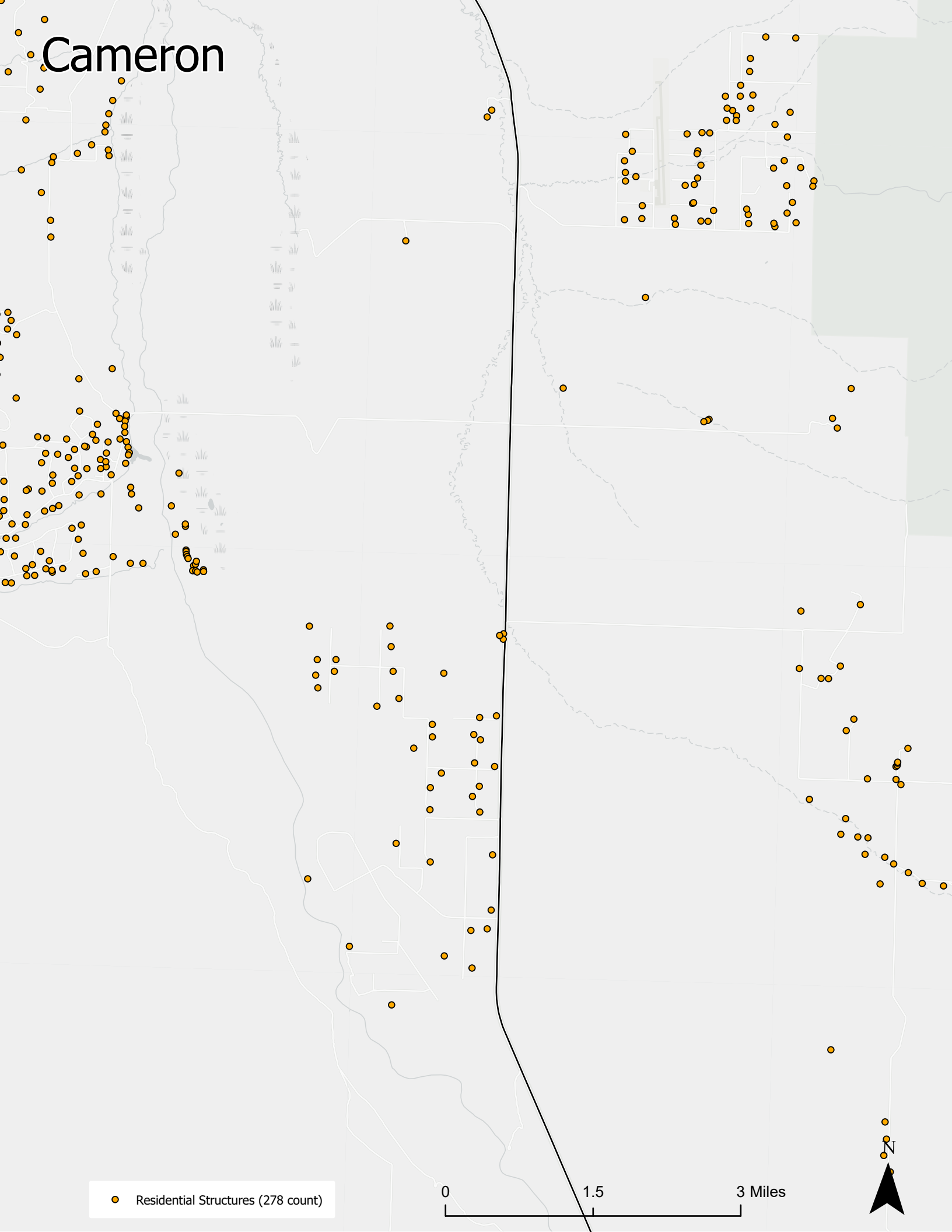


● Residential Structures (186 count)

0 0.5 1 Miles



Cameron

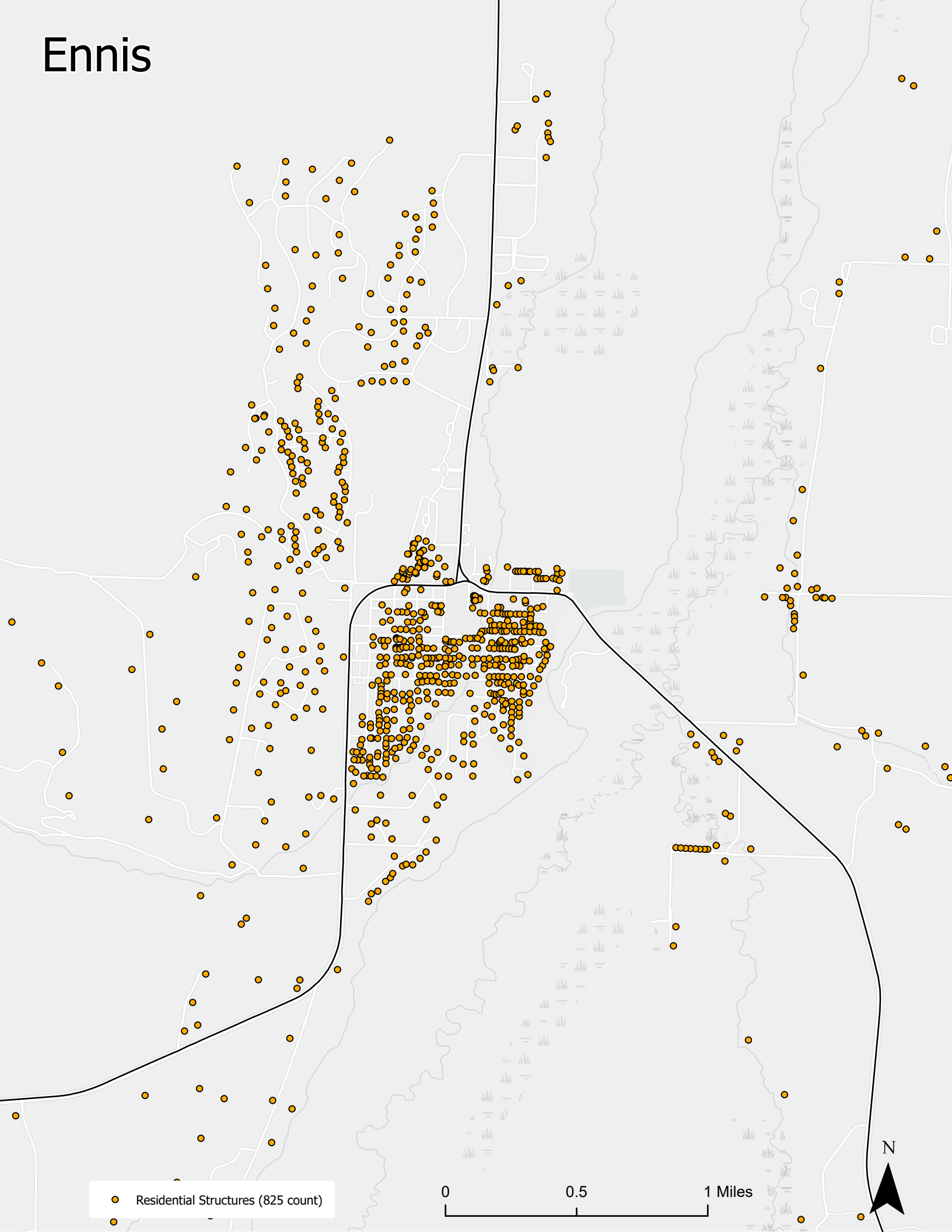


● Residential Structures (278 count)

0 1.5 3 Miles



Ennis

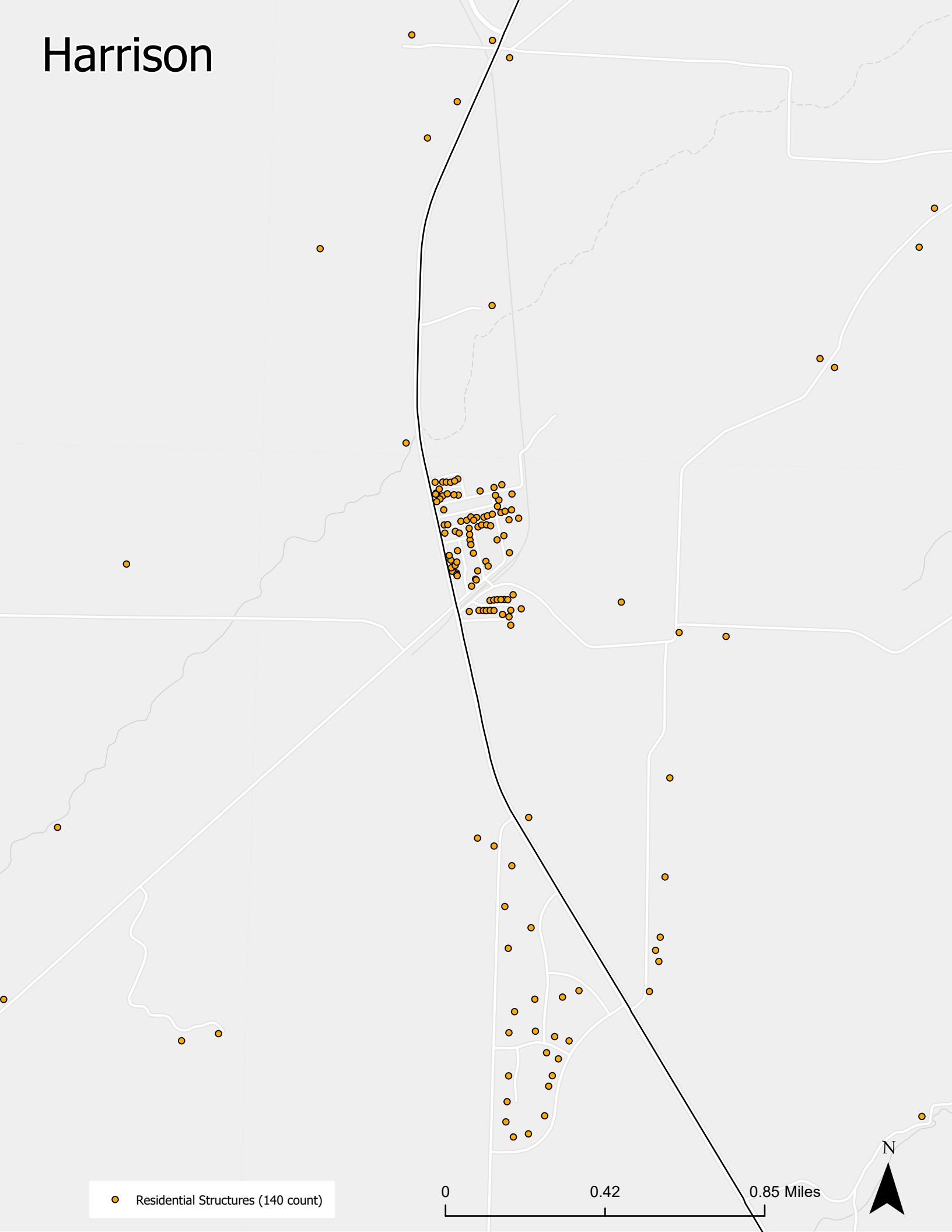


● Residential Structures (825 count)

0 0.5 1 Miles



Harrison

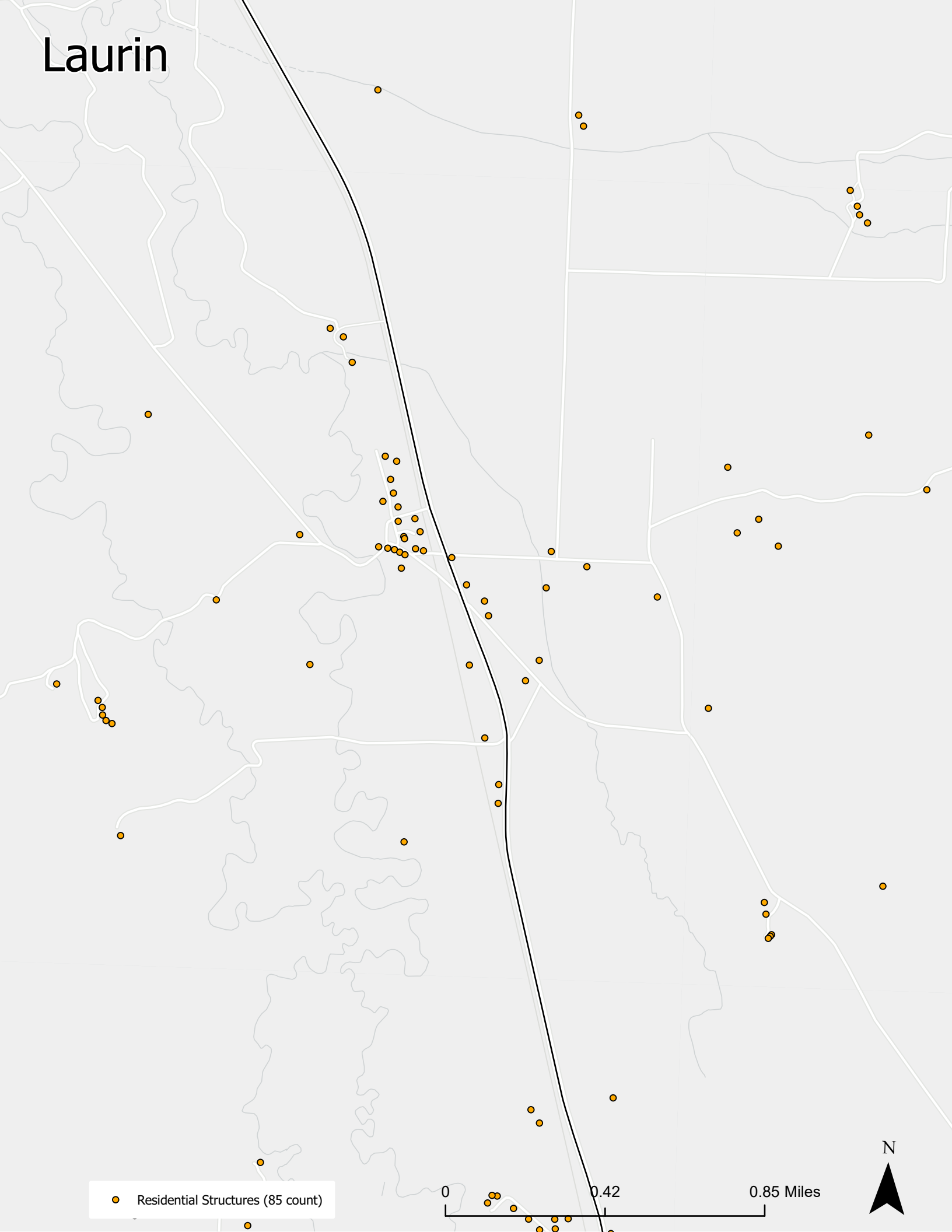


● Residential Structures (140 count)

0 0.42 0.85 Miles



Laurin

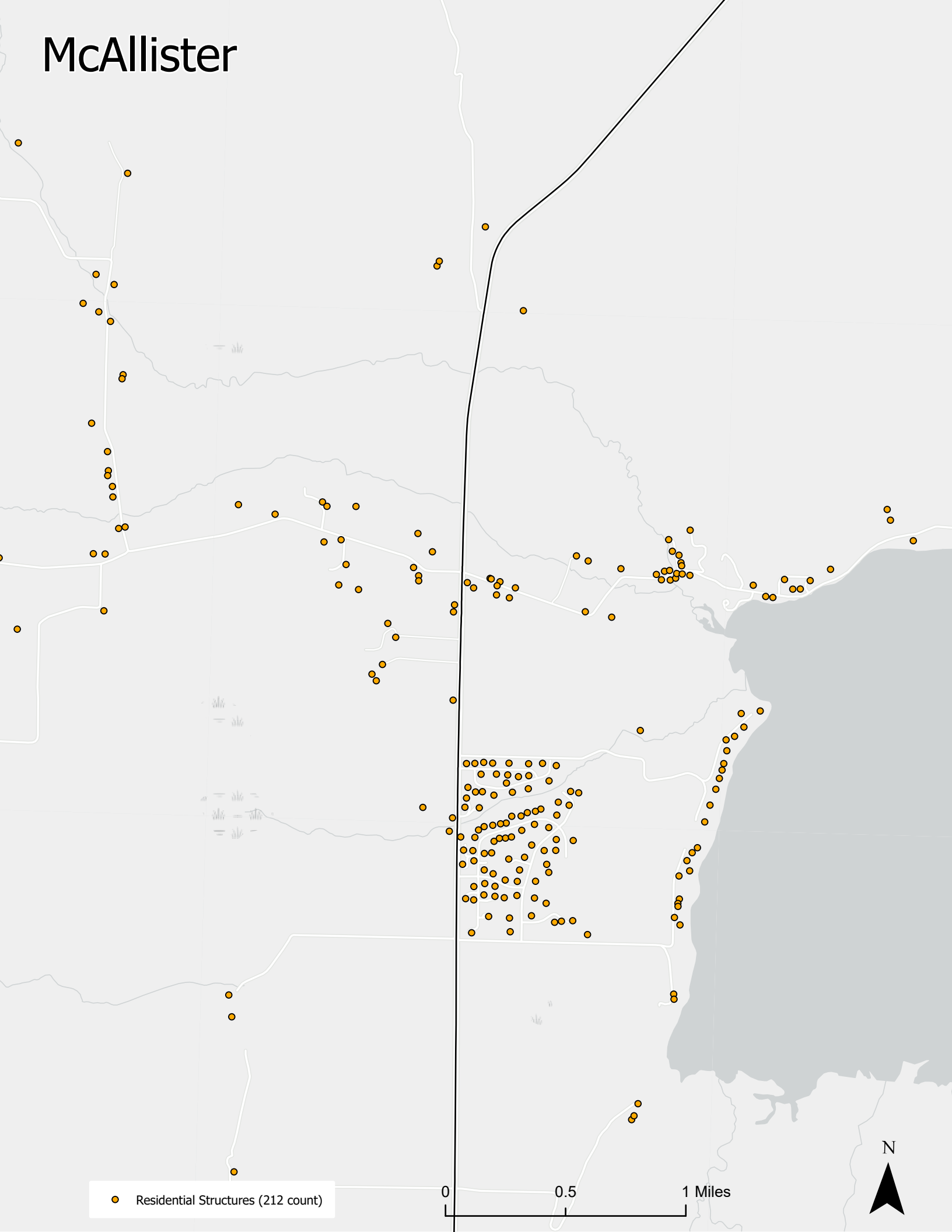


● Residential Structures (85 count)

0 0.42 0.85 Miles



McAllister

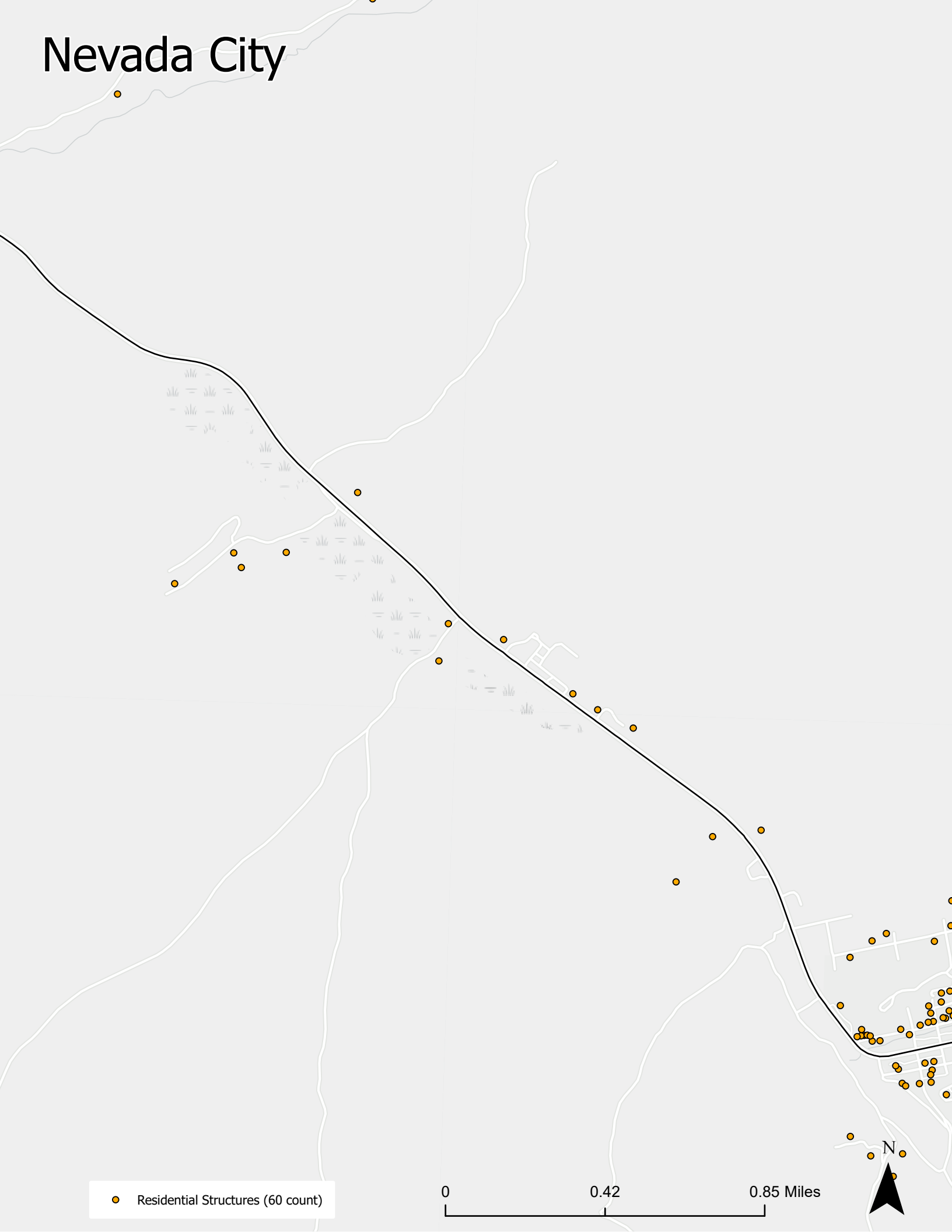


● Residential Structures (212 count)

0 0.5 1 Miles



Nevada City

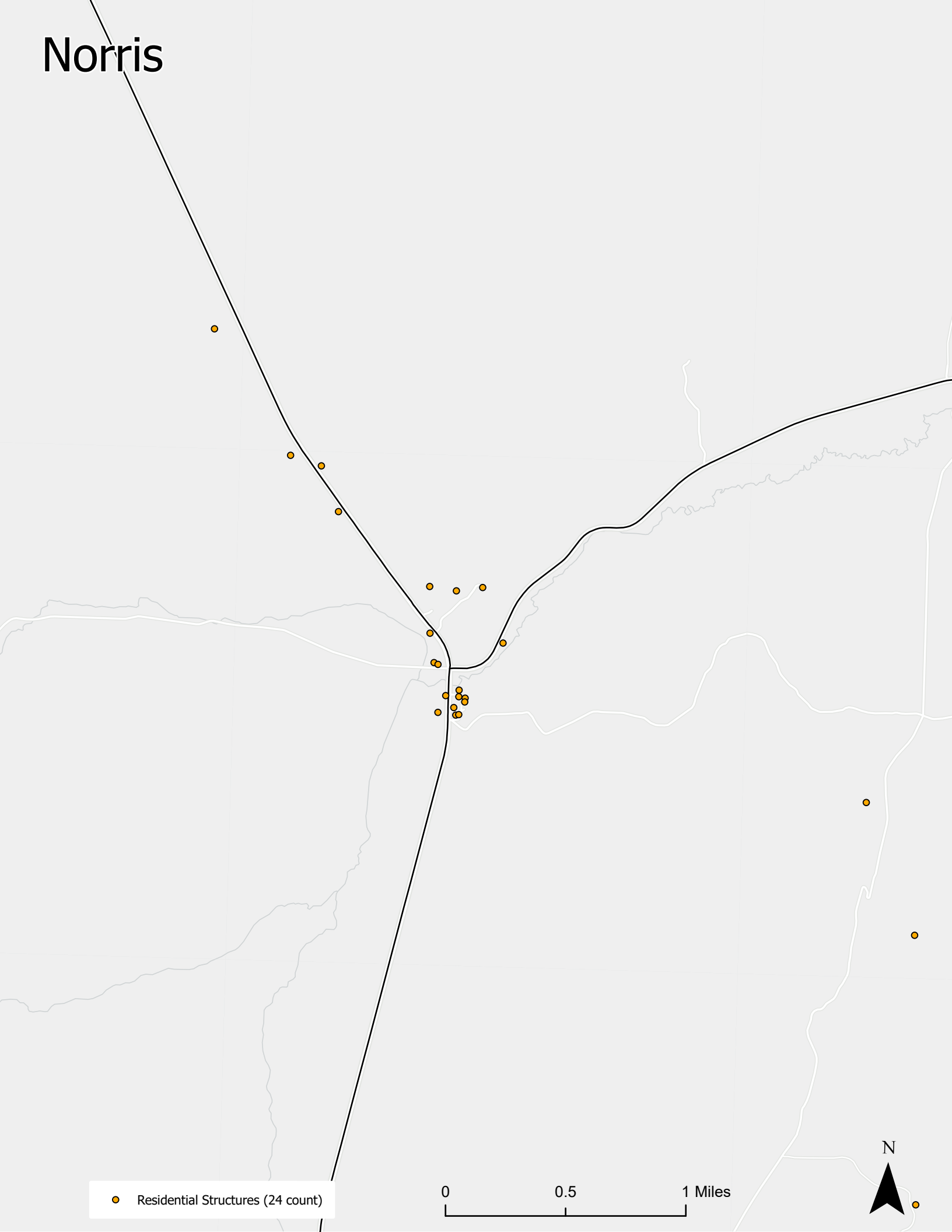


● Residential Structures (60 count)

0 0.42 0.85 Miles



Norris

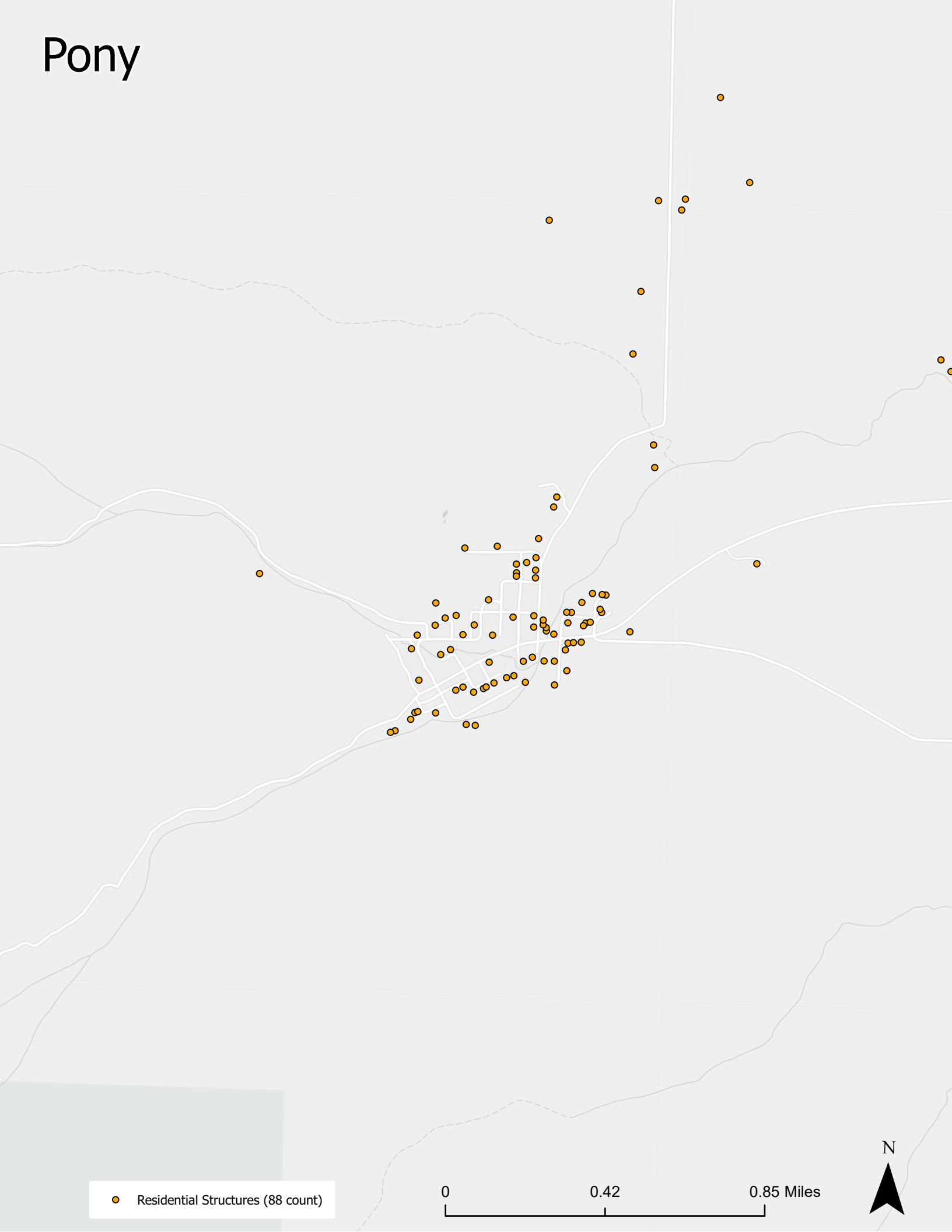


● Residential Structures (24 count)

0 0.5 1 Miles



Pony

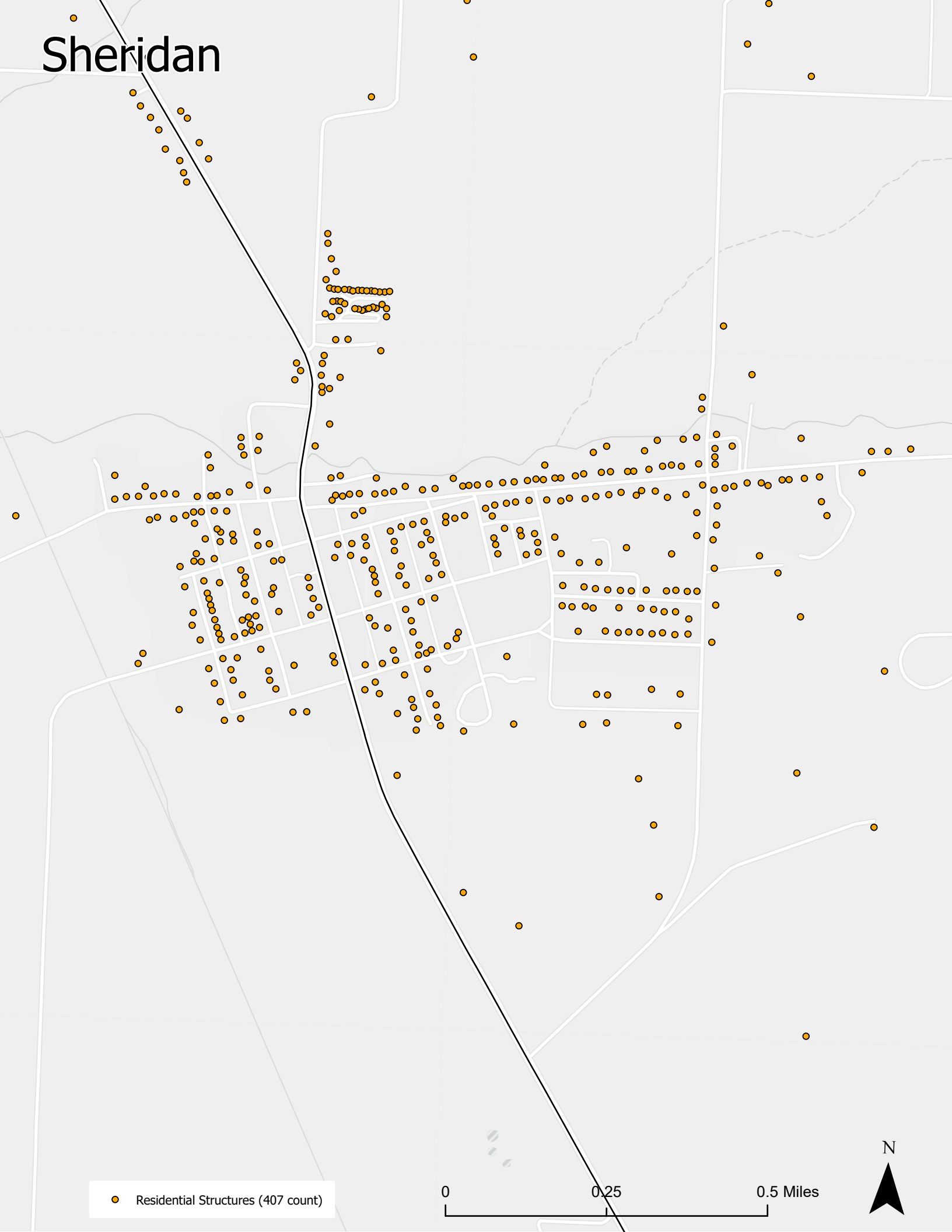


● Residential Structures (88 count)

0 0.42 0.85 Miles



Sheridan

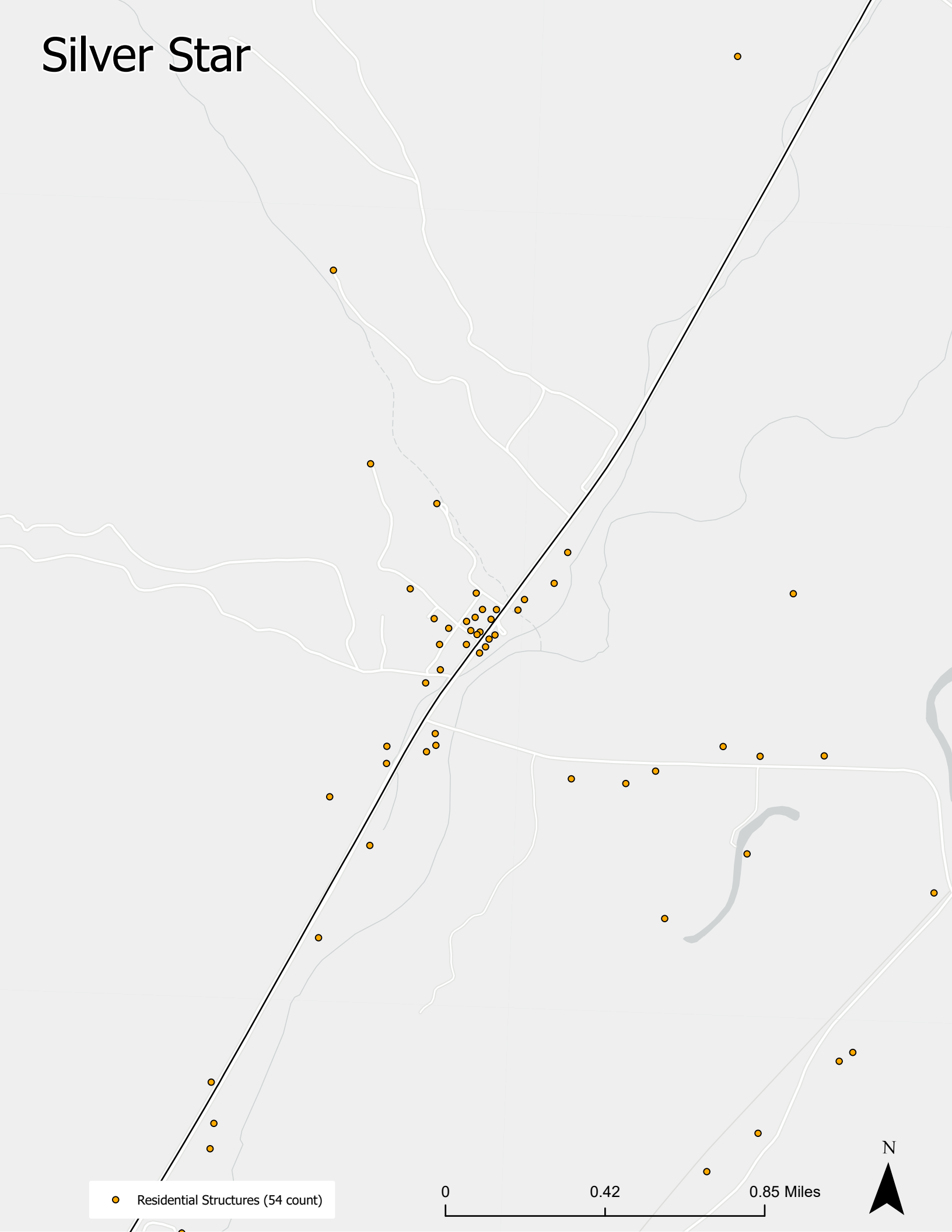


● Residential Structures (407 count)

0 0.25 0.5 Miles



Silver Star

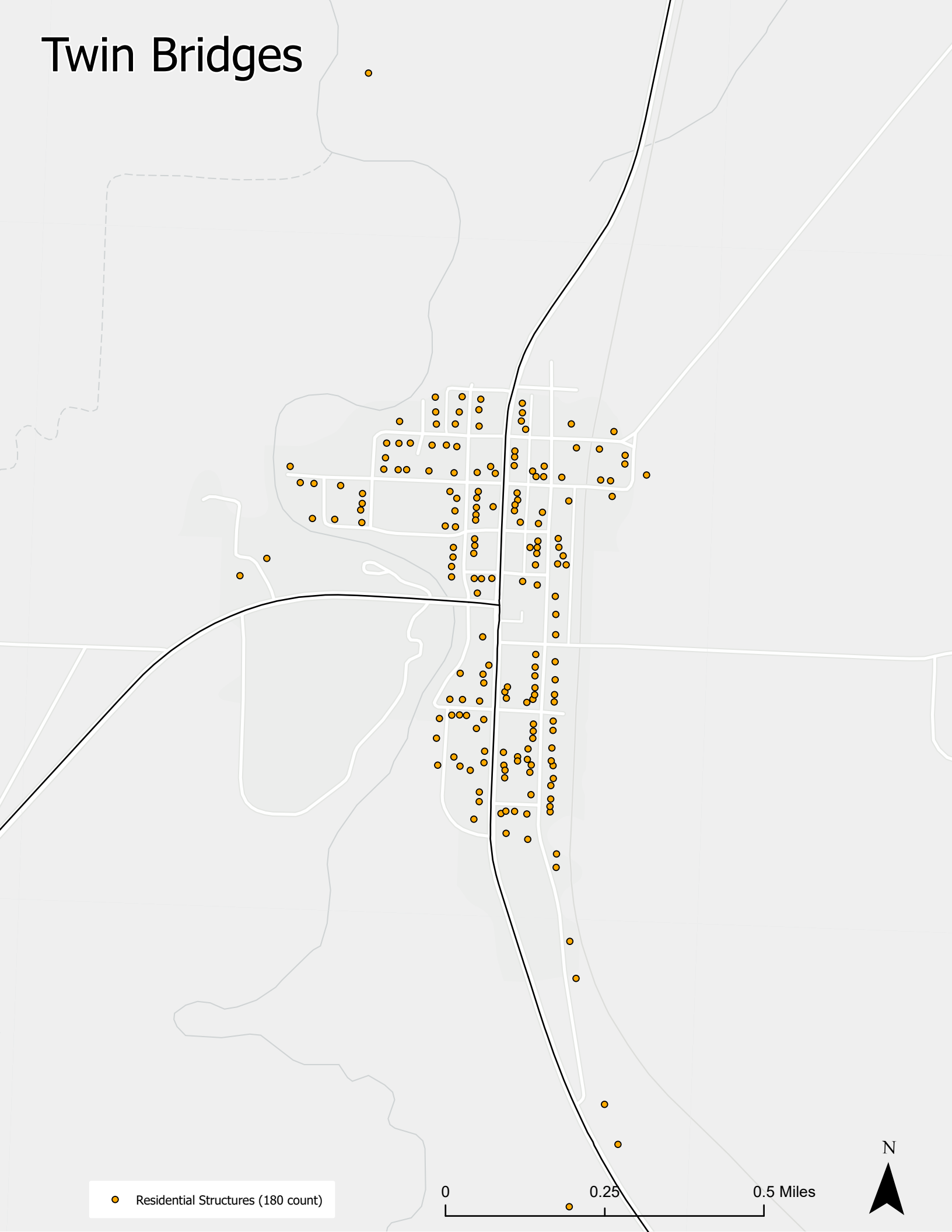


● Residential Structures (54 count)

0 0.42 0.85 Miles



Twin Bridges

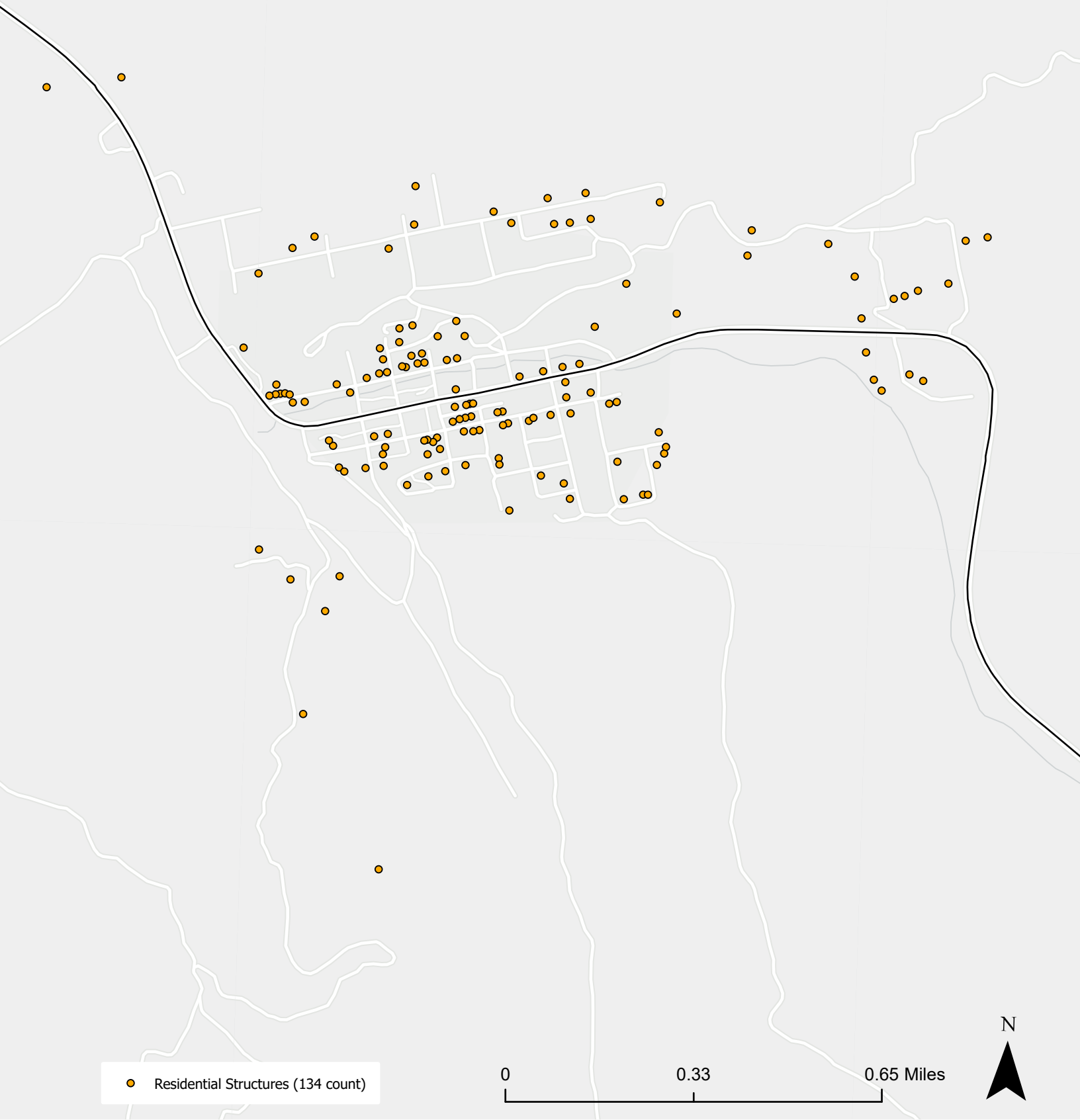


● Residential Structures (180 count)

0 0.25 0.5 Miles



Virginia City

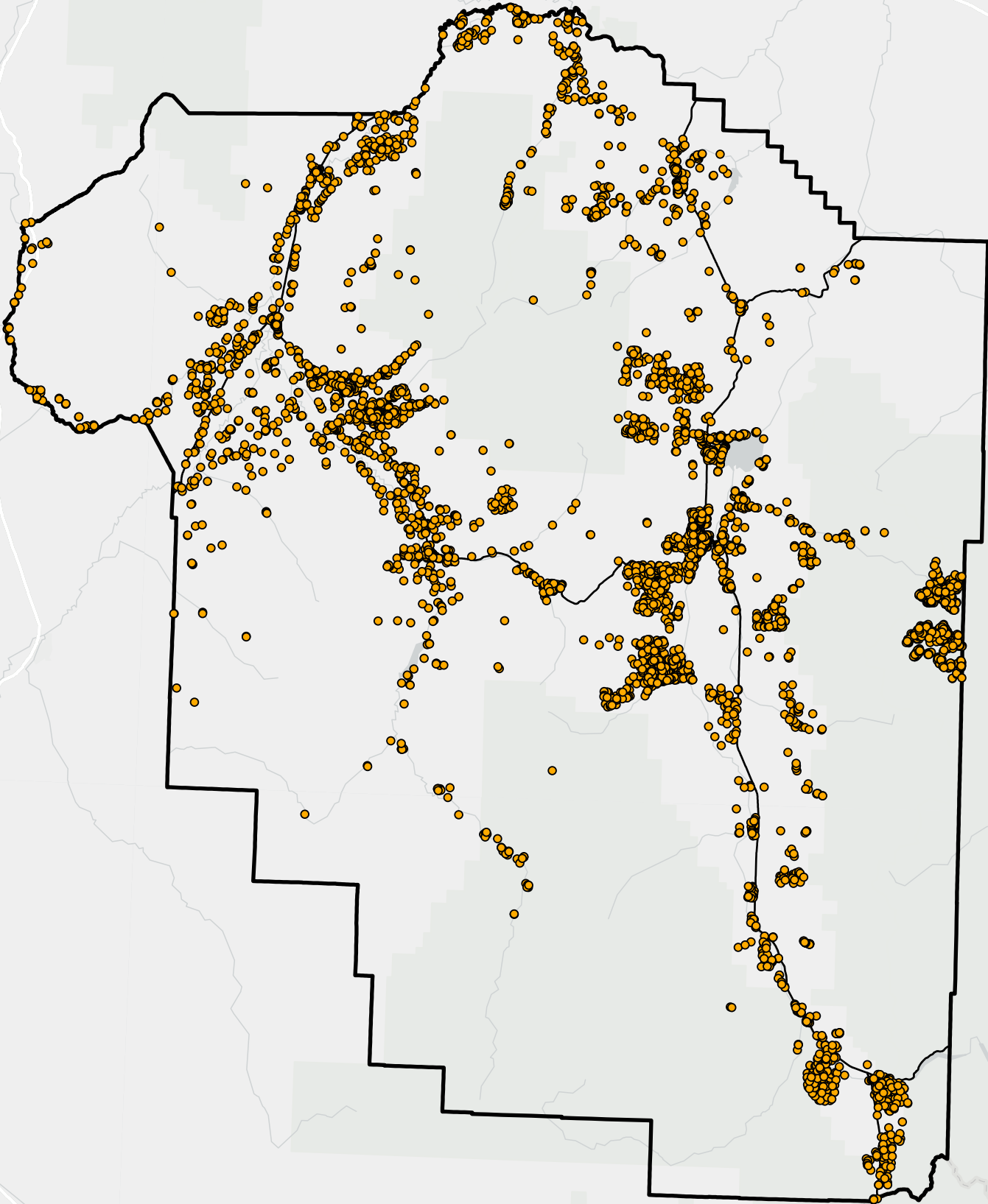


● Residential Structures (134 count)

0 0.33 0.65 Miles

N

Madison County



● Residential Structures (6309 count)

0 12.5 25 Miles

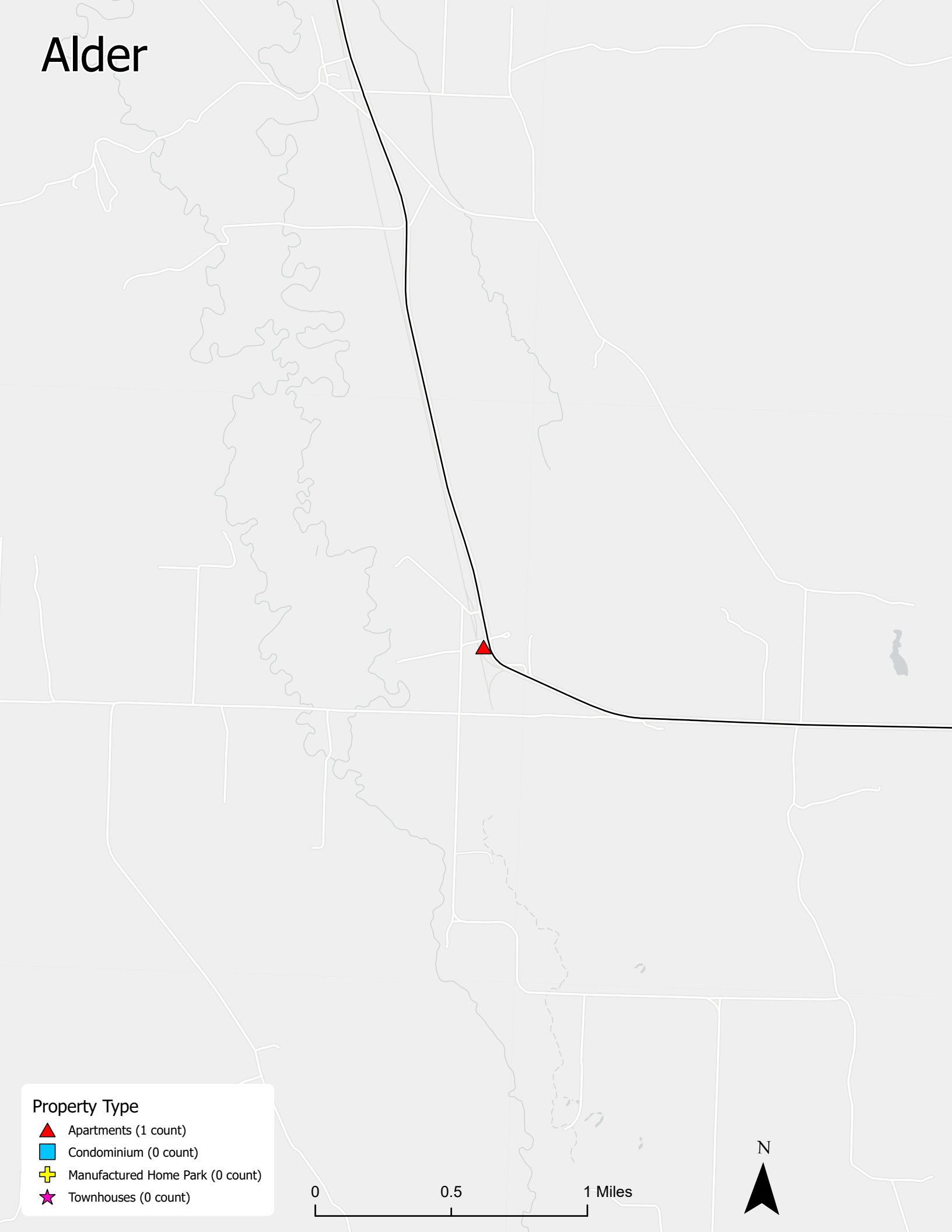


APPENDIX B

MULTI-UNIT DWELLINGS COMMUNITY MAPS

HYALITE

Alder



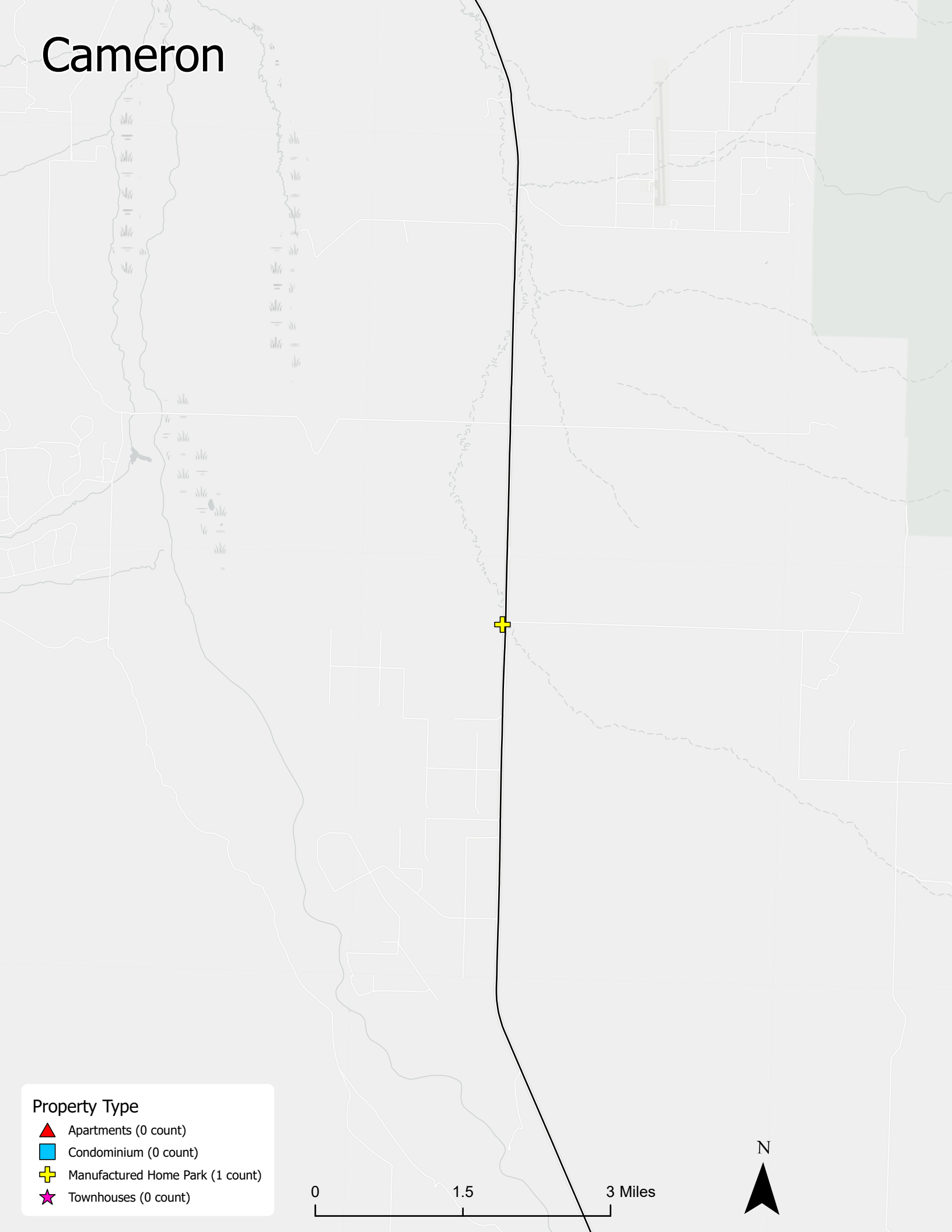
Property Type

- ▲ Apartments (1 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)





0 0.5 1 Miles



Cameron



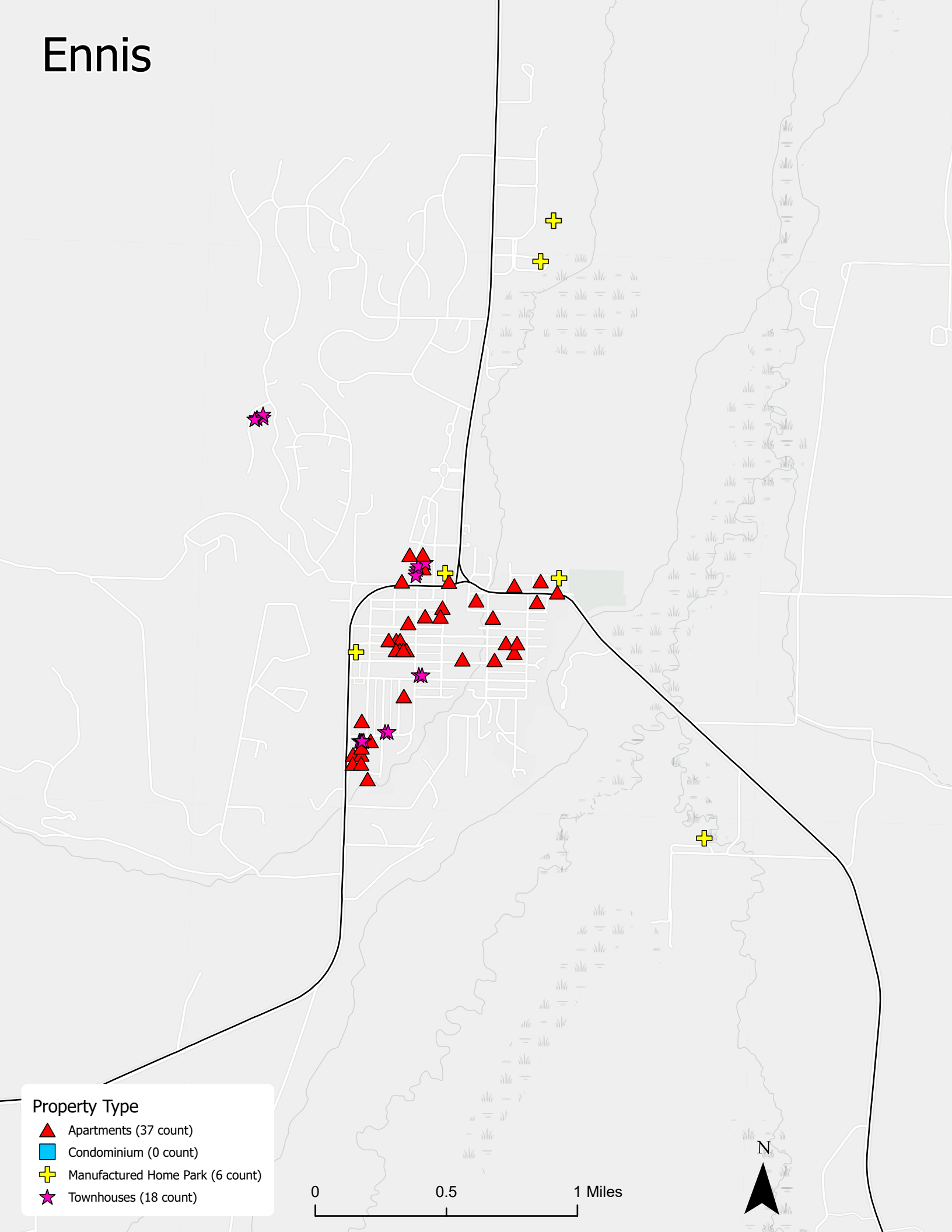
Property Type

-  Apartments (0 count)
-  Condominium (0 count)
-  Manufactured Home Park (1 count)
-  Townhouses (0 count)

0 1.5 3 Miles



Ennis



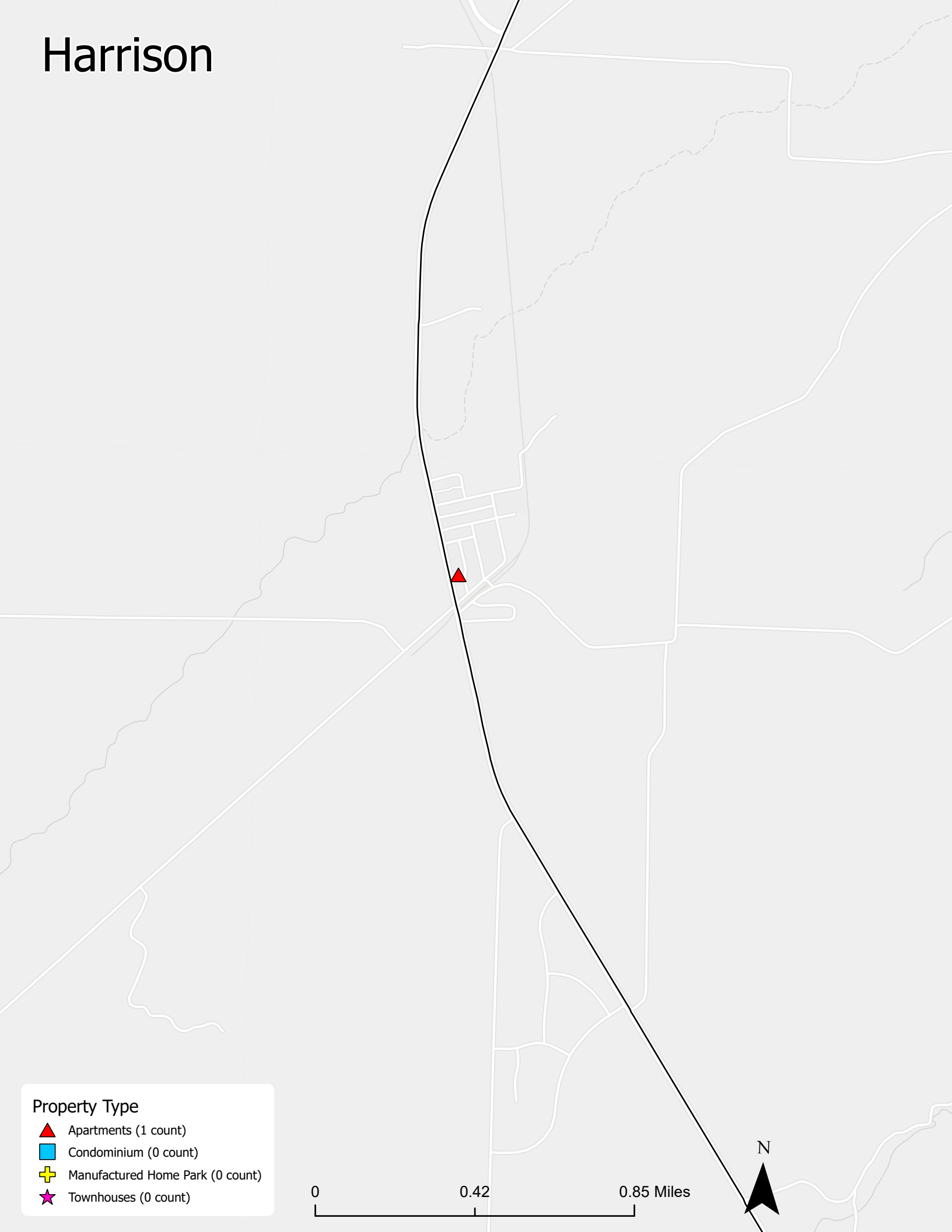
Property Type

- ▲ Apartments (37 count)
- Condominium (0 count)
- ✚ Manufactured Home Park (6 count)
- ★ Townhouses (18 count)

0 0.5 1 Miles



Harrison



Property Type

- ▲ Apartments (1 count)
- Condominium (0 count)
- ✚ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.42 0.85 Miles



Laurin

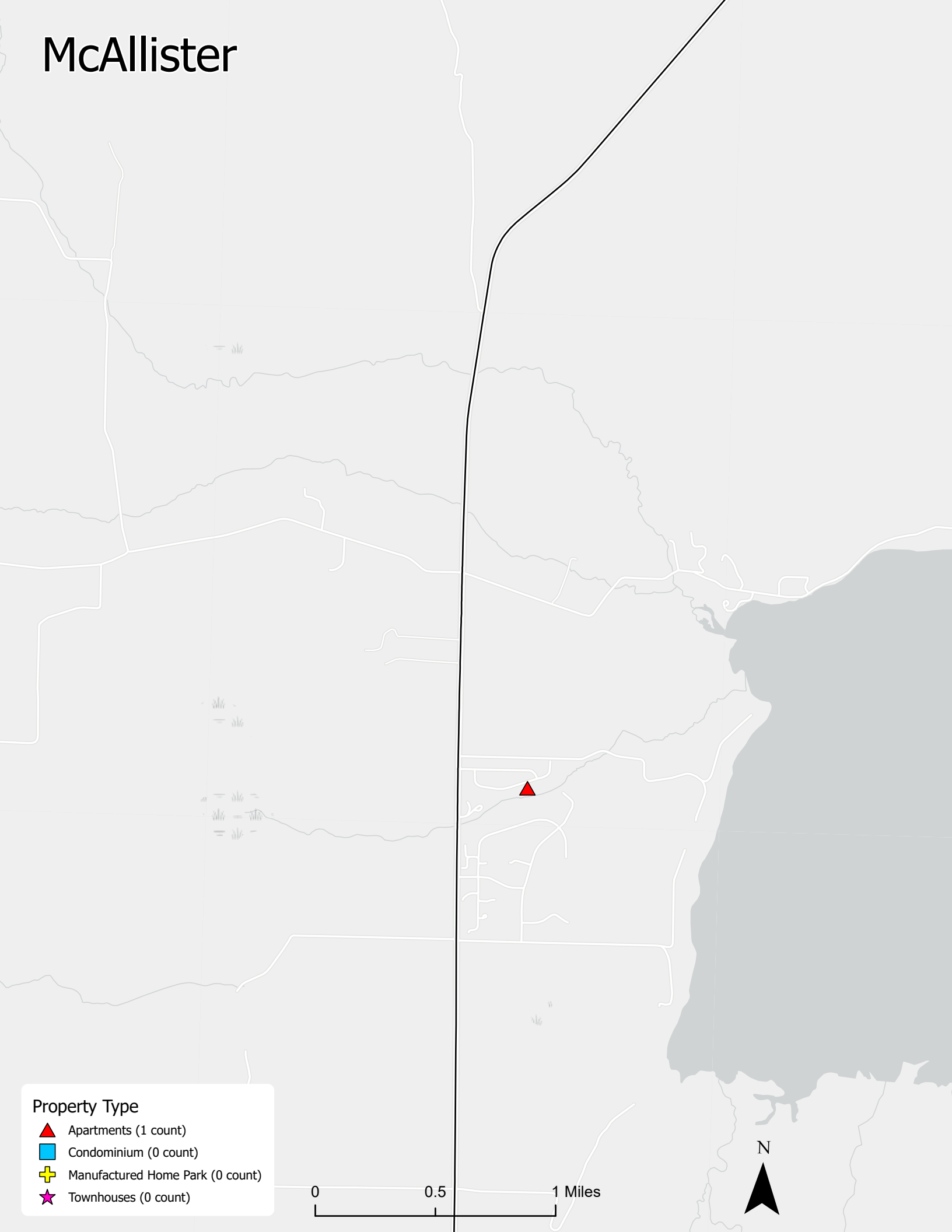
Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.42 0.85 Miles



McAllister



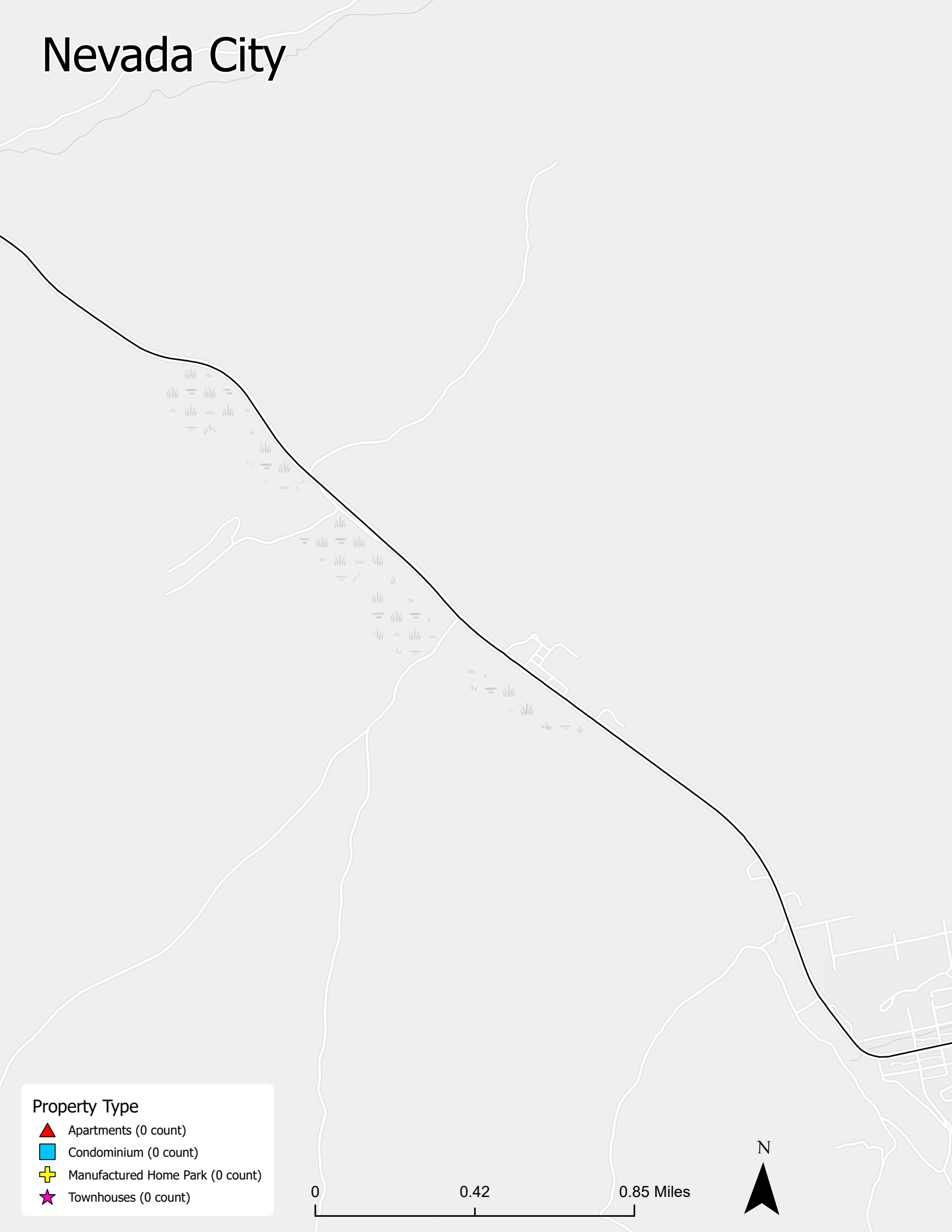
Property Type

- ▲ Apartments (1 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.5 1 Miles



Nevada City



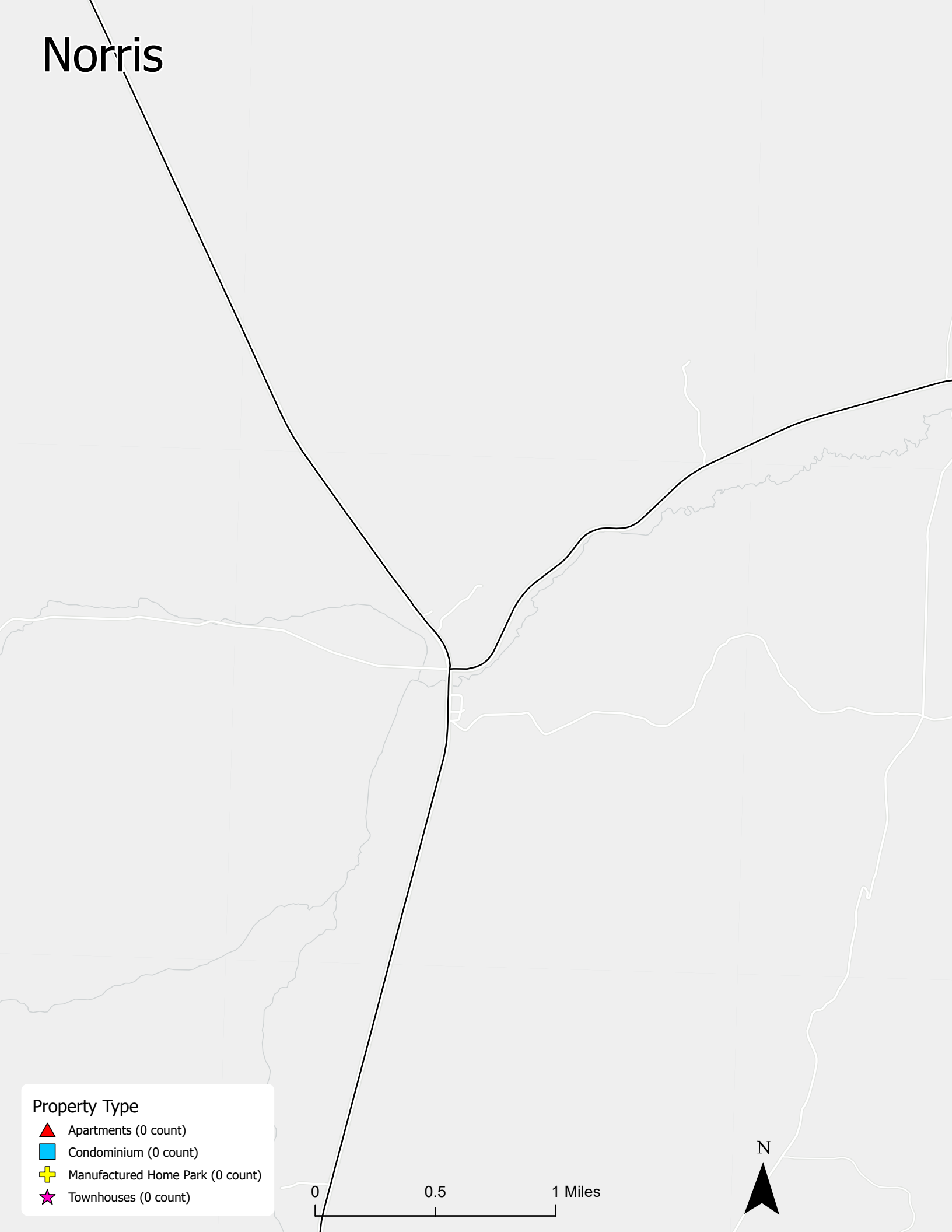
Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.42 0.85 Miles



Norris



Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.5 1 Miles



Pony



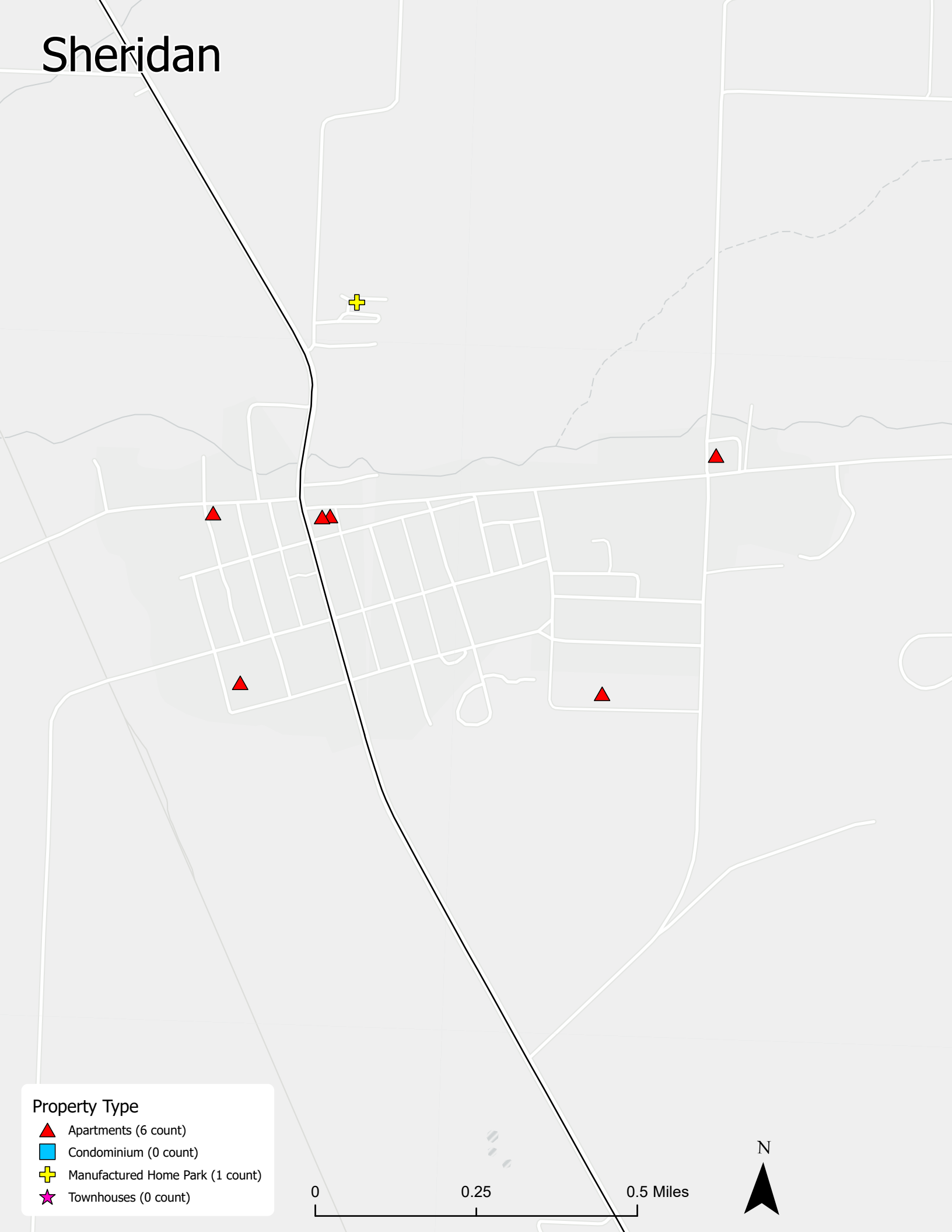
Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.42 0.85 Miles



Sheridan



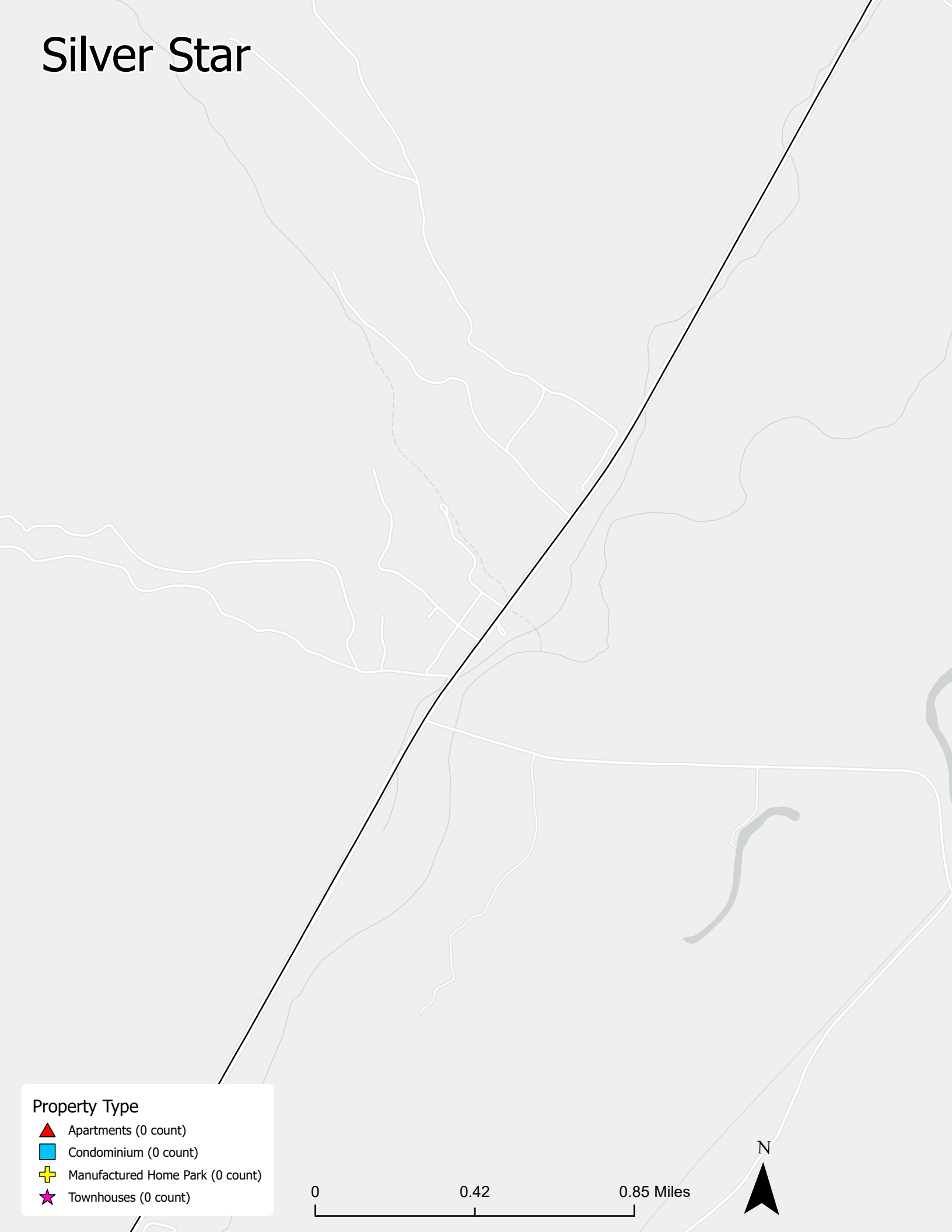
Property Type

- ▲ Apartments (6 count)
- Condominium (0 count)
- ✚ Manufactured Home Park (1 count)
- ★ Townhouses (0 count)

0 0.25 0.5 Miles



Silver Star



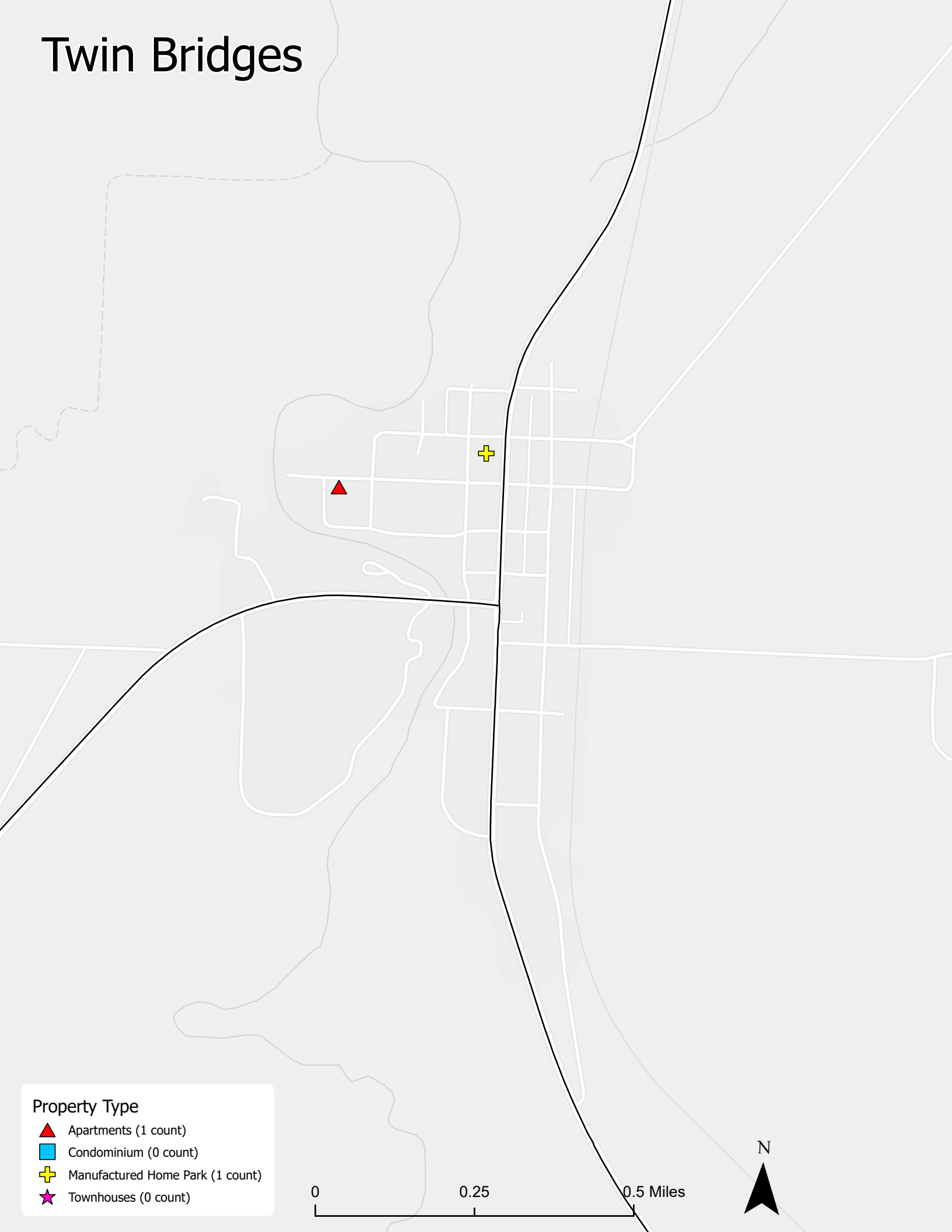
Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ✚ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.42 0.85 Miles



Twin Bridges



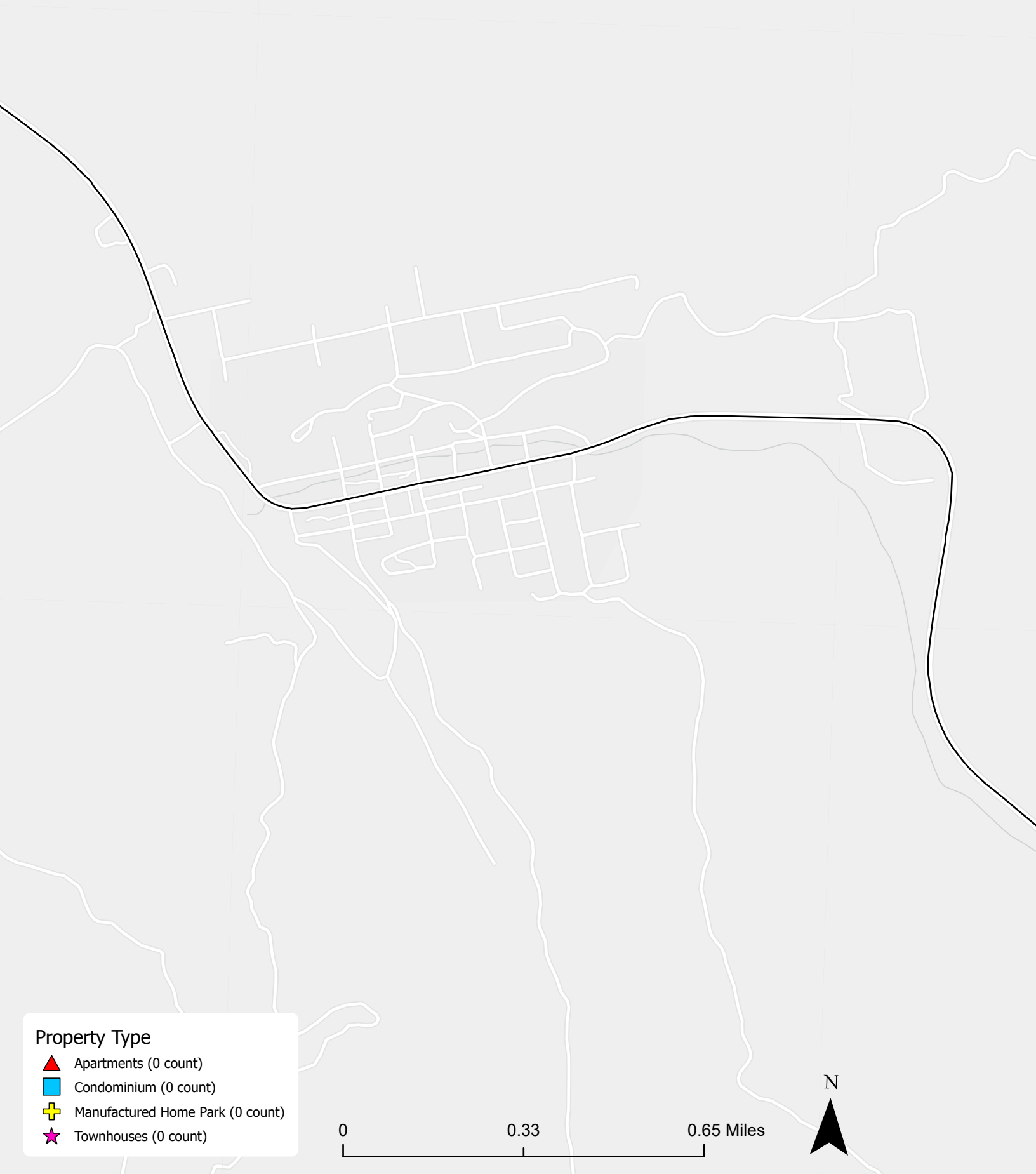
Property Type

- ▲ Apartments (1 count)
- Condominium (0 count)
- ✚ Manufactured Home Park (1 count)
- ★ Townhouses (0 count)

0 0.25 0.5 Miles



Virginia City



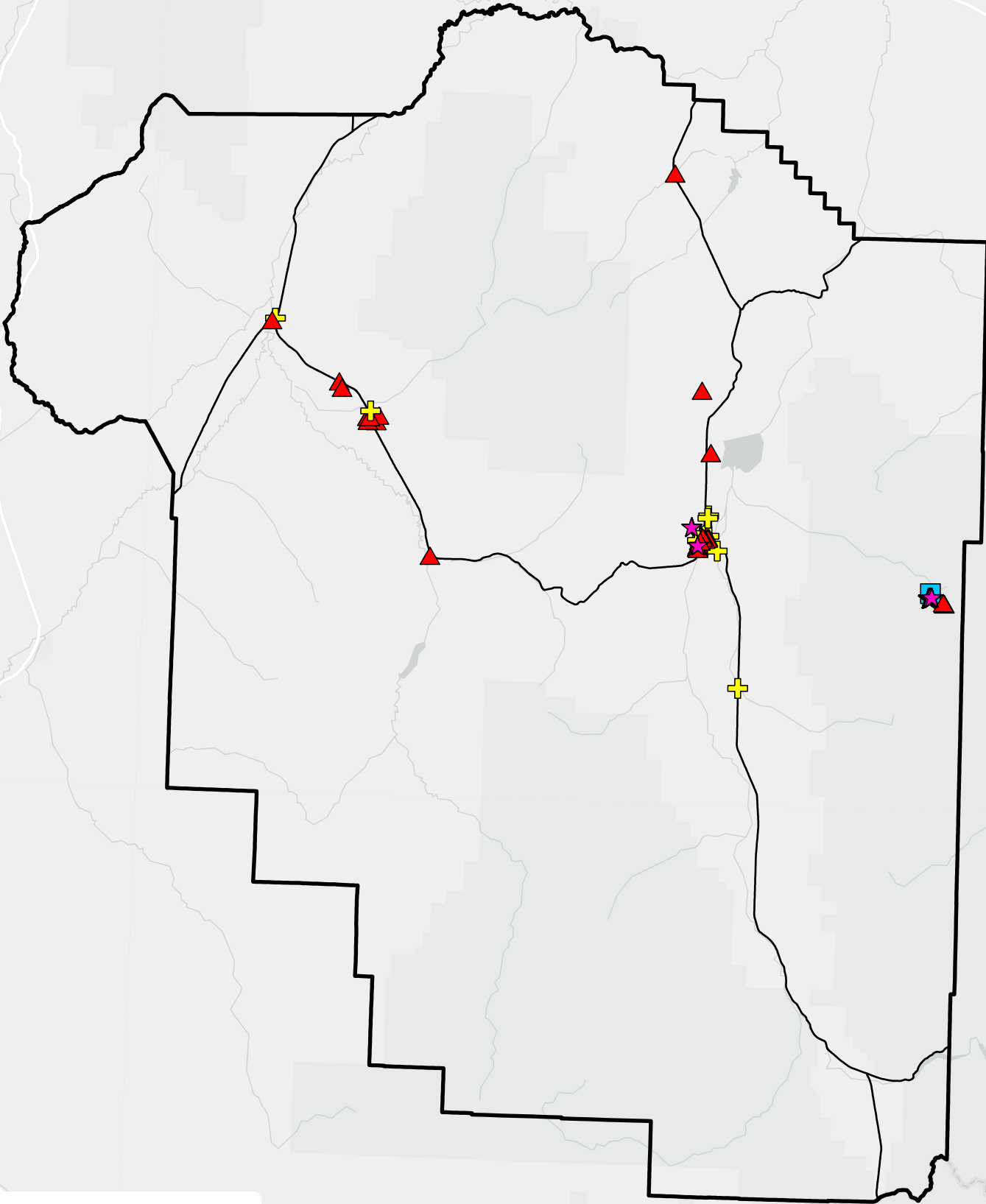
Property Type

- ▲ Apartments (0 count)
- Condominium (0 count)
- ⊕ Manufactured Home Park (0 count)
- ★ Townhouses (0 count)

0 0.33 0.65 Miles



Madison County



Property Type

- ▲ Apartments (53 count)
- Condominium (1 count)
- ⊕ Manufactured Home Park (9 count)
- ★ Townhouses (103 count)

0 12.5 25 Miles



APPENDIX C

HOUSING UNIT TYPES
COMMUNITY MAPS

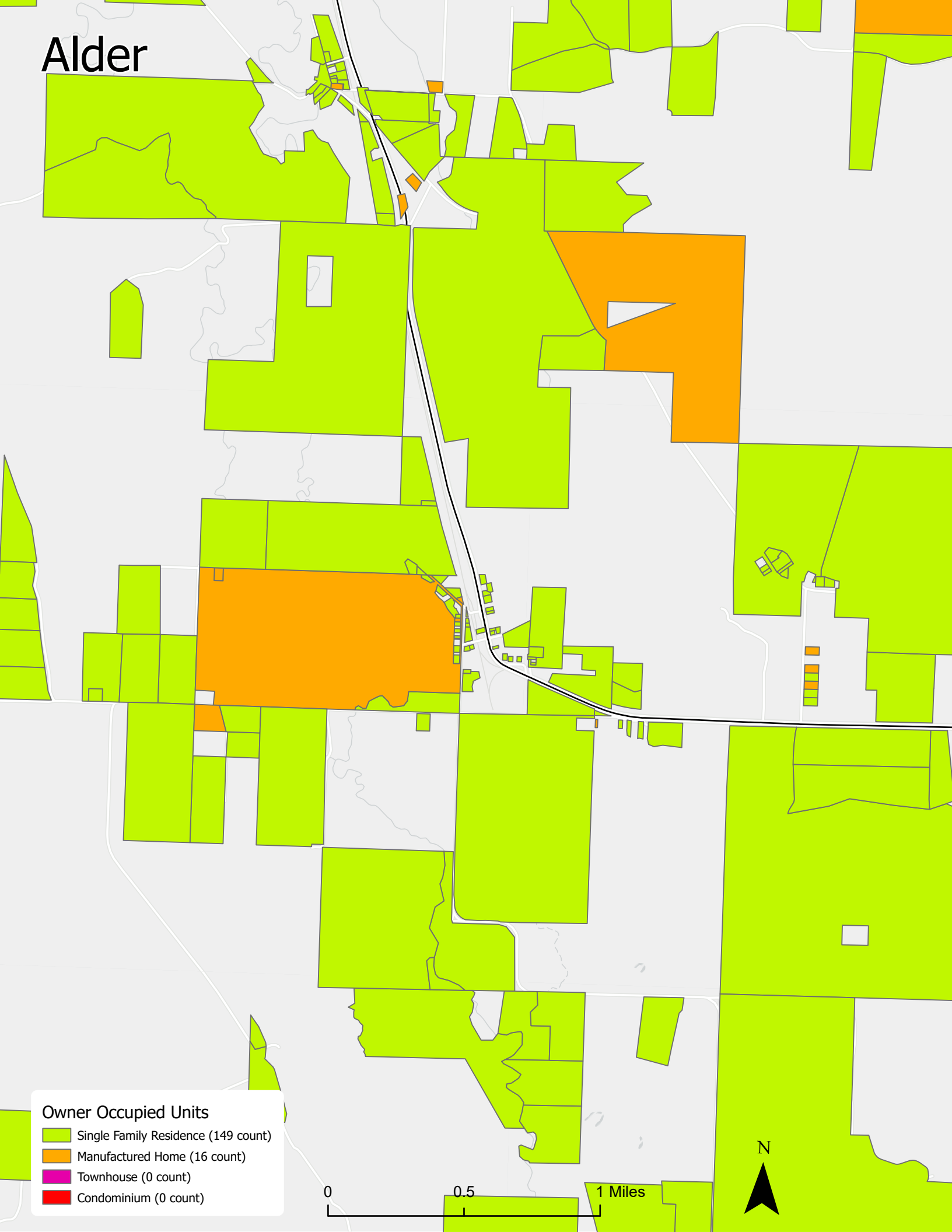
 **HYALITE**

APPENDIX C.1

OWNER HOUSING UNIT TYPES
COMMUNITY MAPS

 **HYALITE**

Alder



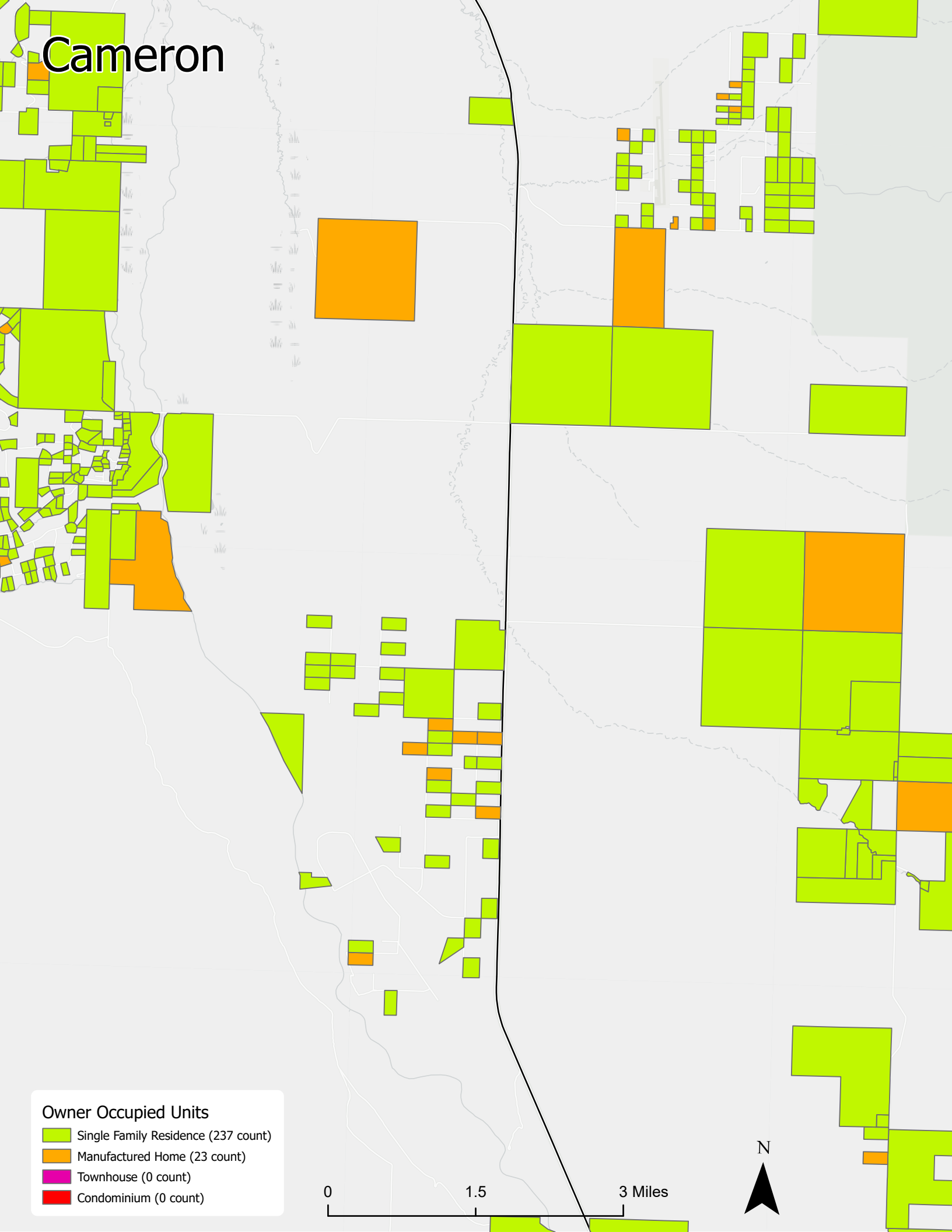
Owner Occupied Units

- Single Family Residence (149 count)
- Manufactured Home (16 count)
- Townhouse (0 count)
- Condominium (0 count)

0 0.5 1 Miles



Cameron



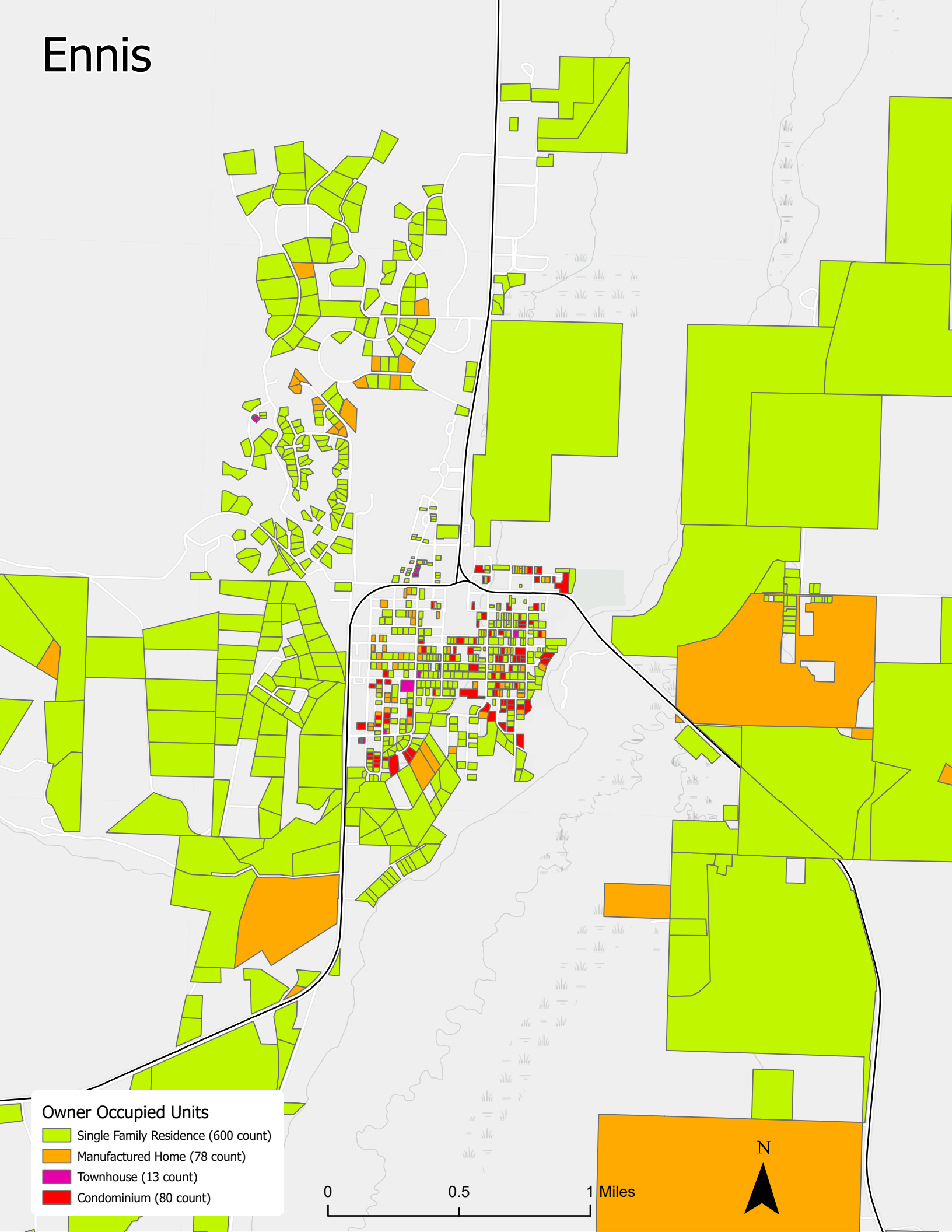
Owner Occupied Units

- Single Family Residence (237 count)
- Manufactured Home (23 count)
- Townhouse (0 count)
- Condominium (0 count)

0 1.5 3 Miles



Ennis



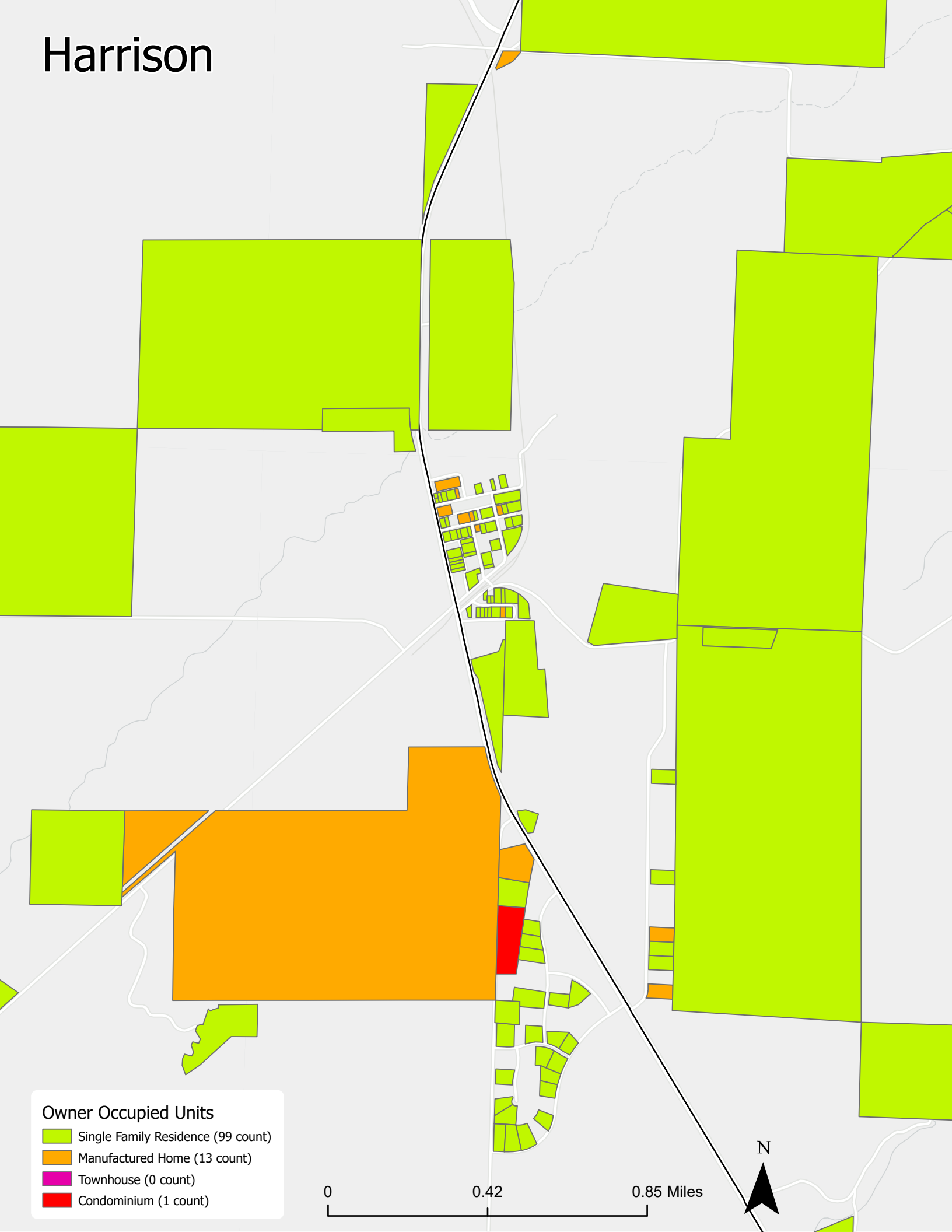
Owner Occupied Units

- Single Family Residence (600 count)
- Manufactured Home (78 count)
- Townhouse (13 count)
- Condominium (80 count)

0 0.5 1 Miles

N

Harrison



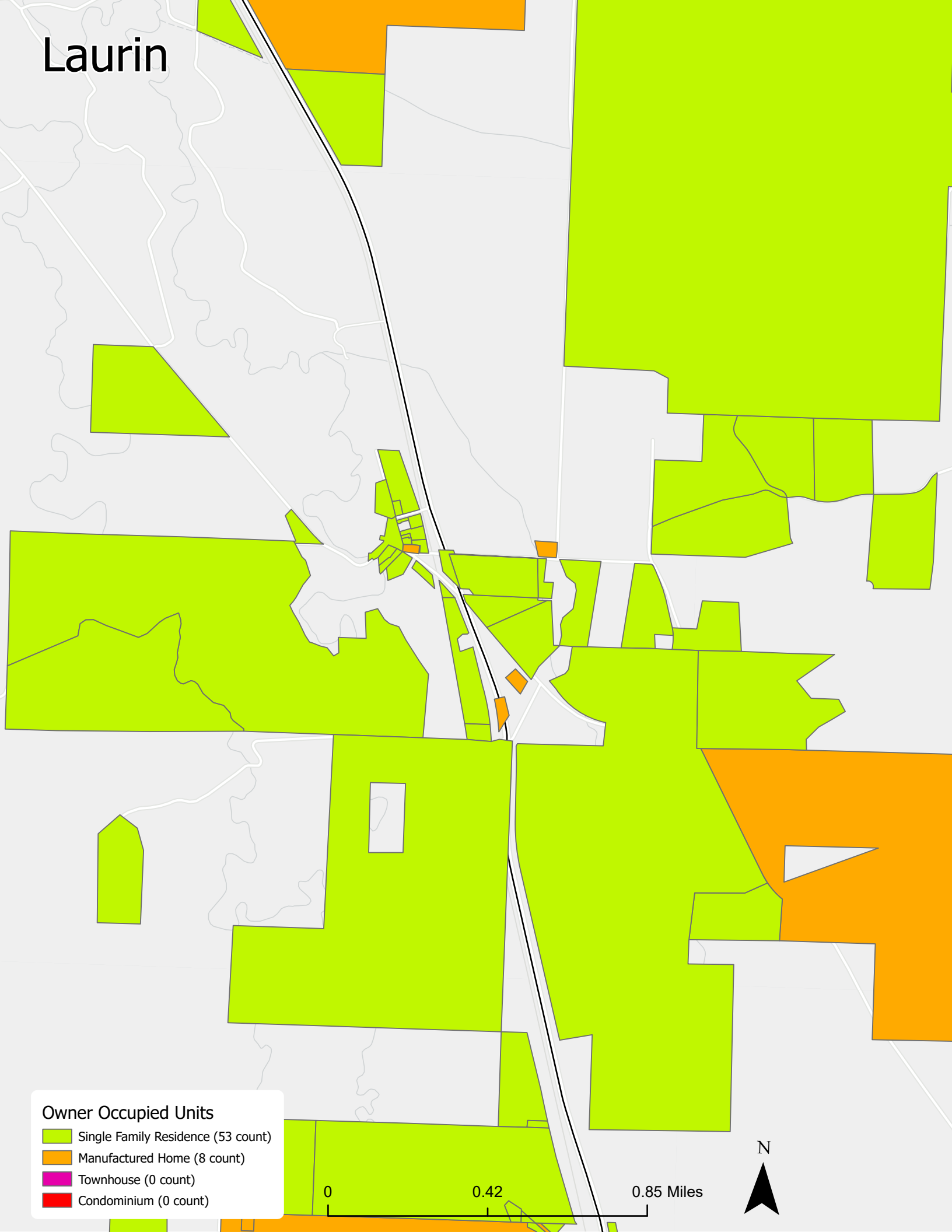
Owner Occupied Units

- Single Family Residence (99 count)
- Manufactured Home (13 count)
- Townhouse (0 count)
- Condominium (1 count)

0 0.42 0.85 Miles



Laurin



Owner Occupied Units

- Single Family Residence (53 count)
- Manufactured Home (8 count)
- Townhouse (0 count)
- Condominium (0 count)

0

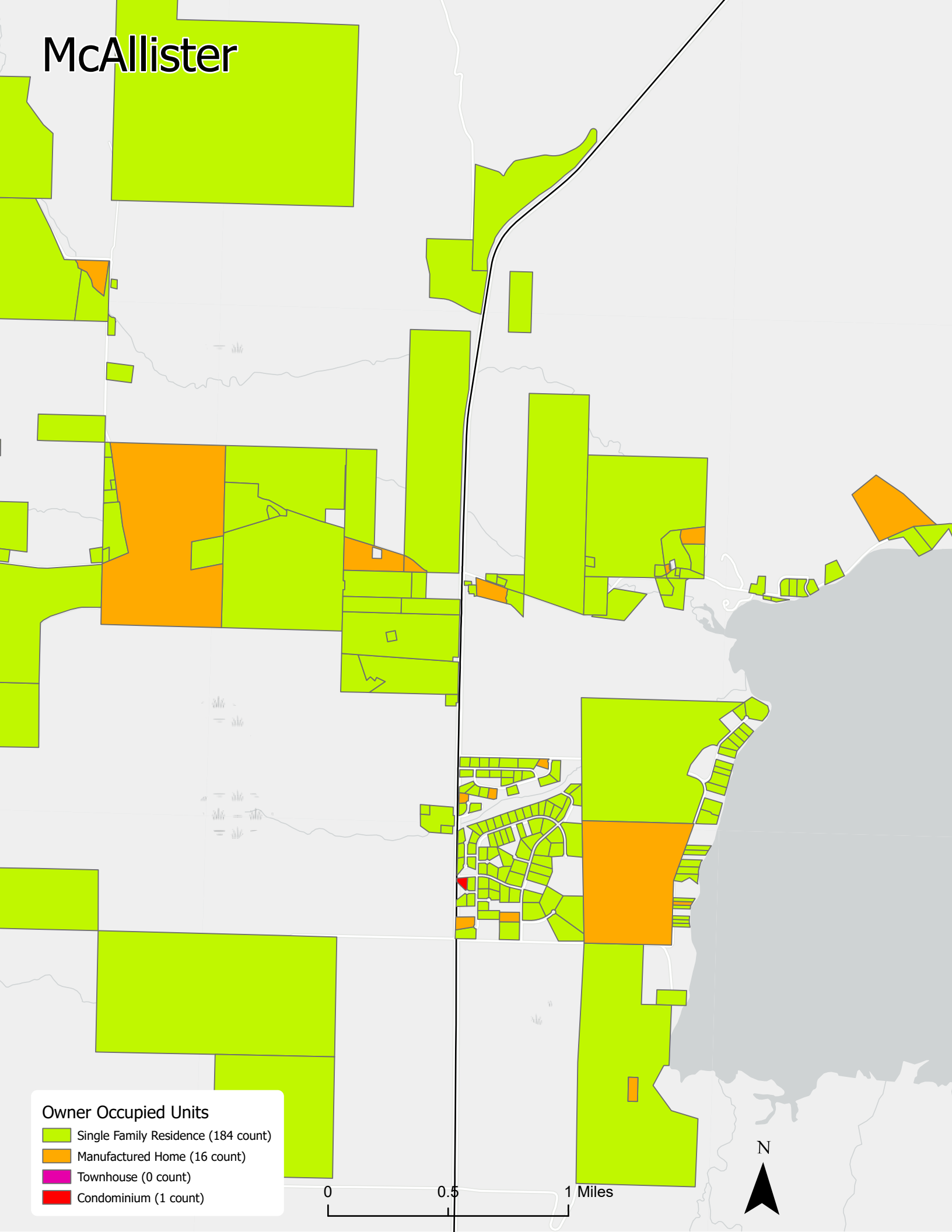
0.42

0.85 Miles

N



McAllister



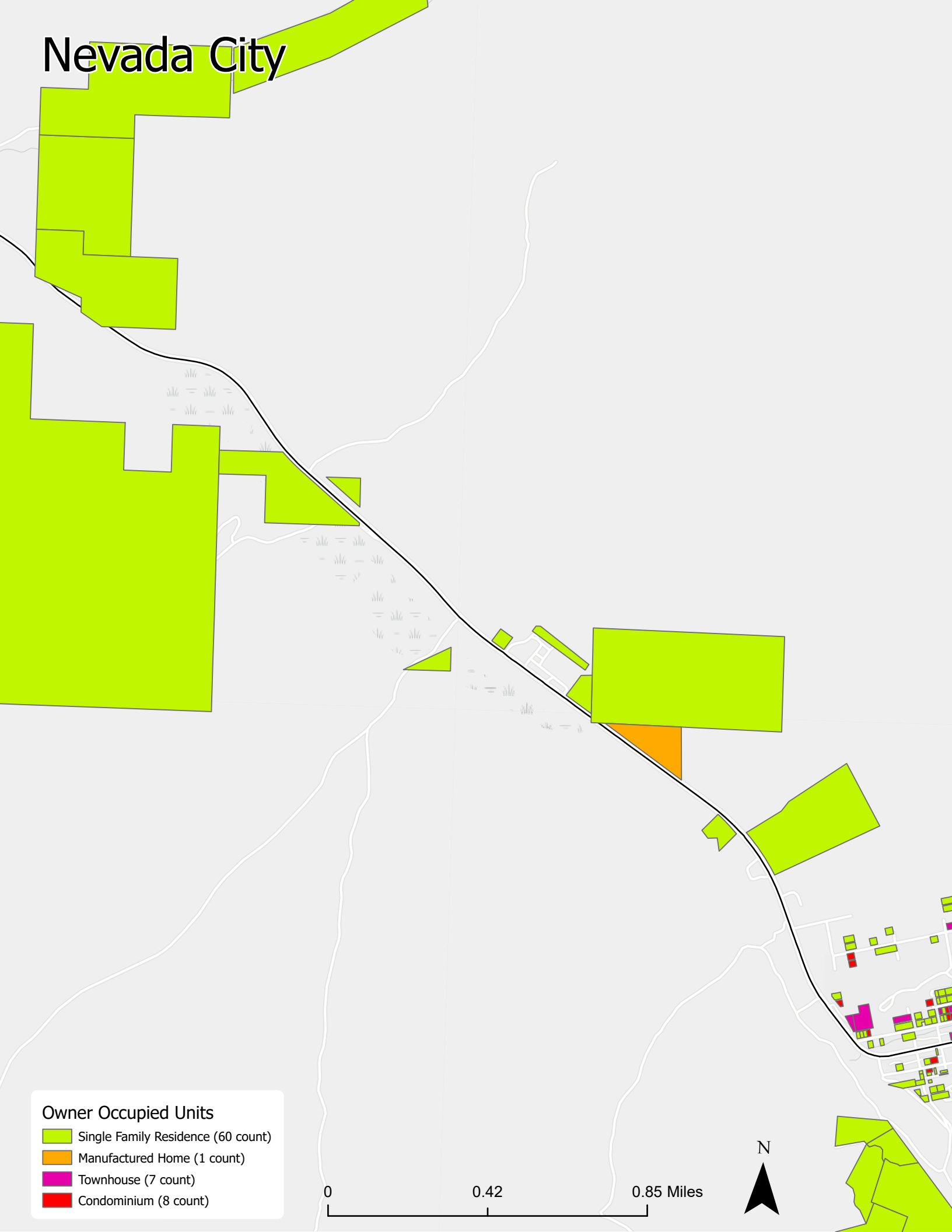
Owner Occupied Units

- Single Family Residence (184 count)
- Manufactured Home (16 count)
- Townhouse (0 count)
- Condominium (1 count)

0 0.5 1 Miles



Nevada City



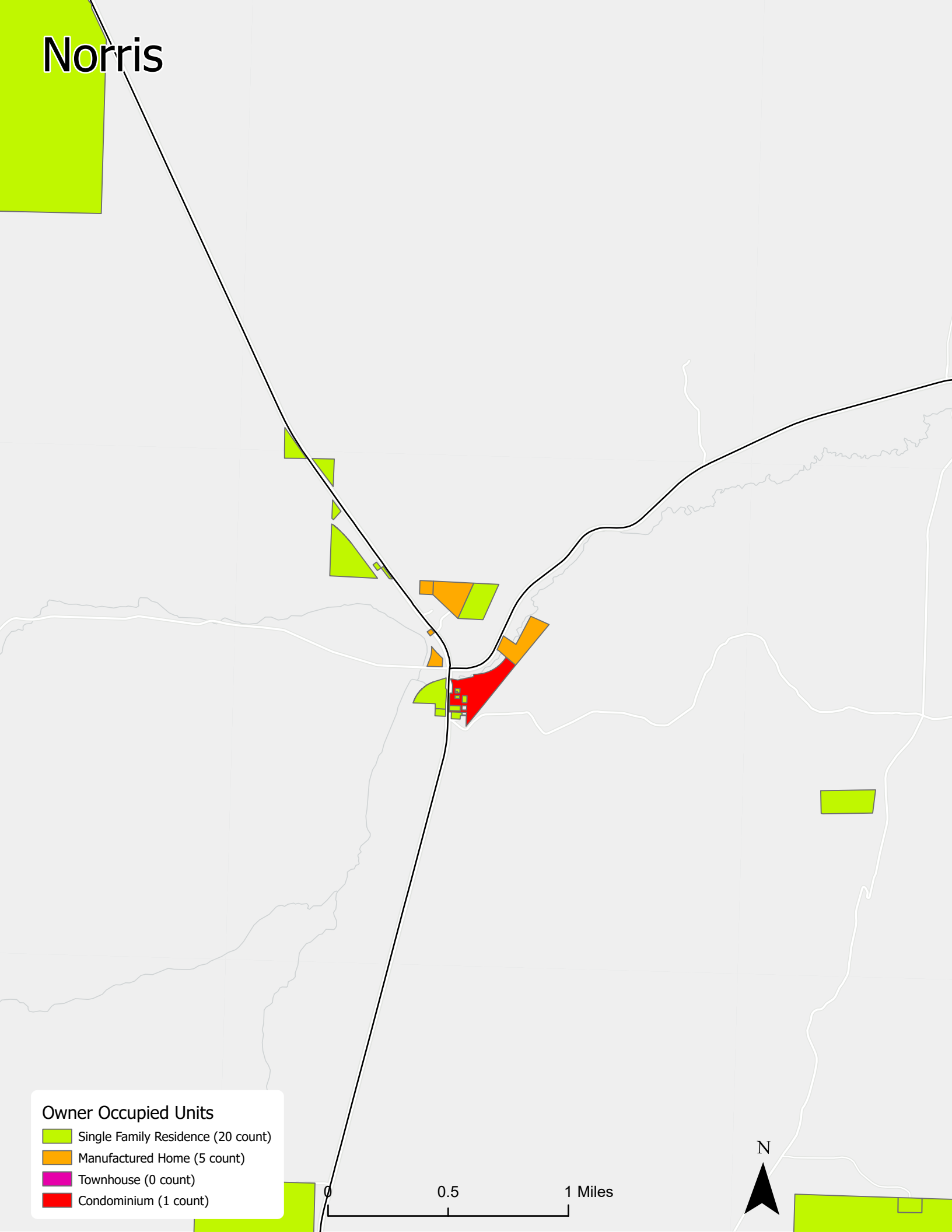
Owner Occupied Units

- Single Family Residence (60 count)
- Manufactured Home (1 count)
- Townhouse (7 count)
- Condominium (8 count)

0 0.42 0.85 Miles



Norris



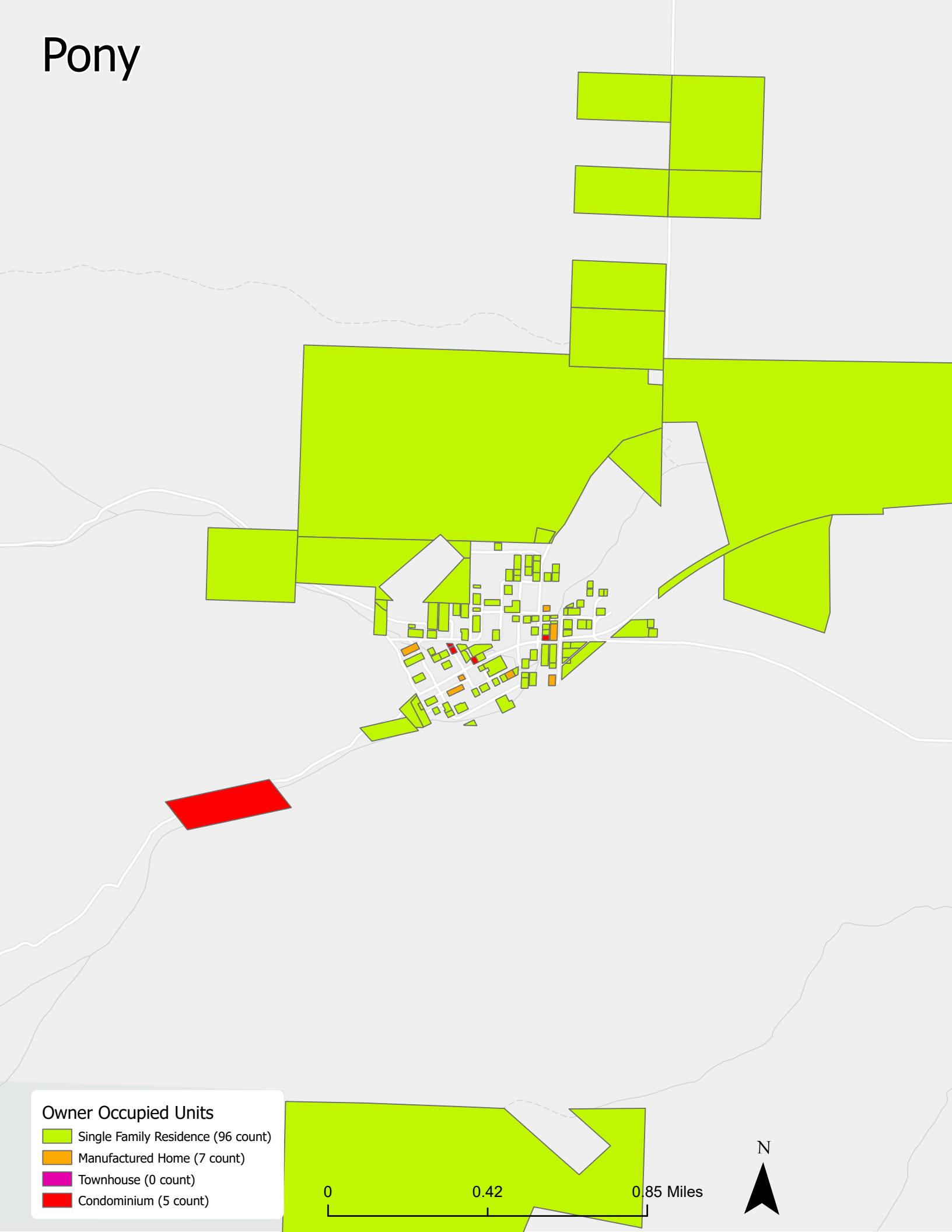
Owner Occupied Units

- Single Family Residence (20 count)
- Manufactured Home (5 count)
- Townhouse (0 count)
- Condominium (1 count)

0 0.5 1 Miles



Pony



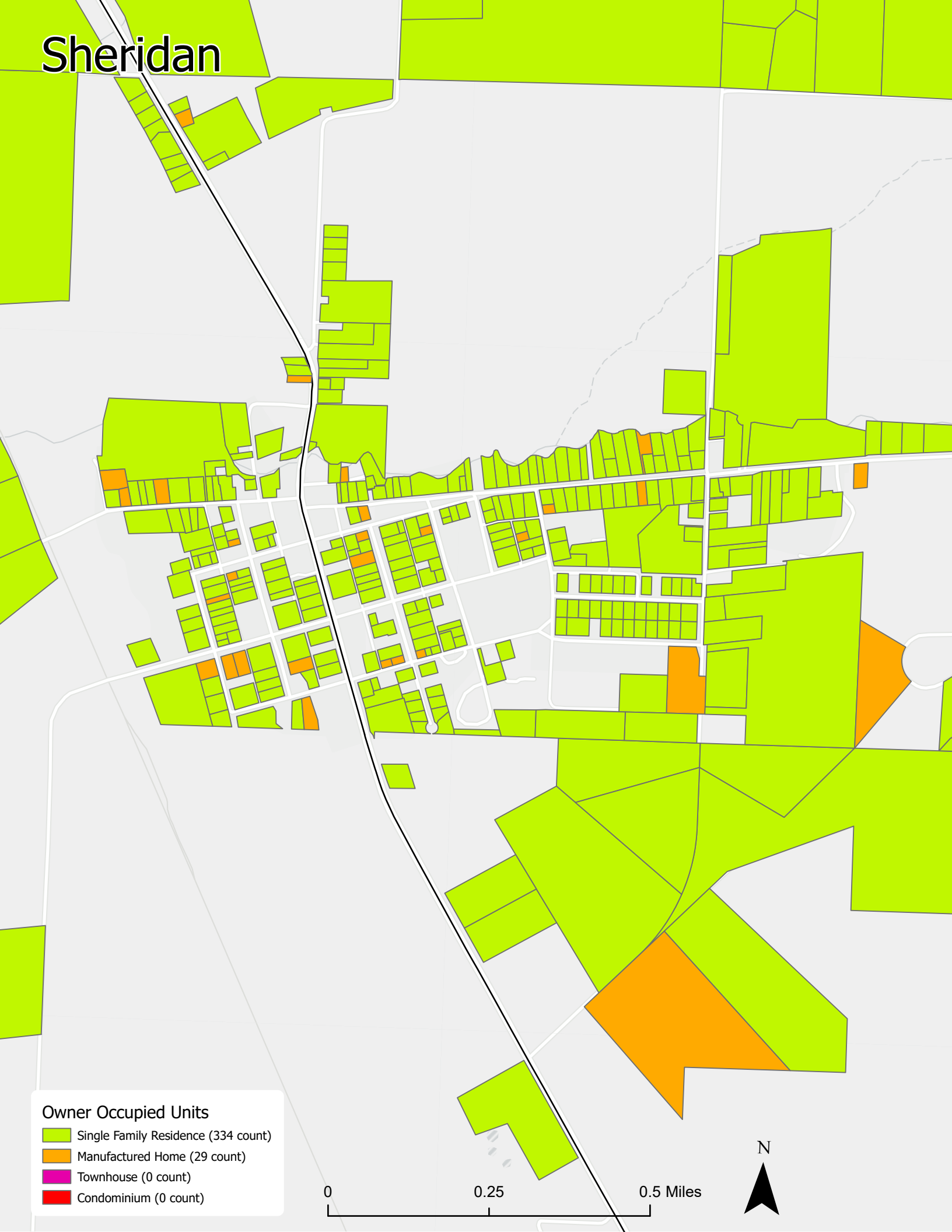
Owner Occupied Units

- Single Family Residence (96 count)
- Manufactured Home (7 count)
- Townhouse (0 count)
- Condominium (5 count)

0 0.42 0.85 Miles



Sheridan



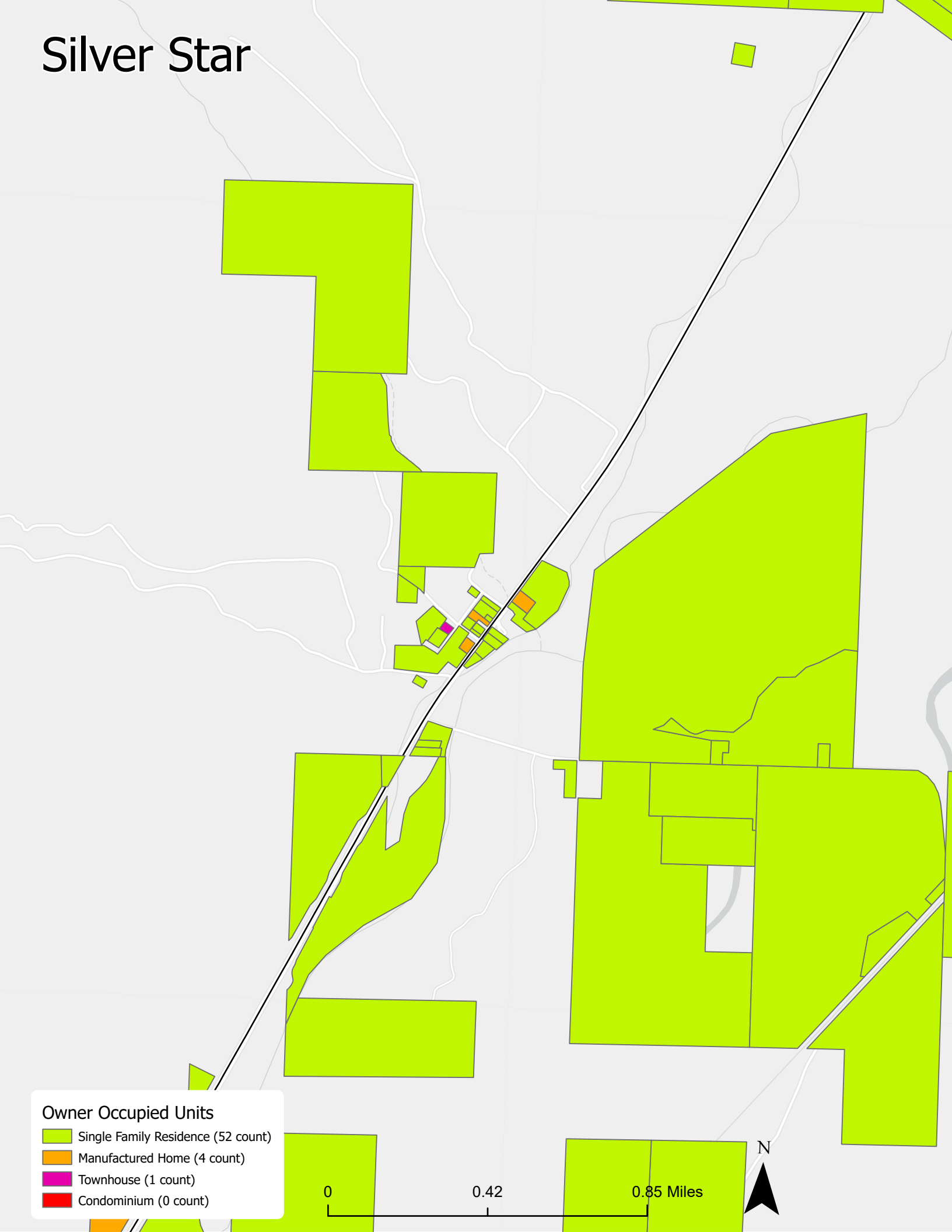
Owner Occupied Units

- Single Family Residence (334 count)
- Manufactured Home (29 count)
- Townhouse (0 count)
- Condominium (0 count)

0 0.25 0.5 Miles



Silver Star

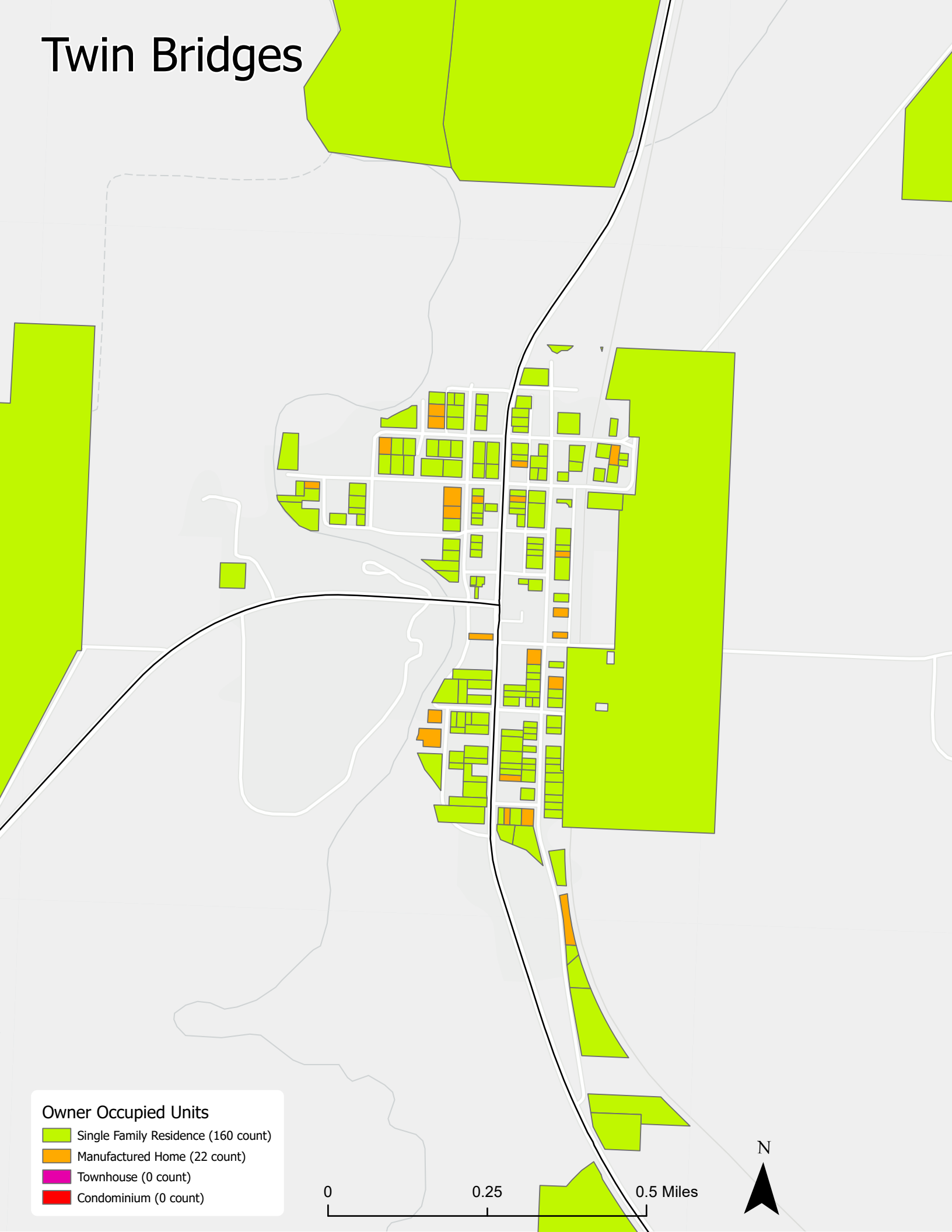


Owner Occupied Units

- Single Family Residence (52 count)
- Manufactured Home (4 count)
- Townhouse (1 count)
- Condominium (0 count)



Twin Bridges



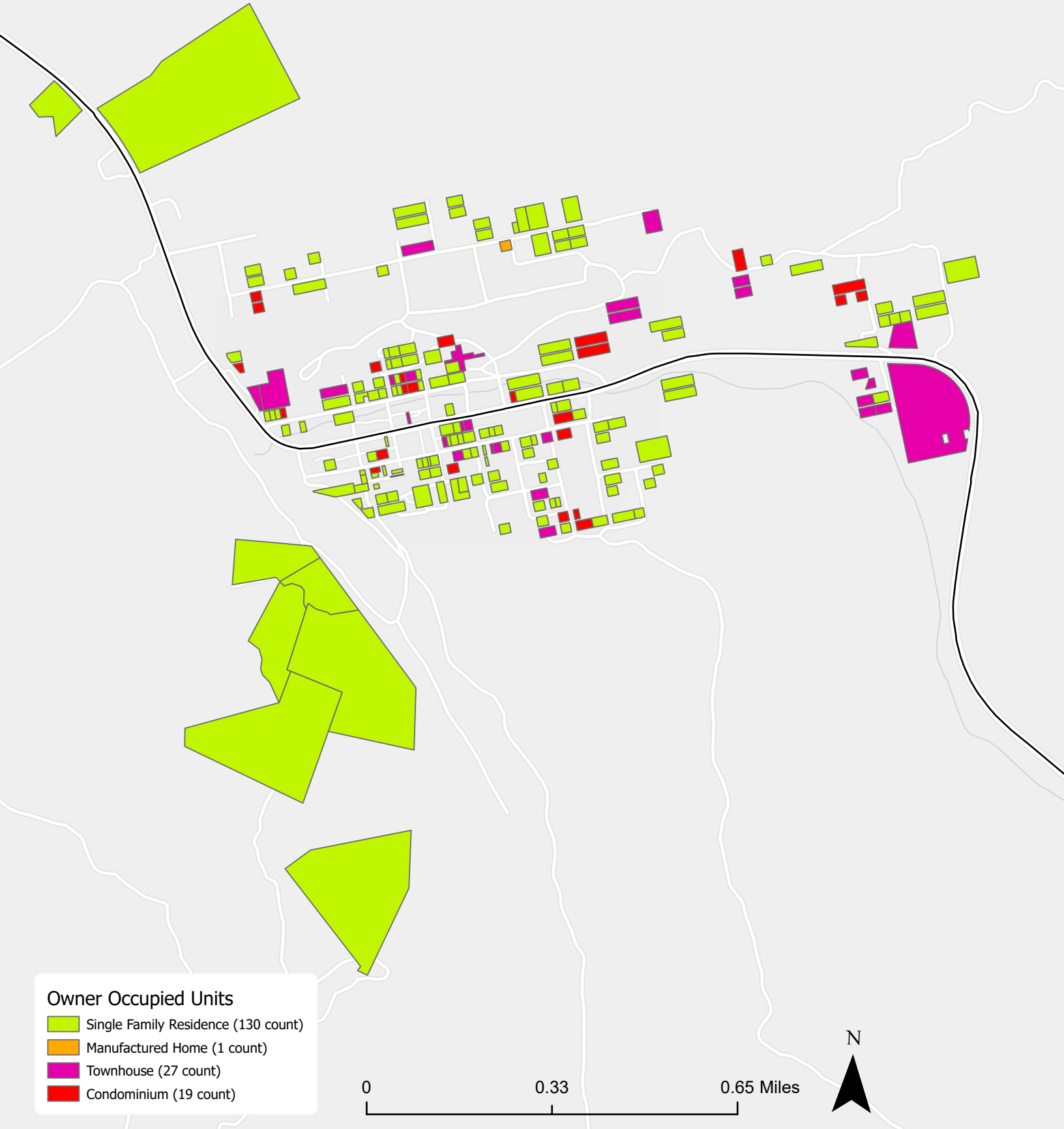
Owner Occupied Units

- Single Family Residence (160 count)
- Manufactured Home (22 count)
- Townhouse (0 count)
- Condominium (0 count)

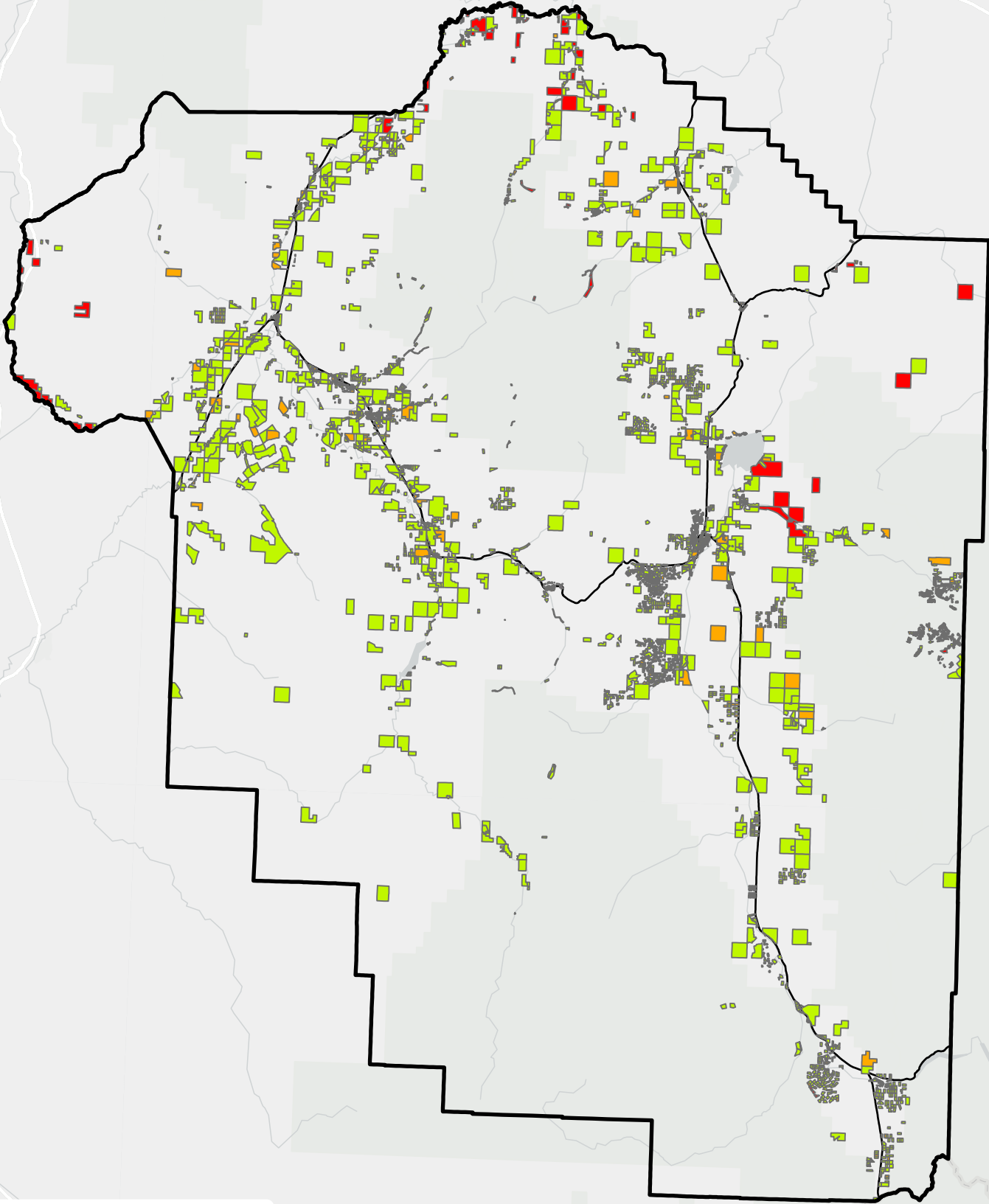
0 0.25 0.5 Miles



Virginia City

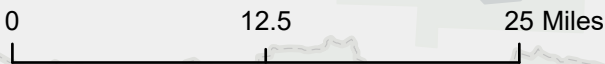


Madison County



Owner Occupied Units

- Single Family Residence (4,793 count)
- Manufactured Home (435 count)
- Townhouse (69 count)
- Condominium (375 count)

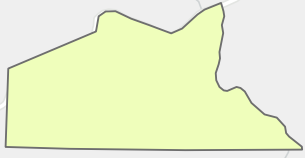


APPENDIX C.2










RENTAL HOUSING UNIT TYPES COMMUNITY MAPS

 **HYALITE**

Alder



Rental Units

-  Single Family Residential (2 count)
-  Duplex (1 count)
-  Triplex (1 count)
-  Four-plex (0 count)
-  Mixed Residential Commercial (1 count)
-  Condominium (0 count)
-  Apartment (0 count)
-  Townhouse (0 count)
-  Manufactured Home Park (0 count)

0 0.5 1 Miles



Cameron

Rental Units

- Single Family Residential (1 count)
- Duplex (0 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

0 1.5 3 Miles



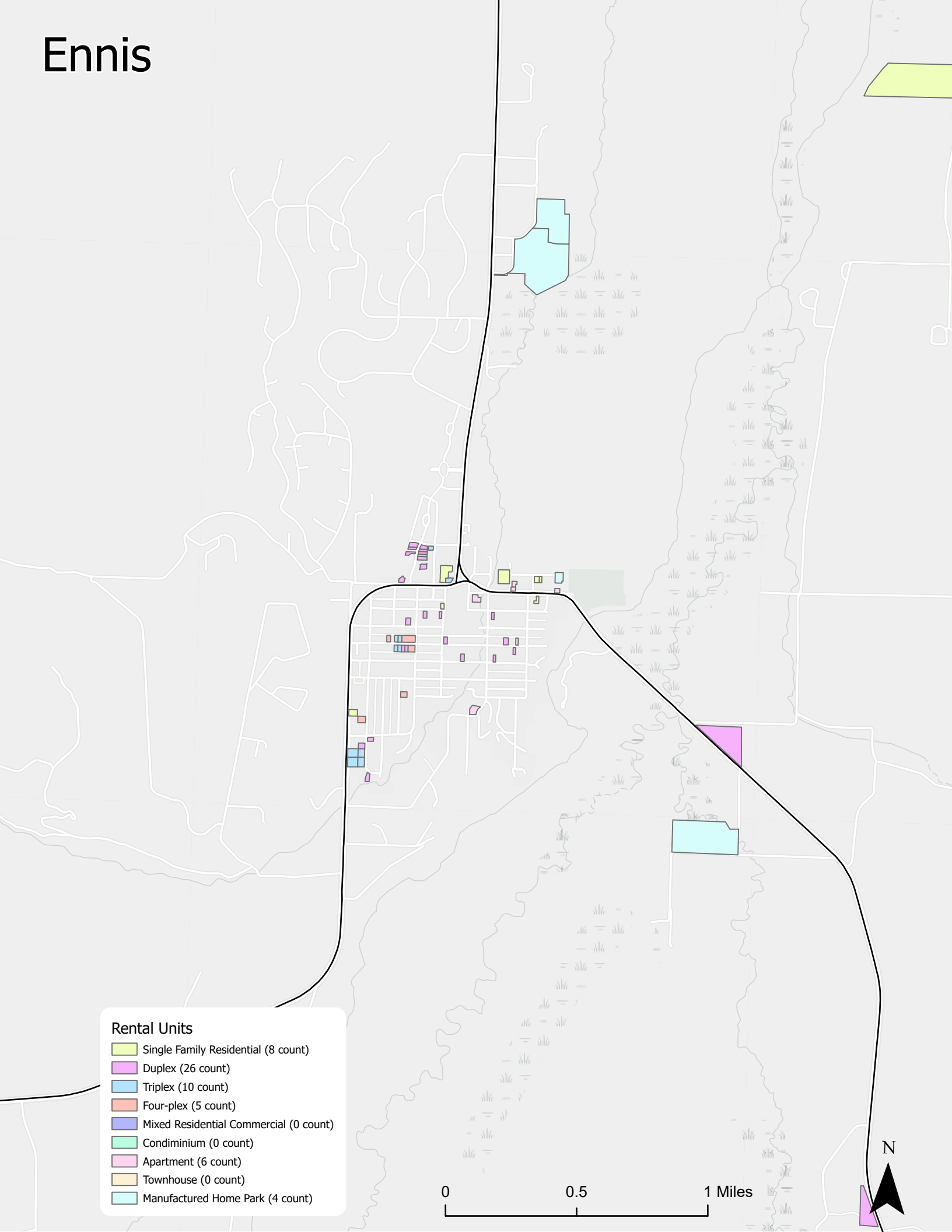
Ennis

Rental Units

- Single Family Residential (8 count)
- Duplex (26 count)
- Triplex (10 count)
- Four-plex (5 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (6 count)
- Townhouse (0 count)
- Manufactured Home Park (4 count)

0 0.5 1 Miles

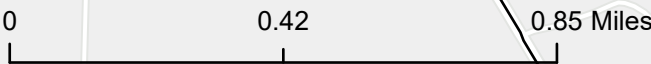
N



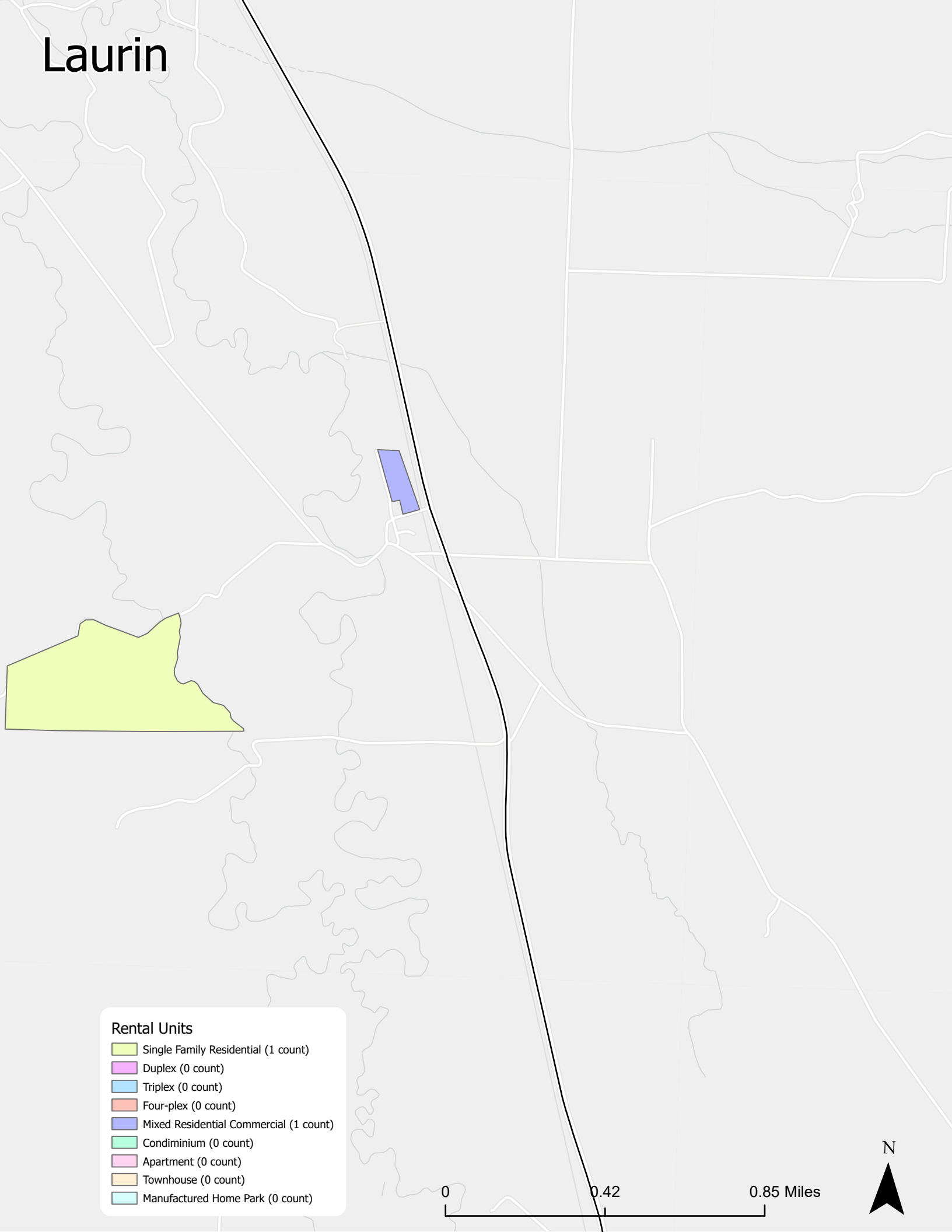
Harrison

Rental Units

- Single Family Residential (0 count)
- Duplex (0 count)
- Triplex (1 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)



Laurin



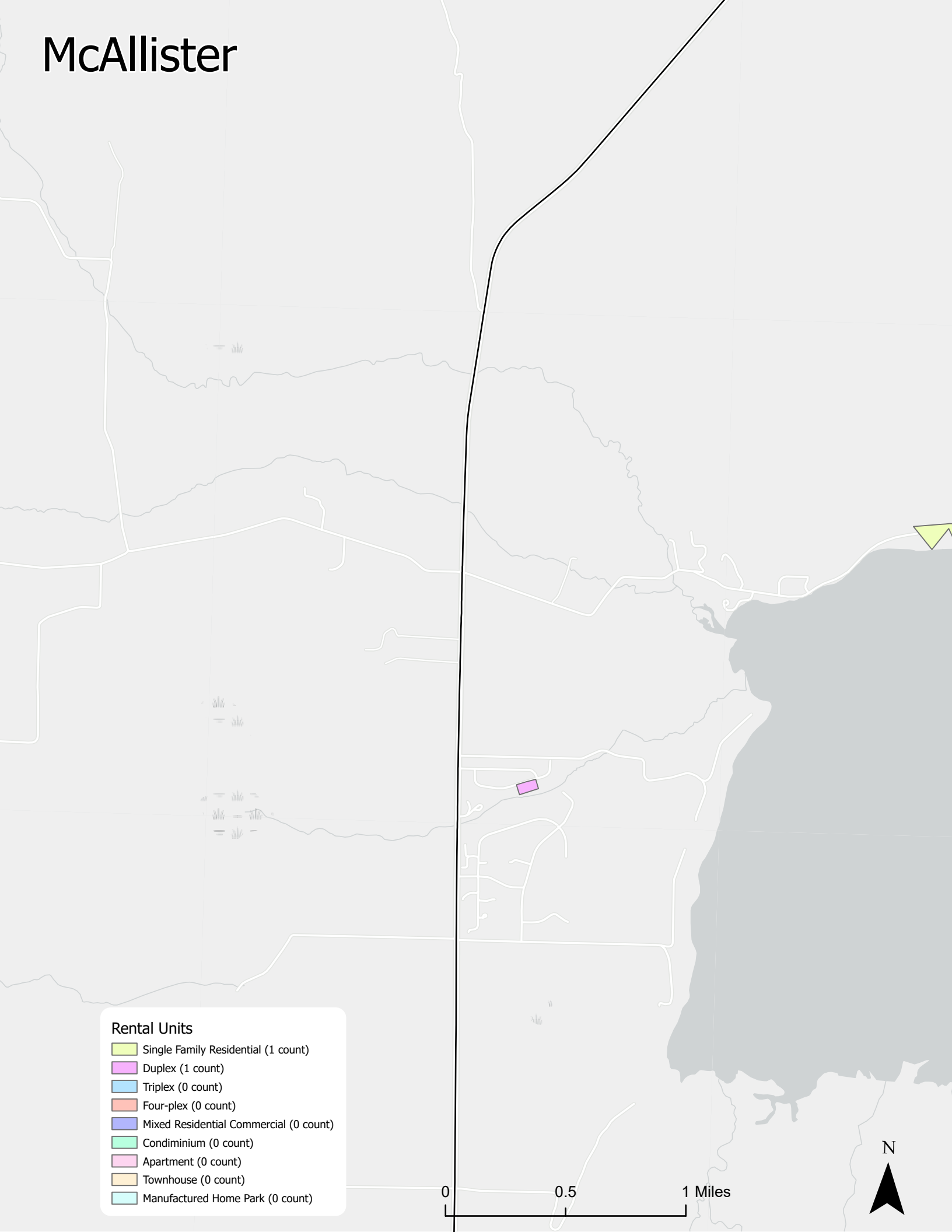
Rental Units

- Single Family Residential (1 count)
- Duplex (0 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (1 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

0 0.42 0.85 Miles



McAllister



Rental Units

- Single Family Residential (1 count)
- Duplex (1 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

0 0.5 1 Miles



Nevada City

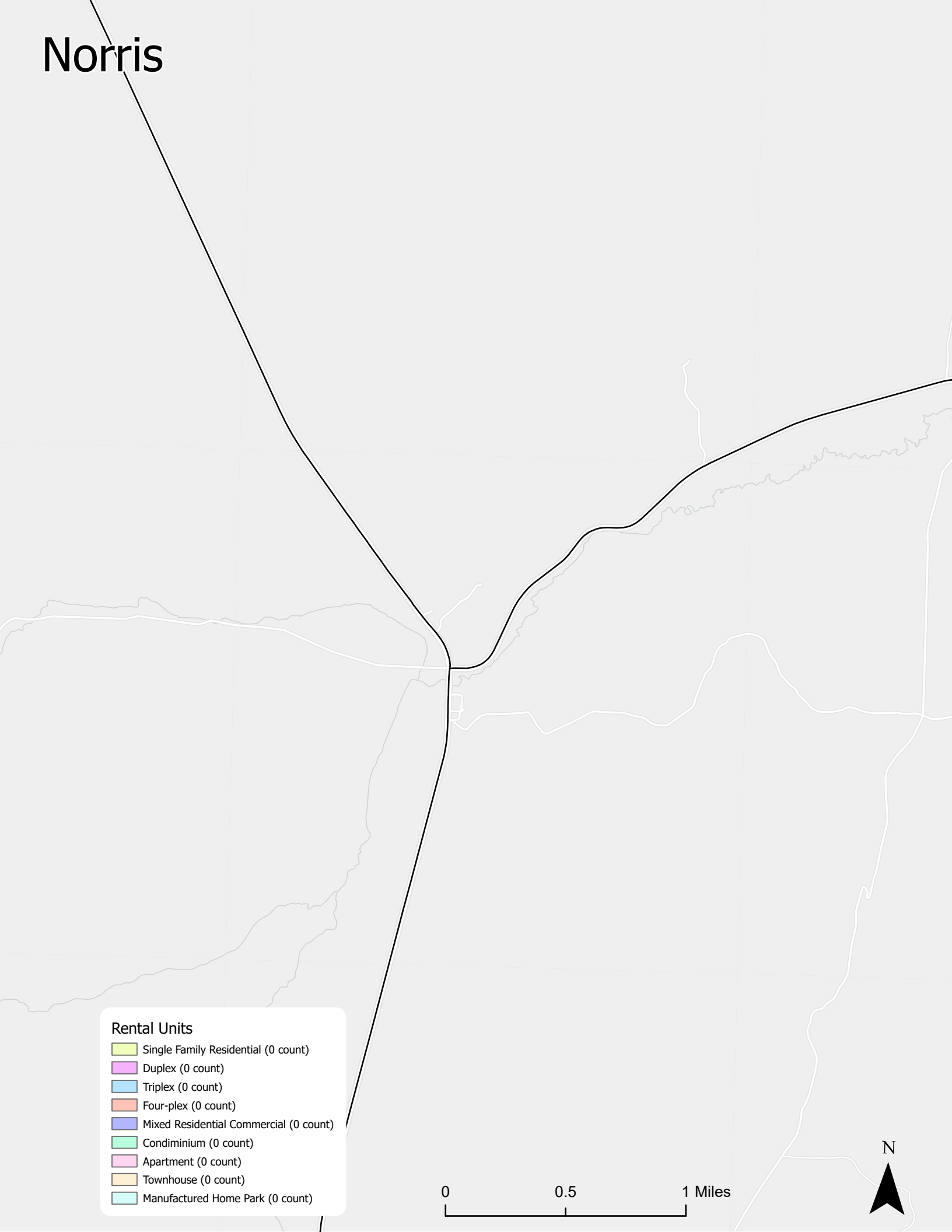
Rental Units

- Single Family Residential (0 count)
- Duplex (0 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

0 0.42 0.85 Miles



Norris



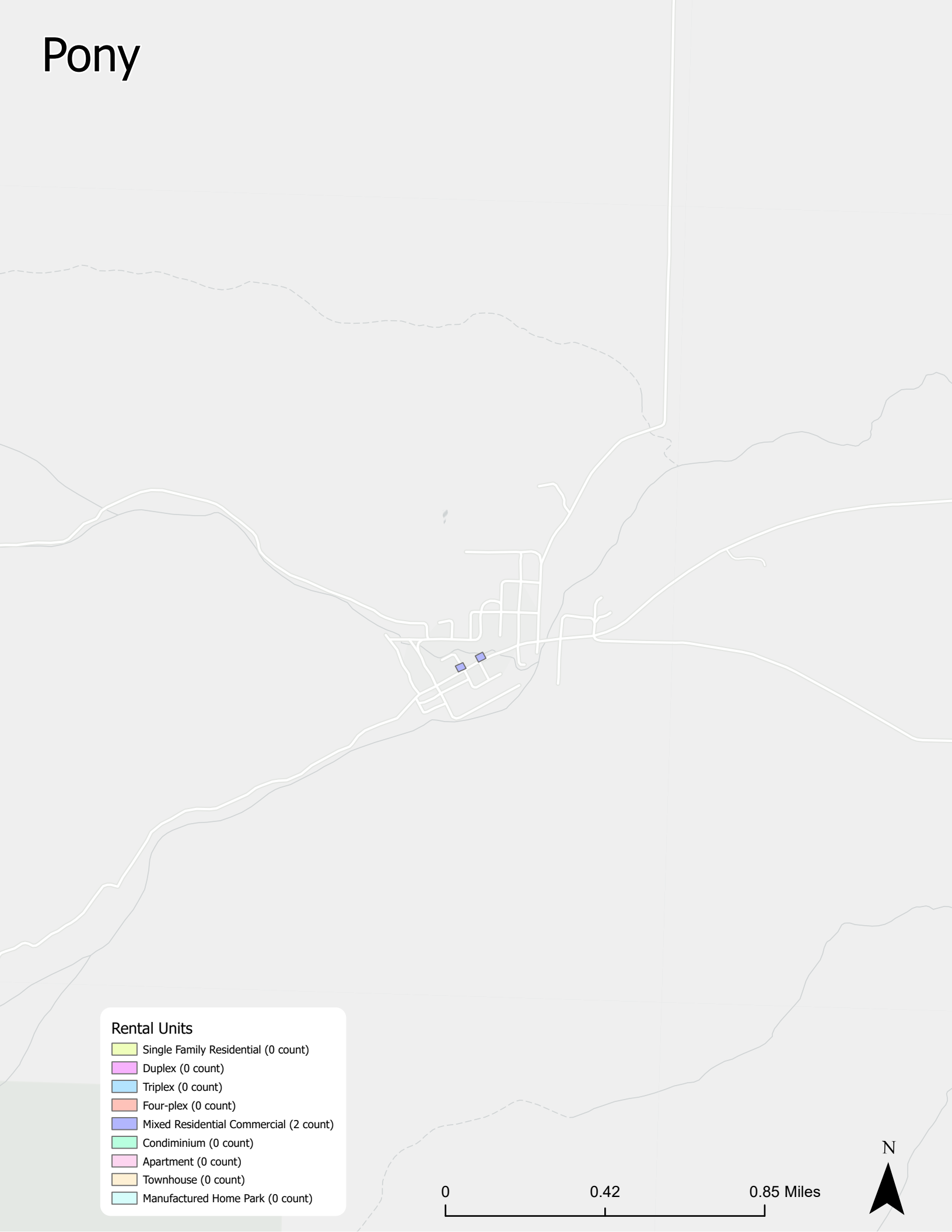
Rental Units

- Single Family Residential (0 count)
- Duplex (0 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

0 0.5 1 Miles

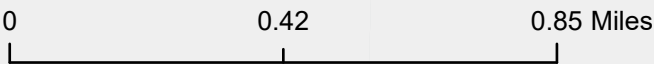


Pony



Rental Units

- Single Family Residential (0 count)
- Duplex (0 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (2 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)



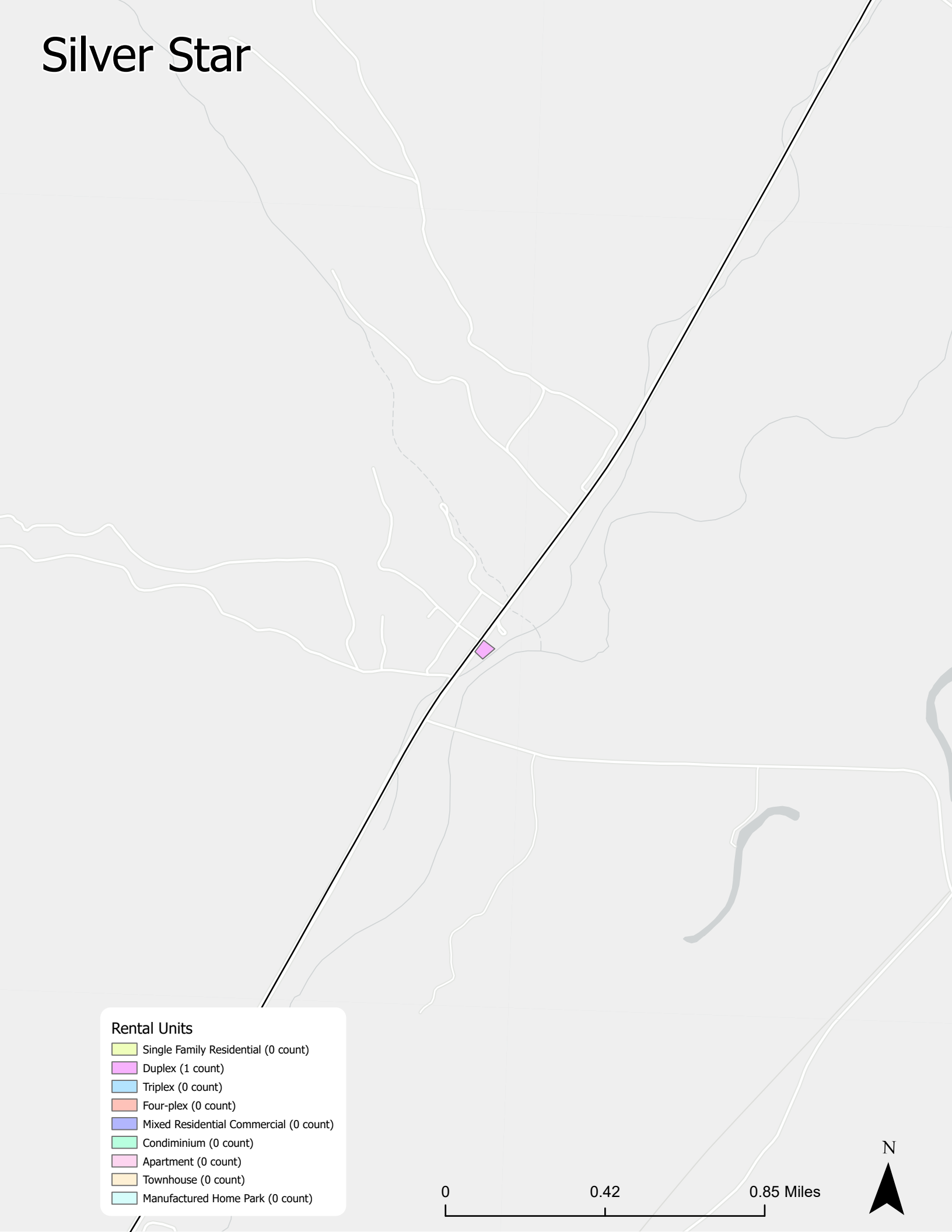
Sheridan

Rental Units

- Single Family Residential (1 count)
- Duplex (4 count)
- Triplex (0 count)
- Four-plex (1 count)
- Mixed Residential Commercial (2 count)
- Condominium (0 count)
- Apartment (1 count)
- Townhouse (0 count)
- Manufactured Home Park (1 count)

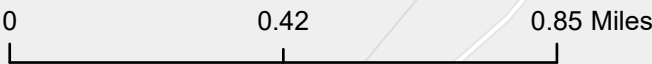


Silver Star

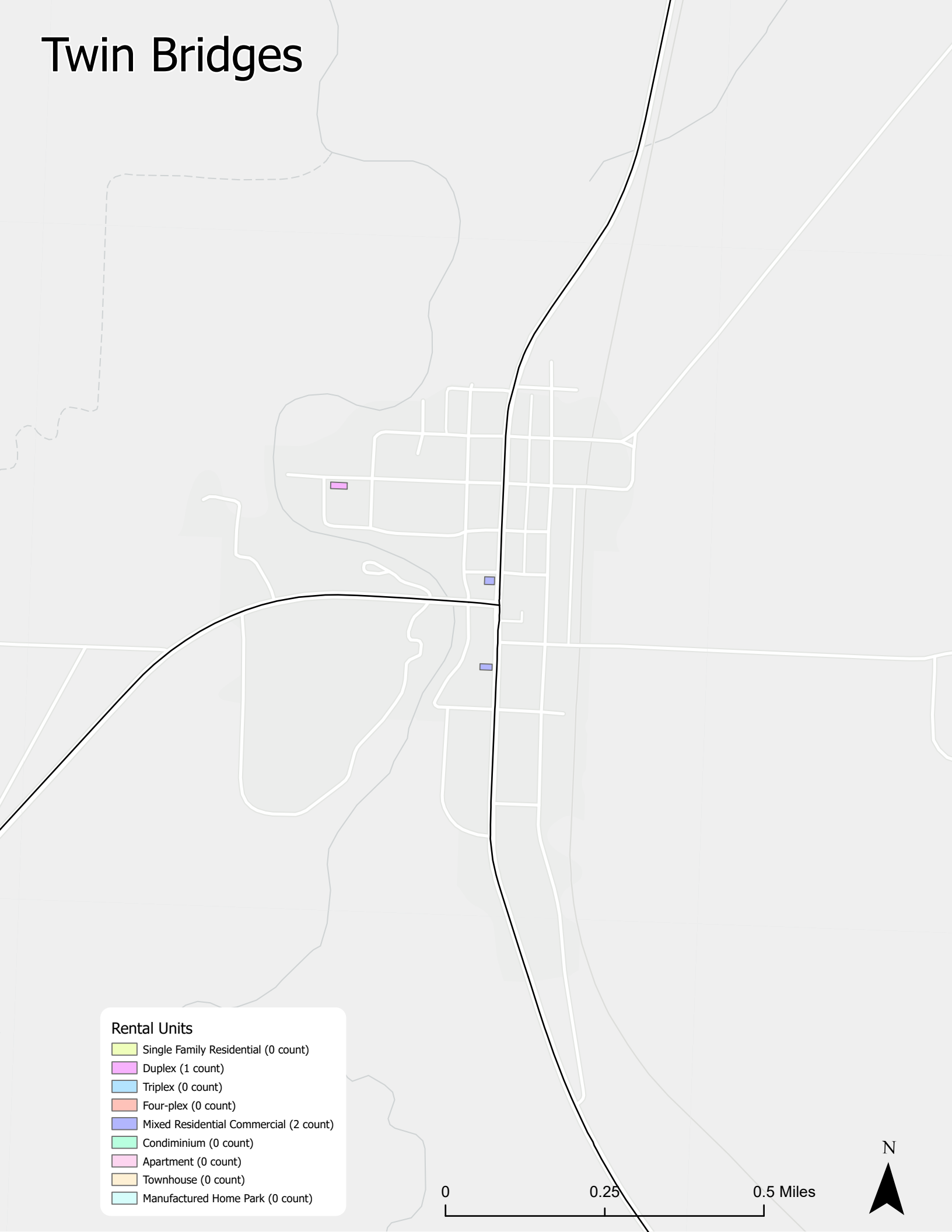


Rental Units

- Single Family Residential (0 count)
- Duplex (1 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (0 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)



Twin Bridges



Rental Units

- Single Family Residential (0 count)
- Duplex (1 count)
- Triplex (0 count)
- Four-plex (0 count)
- Mixed Residential Commercial (2 count)
- Condominium (0 count)
- Apartment (0 count)
- Townhouse (0 count)
- Manufactured Home Park (0 count)

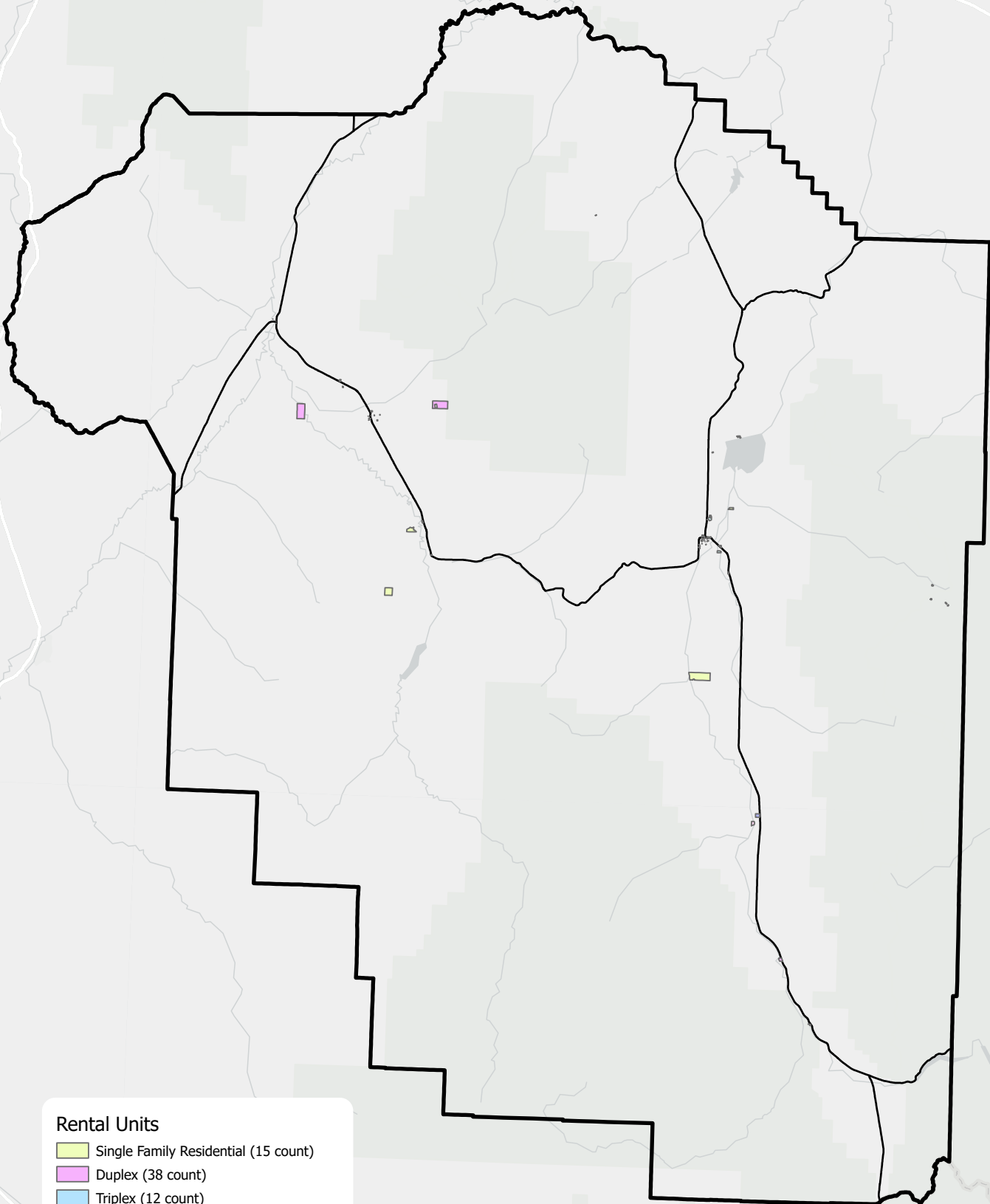
0 0.25 0.5 Miles



Virginia City



Madison County



Rental Units

- Single Family Residential (15 count)
- Duplex (38 count)
- Triplex (12 count)
- Four-plex (7 count)
- Mixed Residential Commercial (8 count)
- Condominium (1 count)
- Apartment (12 count)
- Townhouse (1 count)
- Manufactured Home Park (5 count)

0 12.5 25 Miles

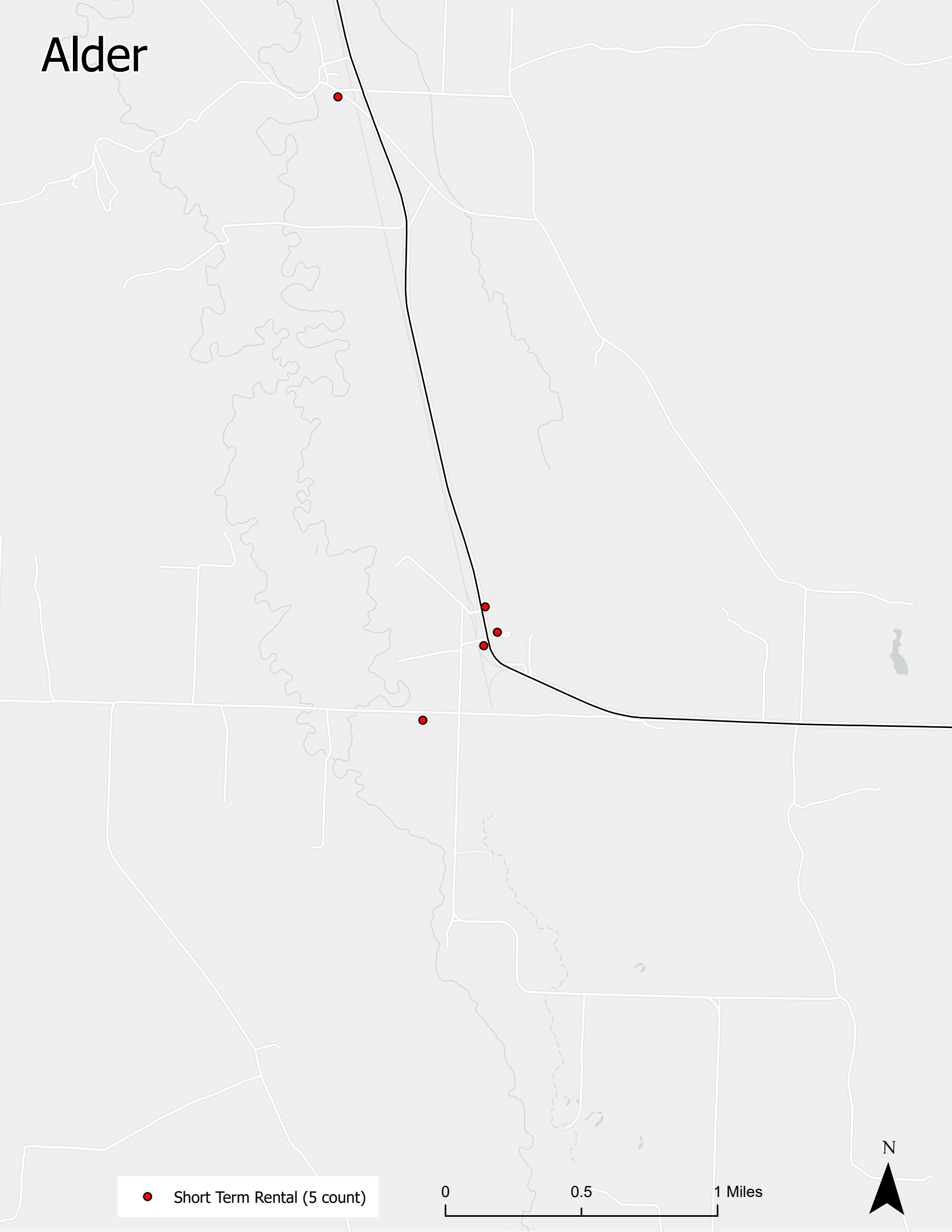


APPENDIX D

SHORT TERM RENTAL MAPS
COMMUNITY MAPS

 **HYALITE**

Alder

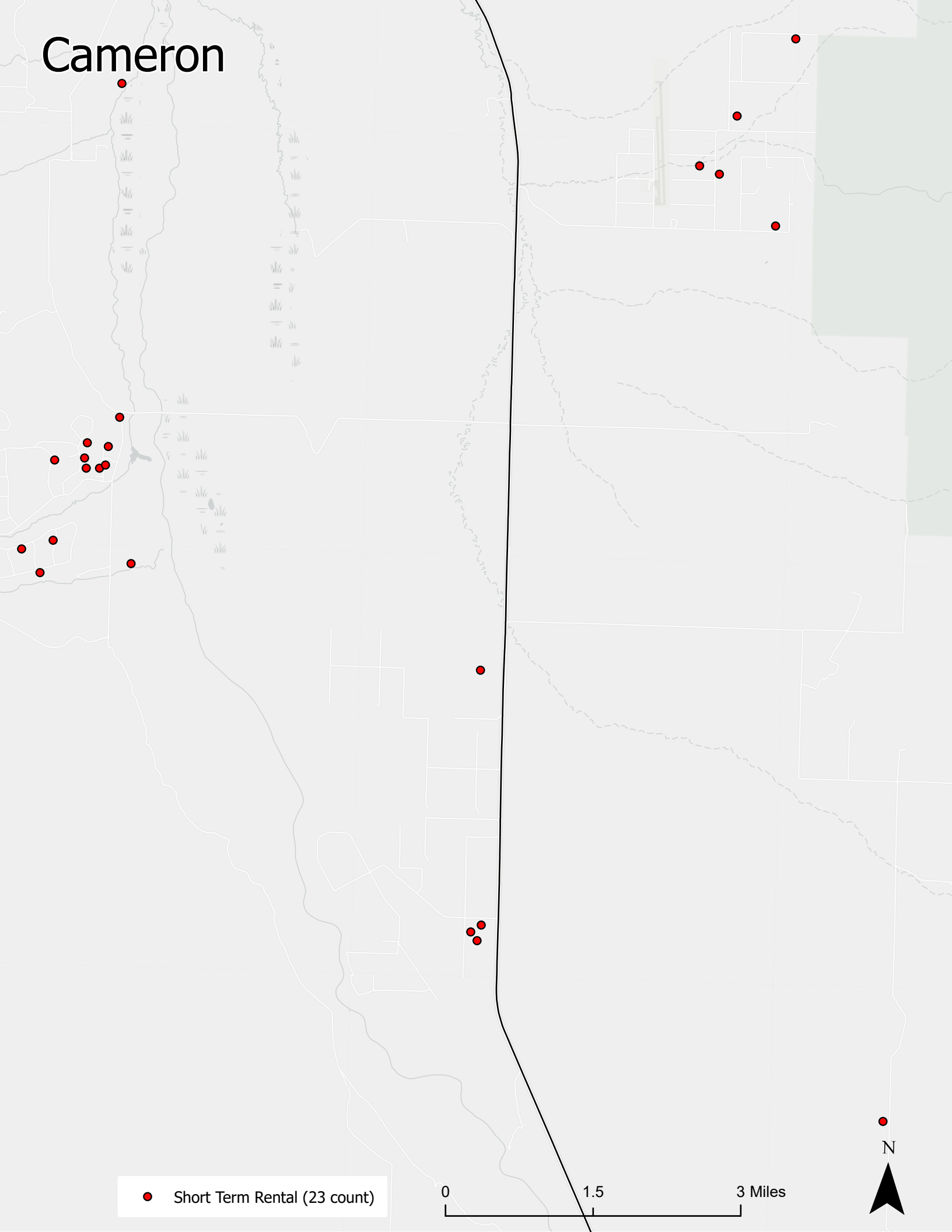


● Short Term Rental (5 count)

0 0.5 1 Miles



Cameron

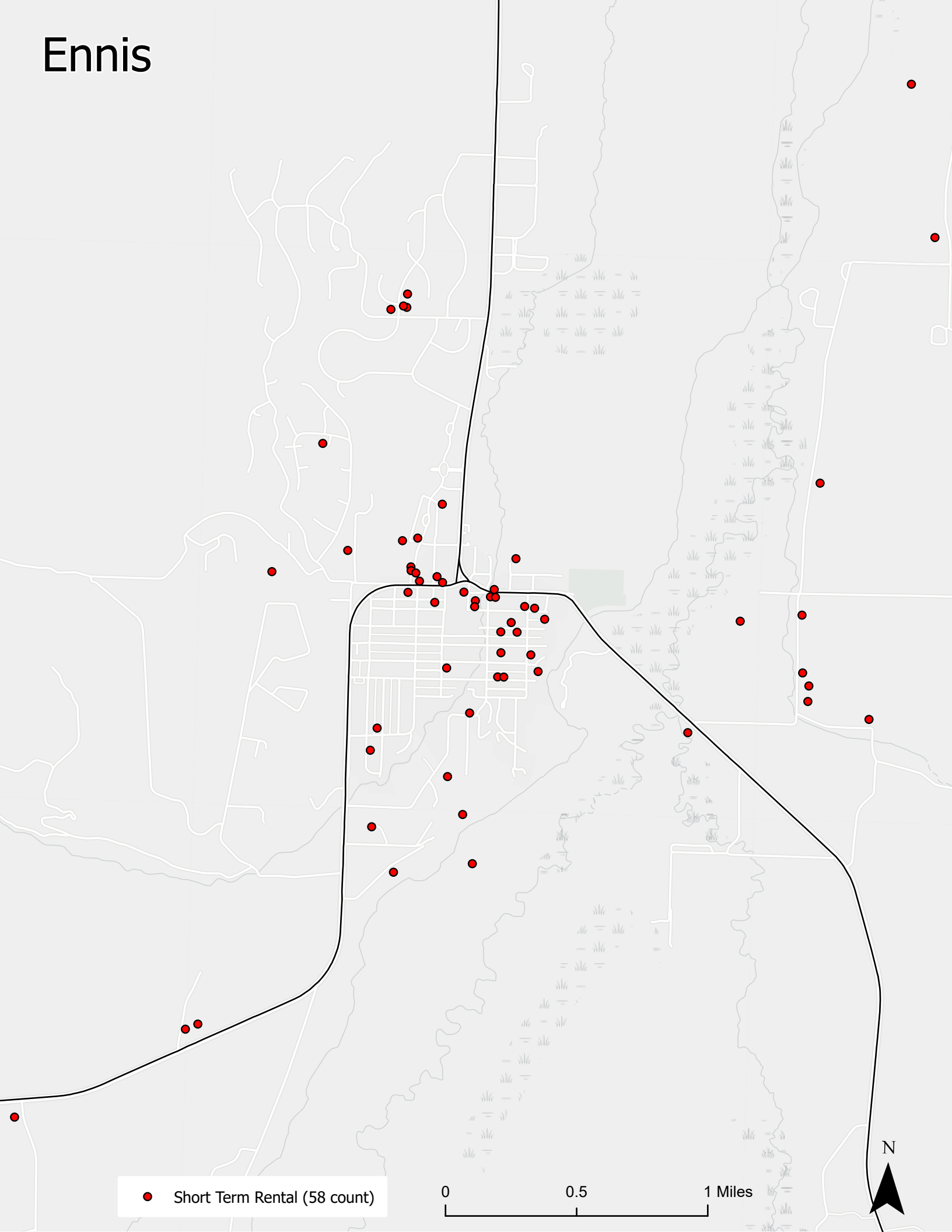


● Short Term Rental (23 count)

0 1.5 3 Miles



Ennis

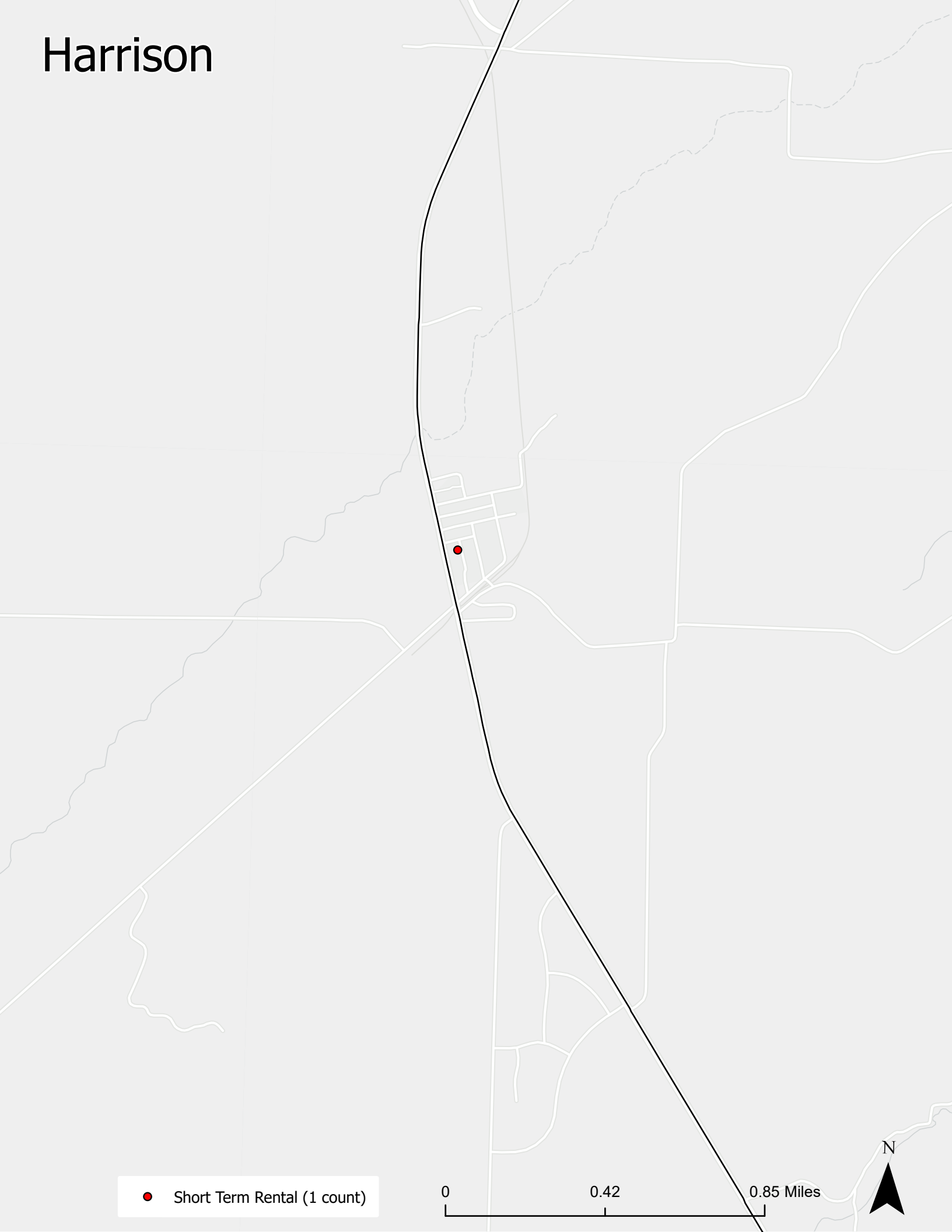


● Short Term Rental (58 count)

0 0.5 1 Miles



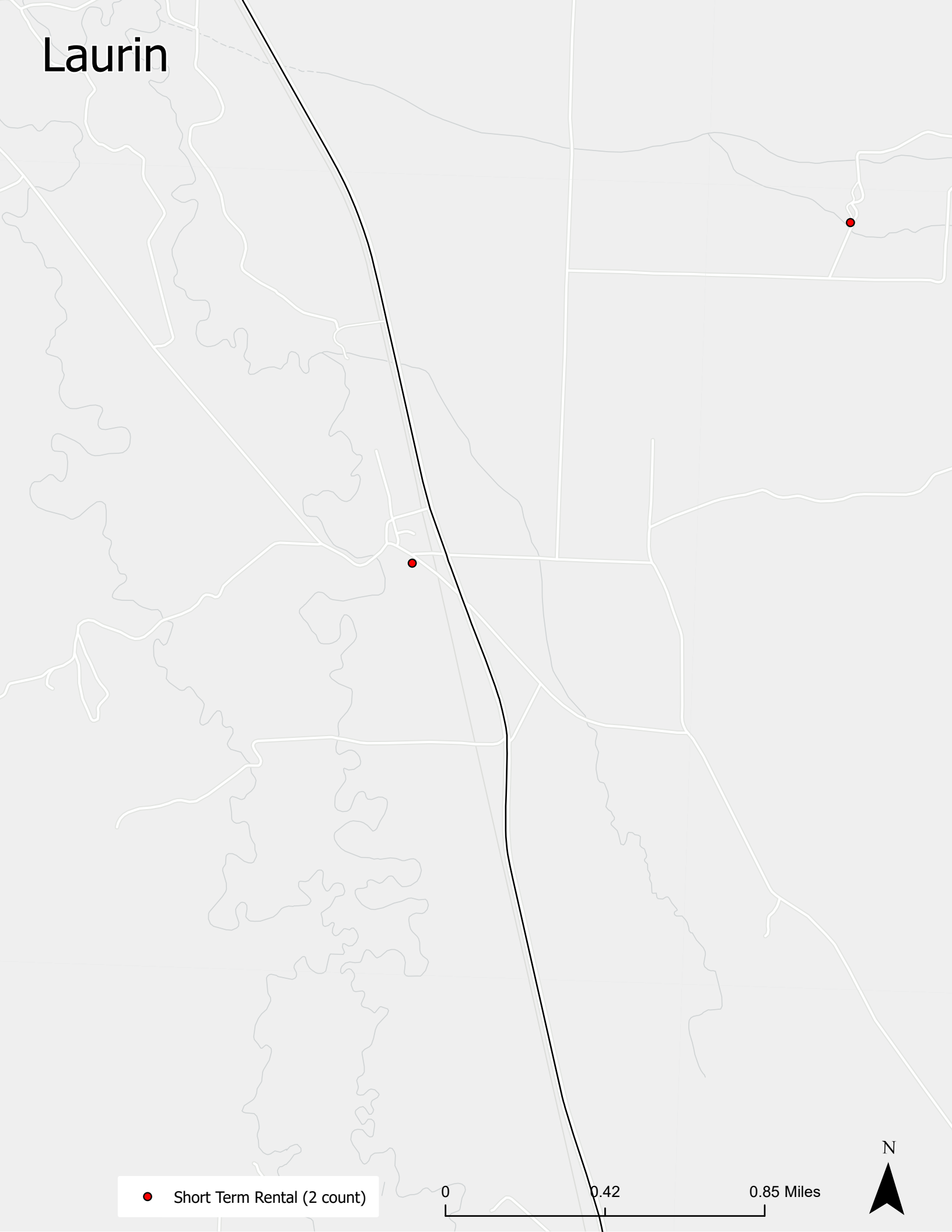
Harrison



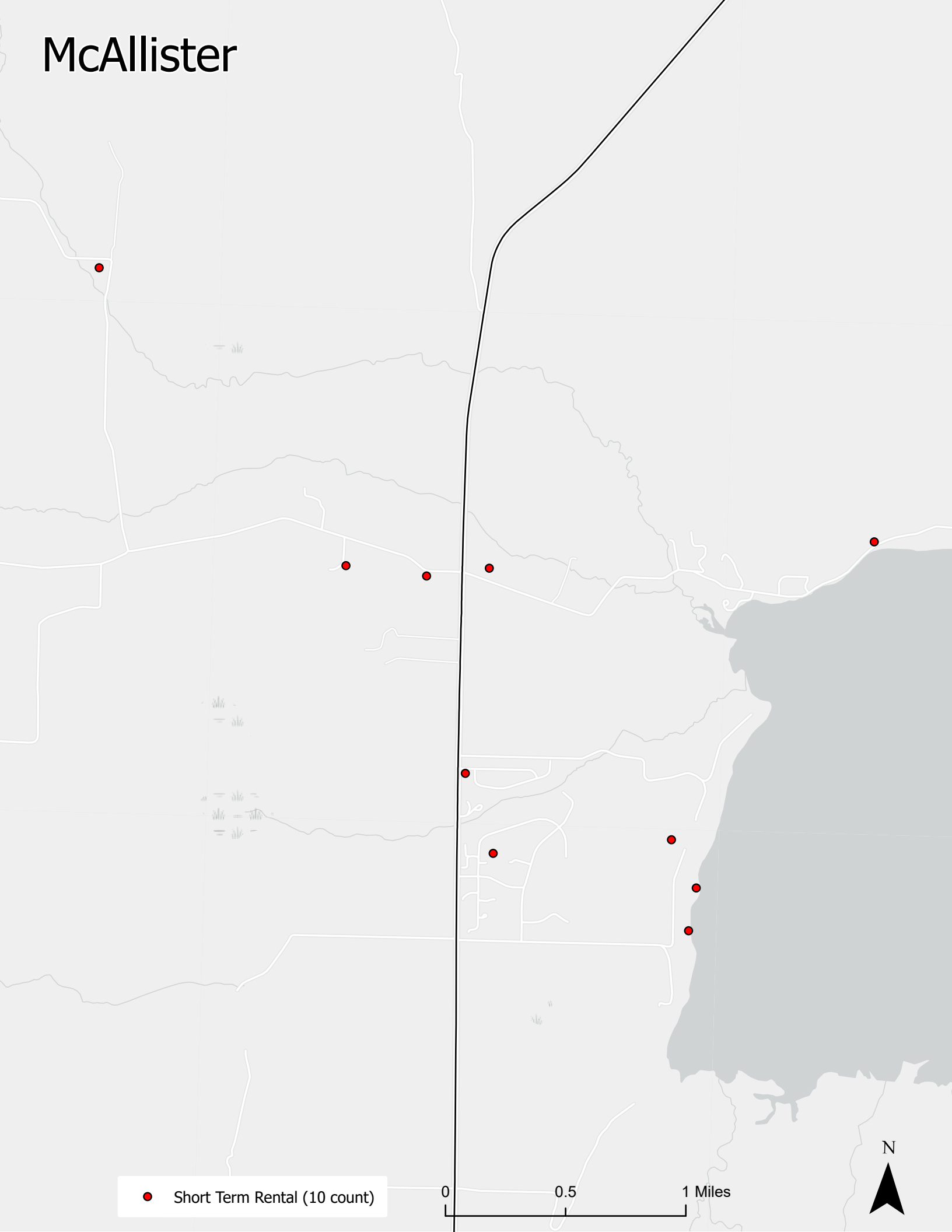
Laurin

● Short Term Rental (2 count)

0 0.42 0.85 Miles



McAllister

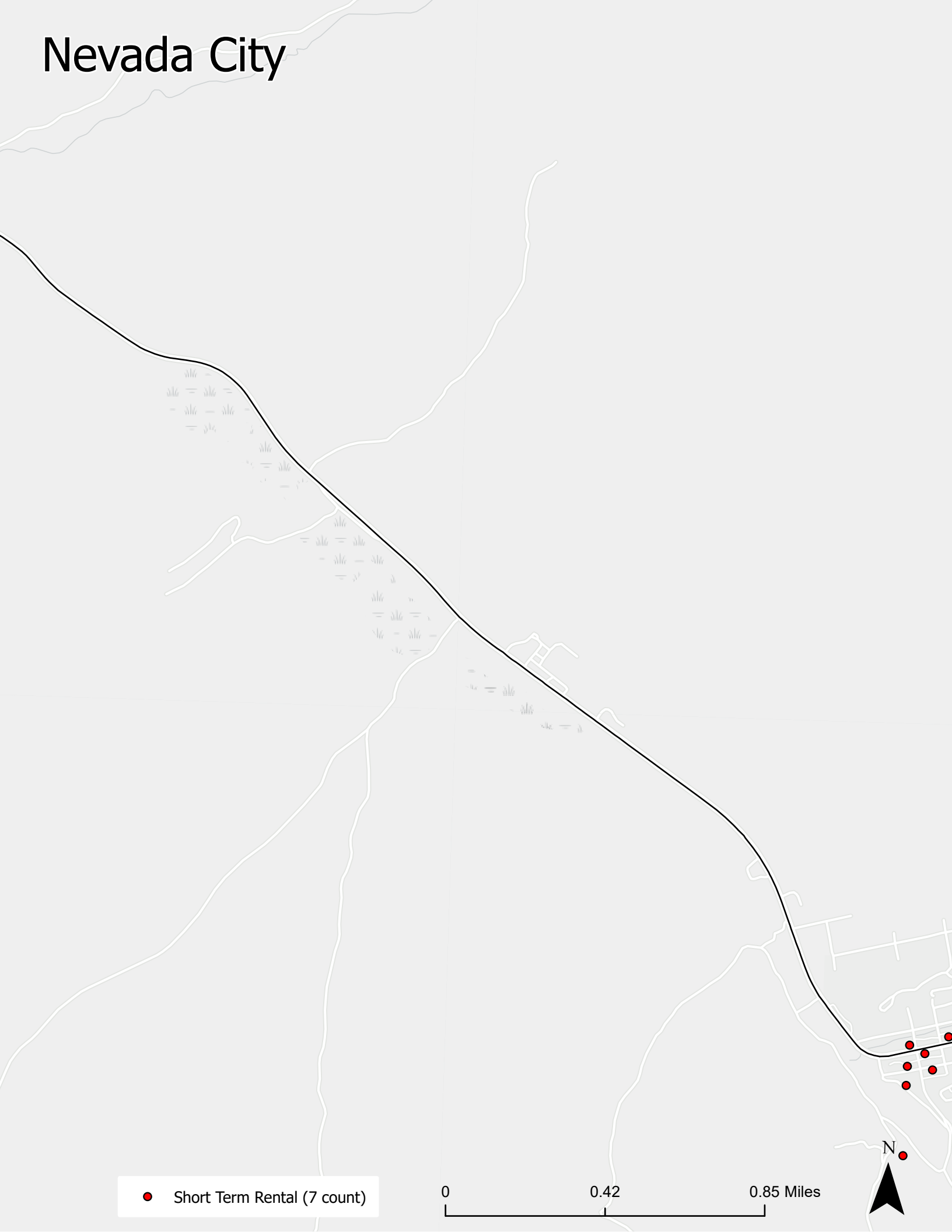


● Short Term Rental (10 count)

0 0.5 1 Miles



Nevada City

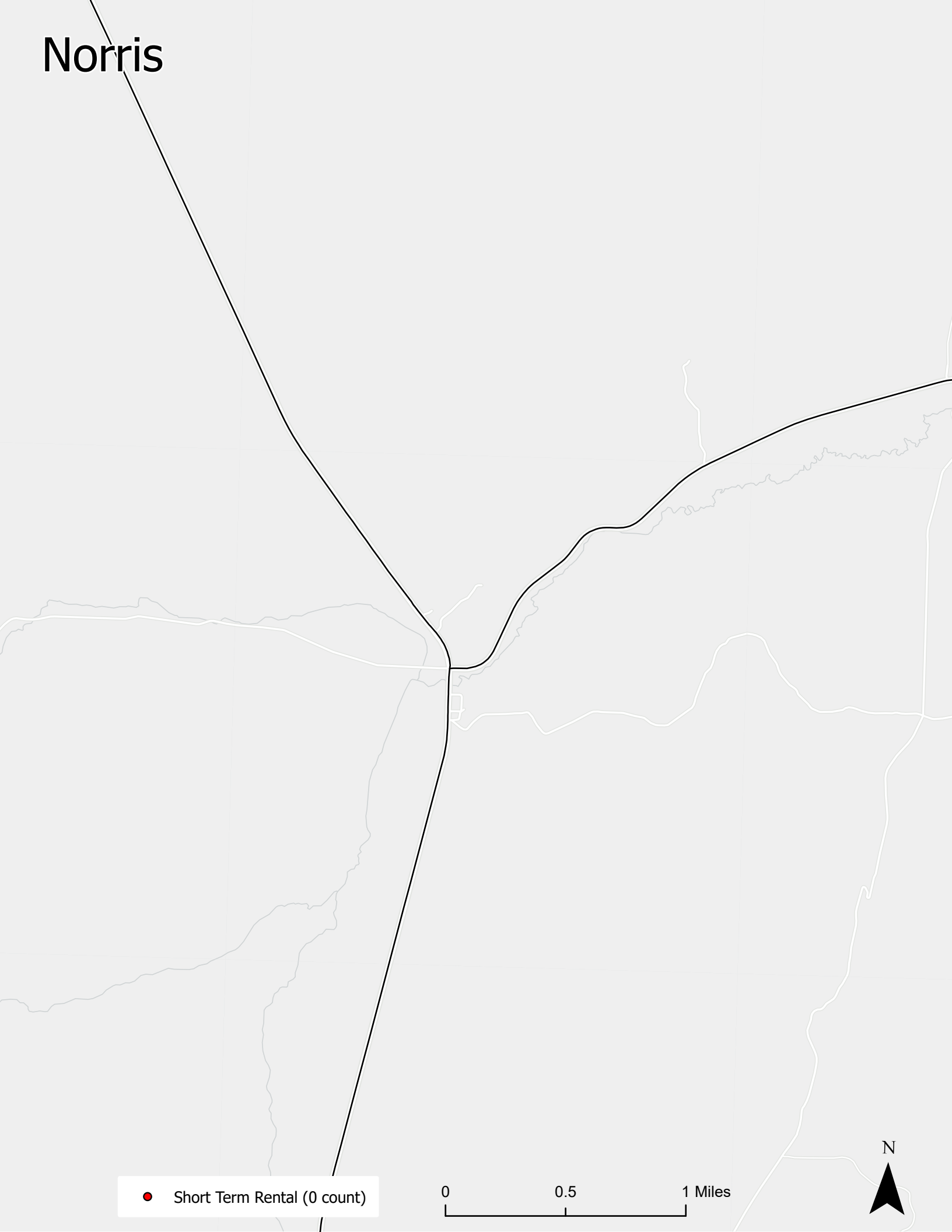


● Short Term Rental (7 count)

0 0.42 0.85 Miles



Norris

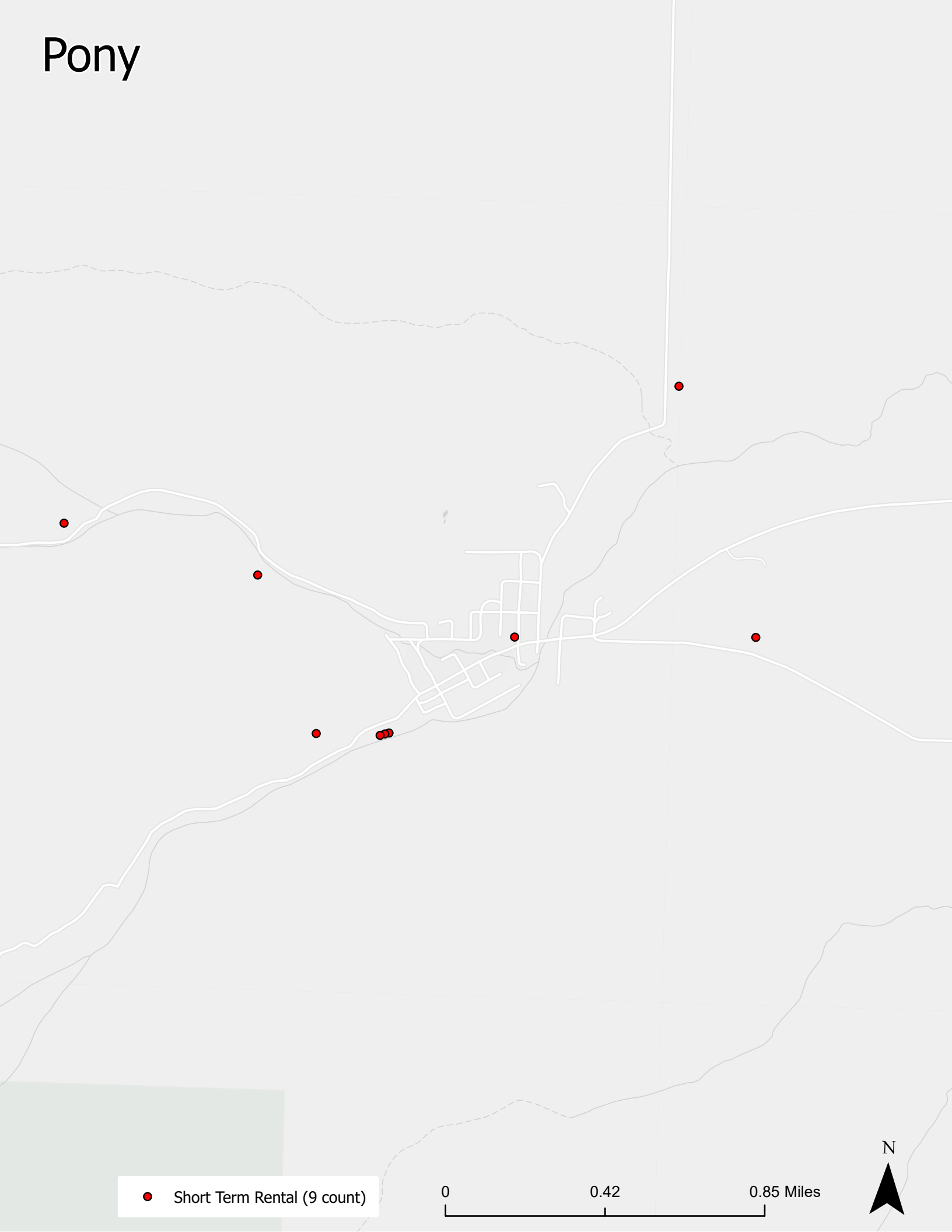


● Short Term Rental (0 count)

0 0.5 1 Miles



Pony

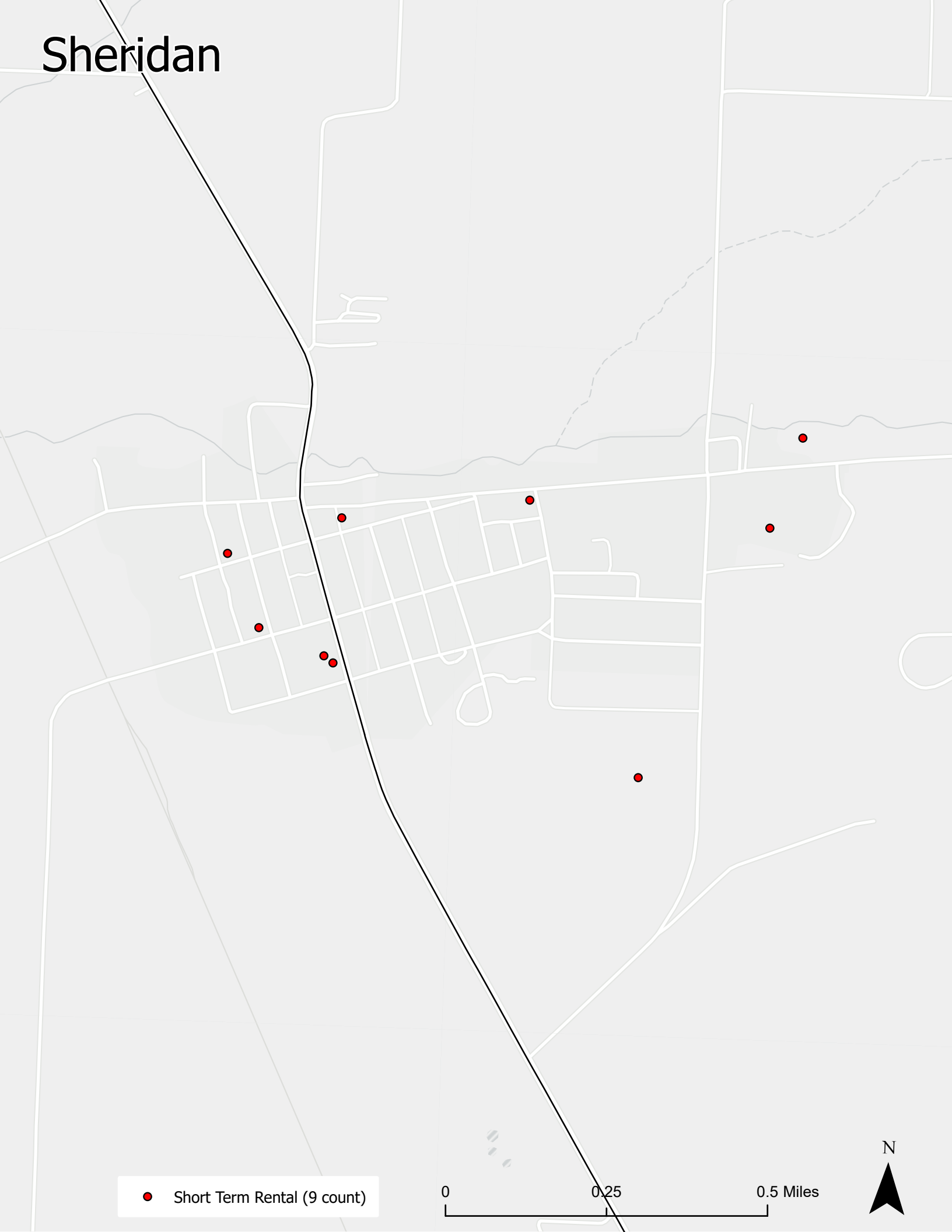


● Short Term Rental (9 count)

0 0.42 0.85 Miles



Sheridan



● Short Term Rental (9 count)

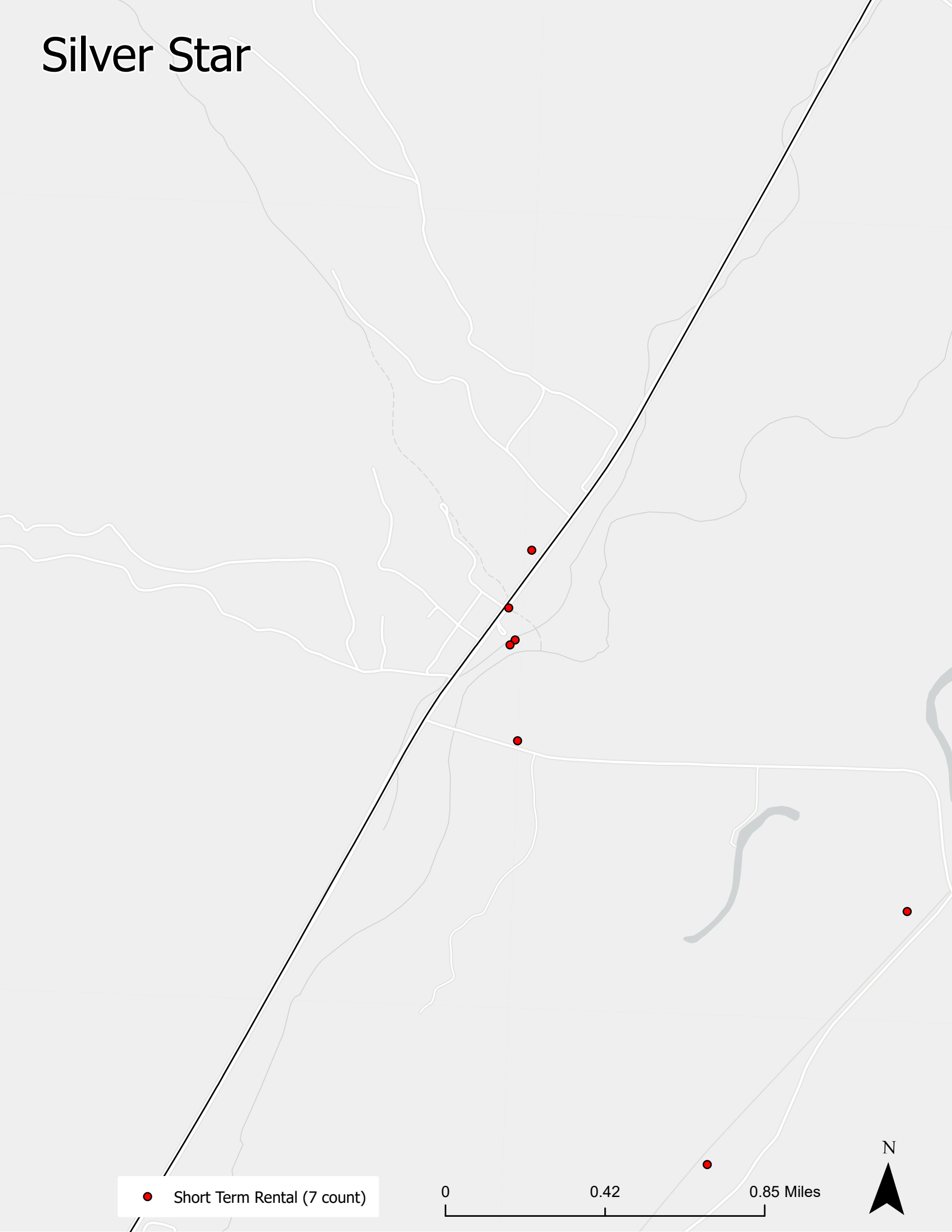
0 0.25 0.5 Miles



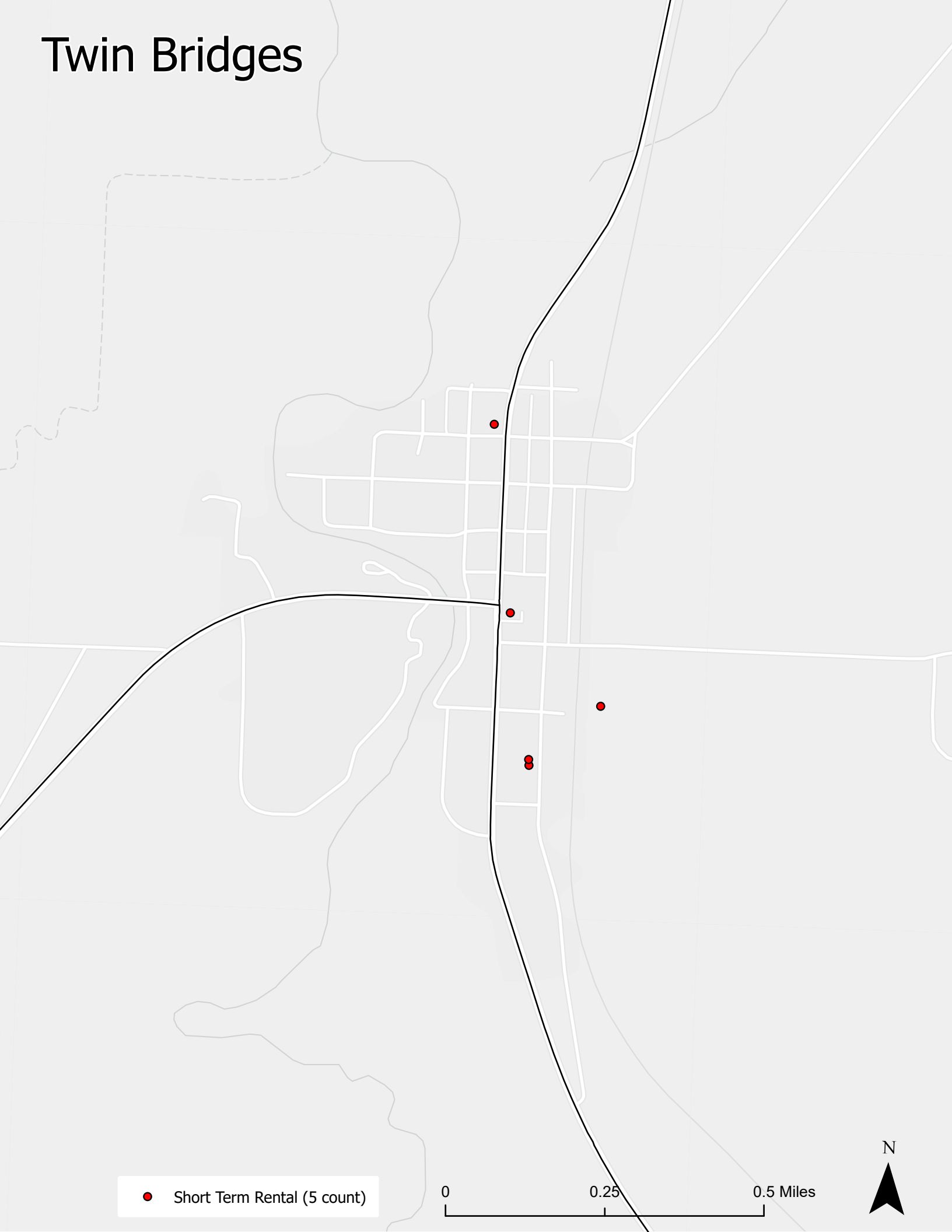
Silver Star

● Short Term Rental (7 count)

0 0.42 0.85 Miles



Twin Bridges

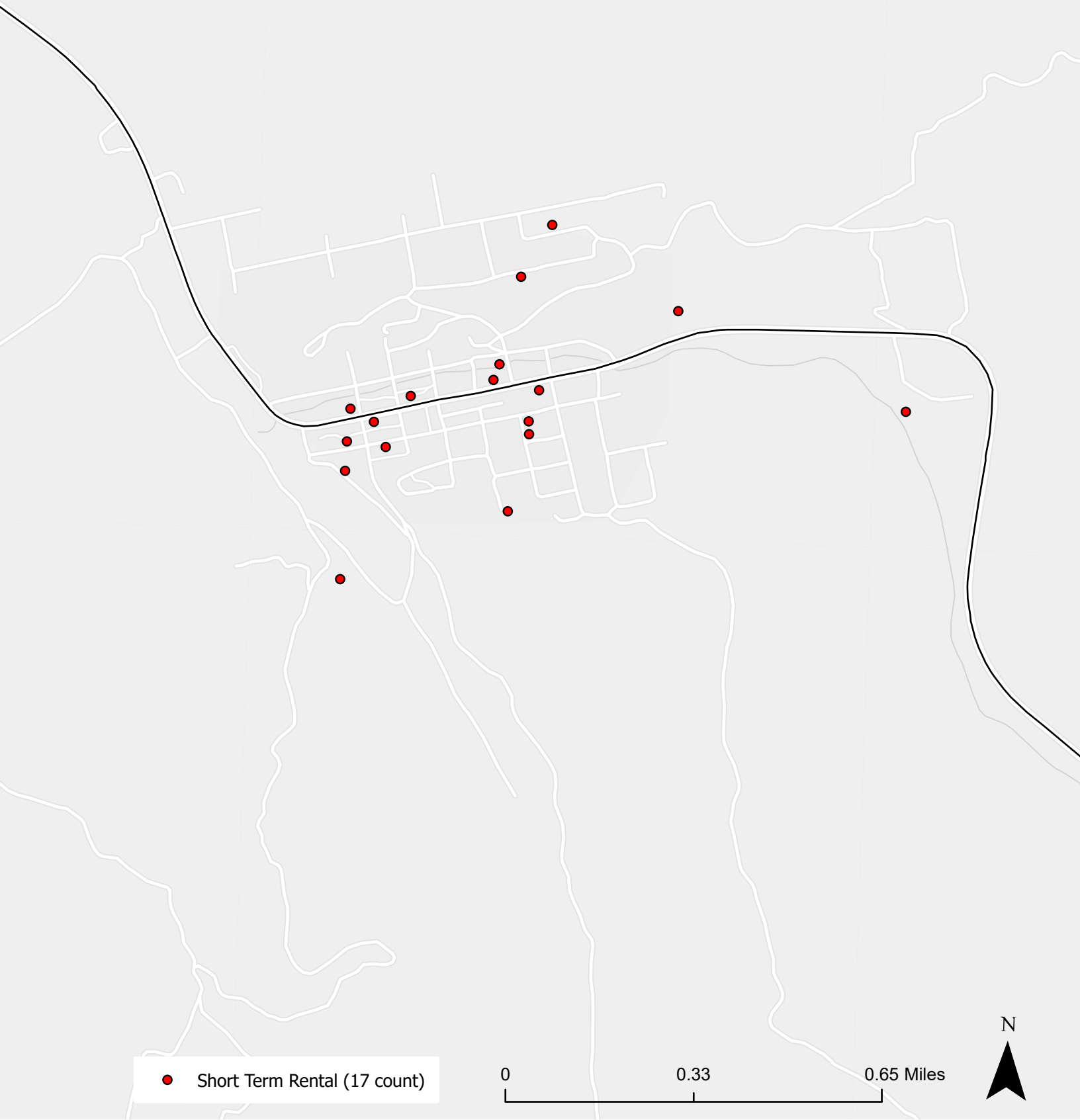


● Short Term Rental (5 count)

0 0.25 0.5 Miles



Virginia City

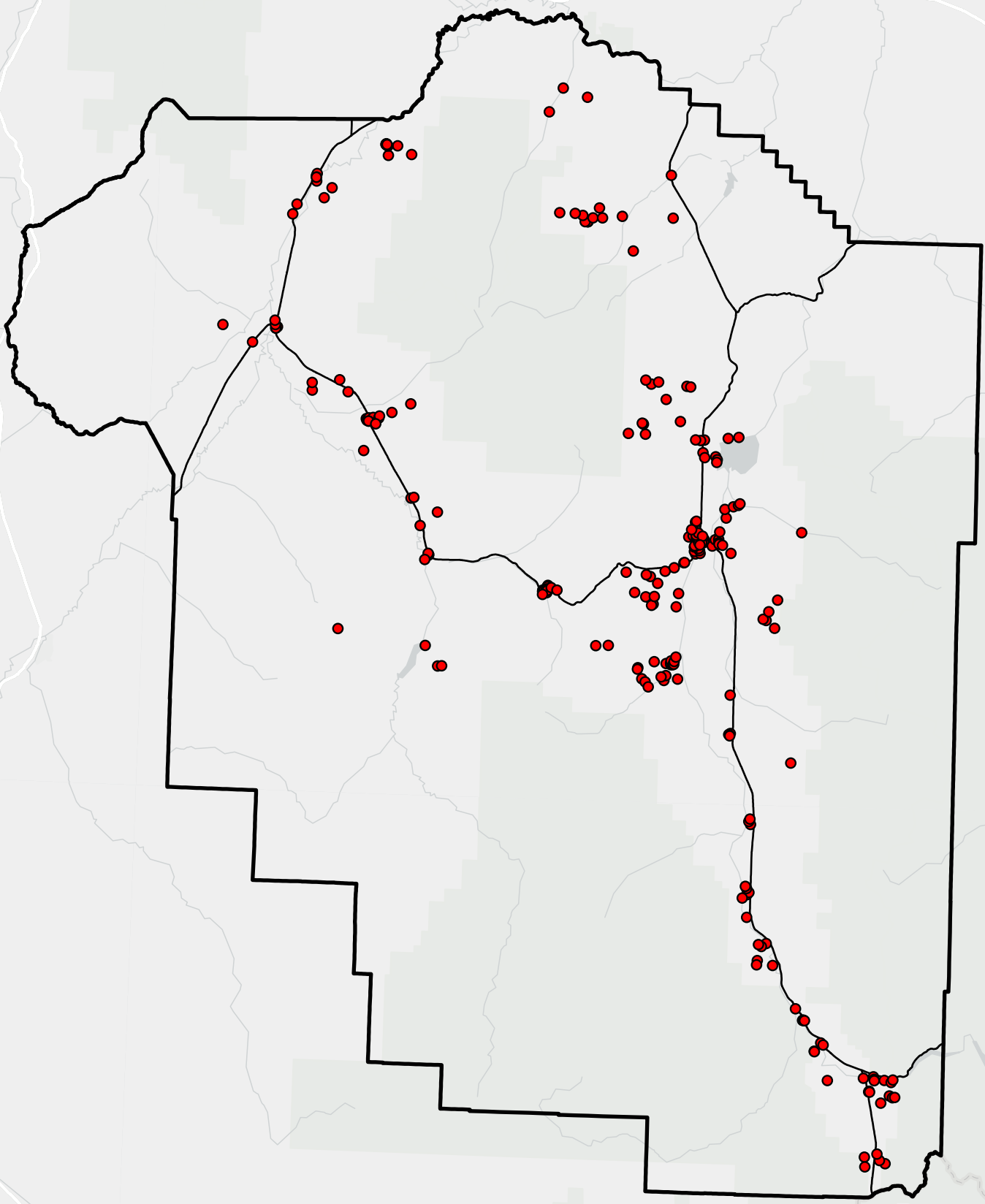


● Short Term Rental (17 count)

0 0.33 0.65 Miles



Madison County



● Short Term Rental (262 count)

0 12.5 25 Miles












APPENDIX E

EXISTING PHYSICAL LIMITATIONS COMMUNITY MAPS

HYALITE

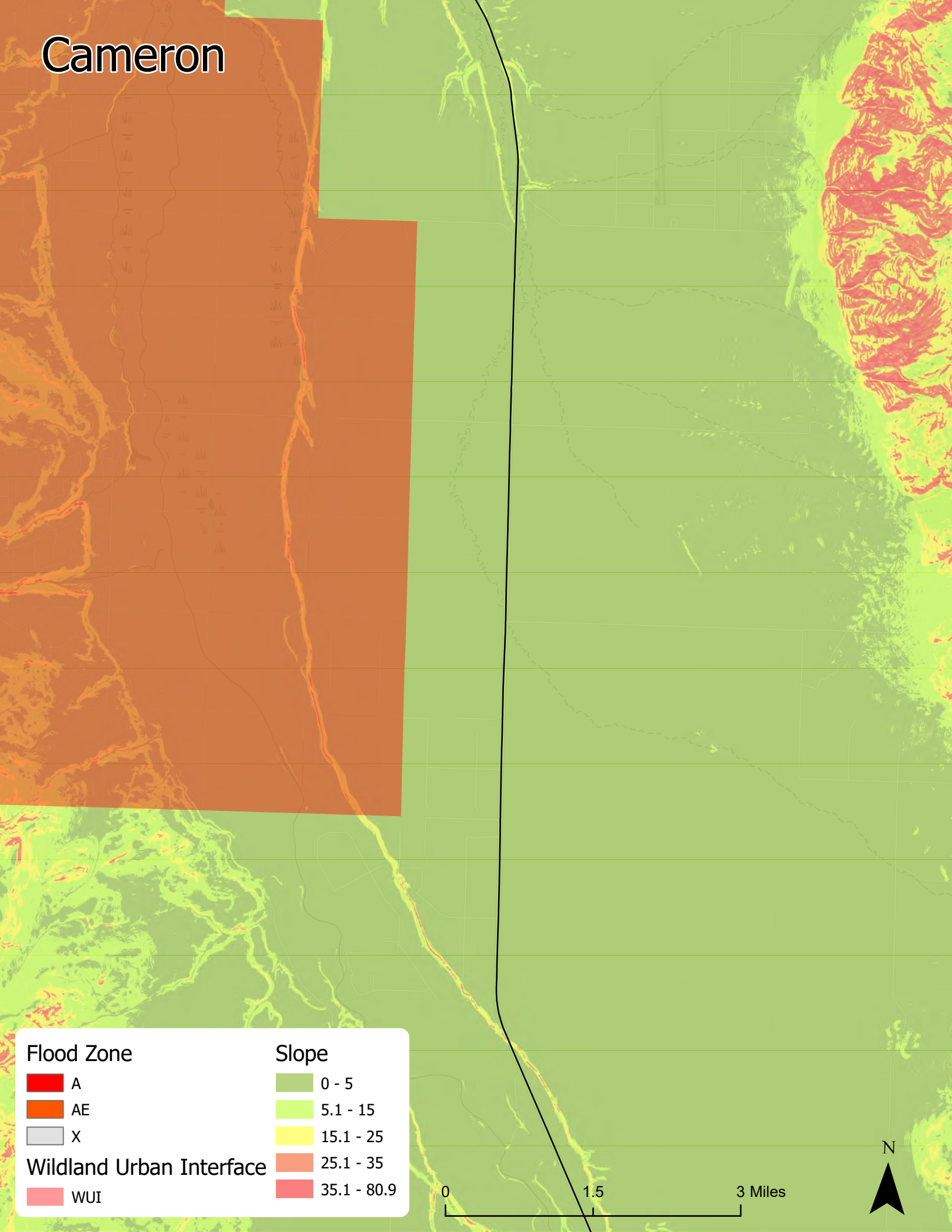
Alder

Flood Zone		Slope	
	A		0 - 5
	AE		5.1 - 15
	X		15.1 - 25
Wildland Urban Interface			25.1 - 35
	WUI		35.1 - 80.9

0 0.5 1 Miles



Cameron








Flood Zone

-  A
-  AE
-  X

Wildland Urban Interface

-  WUI

Slope

-  0 - 5
-  5.1 - 15
-  15.1 - 25
-  25.1 - 35
-  35.1 - 80.9

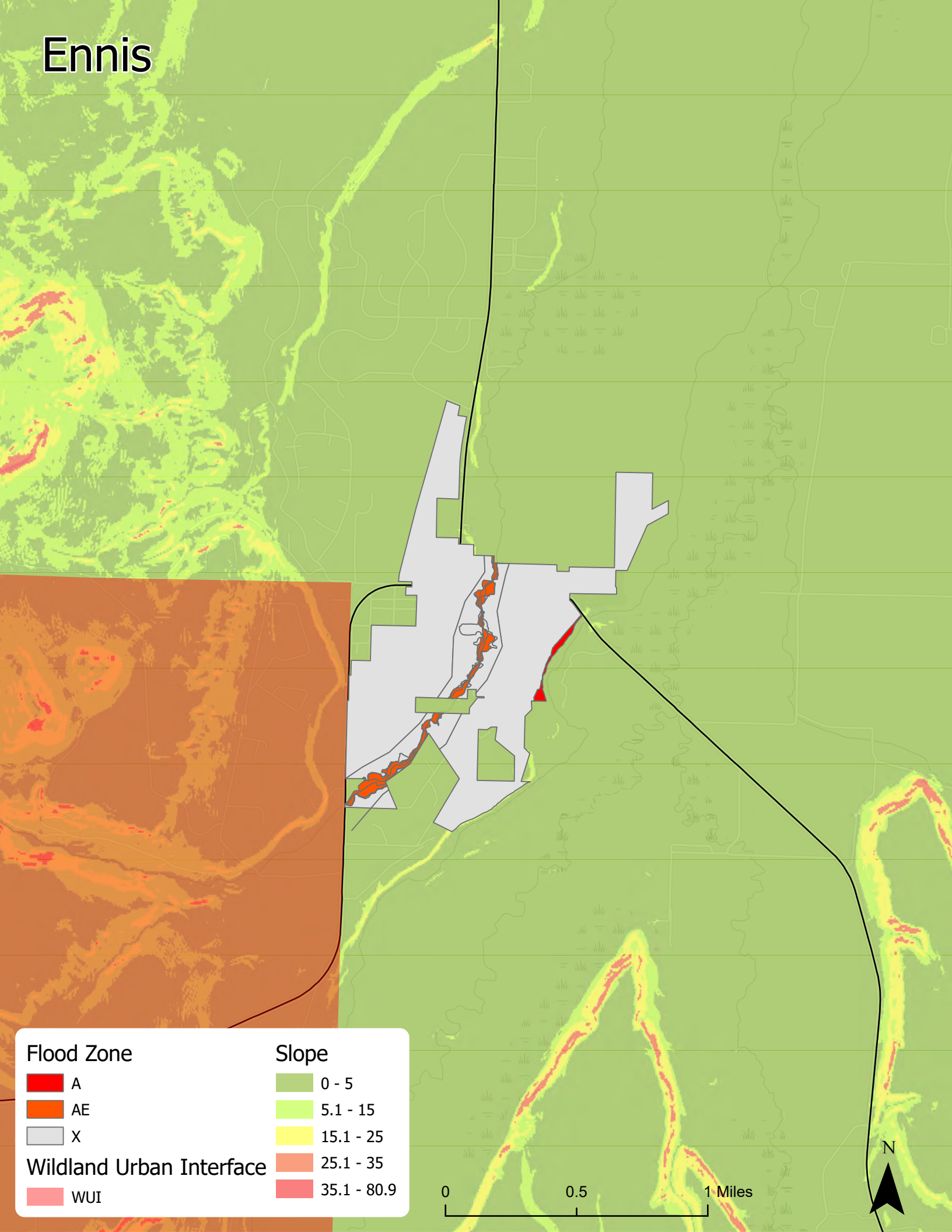
0

1.5

3 Miles

N

Ennis



Flood Zone

- A
- AE
- X

Wildland Urban Interface

- WUI

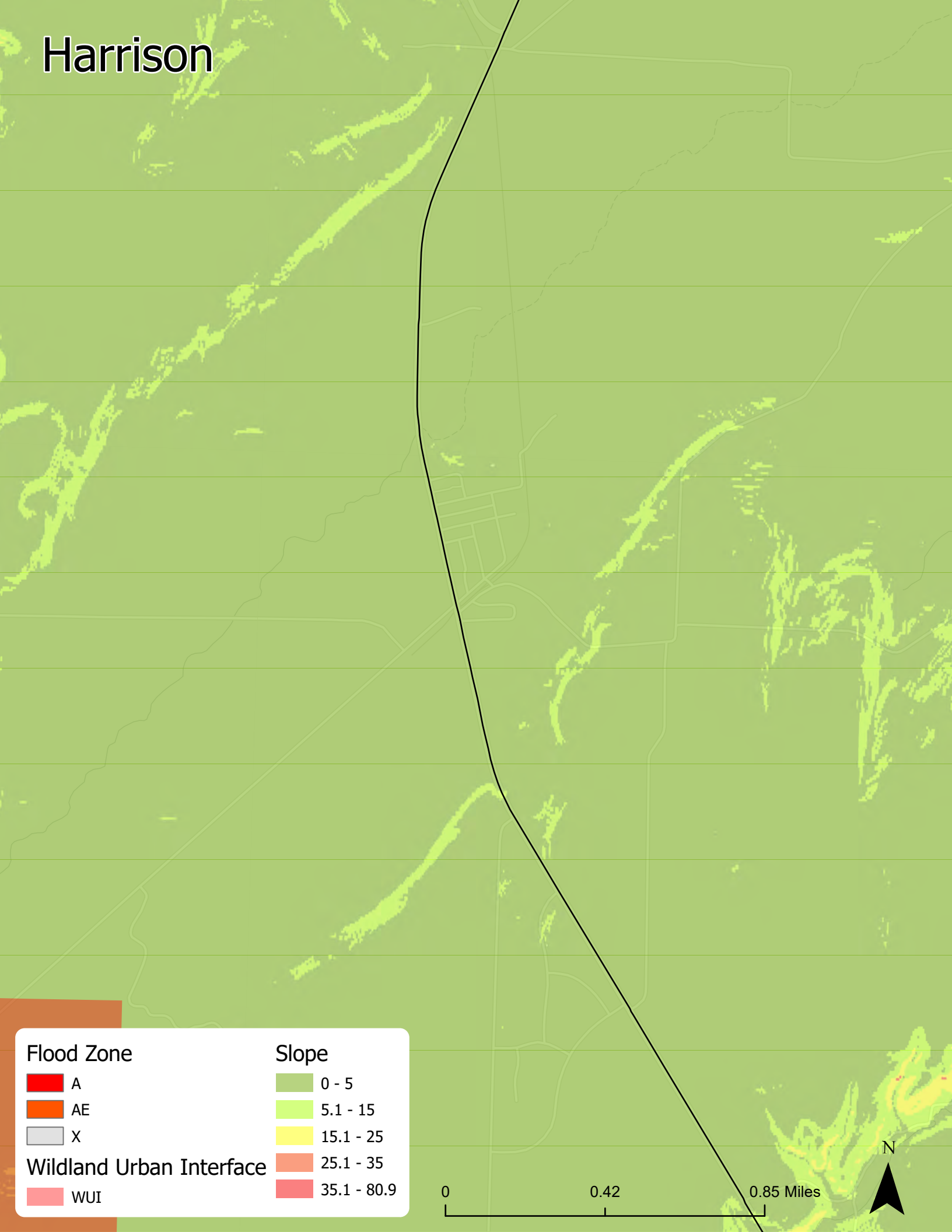
Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

0 0.5 1 Miles

N

Harrison



Flood Zone

- A
- AE
- X

Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

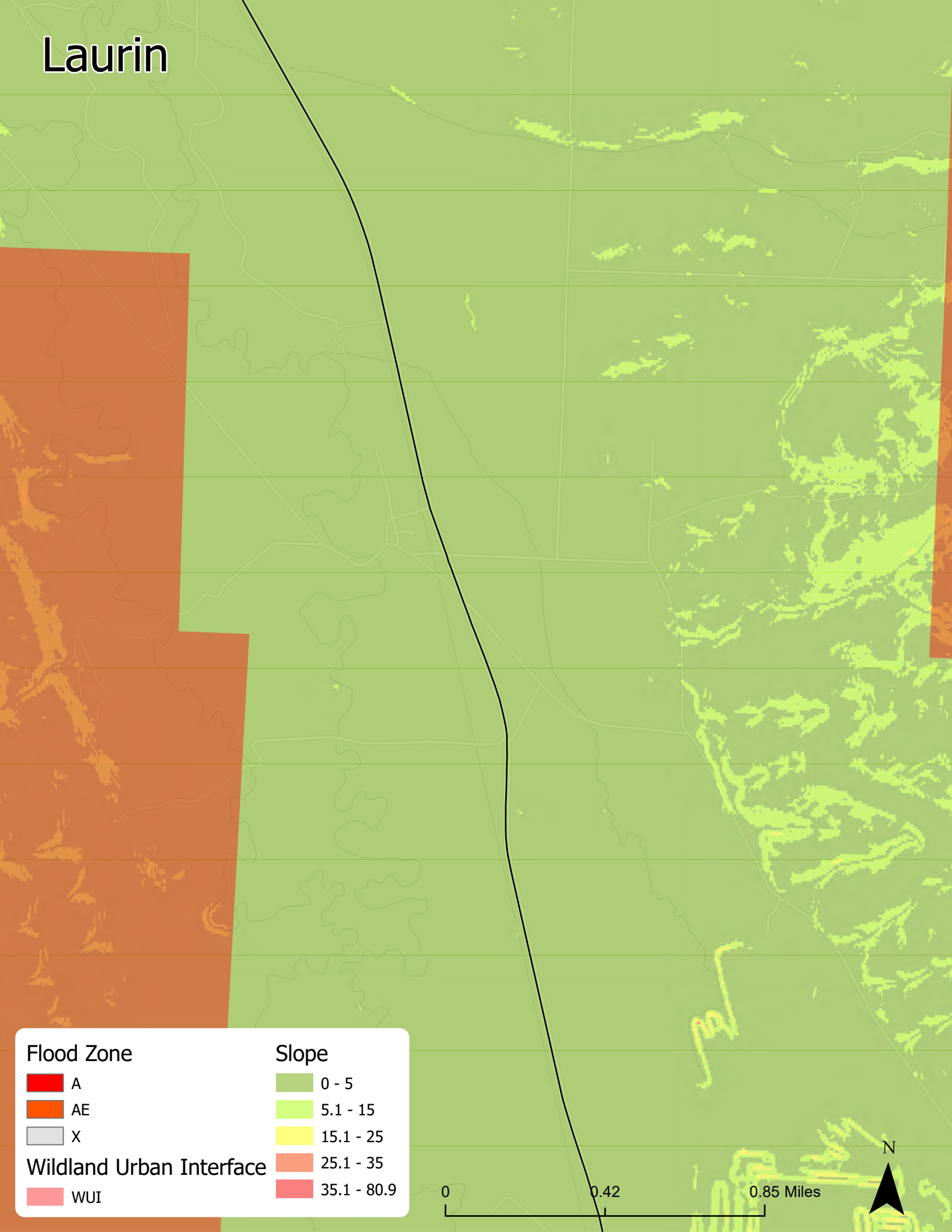
Wildland Urban Interface

- WUI

0 0.42 0.85 Miles



Laurin



Flood Zone

- A
- AE
- X

Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

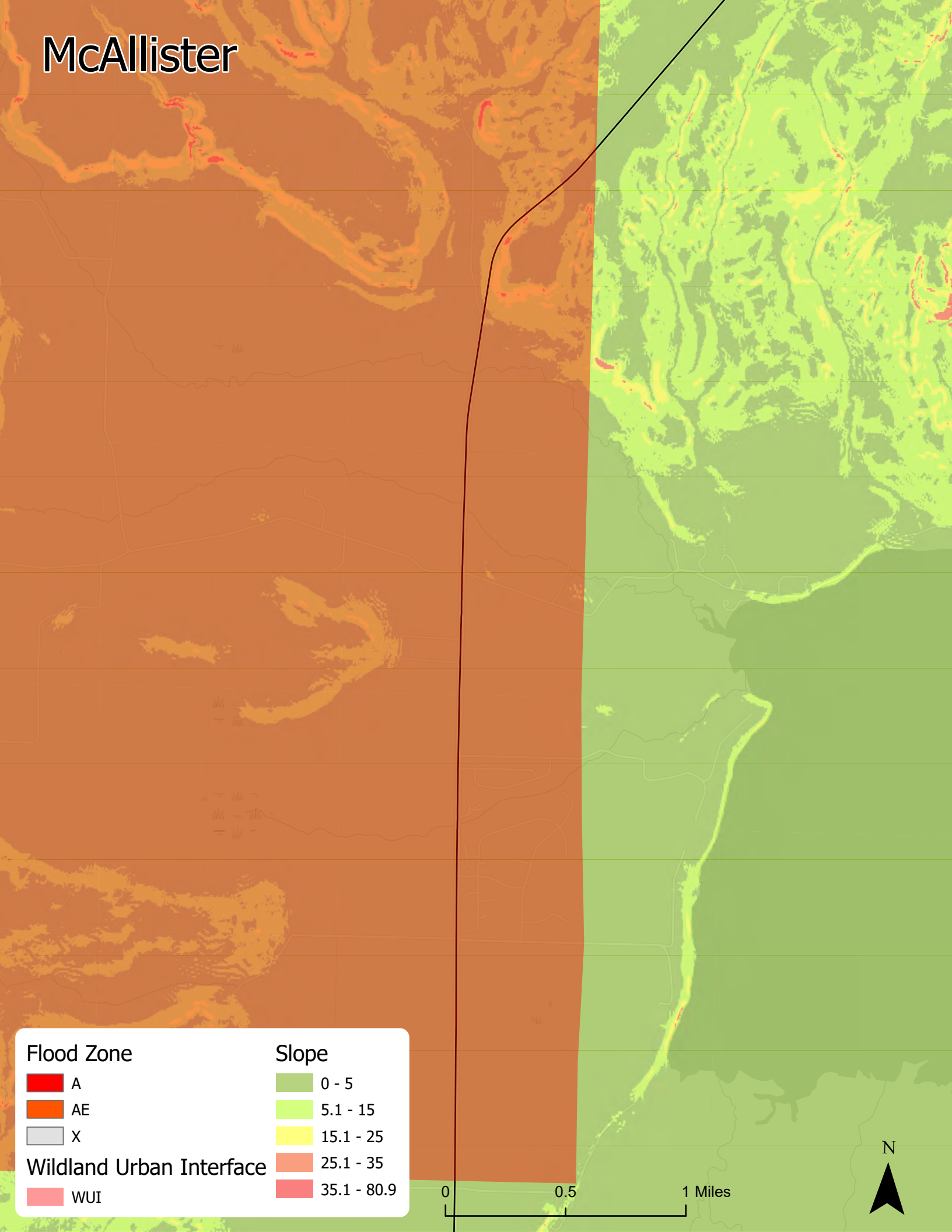
Wildland Urban Interface

- WUI

0 0.42 0.85 Miles



McAllister



Flood Zone

- A
- AE
- X

Wildland Urban Interface

- WUI

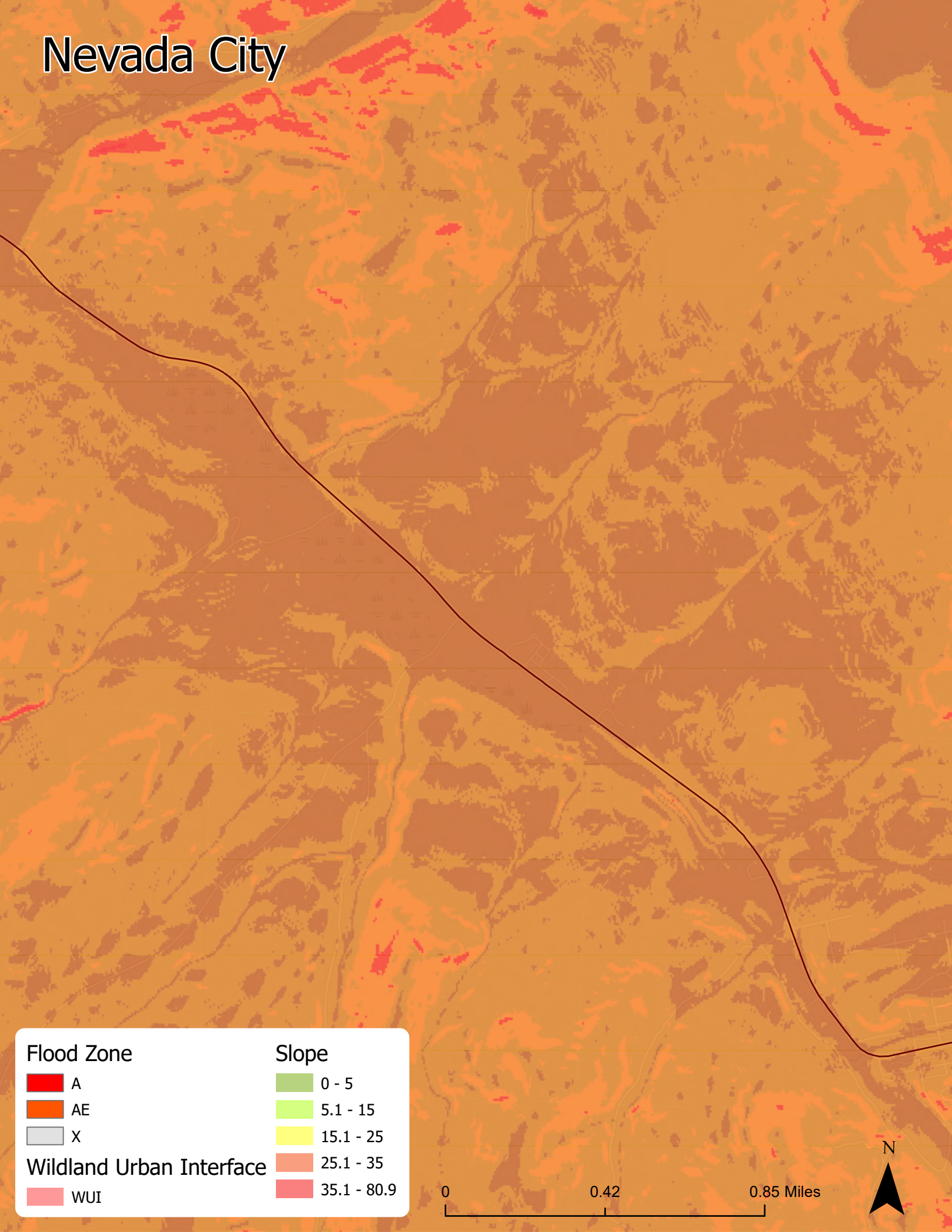
Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

0 0.5 1 Miles

N

Nevada City



Flood Zone

- A
- AE
- X

Wildland Urban Interface

- WUI

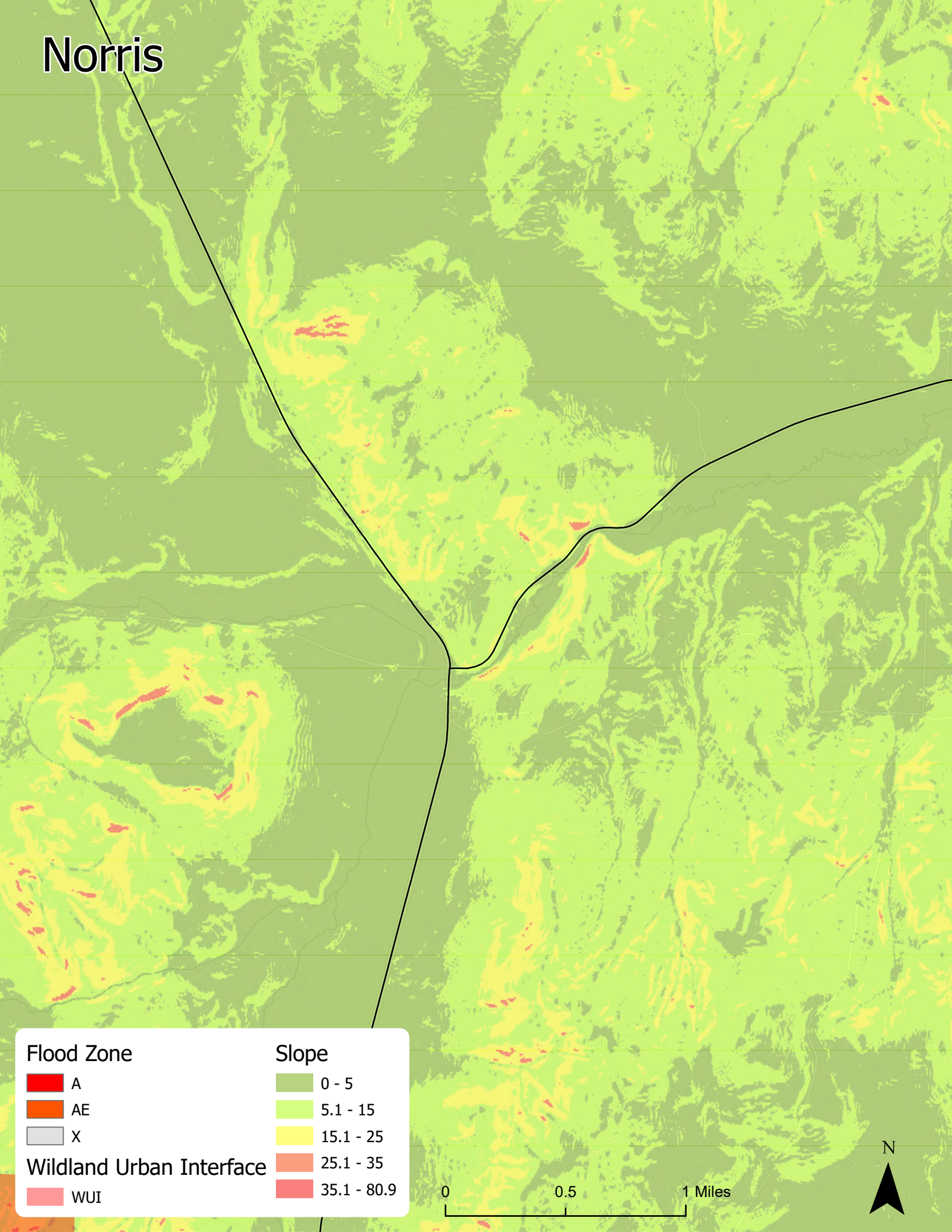
Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9



0 0.42 0.85 Miles



Norris








Flood Zone

-  A
-  AE
-  X

Wildland Urban Interface

-  WUI

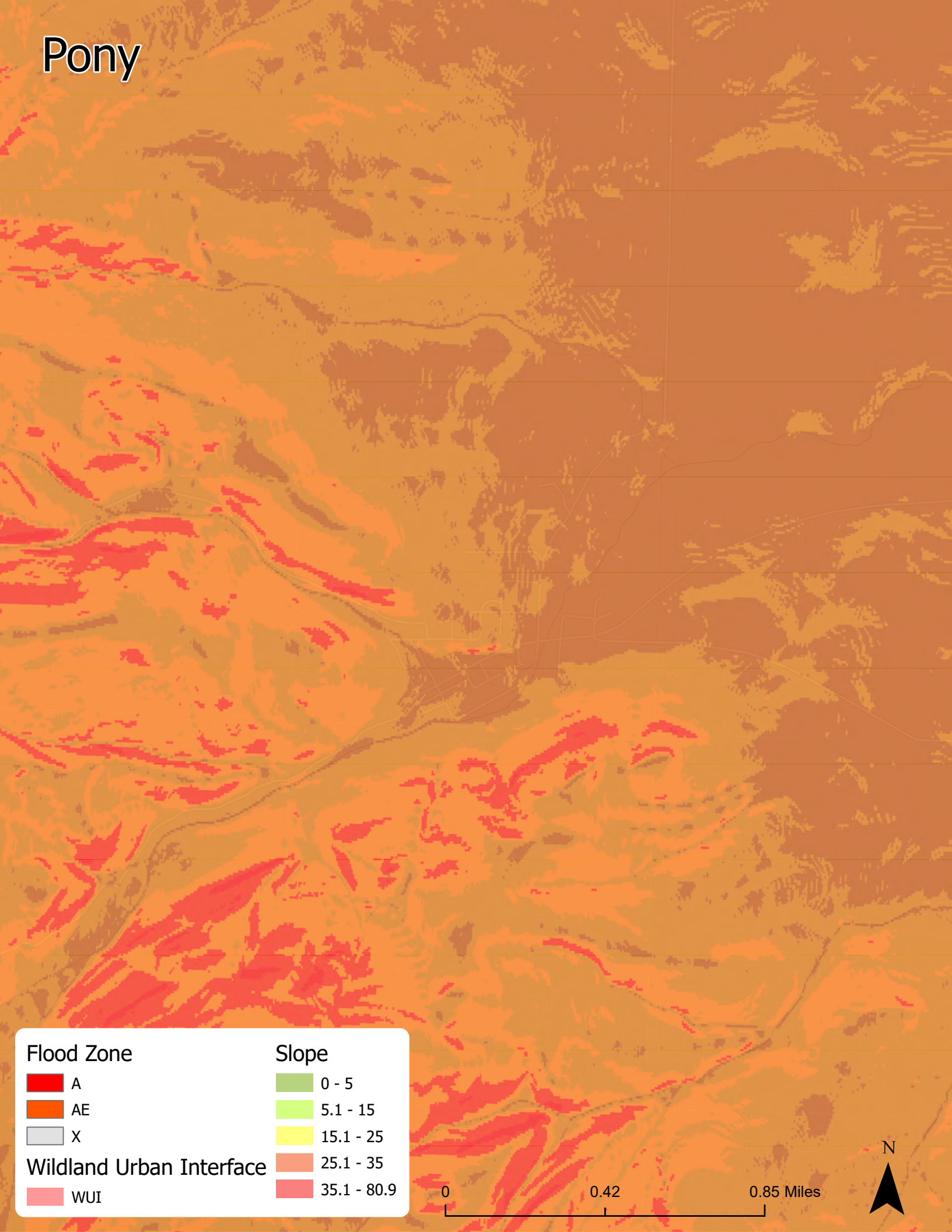
Slope

-  0 - 5
-  5.1 - 15
-  15.1 - 25
-  25.1 - 35
-  35.1 - 80.9

0 0.5 1 Miles

N






Pony



Flood Zone

-  A
-  AE
-  X

Slope

-  0 - 5
-  5.1 - 15
-  15.1 - 25
-  25.1 - 35
-  35.1 - 80.9

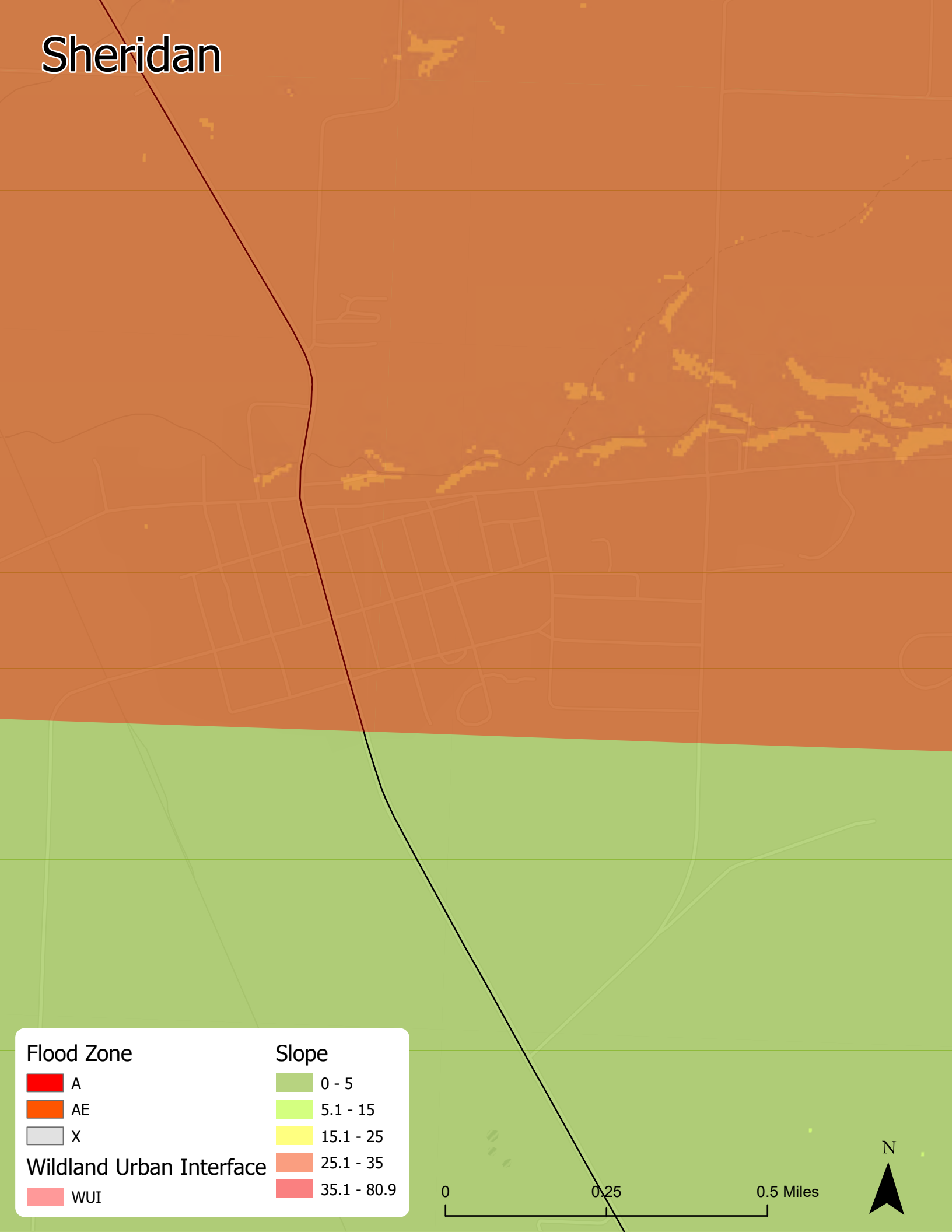
Wildland Urban Interface

-  WUI

0 0.42 0.85 Miles








Sheridan



Flood Zone

-  A
-  AE
-  X

Slope

-  0 - 5
-  5.1 - 15
-  15.1 - 25
-  25.1 - 35
-  35.1 - 80.9

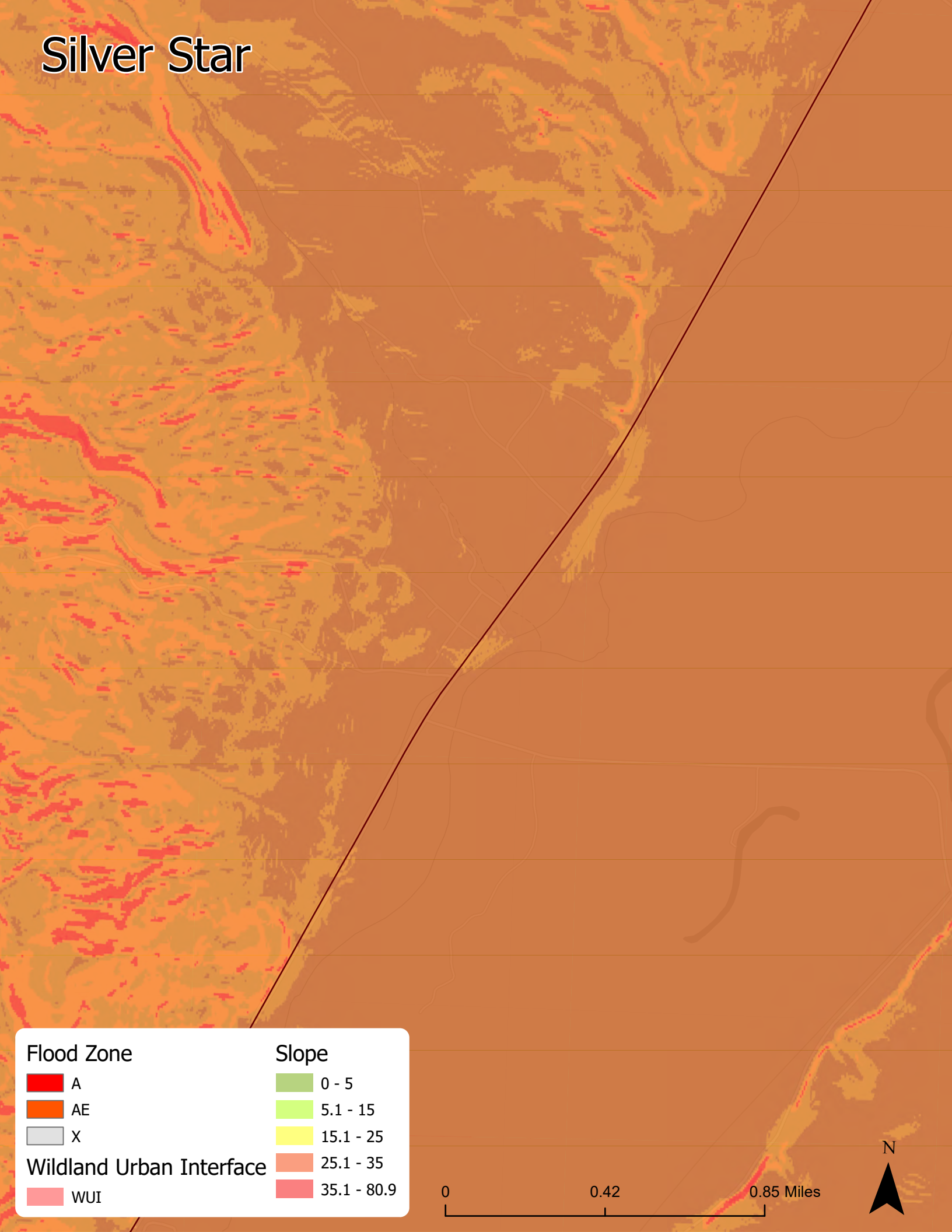
Wildland Urban Interface

-  WUI

0 0.25 0.5 Miles

N

Silver Star



Flood Zone

- A
- AE
- X

Wildland Urban Interface

- WUI

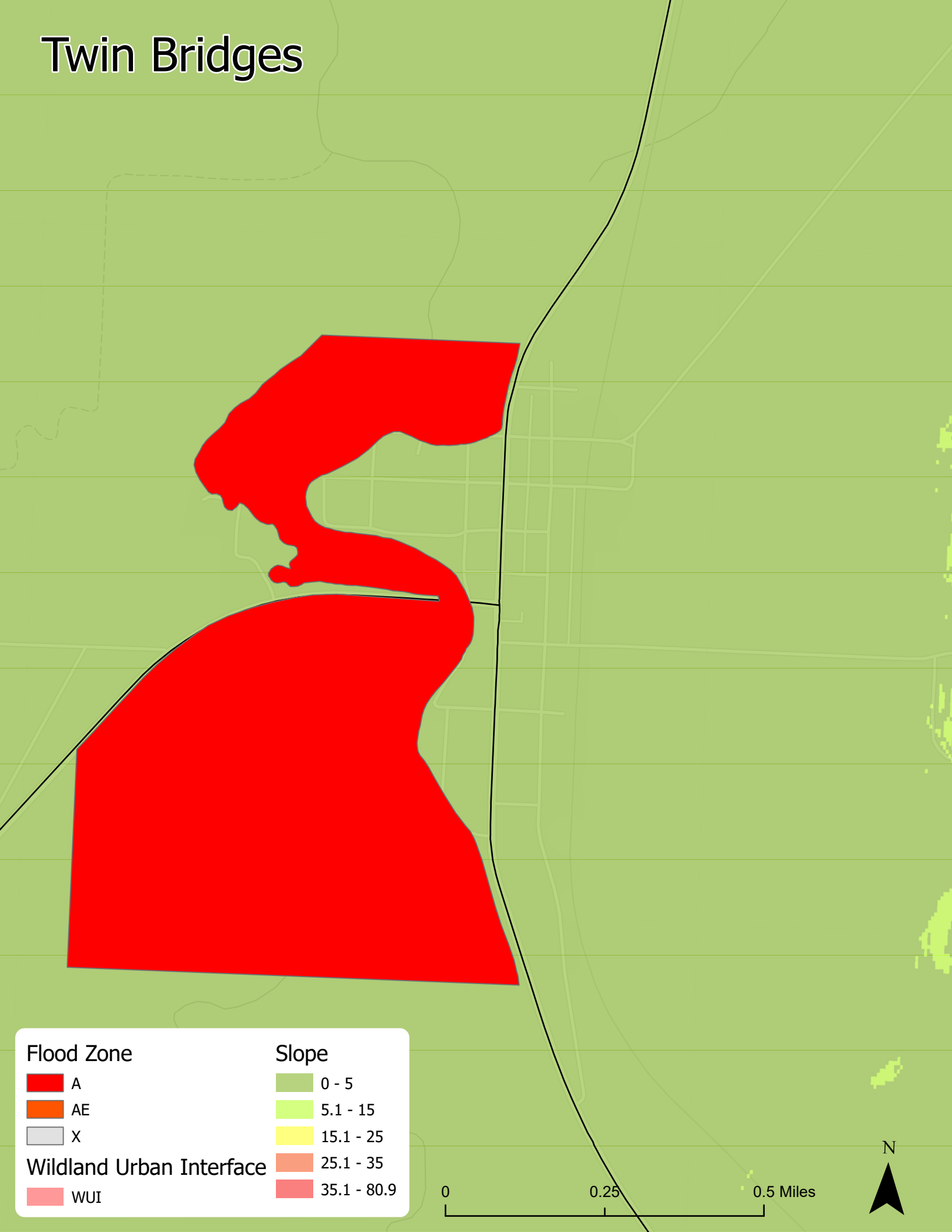
Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

0 0.42 0.85 Miles



Twin Bridges








Flood Zone

-  A
-  AE
-  X

Wildland Urban Interface

-  WUI

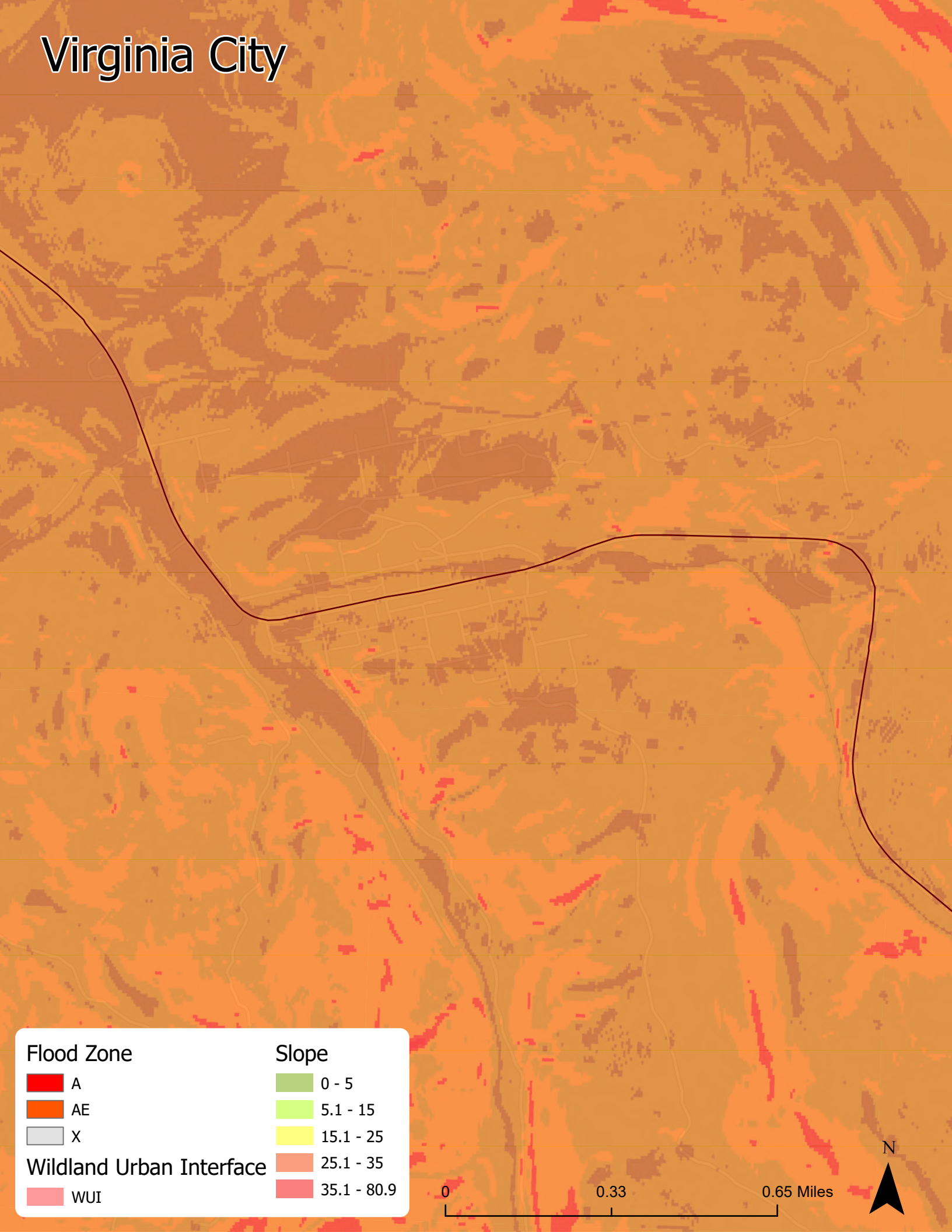
Slope

-  0 - 5
-  5.1 - 15
-  15.1 - 25
-  25.1 - 35
-  35.1 - 80.9

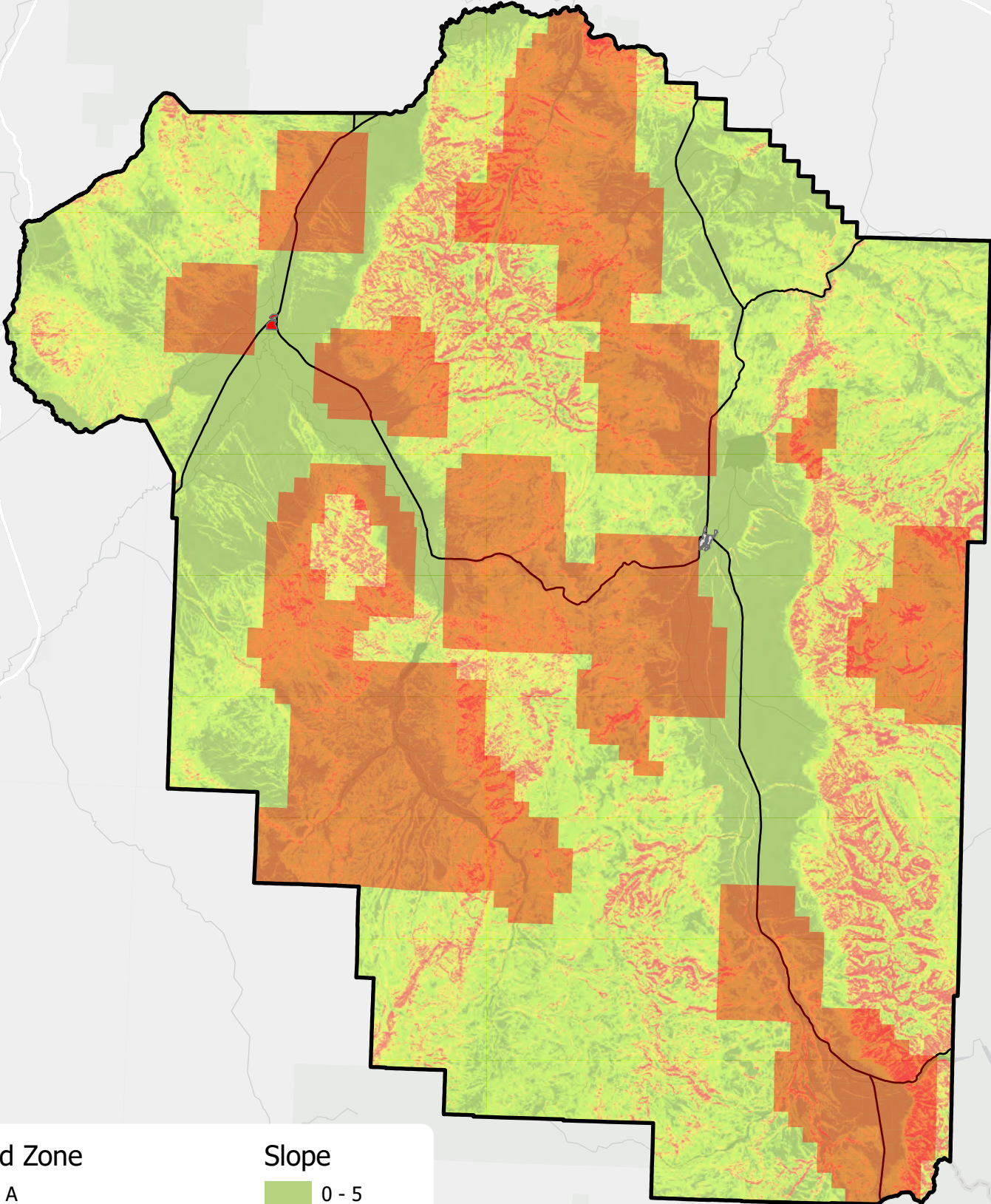
0 0.25 0.5 Miles



Virginia City



Madison County



Flood Zone

- A
- AE
- X

Wildland Urban Interface

- WUI

Slope

- 0 - 5
- 5.1 - 15
- 15.1 - 25
- 25.1 - 35
- 35.1 - 80.9

0 12.5 25 Miles

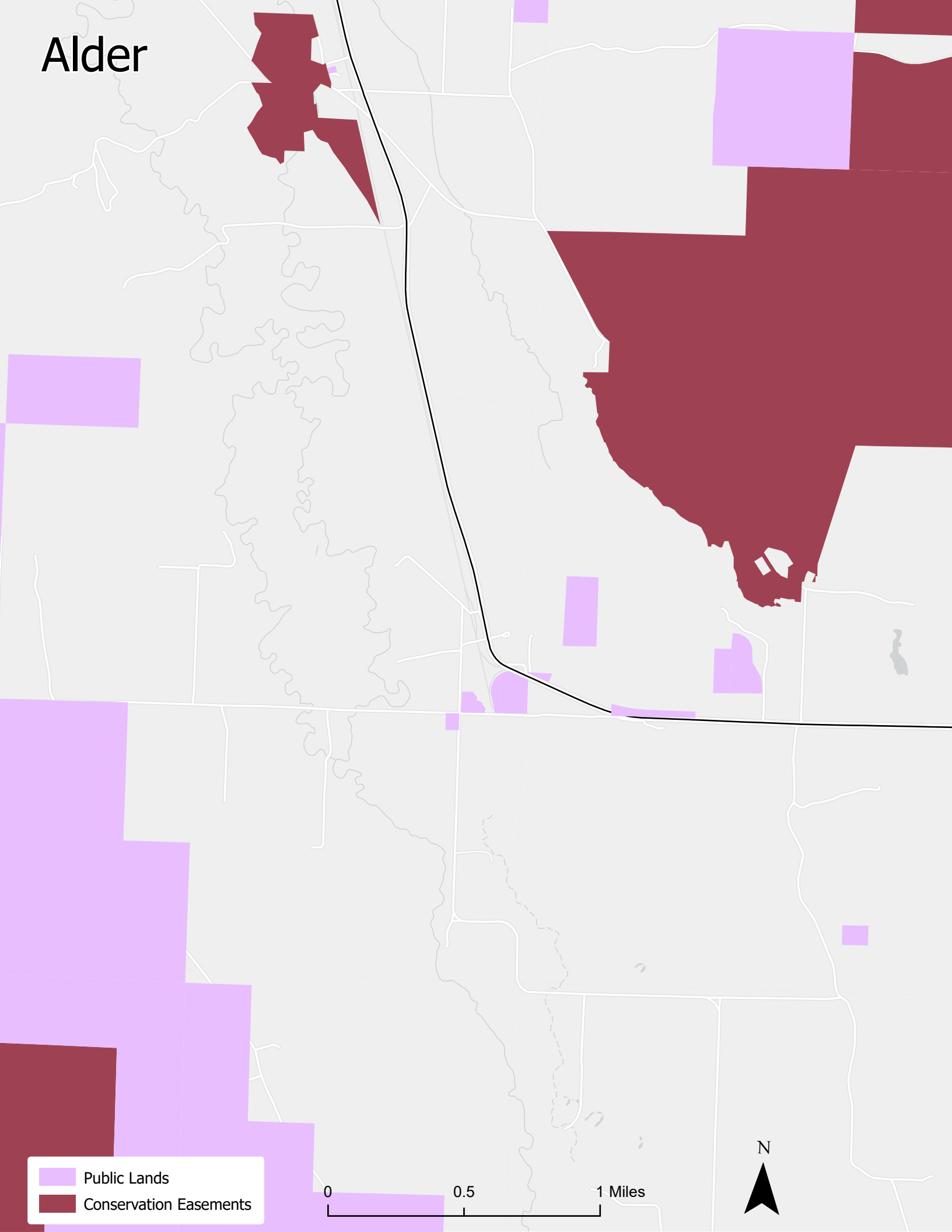


APPENDIX F

CONSERVATION EASEMENTS AND PUBLIC LANDS COMMUNITY MAPS

HYALITE

Alder

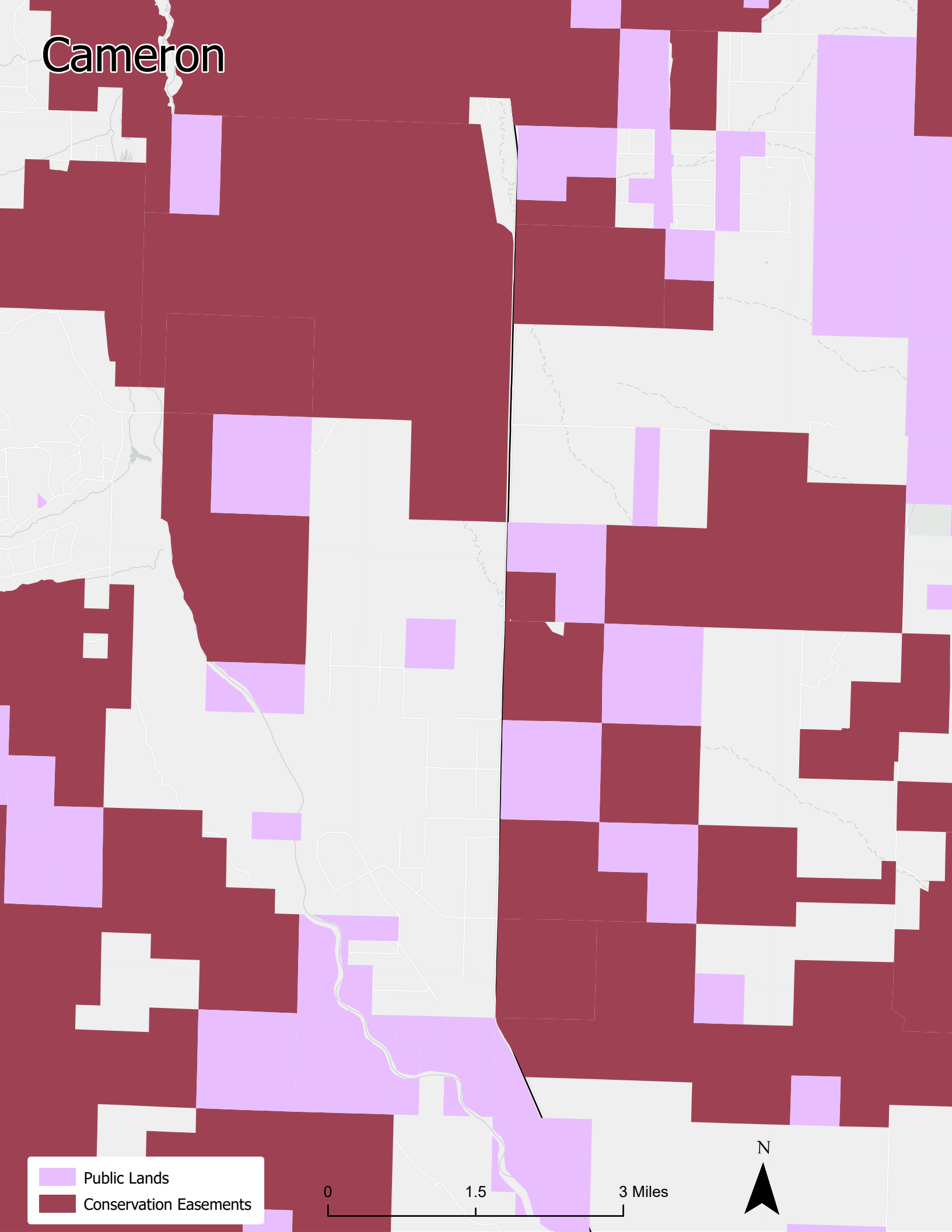


Public Lands
Conservation Easements

0 0.5 1 Miles



Cameron

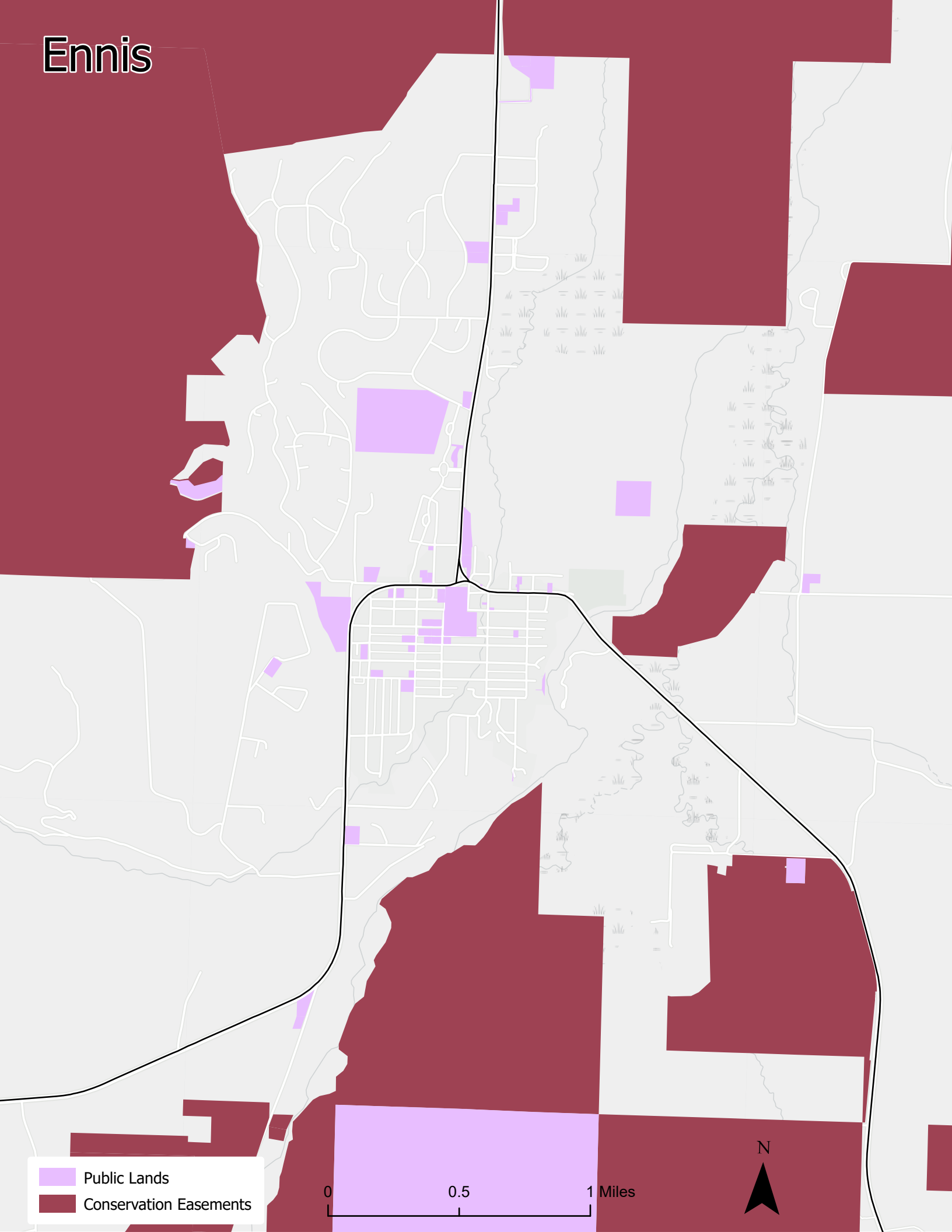


Public Lands
Conservation Easements

0 1.5 3 Miles



Ennis

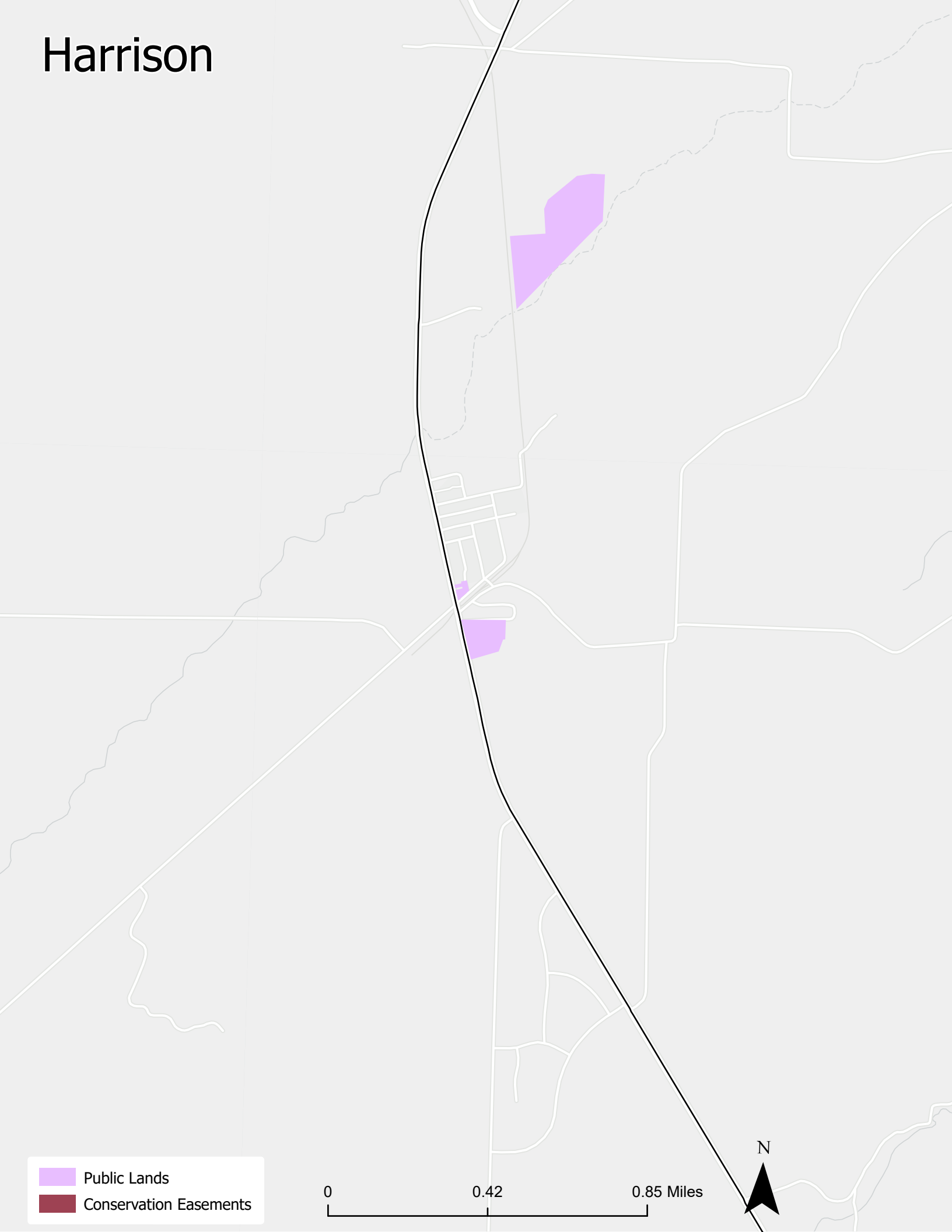


Public Lands
Conservation Easements

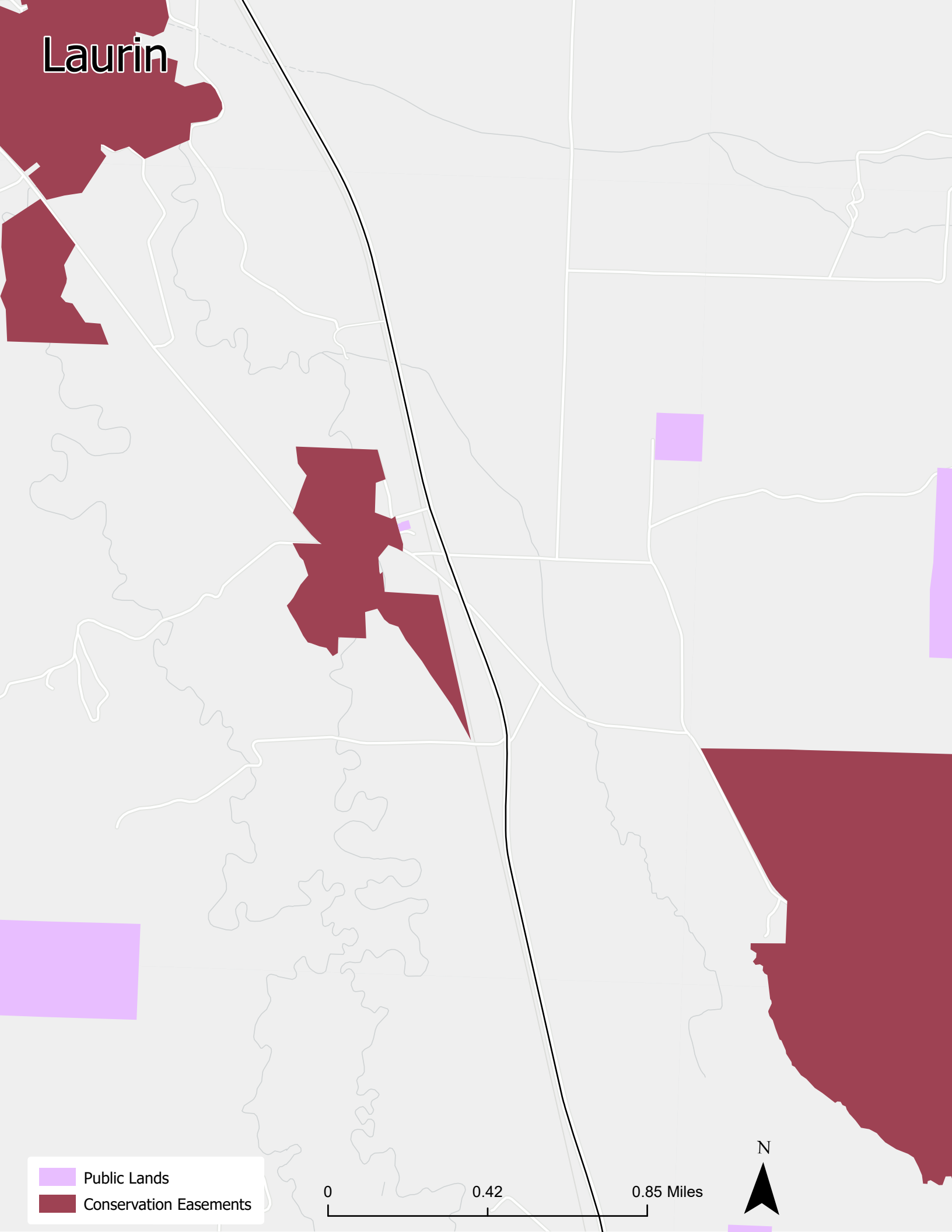
0 0.5 1 Miles



Harrison



Laurin

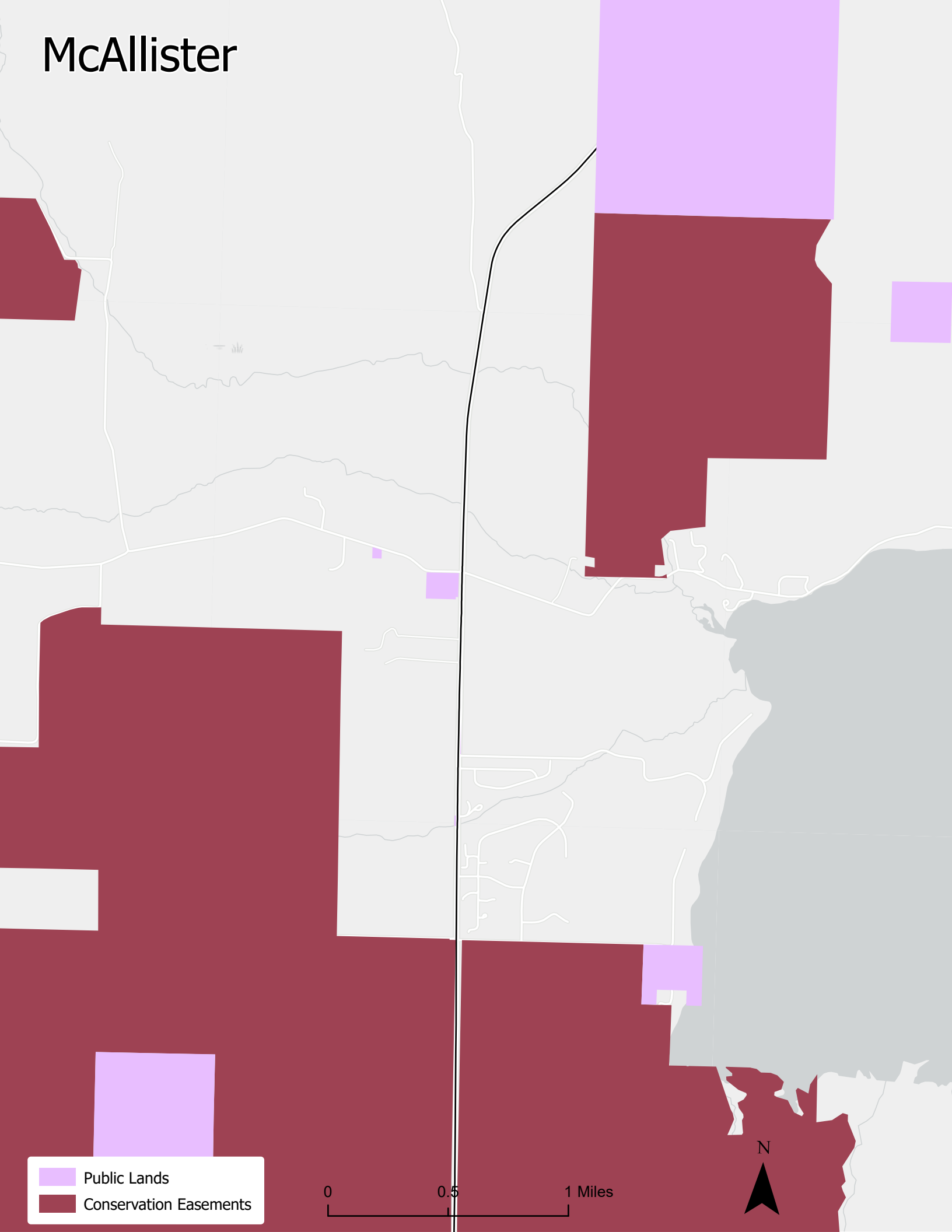


Public Lands
Conservation Easements

0 0.42 0.85 Miles



McAllister

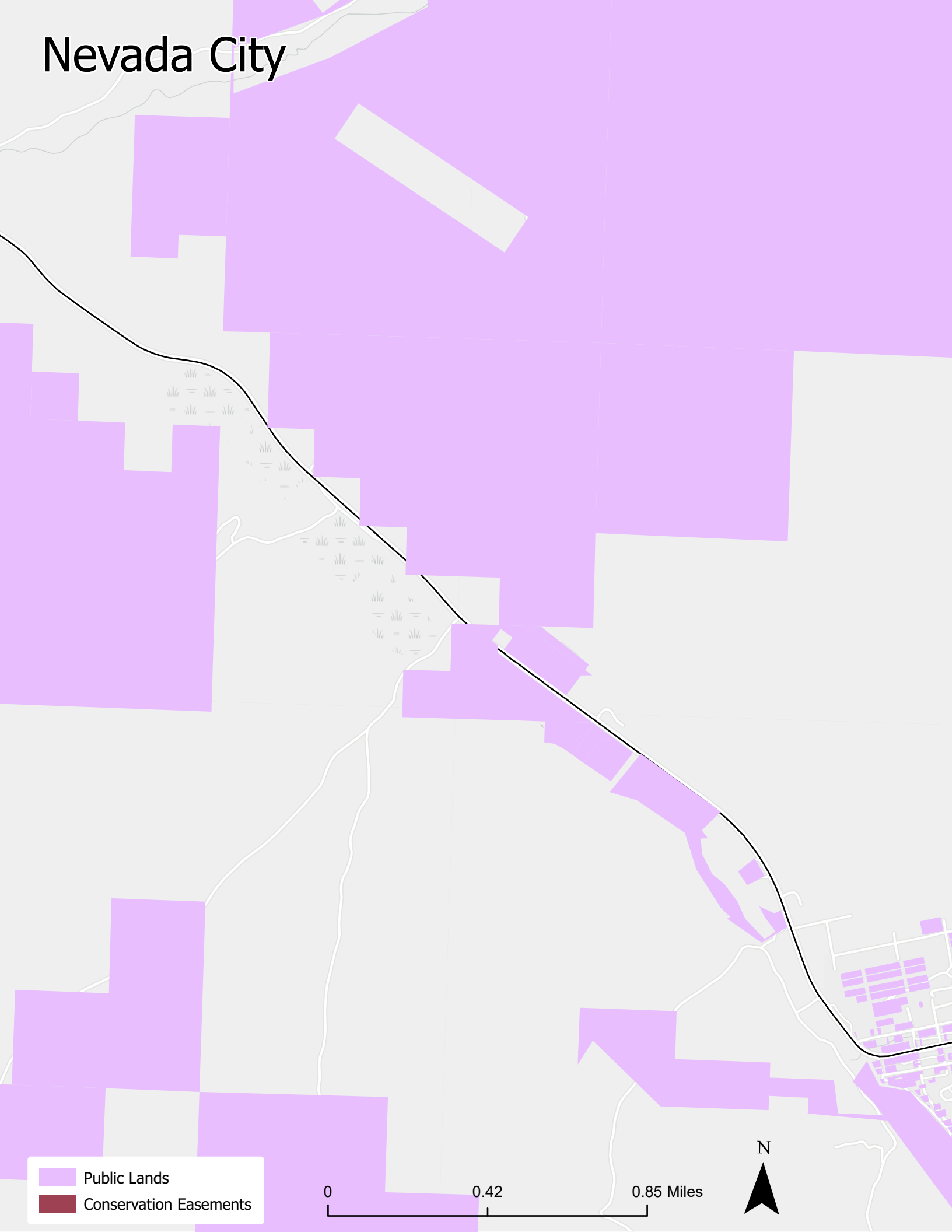


Public Lands
Conservation Easements

0 0.5 1 Miles



Nevada City



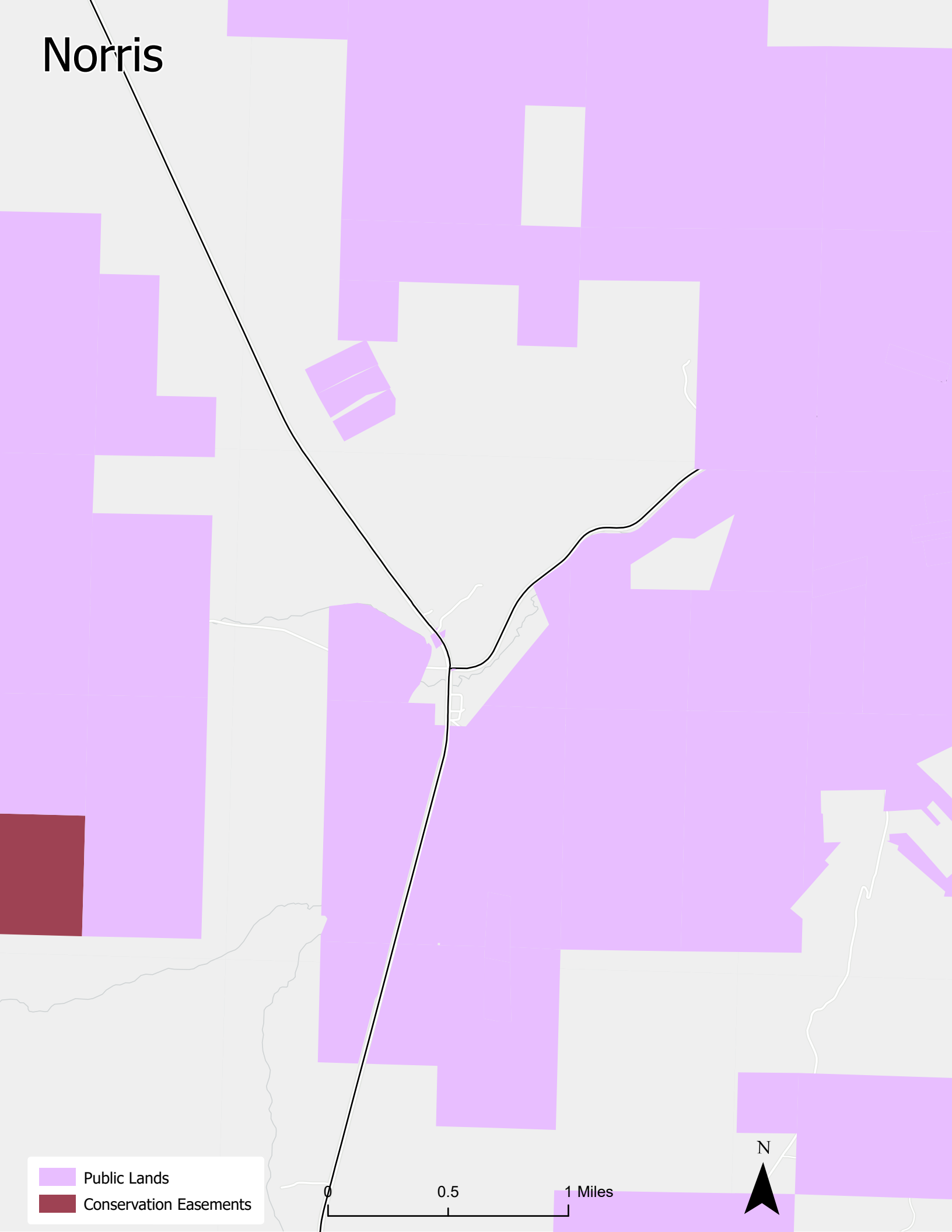
Public Lands

Conservation Easements

0 0.42 0.85 Miles

N

Norris

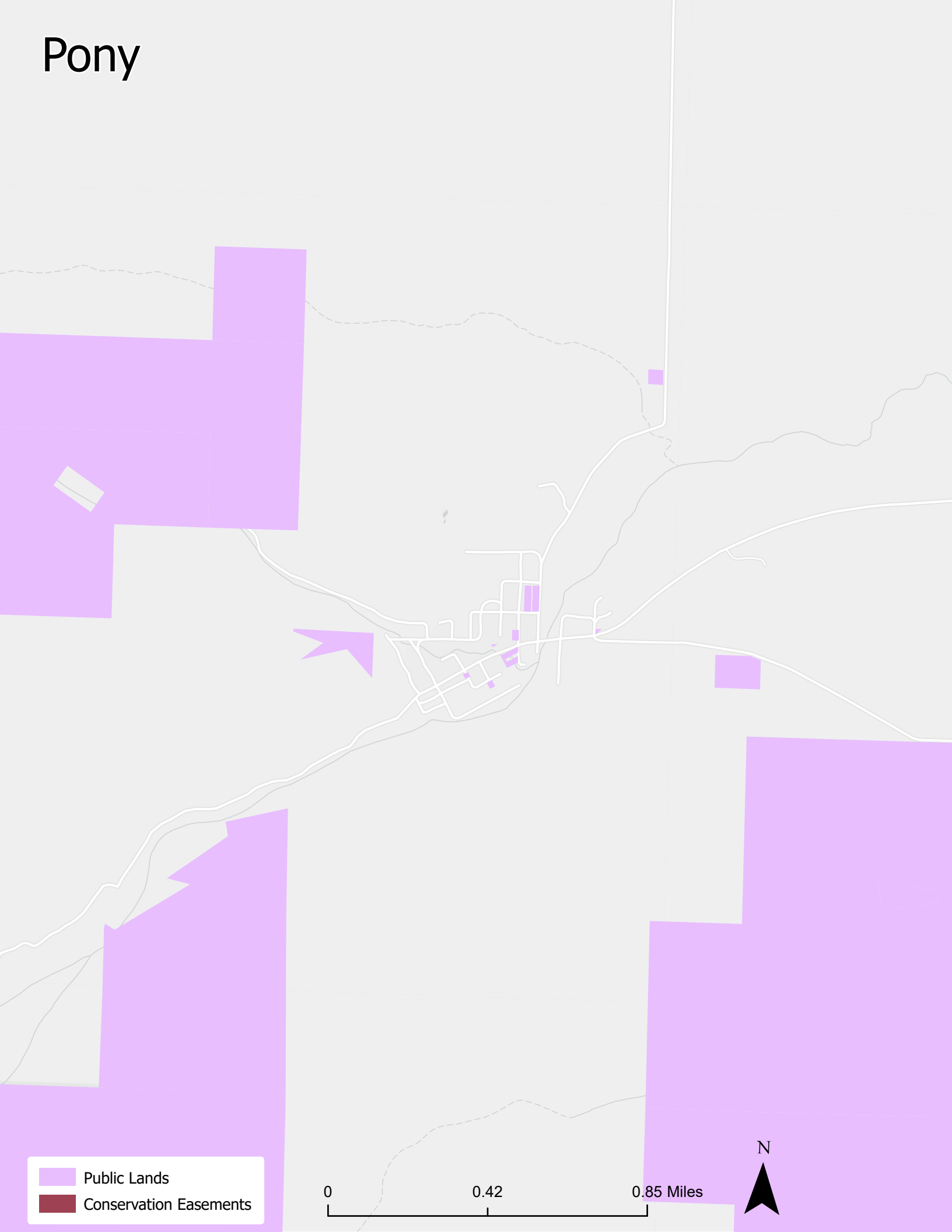


Public Lands
Conservation Easements

0 0.5 1 Miles



Pony

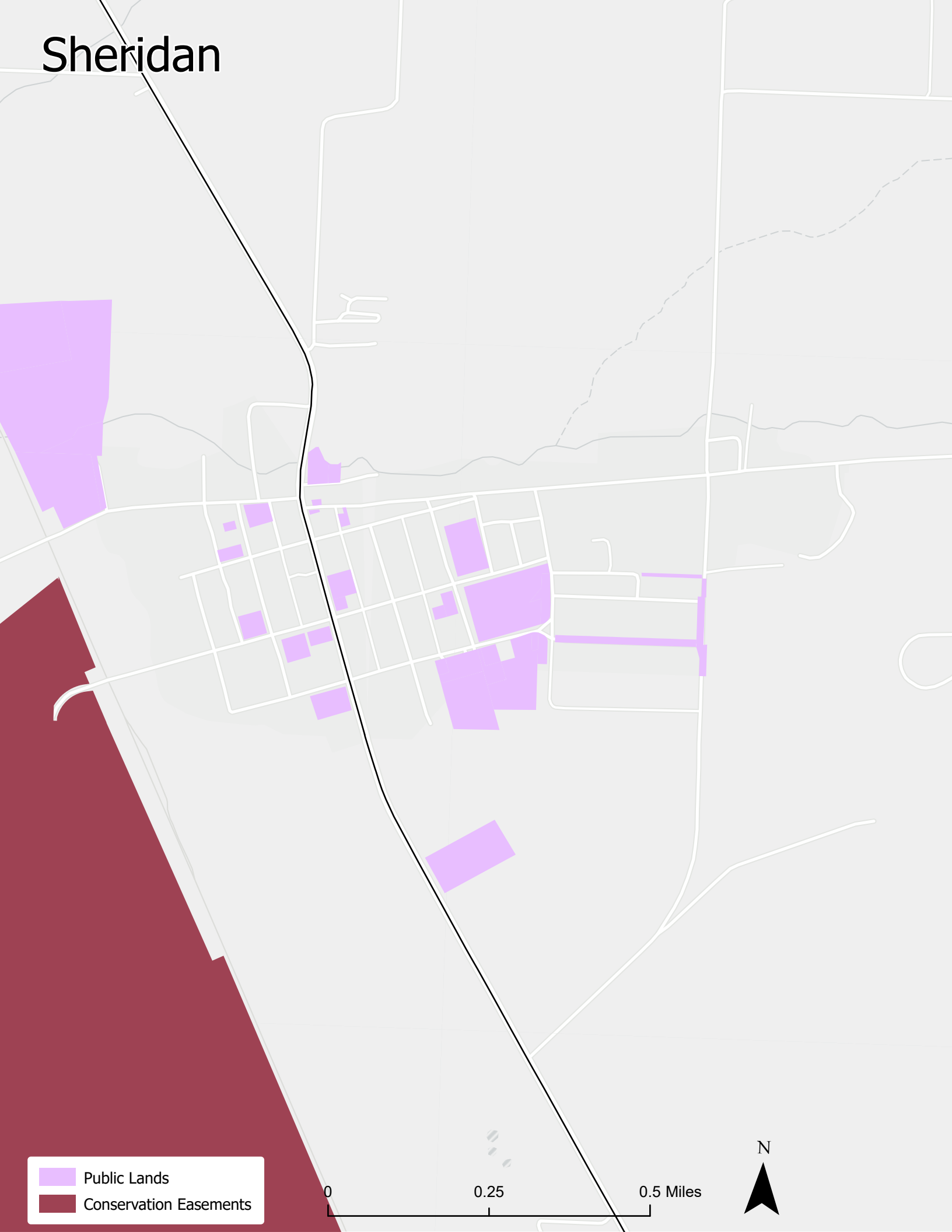


- Public Lands
- Conservation Easements

0 0.42 0.85 Miles



Sheridan

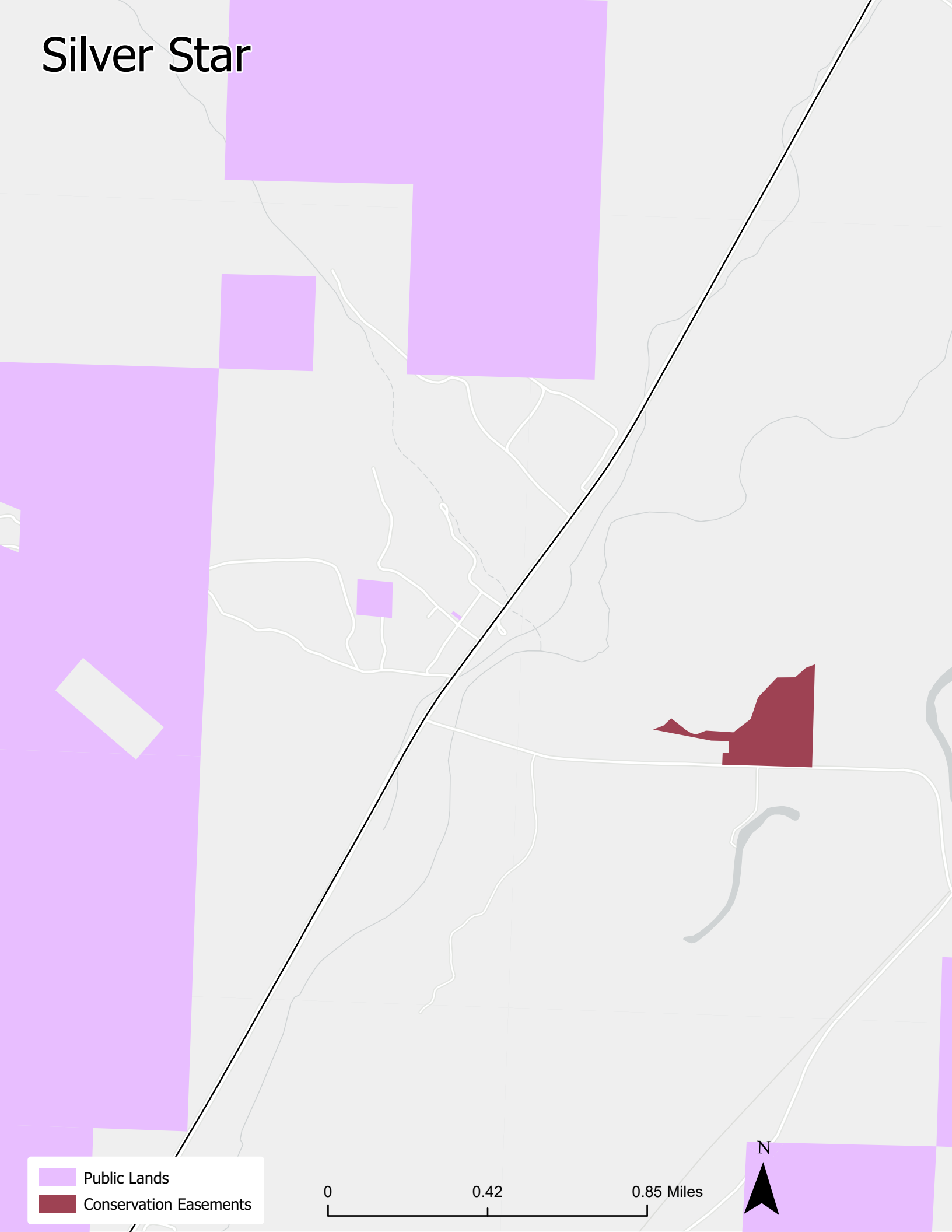


Public Lands
Conservation Easements

0 0.25 0.5 Miles



Silver Star

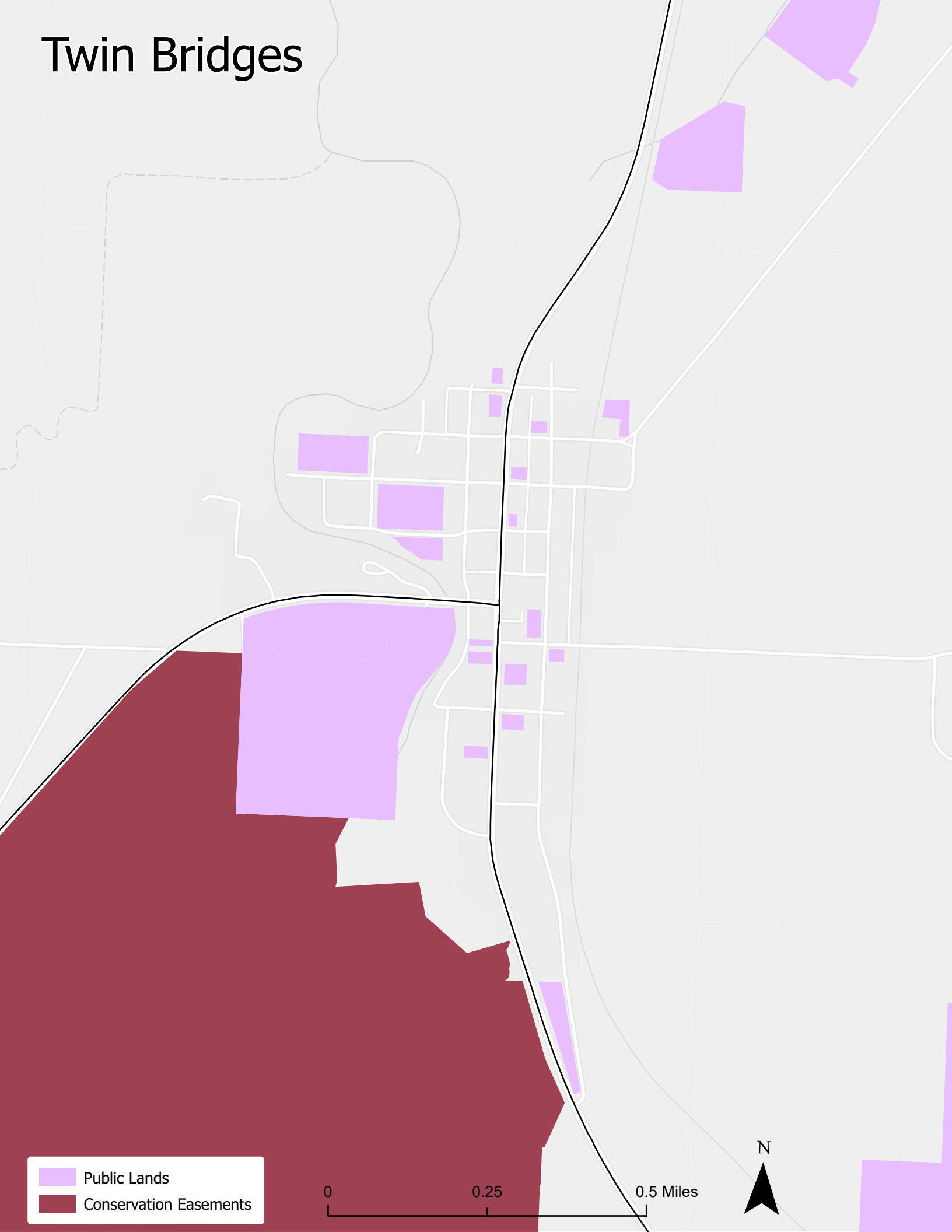


Public Lands
Conservation Easements

0 0.42 0.85 Miles



Twin Bridges

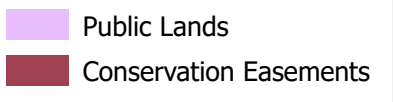
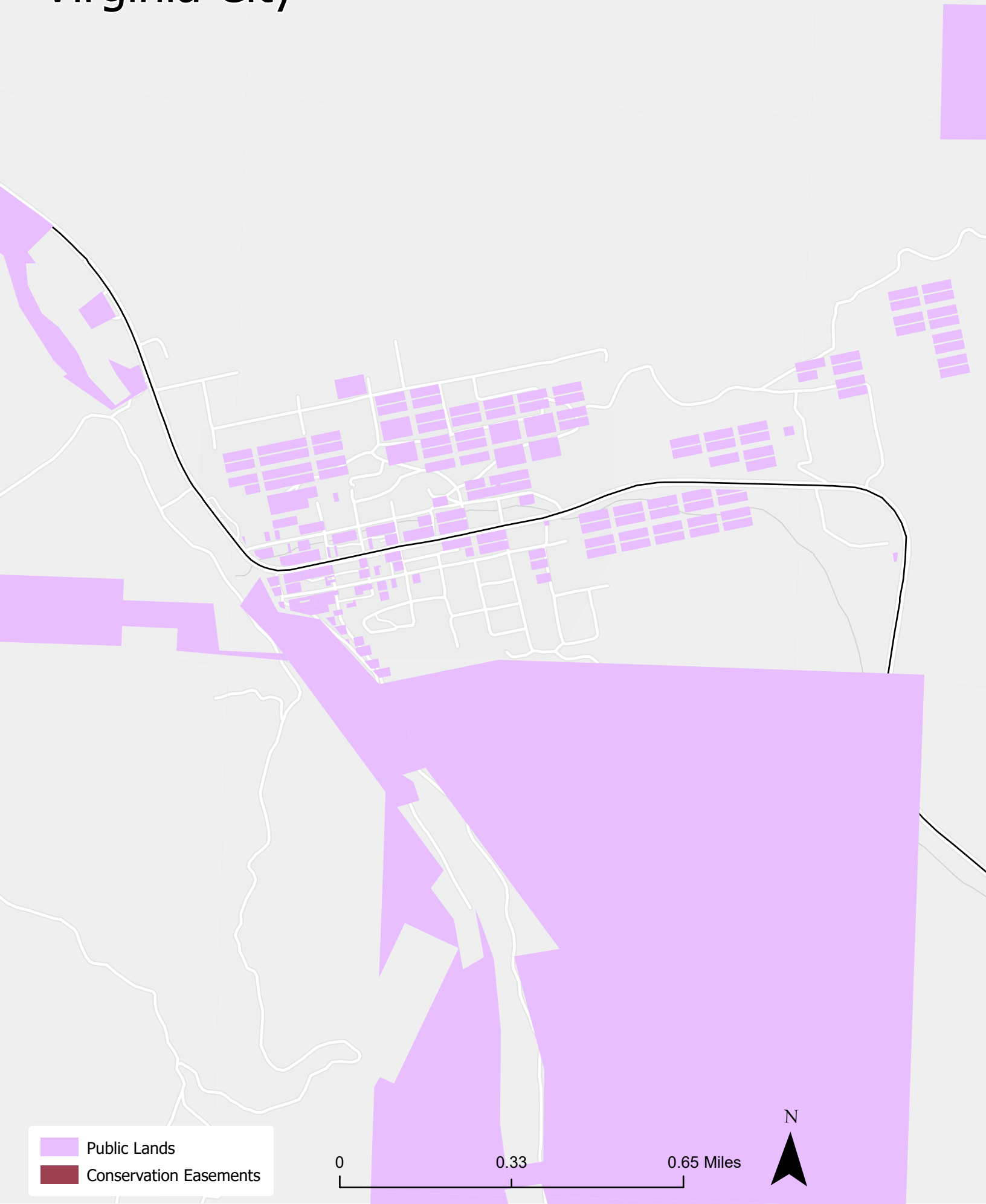


Public Lands
Conservation Easements

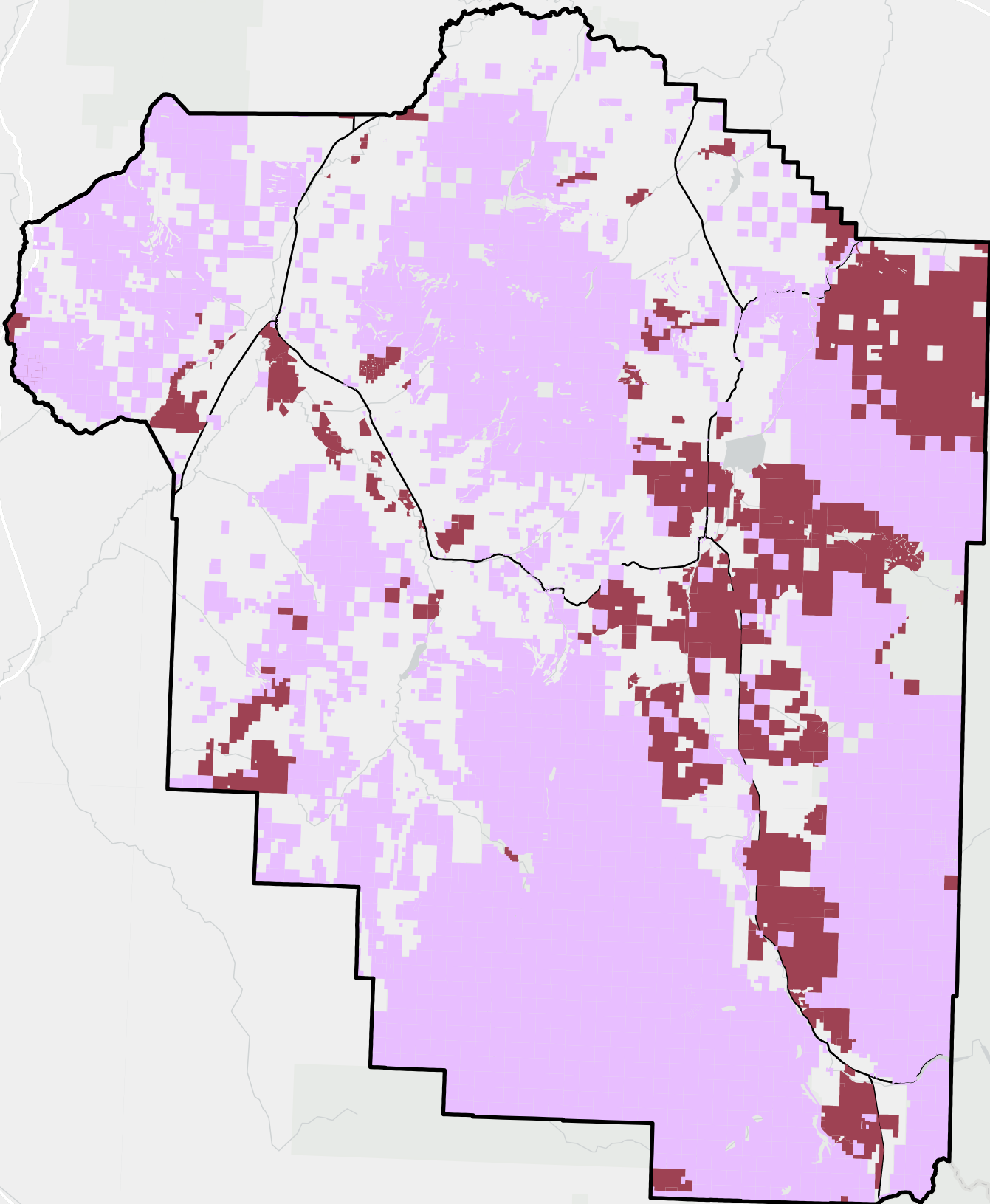
0 0.25 0.5 Miles



Virginia City



Madison County



Public Lands
Conservation Easements

0 12.5 25 Miles

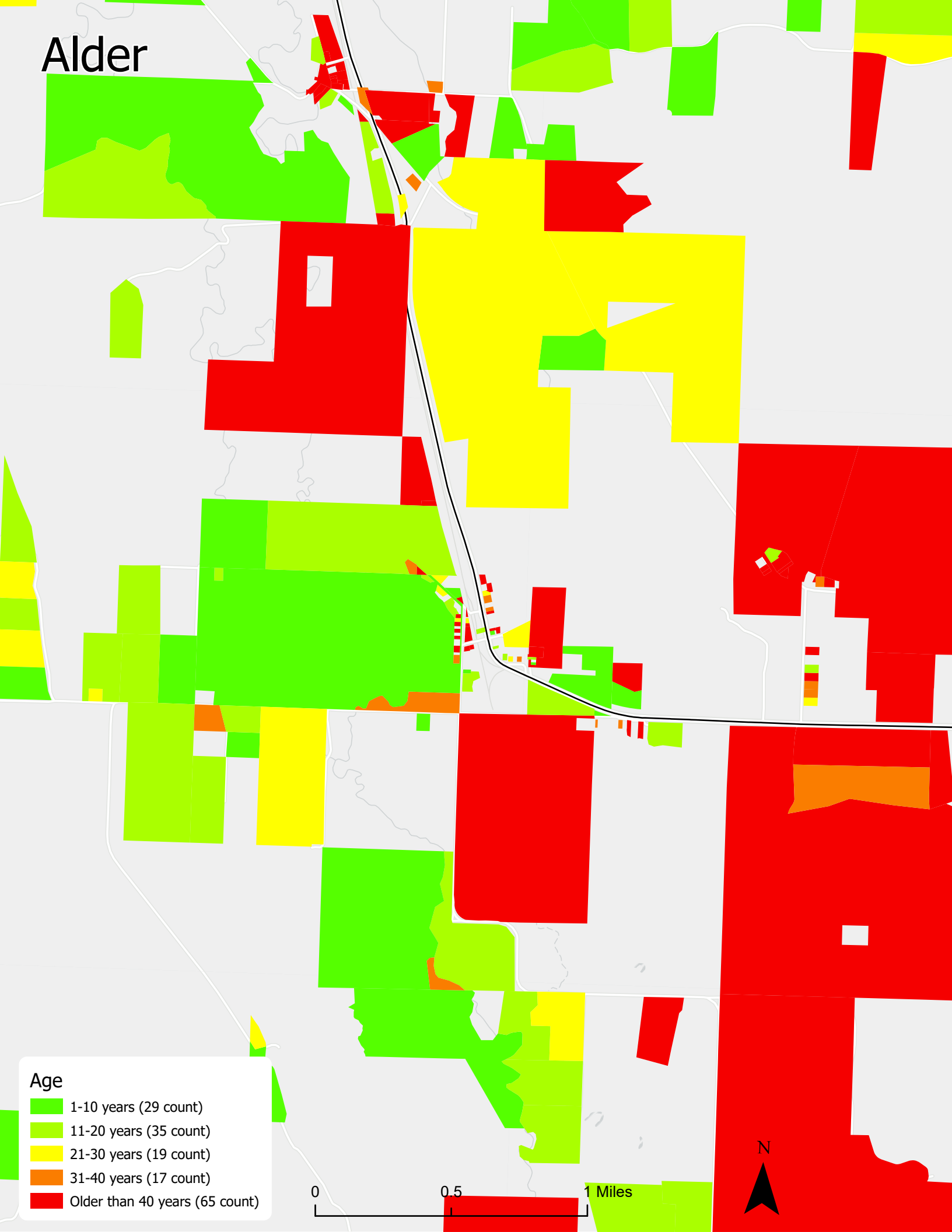


APPENDIX G

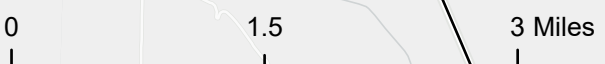
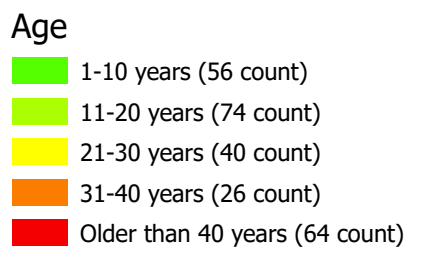
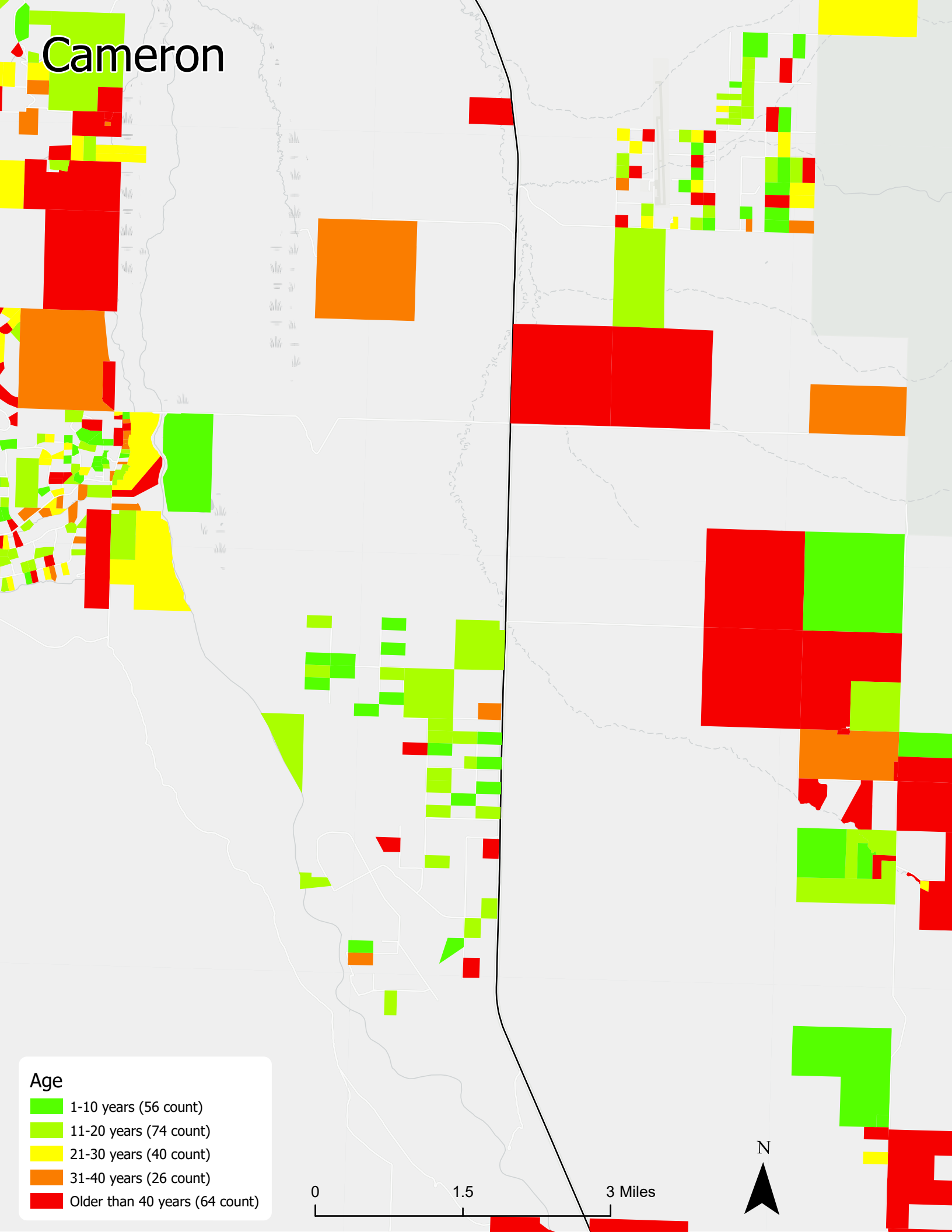
HOUSING AGE COMMUNITY MAPS

HYALITE

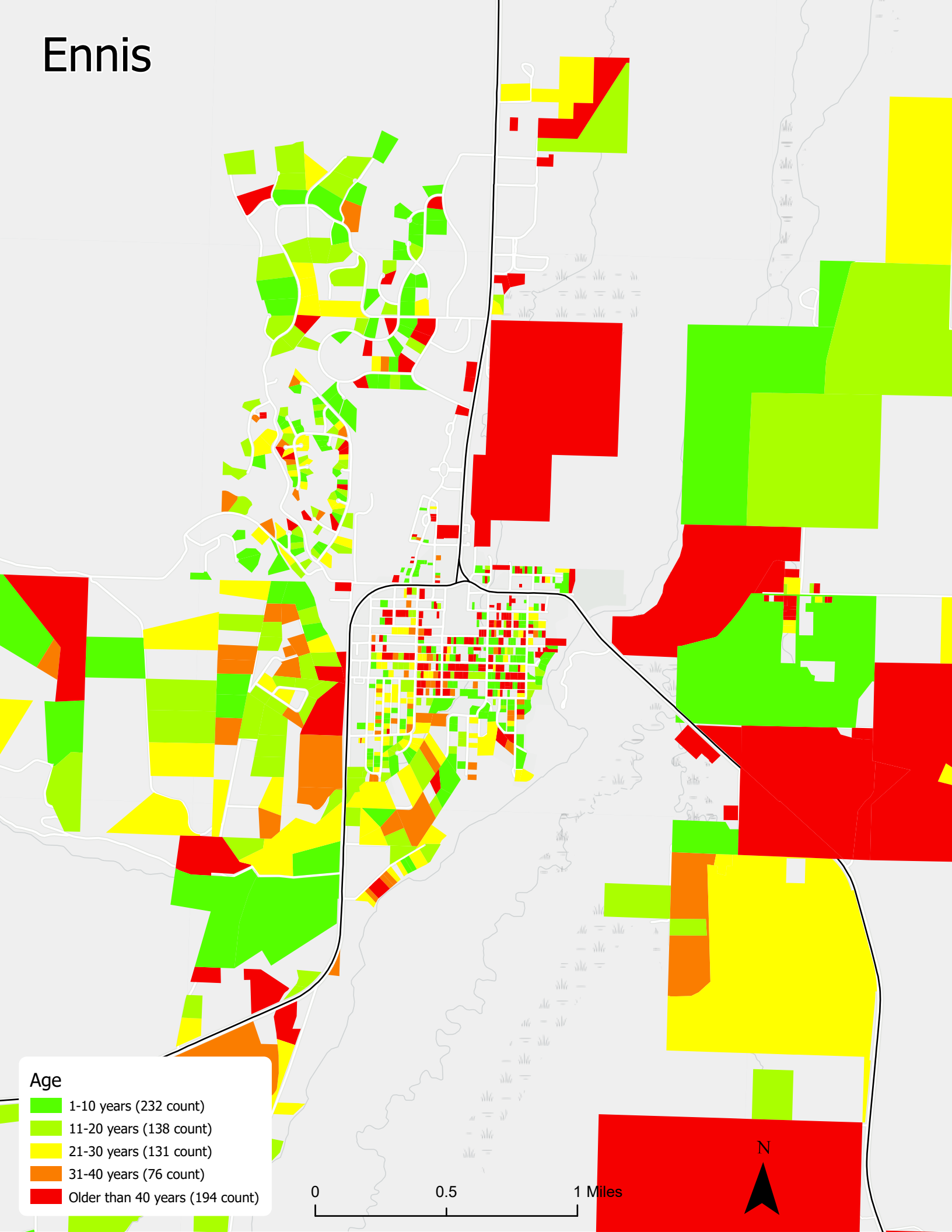
Alder



Cameron



Ennis



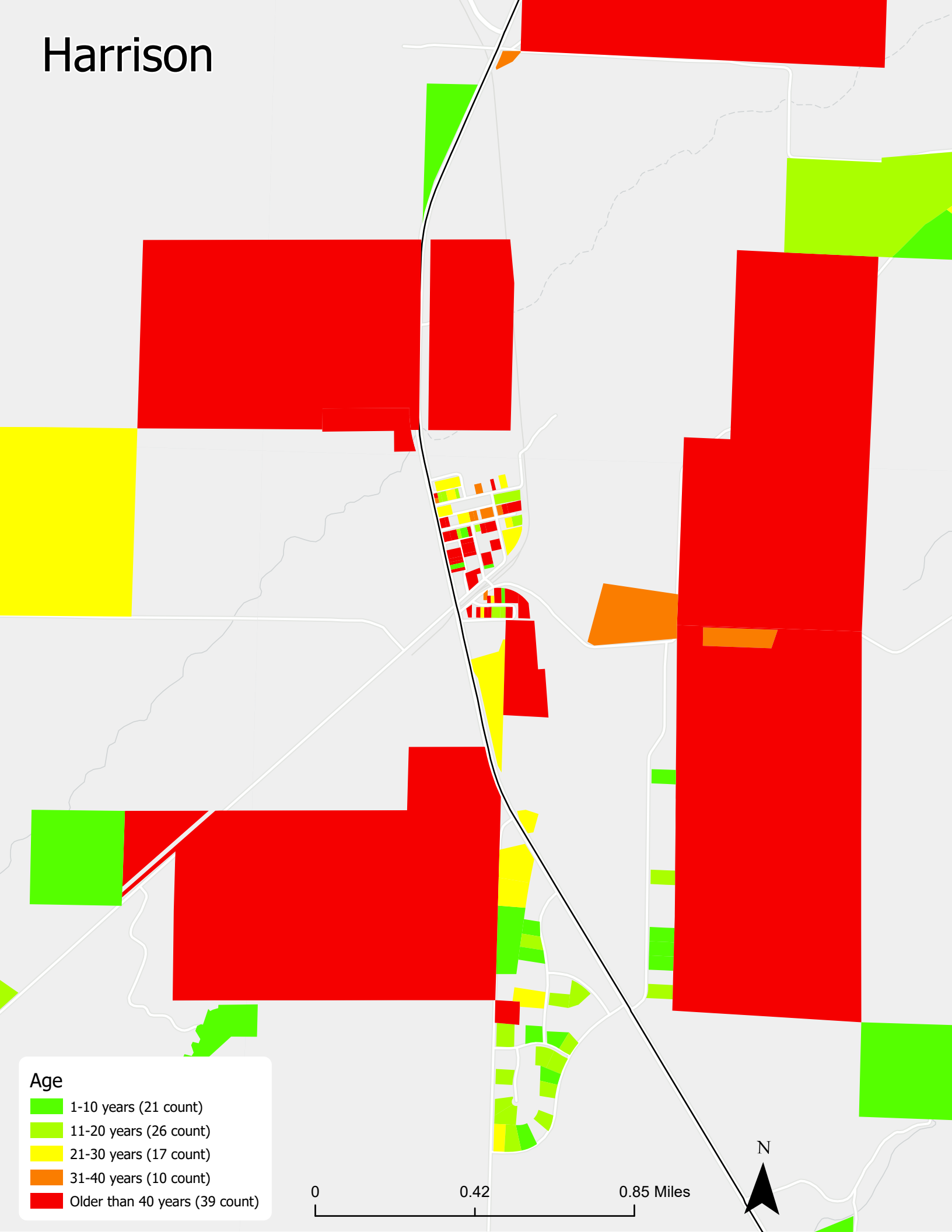
Age

- 1-10 years (232 count)
- 11-20 years (138 count)
- 21-30 years (131 count)
- 31-40 years (76 count)
- Older than 40 years (194 count)

0 0.5 1 Miles



Harrison



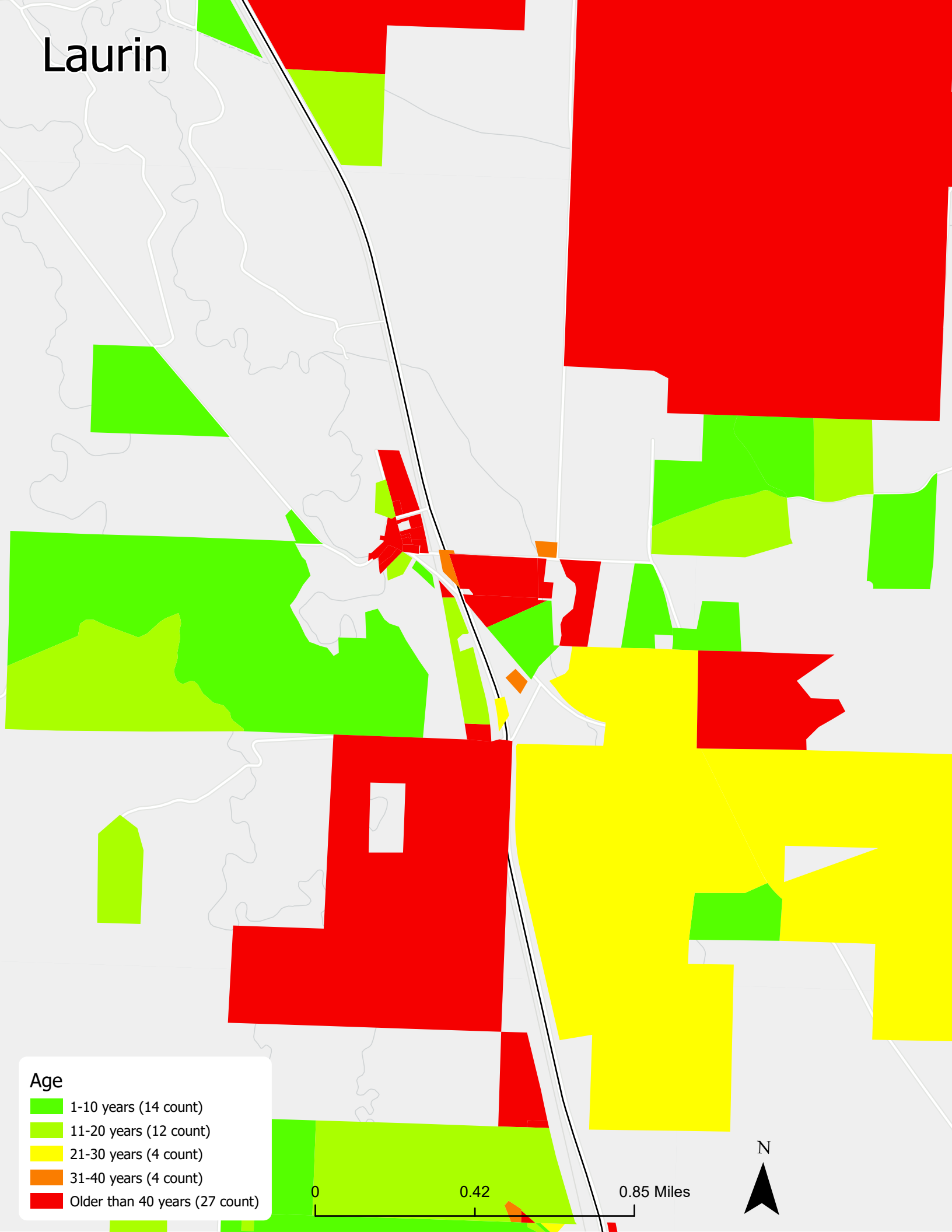
Age

- 1-10 years (21 count)
- 11-20 years (26 count)
- 21-30 years (17 count)
- 31-40 years (10 count)
- Older than 40 years (39 count)

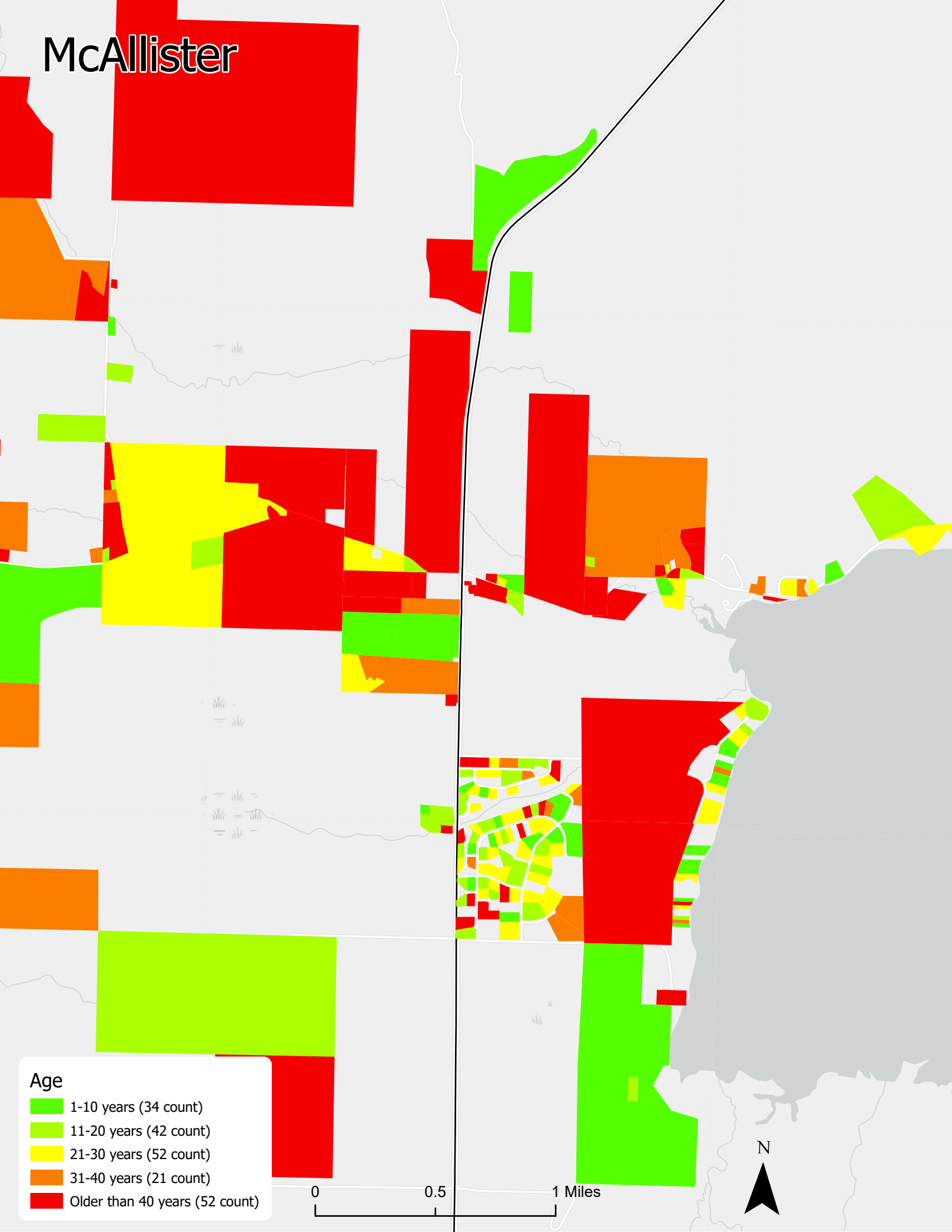
0 0.42 0.85 Miles



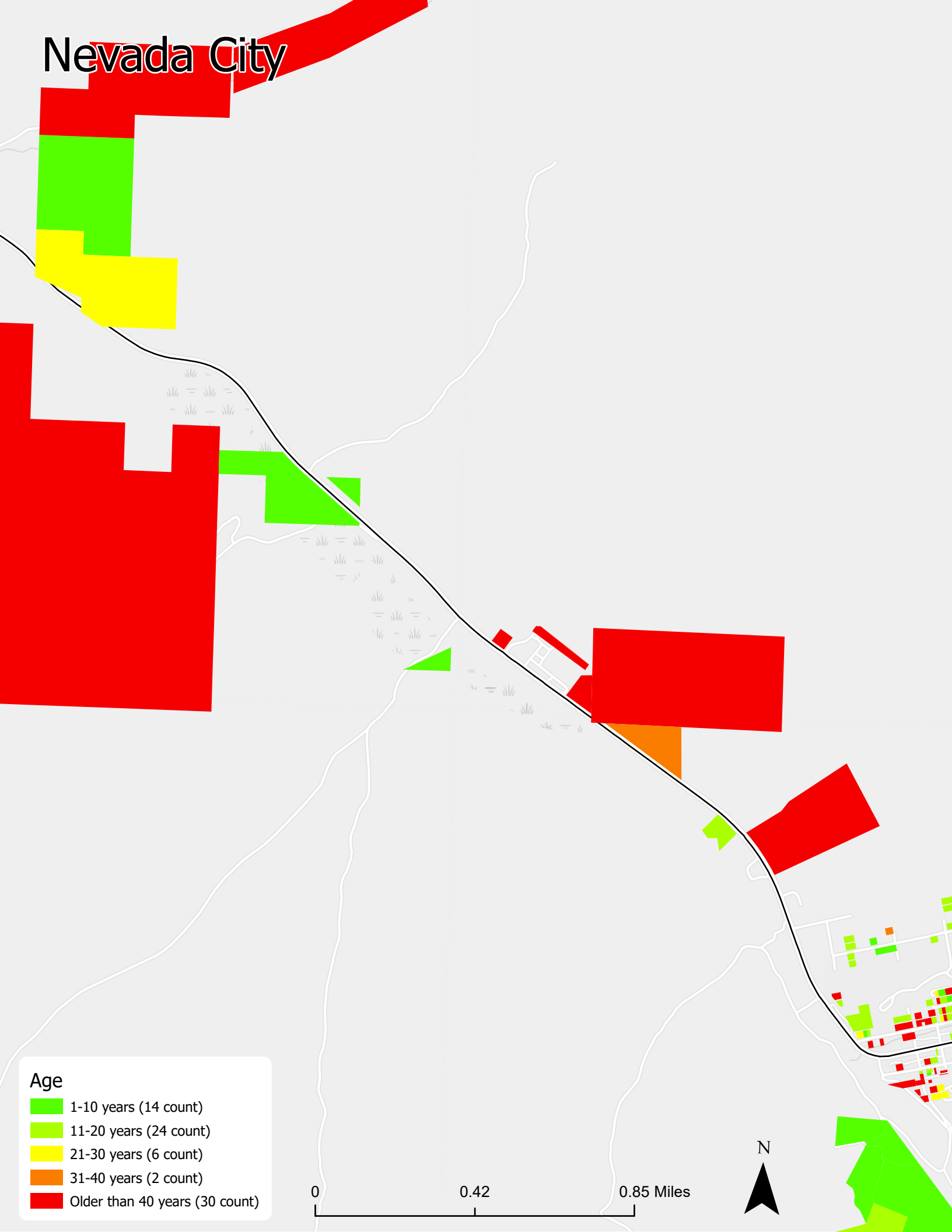
Laurin



McAllister



Nevada City



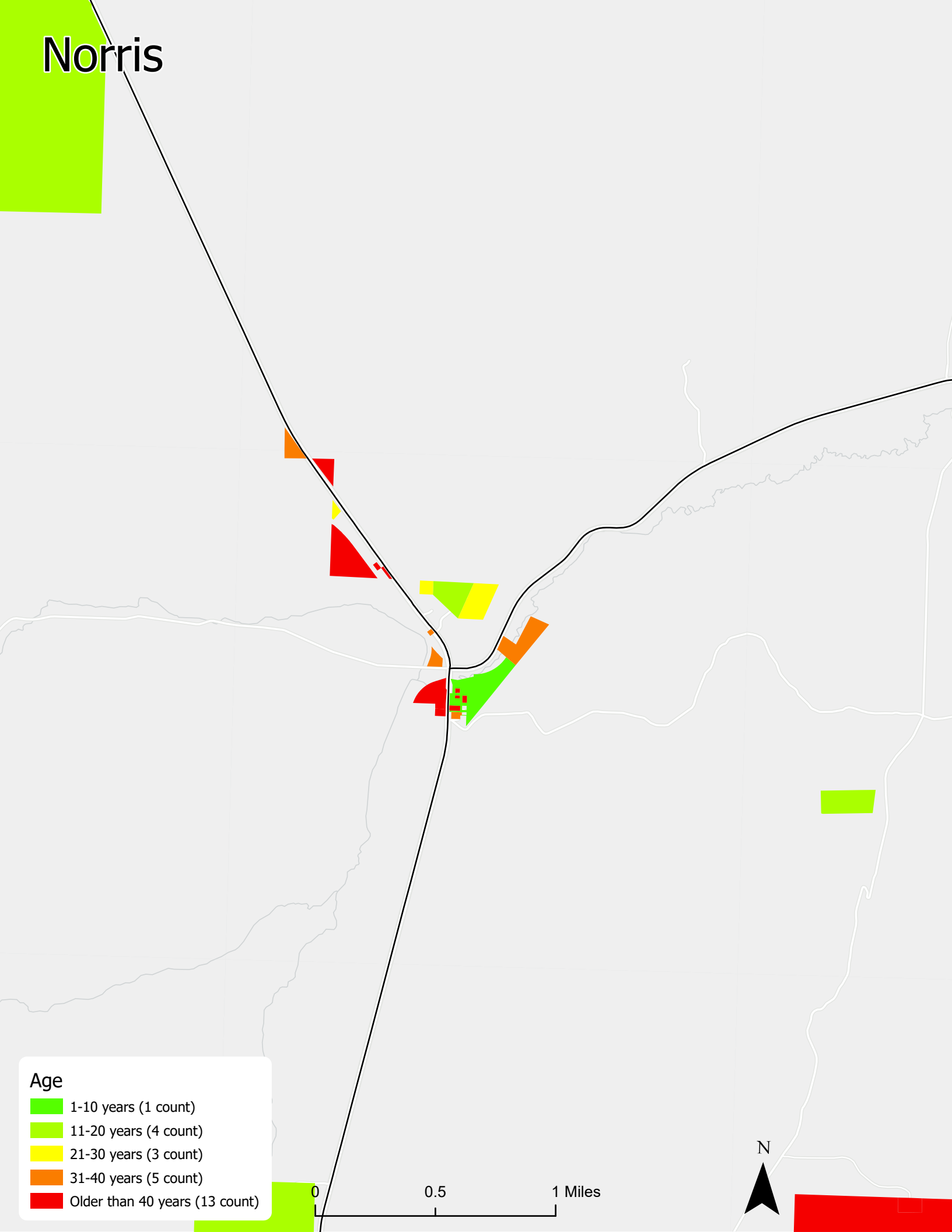
Age

- 1-10 years (14 count)
- 11-20 years (24 count)
- 21-30 years (6 count)
- 31-40 years (2 count)
- Older than 40 years (30 count)

0 0.42 0.85 Miles



Norris



Age

- 1-10 years (1 count)
- 11-20 years (4 count)
- 21-30 years (3 count)
- 31-40 years (5 count)
- Older than 40 years (13 count)

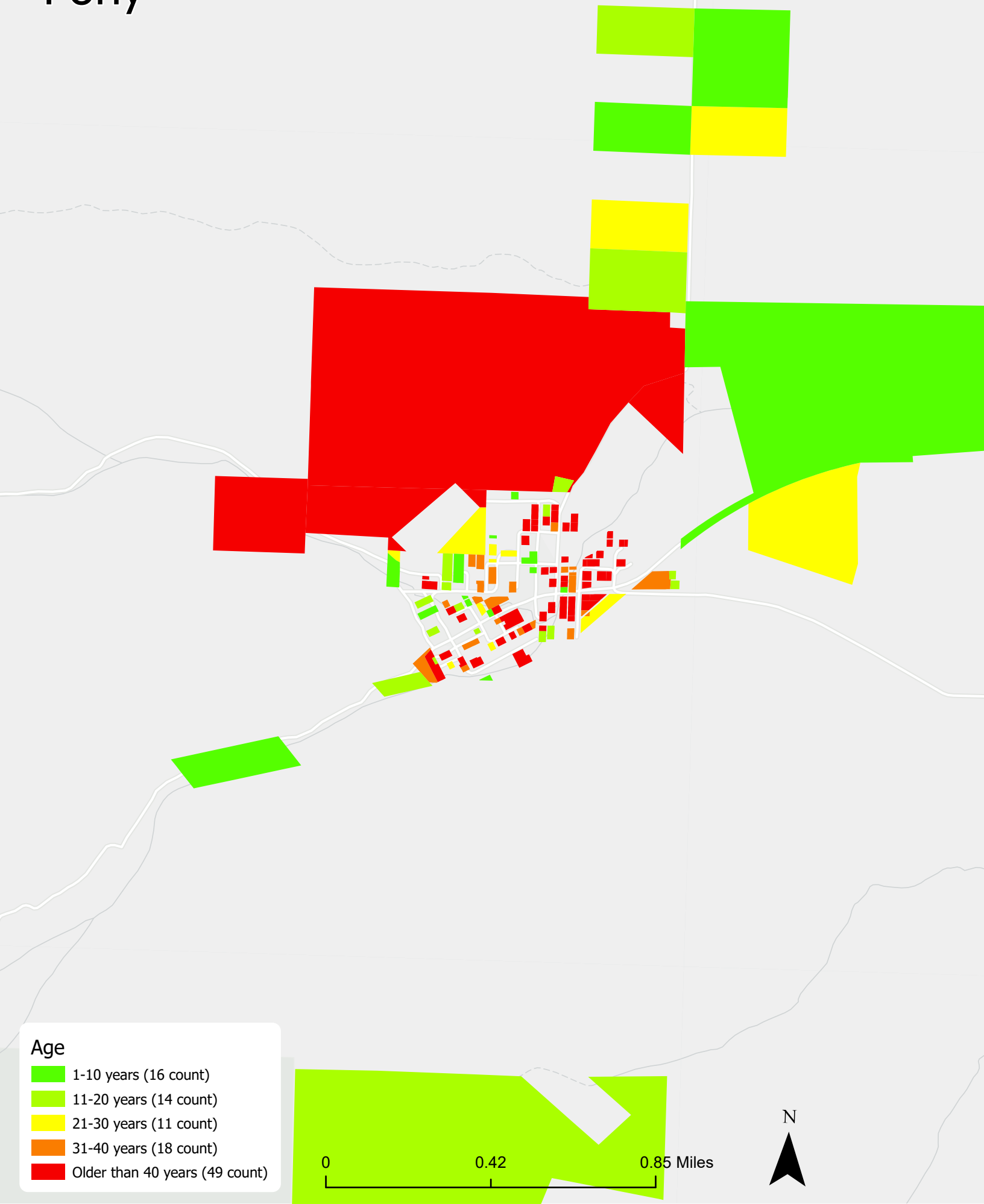
0

0.5

1 Miles

N

Pony



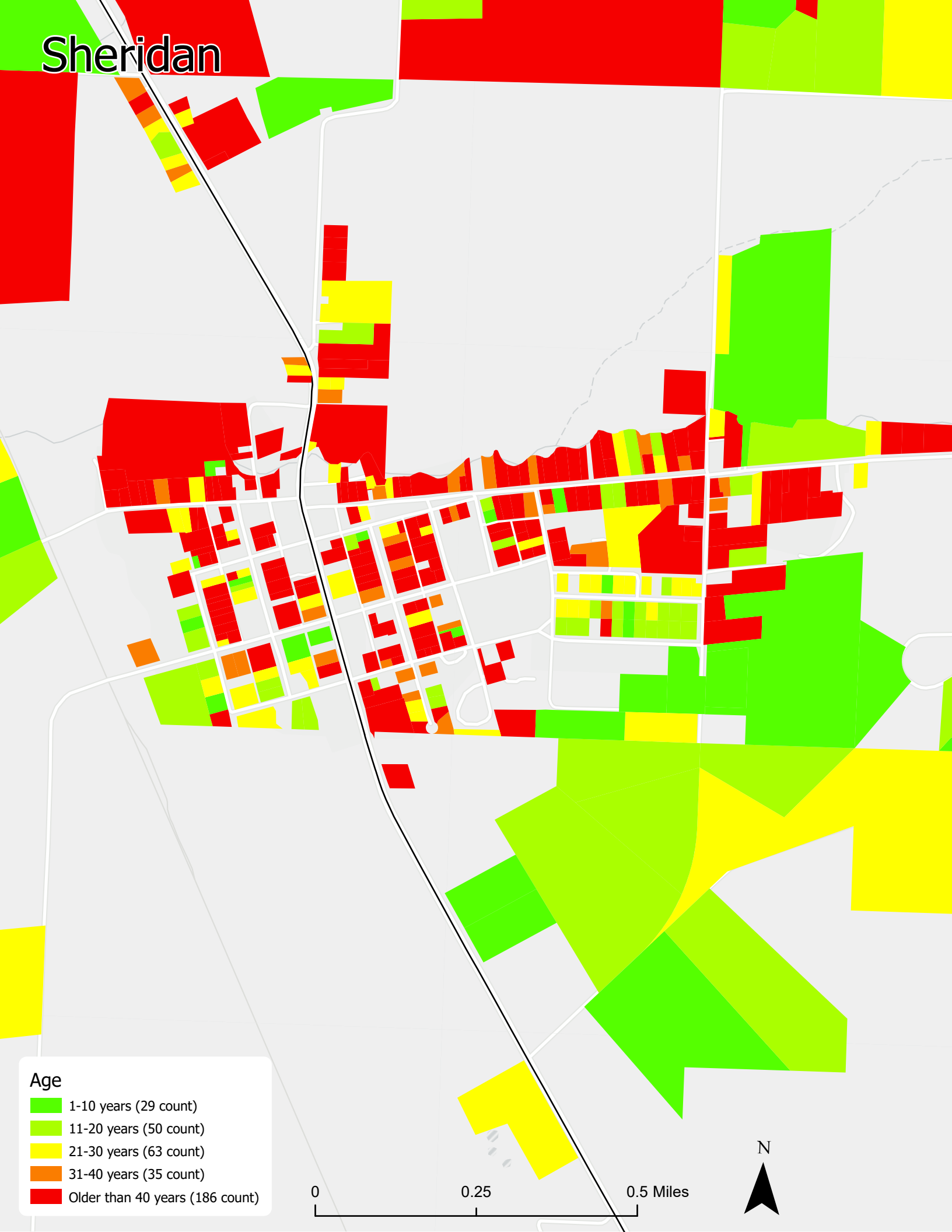
Age

- 1-10 years (16 count)
- 11-20 years (14 count)
- 21-30 years (11 count)
- 31-40 years (18 count)
- Older than 40 years (49 count)

0 0.42 0.85 Miles



Sheridan



Age

- 1-10 years (29 count)
- 11-20 years (50 count)
- 21-30 years (63 count)
- 31-40 years (35 count)
- Older than 40 years (186 count)

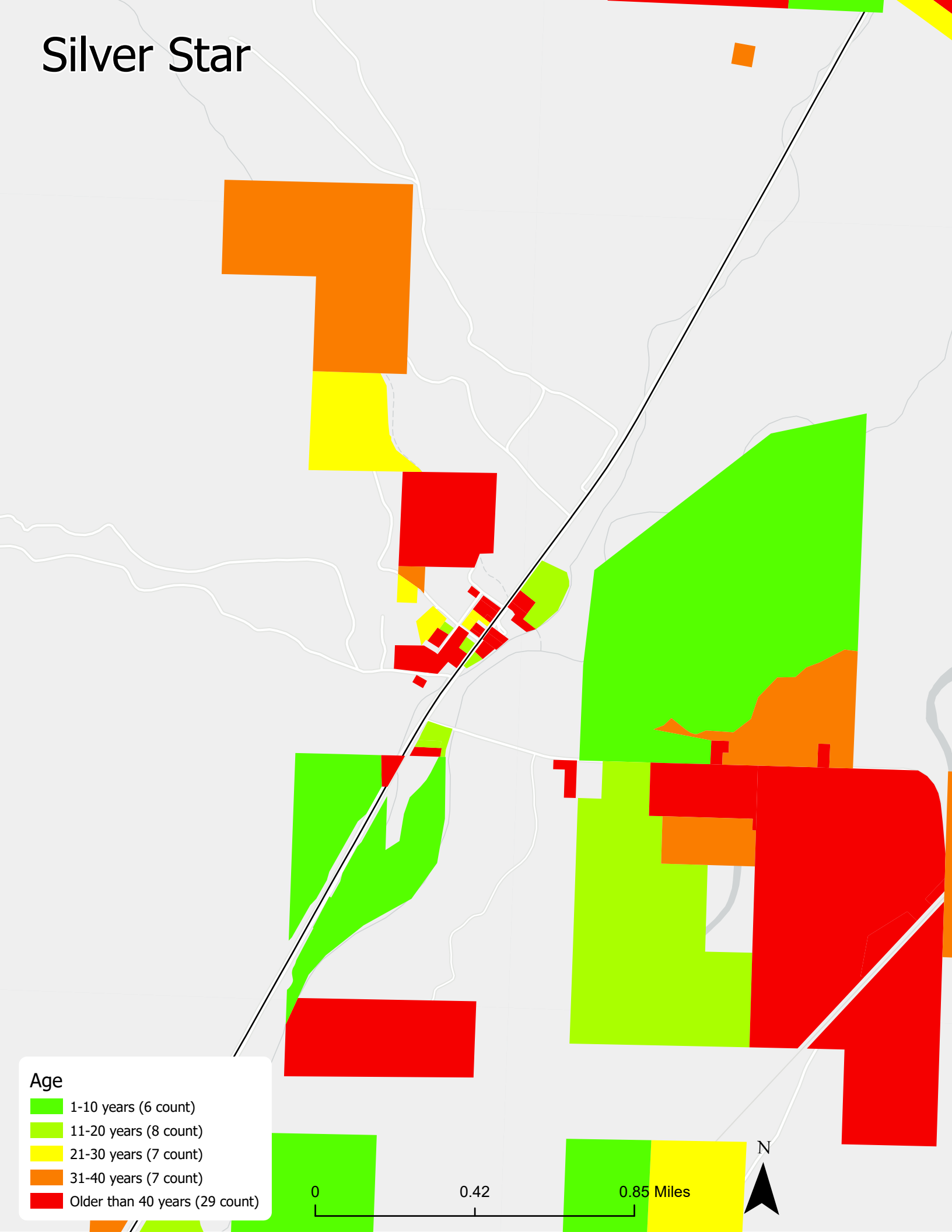
0

0.25

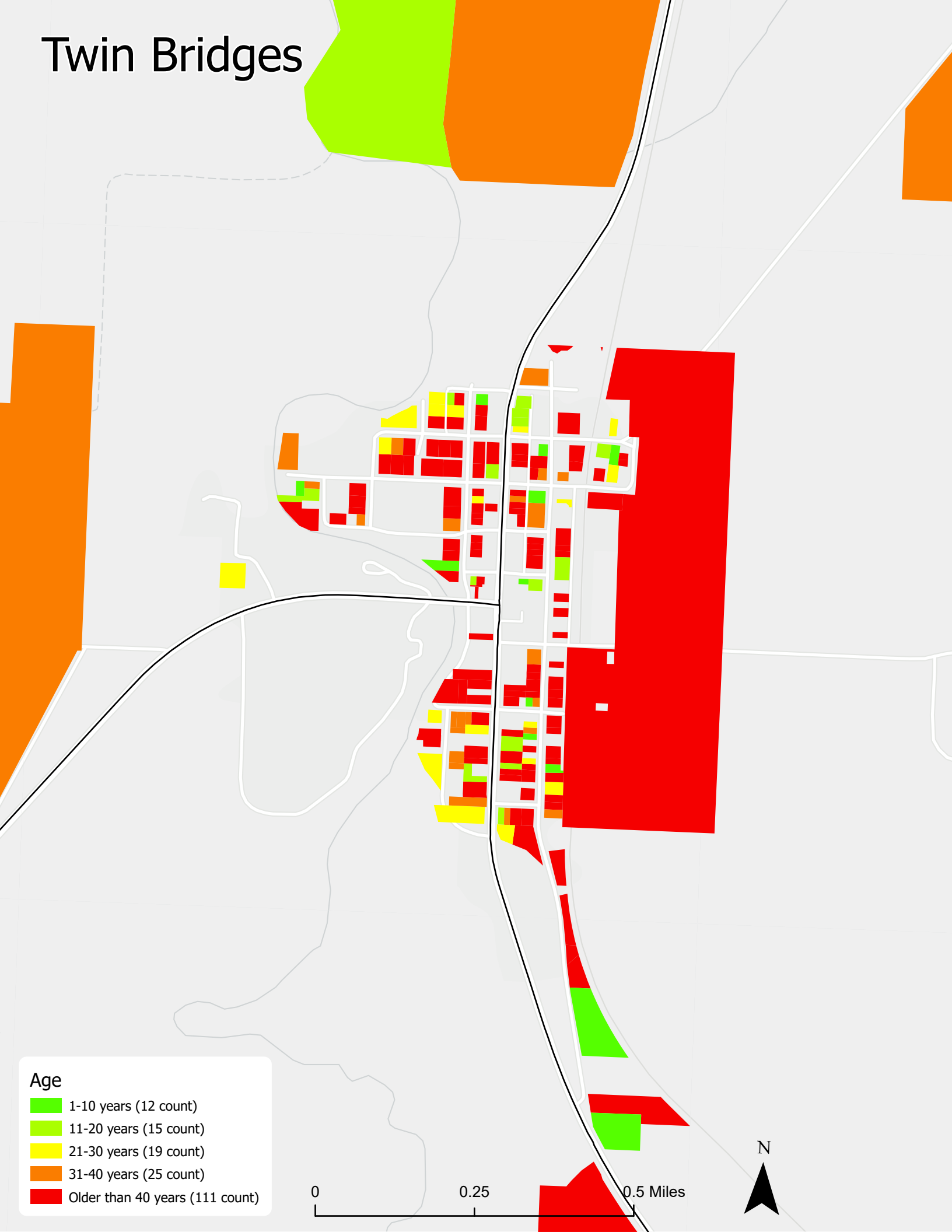
0.5 Miles

N

Silver Star



Twin Bridges



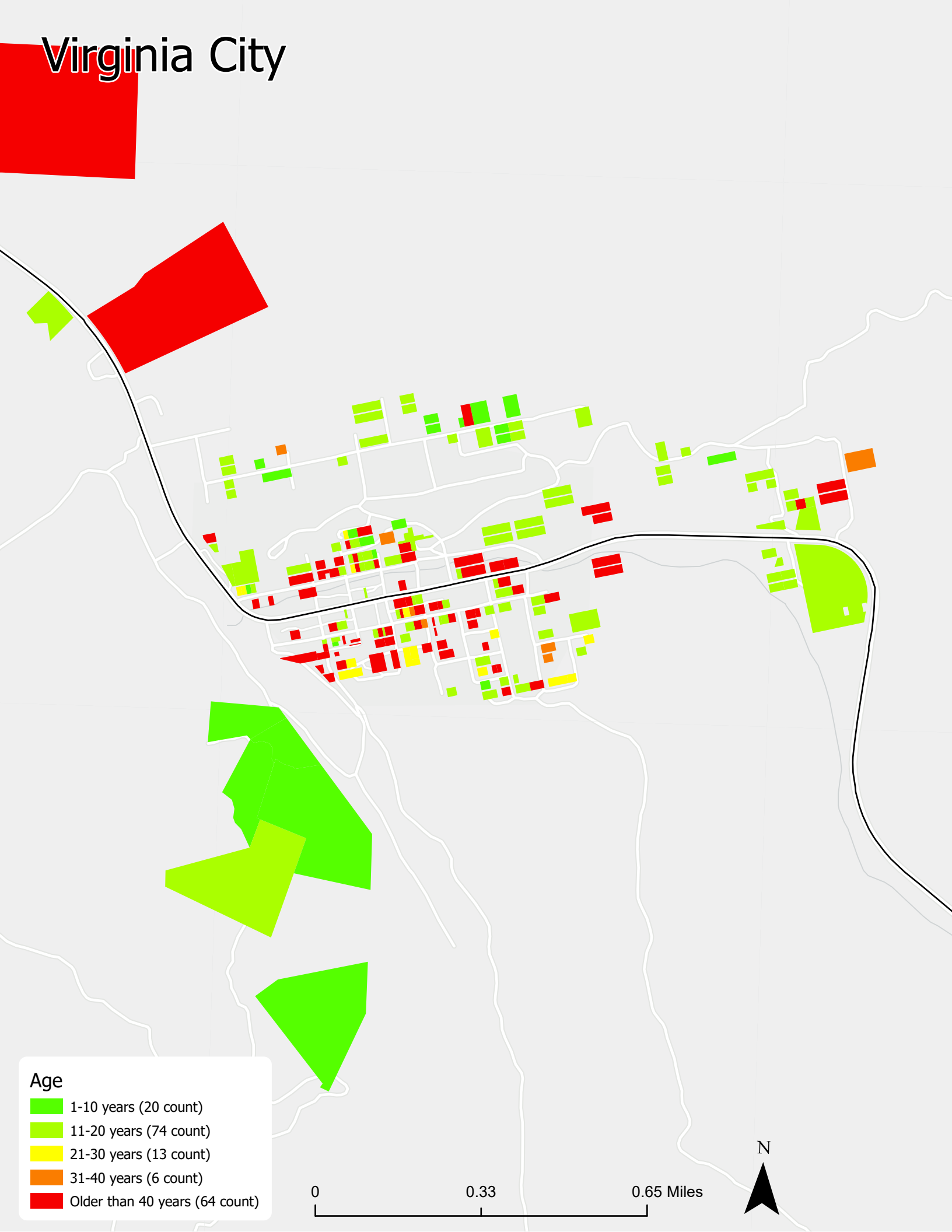
Age

- 1-10 years (12 count)
- 11-20 years (15 count)
- 21-30 years (19 count)
- 31-40 years (25 count)
- Older than 40 years (111 count)

0 0.25 0.5 Miles



Virginia City



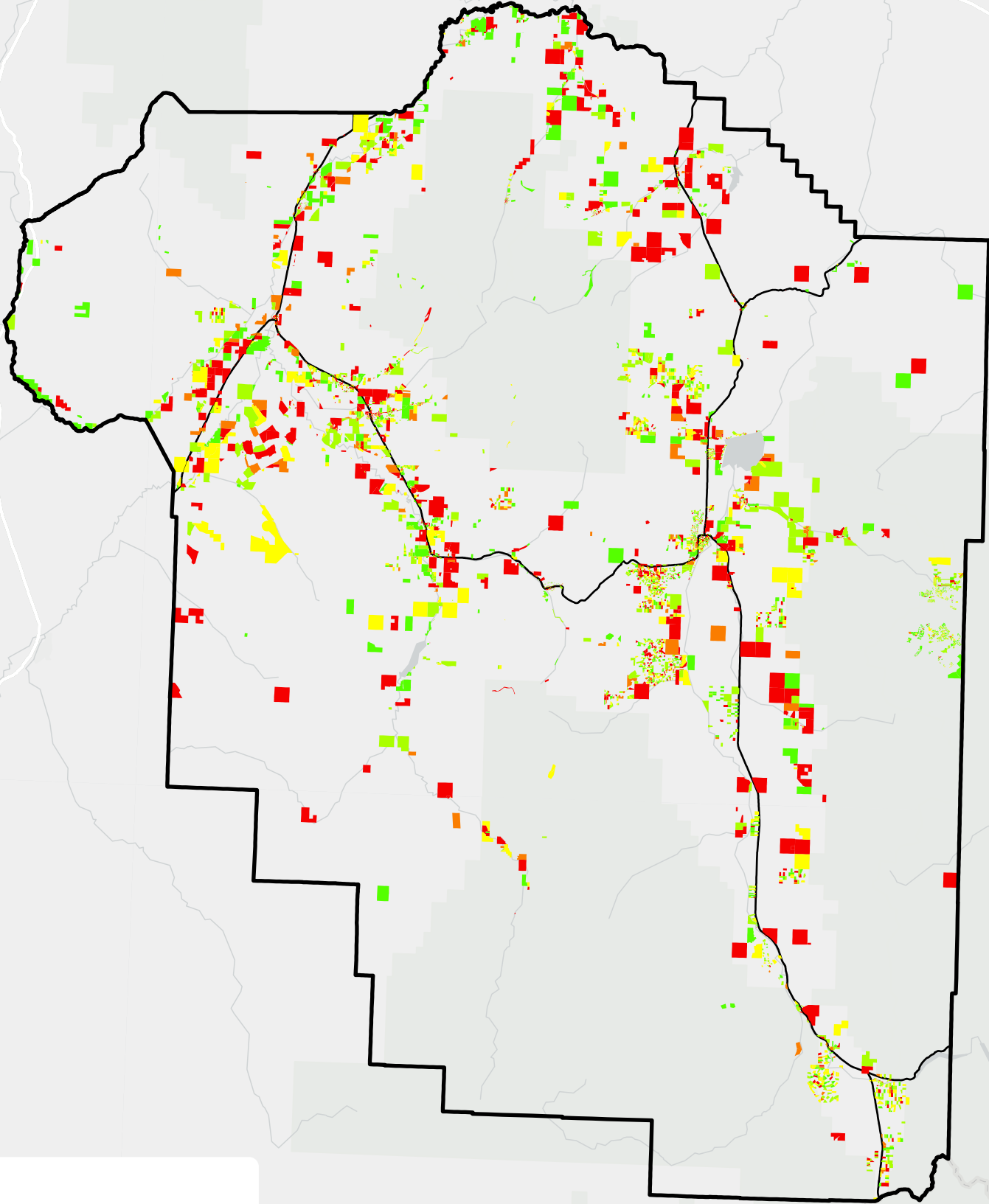
Age

- 1-10 years (20 count)
- 11-20 years (74 count)
- 21-30 years (13 count)
- 31-40 years (6 count)
- Older than 40 years (64 count)

0 0.33 0.65 Miles



Madison County



Age

- 1-10 years (1,238 count)
- 11-20 years (1,465 count)
- 21-30 years (991 count)
- 31-40 years (508 count)
- Older than 40 years (1,470 count)

0 12.5 25 Miles

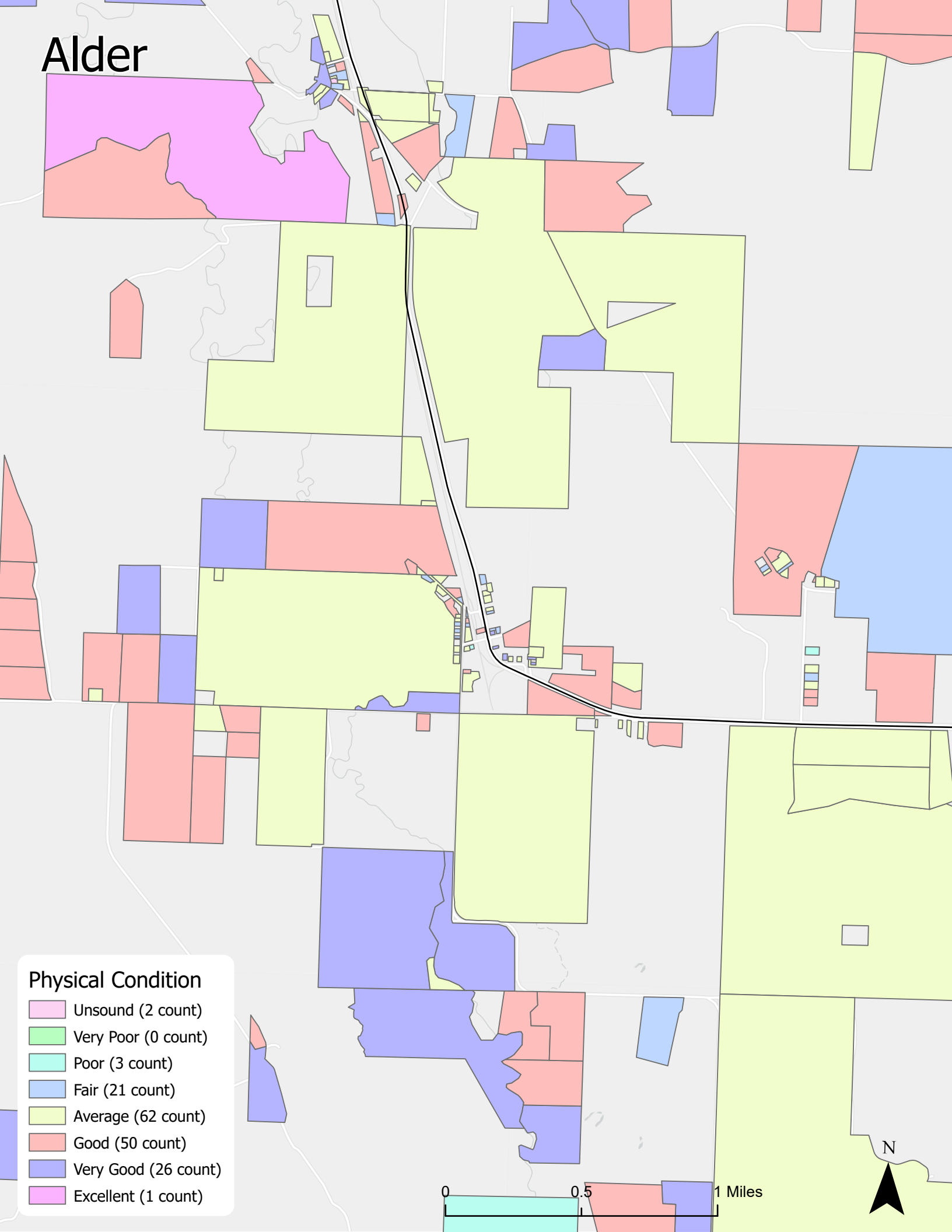


APPENDIX H

HOUSING CONDITION COMMUNITY MAPS

 **HYALITE**

Alder



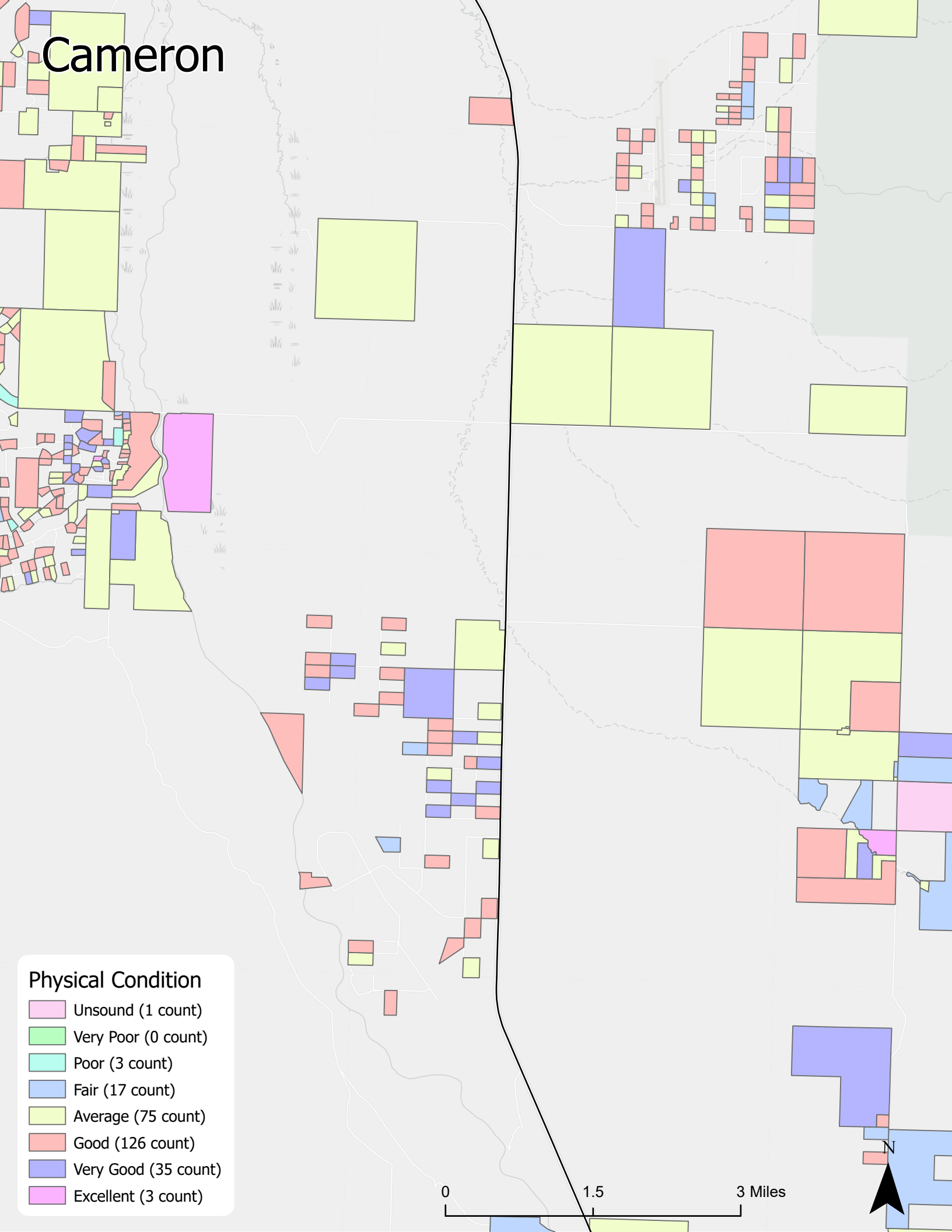
Physical Condition

- Unsound (2 count)
- Very Poor (0 count)
- Poor (3 count)
- Fair (21 count)
- Average (62 count)
- Good (50 count)
- Very Good (26 count)
- Excellent (1 count)

0 0.5 1 Miles

N

Cameron



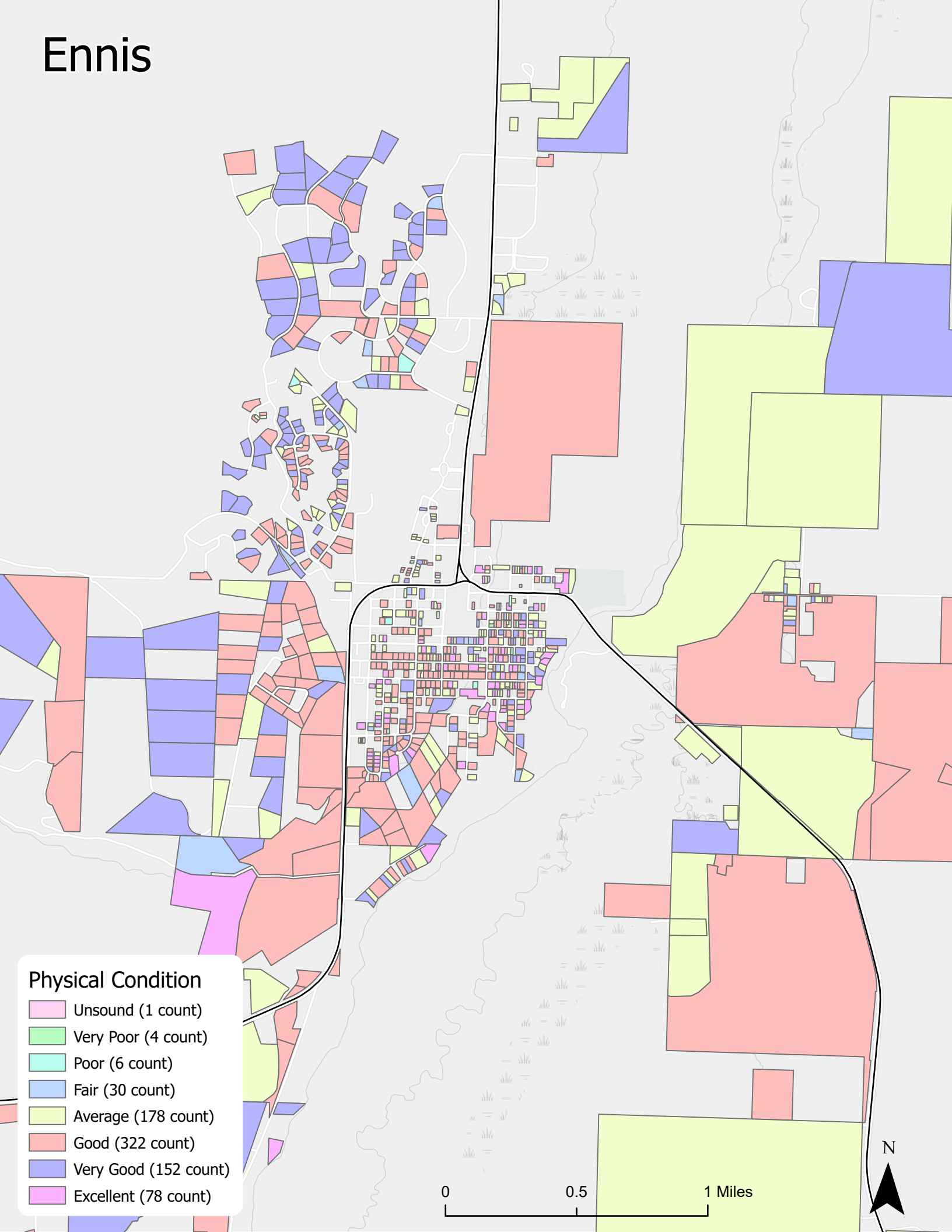
Physical Condition

- Unsound (1 count)
- Very Poor (0 count)
- Poor (3 count)
- Fair (17 count)
- Average (75 count)
- Good (126 count)
- Very Good (35 count)
- Excellent (3 count)

0 1.5 3 Miles



Ennis



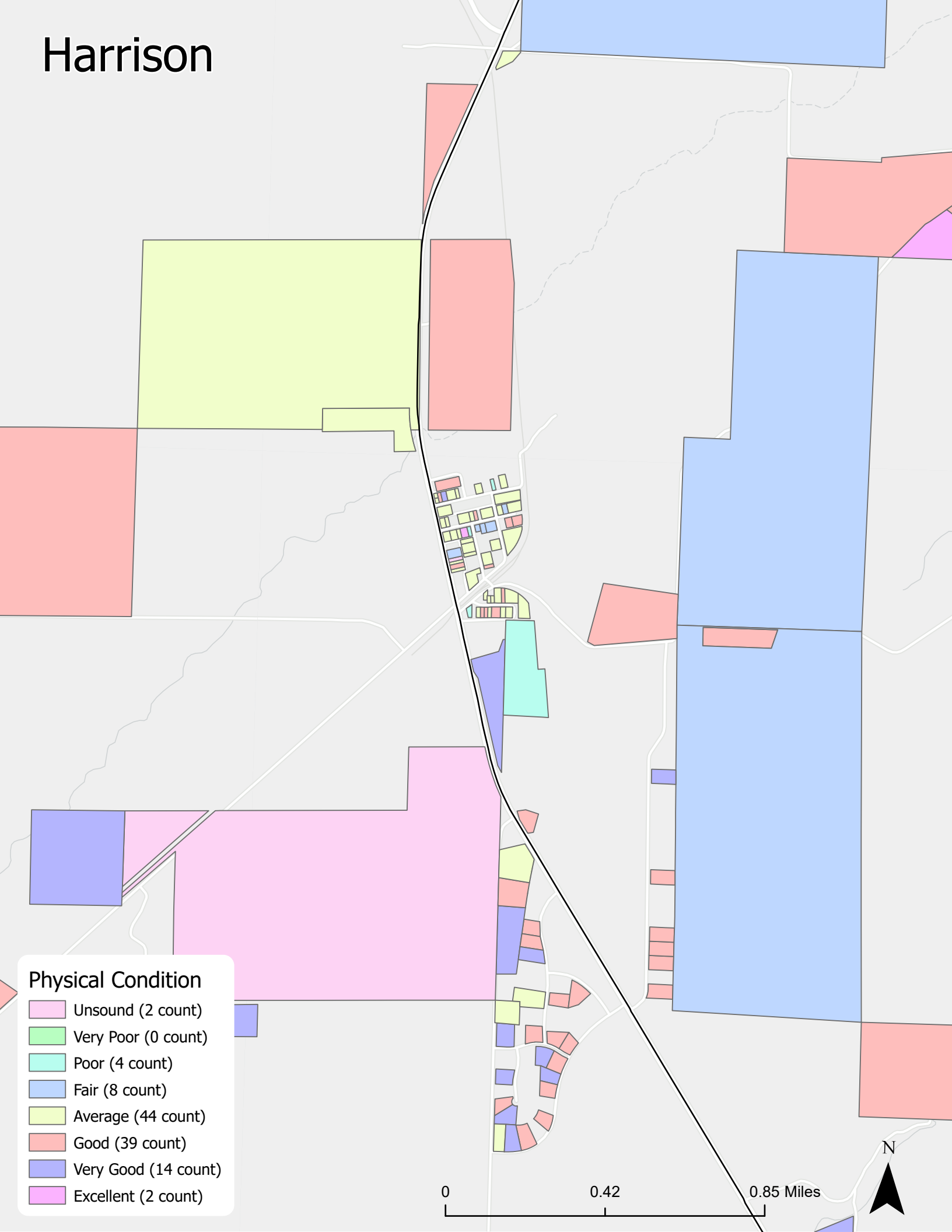
Physical Condition

- Unsound (1 count)
- Very Poor (4 count)
- Poor (6 count)
- Fair (30 count)
- Average (178 count)
- Good (322 count)
- Very Good (152 count)
- Excellent (78 count)

0 0.5 1 Miles

N

Harrison



Physical Condition

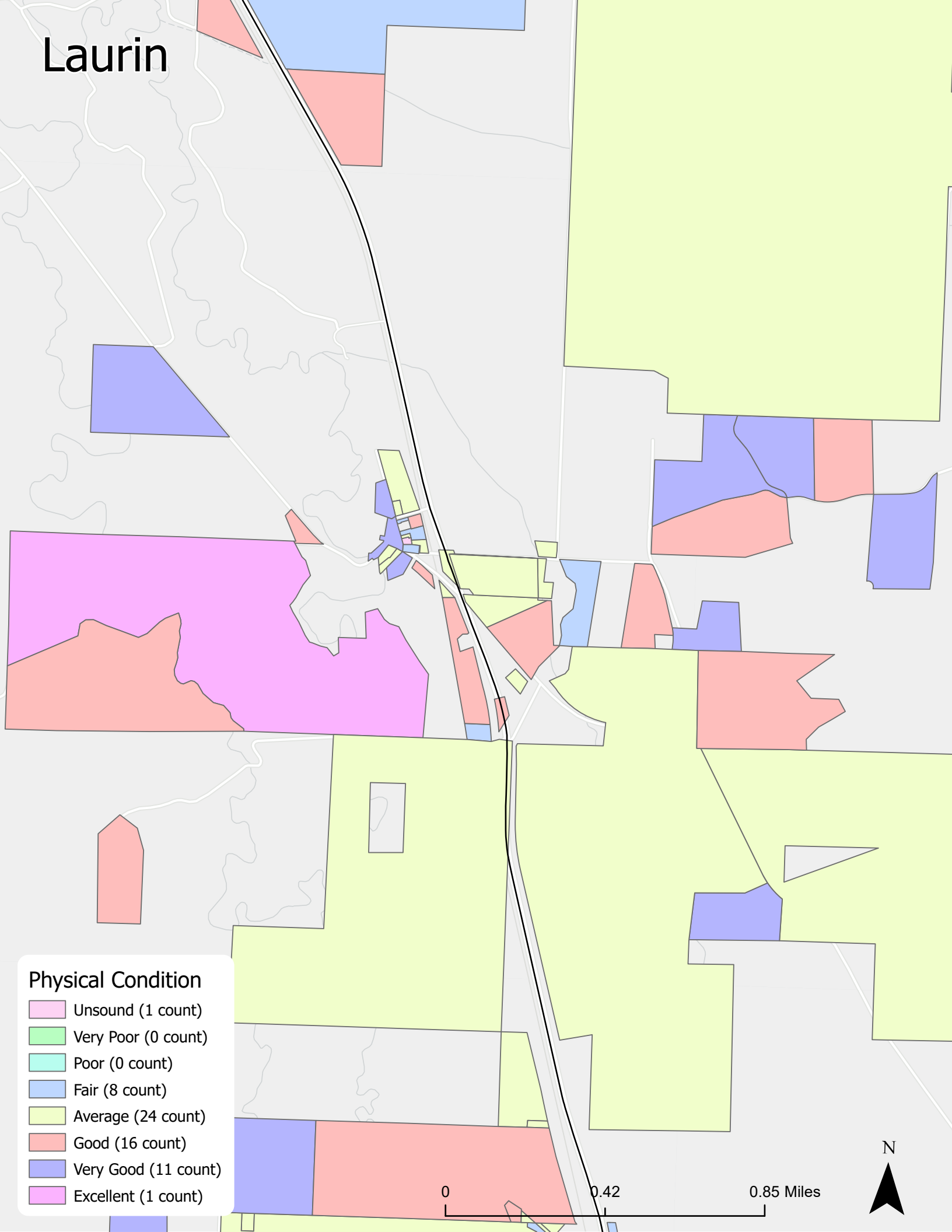
- Unsound (2 count)
- Very Poor (0 count)
- Poor (4 count)
- Fair (8 count)
- Average (44 count)
- Good (39 count)
- Very Good (14 count)
- Excellent (2 count)

0 0.42 0.85 Miles

N



Laurin



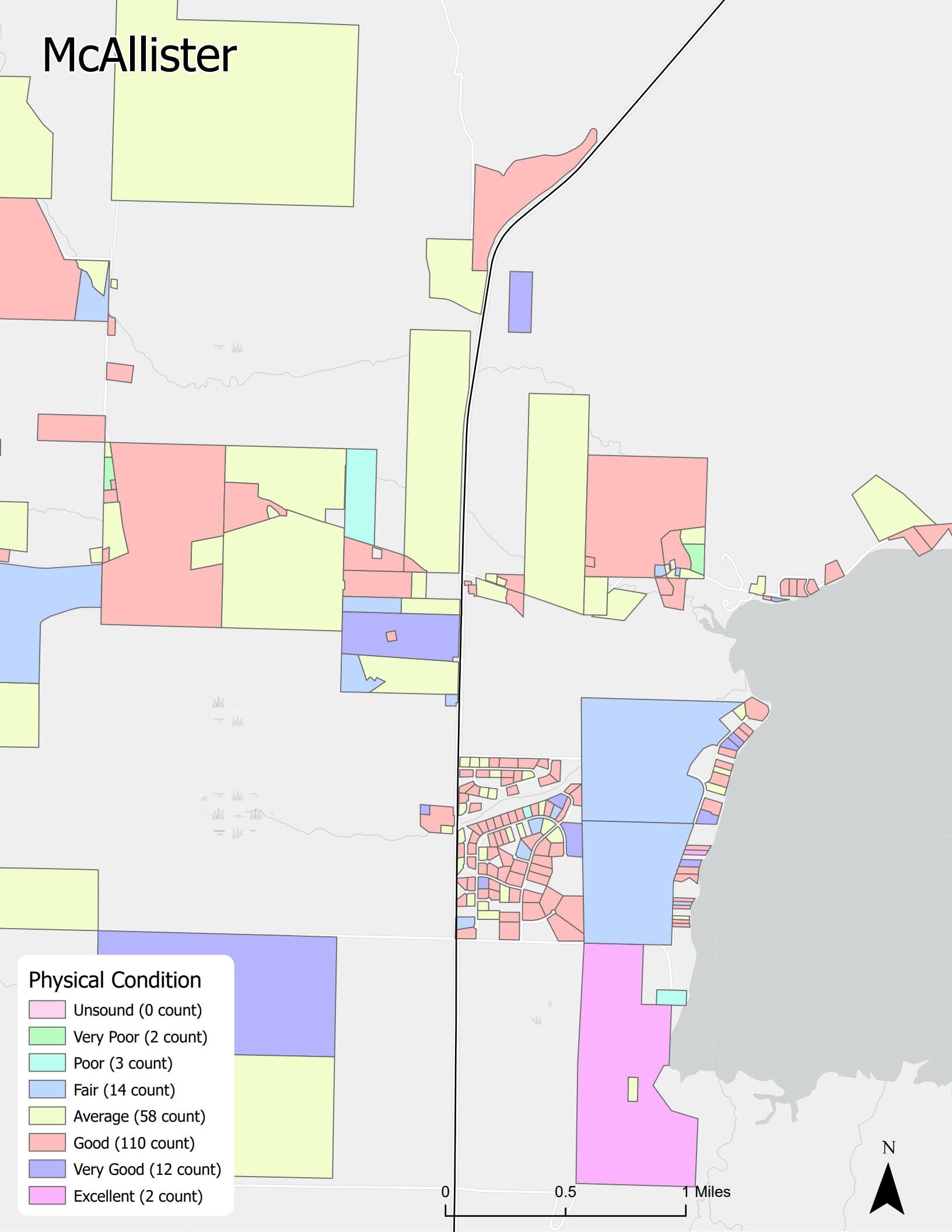
Physical Condition

- Unsound (1 count)
- Very Poor (0 count)
- Poor (0 count)
- Fair (8 count)
- Average (24 count)
- Good (16 count)
- Very Good (11 count)
- Excellent (1 count)

0 0.42 0.85 Miles



McAllister



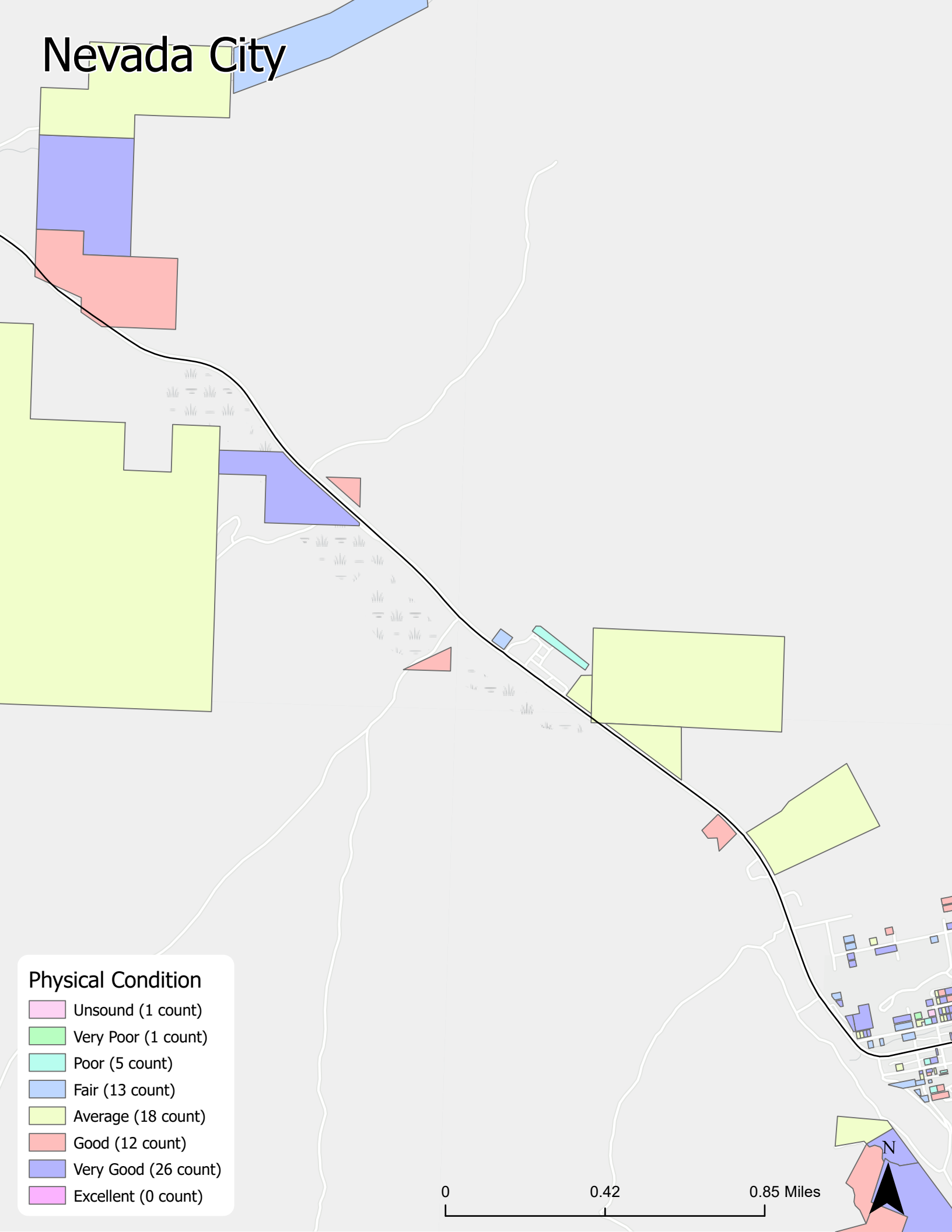
Physical Condition

- Unsound (0 count)
- Very Poor (2 count)
- Poor (3 count)
- Fair (14 count)
- Average (58 count)
- Good (110 count)
- Very Good (12 count)
- Excellent (2 count)

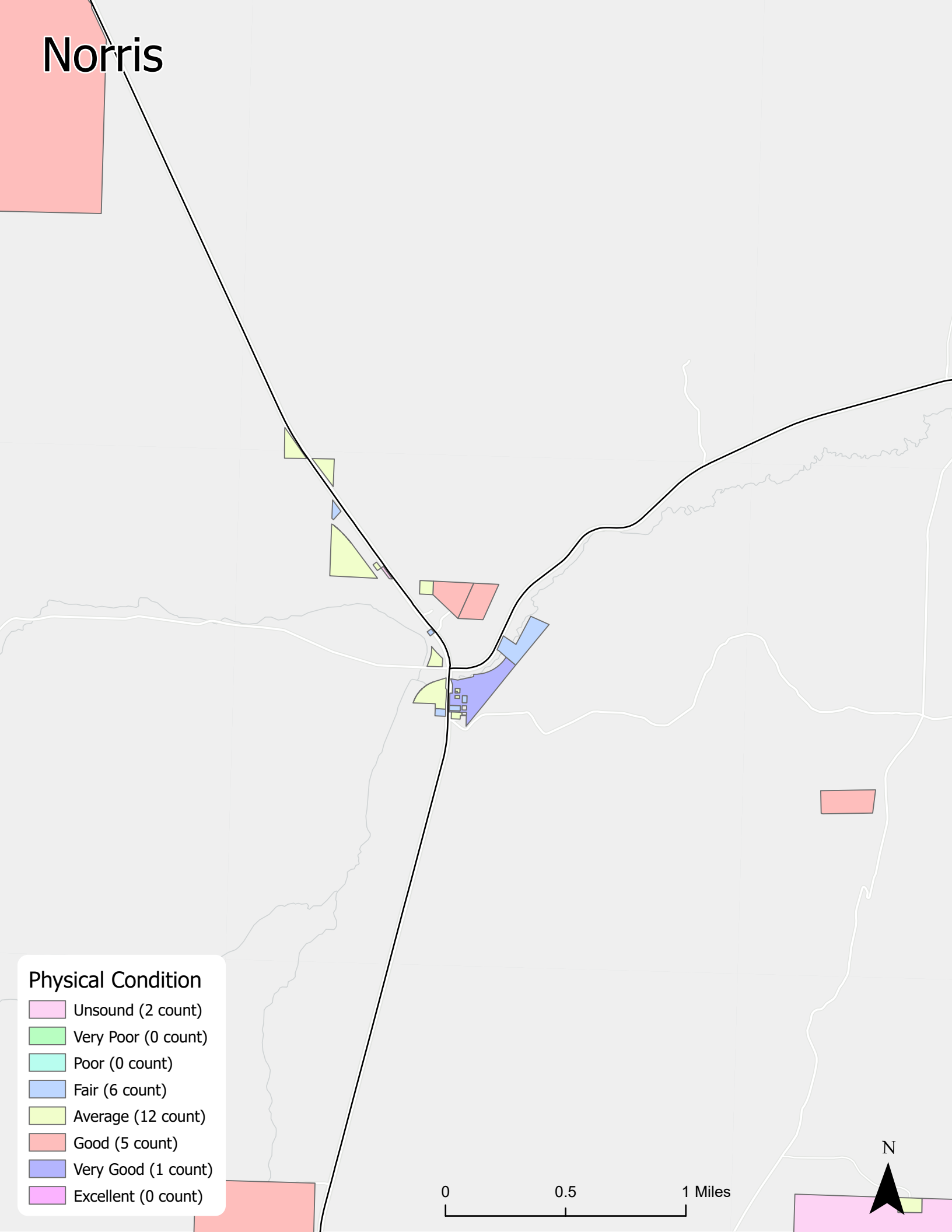
0 0.5 1 Miles



Nevada City



Norris



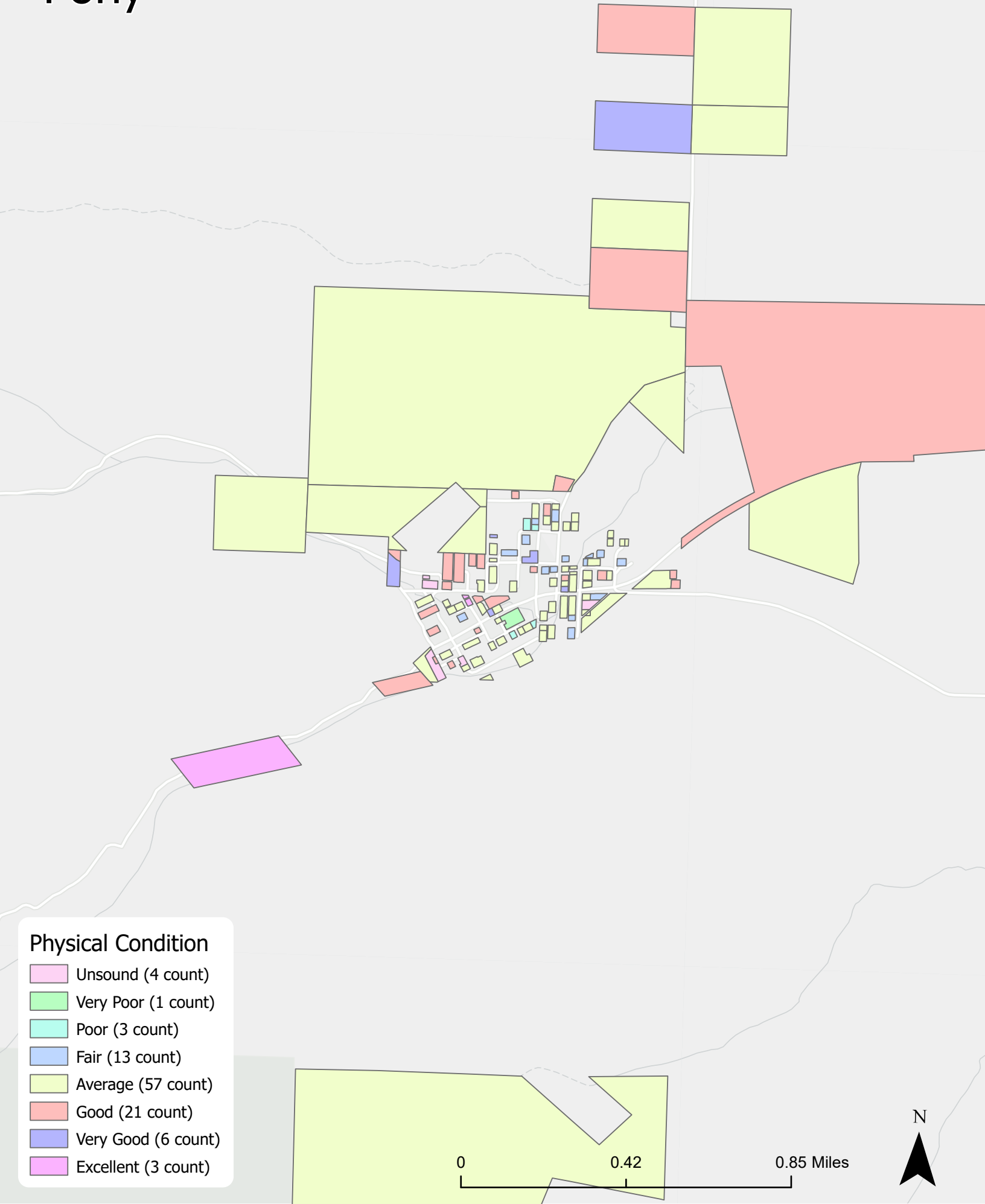
Physical Condition

- Unsound (2 count)
- Very Poor (0 count)
- Poor (0 count)
- Fair (6 count)
- Average (12 count)
- Good (5 count)
- Very Good (1 count)
- Excellent (0 count)

0 0.5 1 Miles

N

Pony



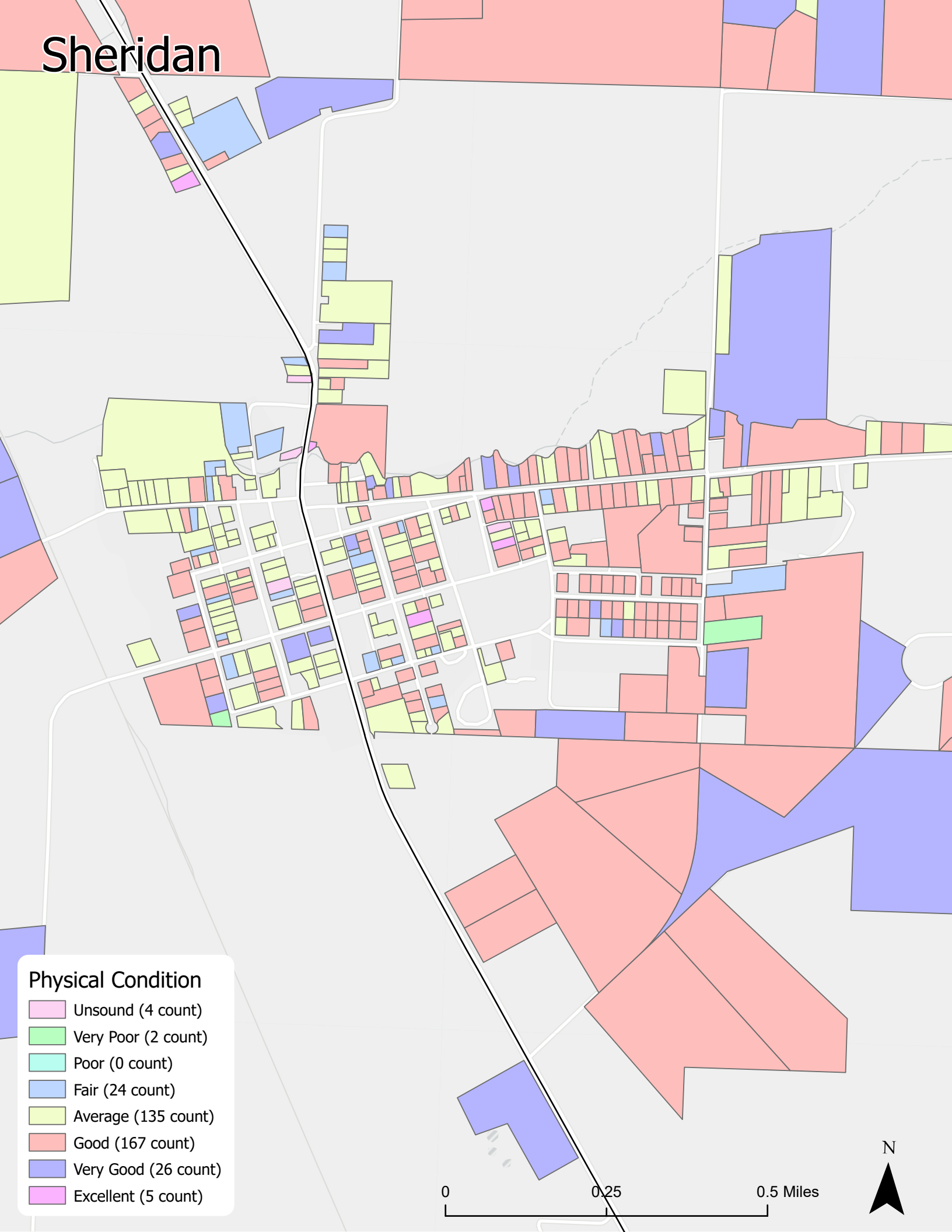
Physical Condition

- Unsound (4 count)
- Very Poor (1 count)
- Poor (3 count)
- Fair (13 count)
- Average (57 count)
- Good (21 count)
- Very Good (6 count)
- Excellent (3 count)

0 0.42 0.85 Miles



Sheridan



Physical Condition

- Unsound (4 count)
- Very Poor (2 count)
- Poor (0 count)
- Fair (24 count)
- Average (135 count)
- Good (167 count)
- Very Good (26 count)
- Excellent (5 count)

0 0.25 0.5 Miles

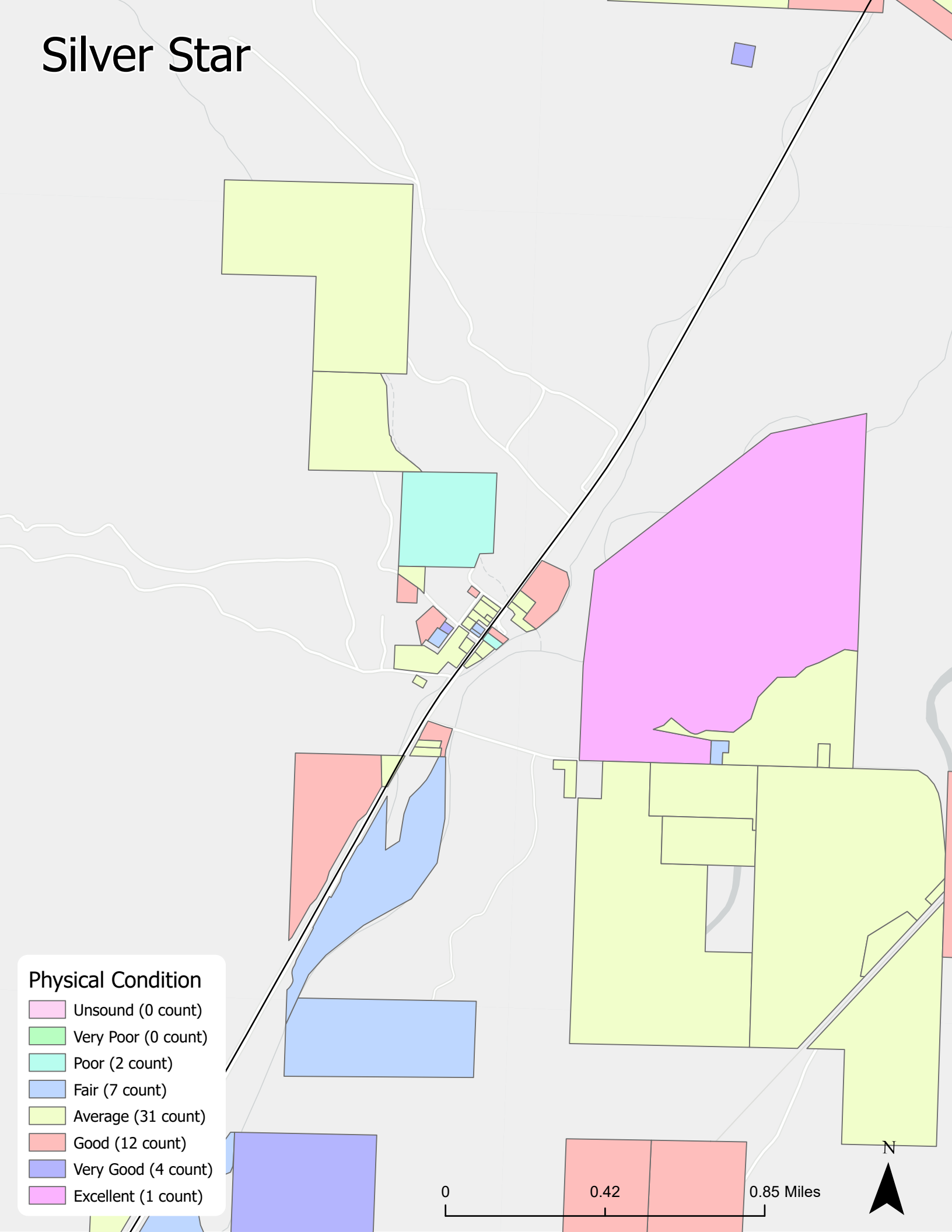


Silver Star

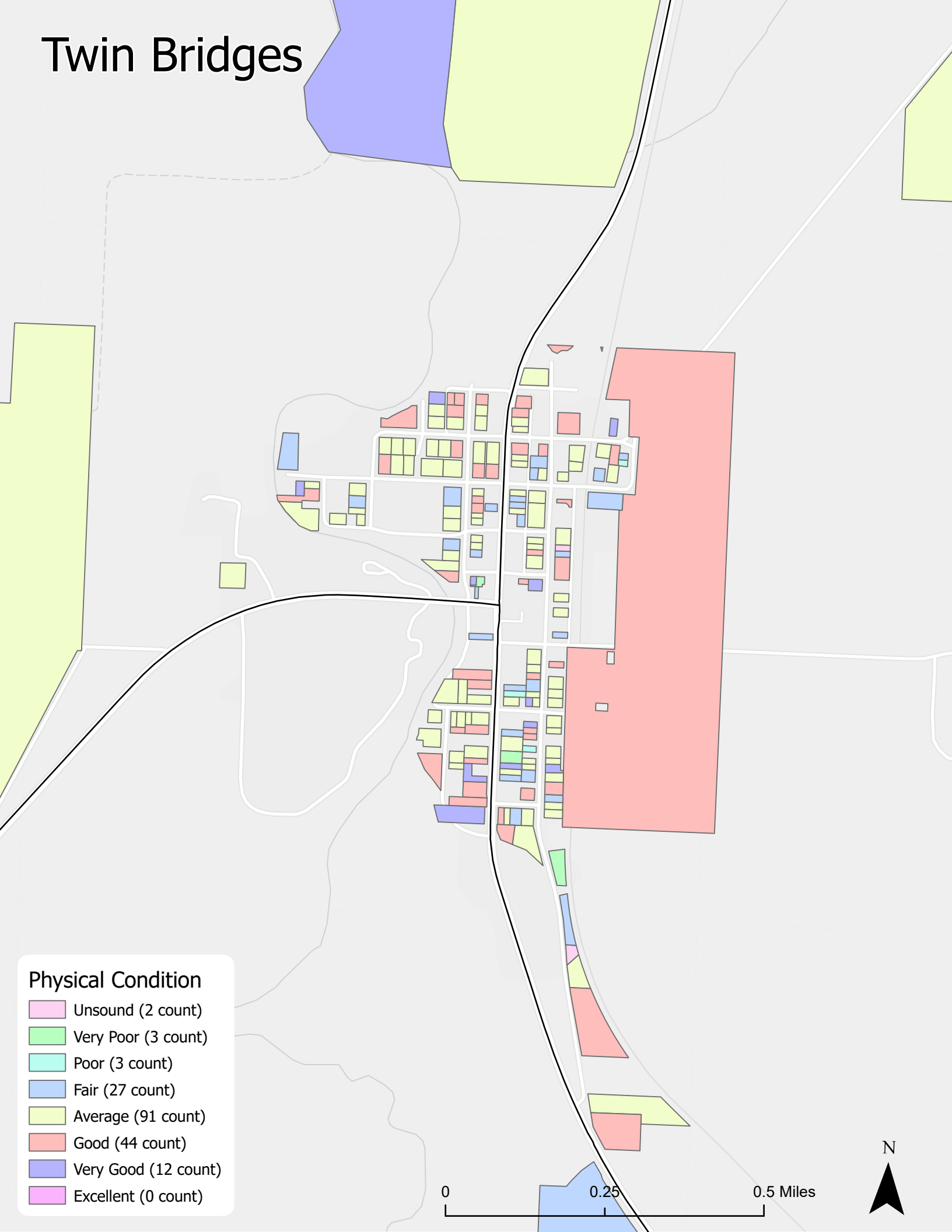
Physical Condition

- Unsound (0 count)
- Very Poor (0 count)
- Poor (2 count)
- Fair (7 count)
- Average (31 count)
- Good (12 count)
- Very Good (4 count)
- Excellent (1 count)

0 0.42 0.85 Miles



Twin Bridges



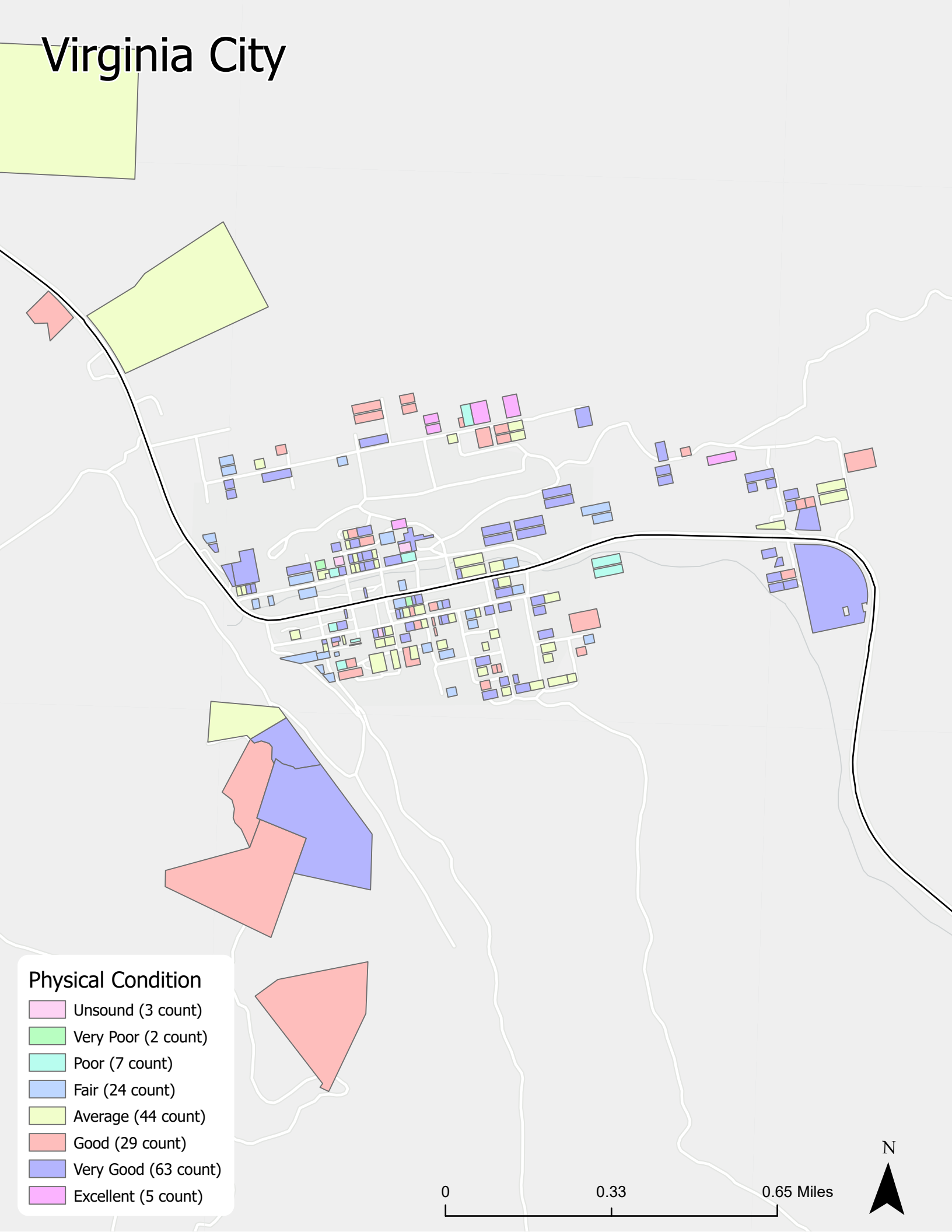
Physical Condition

- Unsound (2 count)
- Very Poor (3 count)
- Poor (3 count)
- Fair (27 count)
- Average (91 count)
- Good (44 count)
- Very Good (12 count)
- Excellent (0 count)

0 0.25 0.5 Miles



Virginia City



Physical Condition

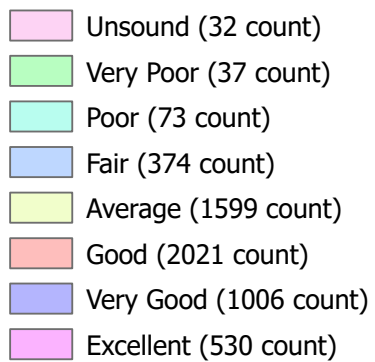
- Unsound (3 count)
- Very Poor (2 count)
- Poor (7 count)
- Fair (24 count)
- Average (44 count)
- Good (29 count)
- Very Good (63 count)
- Excellent (5 count)

0 0.33 0.65 Miles



Madison County

Physical Condition



0 12.5 25 Miles

N



APPENDIX I

BLANK SURVEY QUESTIONS

HYALITE

APPENDIX I.1

BLANK SURVEY QUESTIONS WATER

HYALITE

Water Assessment Survey

1) Population Within Service Area

- a) Equivalent Dwelling Units: _____
- b) Population: _____
- c) Commercial/Industrial Uses: _____

2) All On-Site/Individual Wells? _____

- a) Is deep groundwater limiting development? _____

- b) Is water quality limiting development? _____

- c) Are low yield wells limiting development? _____

- d) Are there any existing or planned large public or community systems within the planning area? If so please explain. _____

- e) Are there any other known issues with water supply via wells within the planning area? _____

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate water capacity or management? If yes please explain. _____

(If there is a central public water system please continue.)

4) Demands

a) Summer Average Day Demand: _____

b) Winter Average Day Demand (no irrigation): _____

c) Max Day Demand: _____

d) Peak Hour Demand: _____

e) Are demands assumed or measured? Please briefly explain methodology: _____

f) Is fire flow provided? _____

5) Source Water

a) Description of Source.

i) Type (Surface or Groundwater): _____

ii) If surface, what is the source water body: _____

iii) Total Source Water Capacity in Gallons Per Day: _____

iv) General Physical Condition of Well(s) or Intake: _____

v) Are water rights limiting development? If so explain: _____

vi) Is physical pumping capacity limiting? If so explain: _____

vii) Please list known source water quality issues, if any: _____

b) Is there raw water storage? If so please describe: _____

c) Do you pump directly to distribution? If yes please describe pumping, metering and treatment works: _____

d) Please describe any known deficiencies with the source water not covered in the above:

6) Water Treatment System

a) Current Capacity: _____

b) Current Average Daily Flow Being Treated: _____

c) Are there plans for capacity increase? If so please explain: _____

d) Please describe the treatment type (e.g., filtration, reverse osmosis, UV, etc.): _____

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

h) Please describe the maintenance requirements and schedule: _____

7) Finished Water Storage

a) Multiple storage facilities? If yes please describe: _____

b) Type (e.g., elevated steel, buried concrete, etc.): _____

c) Total Working Volume: _____

d) Total Volume Dedicated to Fire Flow: _____

e) Inlet Pipe Size: _____

f) Outlet Pressure at Ground Level: _____

g) Outlet Pipe Size: _____

h) Age of Storage Tank/Reservoir: _____

i) General Condition: _____

j) Known Inadequacies: _____

k) Please describe the maintenance requirements and schedule: _____

8) Distribution System

a) Description of distribution system: _____

i) General Condition: _____

ii) Age of Newest/Oldest Pipe or Component in Use: _____

iii) Pipe Material Types: _____

iv) Number of Residential Services: _____

v) Number of Non-Residential Services: _____

vi) Multiple Pressure Zones? If yes please describe: _____

vii) Maximum Normal Pressure: _____

viii) Minimum Normal Pressure: _____

ix) Typical Main Size: _____

x) Number of Fire Hydrants and Approximate Average Spacing: _____

b) Are there any known under-sized mains? If so explain and quantify: _____

c) Is the system generally looped? _____

d) Is there a maintenance schedule? If so Explain: _____

e) When was the last known water main break and how frequent are they?

f) Are there known unmetered flow and leakage losses? If yes provide as much detail as possible:

g) Please describe any other known deficiencies not mentioned above: _____

9) Are source water flow records kept?

a) Daily: YES / NO

b) Weekly: YES / NO

c) Monthly: YES / NO

d) How far back in time are records available? _____

10) Are masterplan and/or design reports available?

a) Facility Plans, please provide the year it was adopted and any details: _____

b) Preliminary Engineering Reports (PERs), please provide the year it was adopted and any details:

c) Other: _____

APPENDIX I.2

BLANK SURVEY QUESTIONS SEWER

HYALITE

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: _____

b) Population: _____

c) Commercial/Industrial Uses: _____

2) Is your community all On-Site/Individual Systems or is there a central system?

a) Is the lack of a central system limiting development?

b) Is high (shallow) groundwater limiting development?

c) Is high nitrate concentration in the groundwater limiting development?

d) Are floodplains limiting development by limiting where drainfields can be built?

e) Are unsuitable soils or shallow bedrock limiting development?

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: _____

ii) General Condition: _____

iii) Age of Newest/Oldest Pipe: _____

iv) Age of Newest/Oldest Manhole in Use: _____

v) Pipe Material Types: _____

vi) Describe the number and condition of any lift stations: _____

b) Are there any known under-sized mains? If so explain and quantify.

c) Are there any identified under-sized lift stations? If so please explain and quantify.

d) Are gravity mains on a regular jetting schedule? If so please explain:

e) Are force mains on a pigging schedule? If so please explain:

f) When was the last known sewer backup on a public main and how frequent are they?

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

5) Treatment System

a) Design Capacity: _____

b) Current Average Day Flow Being Treated: _____

c) Are there plans for capacity increase? If so please explain: _____

d) Treatment Type: _____

i) Large Central Septic/Drainfield: YES / NO _____

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes: _____

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): _____

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: _____

c) Disposal System Design Capacity: _____

d) Current Average Day Flow Being Disposed of: _____

e) Are there plans for capacity increase? If so please explain: _____

f) Disposal Type, please circle one or list here: _____

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

iv) Other: _____

g) Age of Disposal System: _____

h) Condition of Disposal System: _____

i) Known Inadequacies of Disposal System: _____

7) Are flow records being kept currently: YES /NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: _____

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

c) Other: _____

APPENDIX J

SURVEY RESPONSES FOR WATER

HYALITE

APPENDIX J.1

SURVEY RESPONSES FOR WATER
ENNIS, MT

 **HYALITE**

Water Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 665

b) Population: 1100

c) Commercial/Industrial Uses: 0

2) All On-Site/Individual Wells? no

a) Is deep groundwater limiting development? no

b) Is water quality limiting development? no

c) Are low yield wells limiting development? no

d) Are there any existing or planned large public or community systems within the planning area? If so please explain. no

e) Are there any other known issues with water supply via wells within the planning area? _____

no

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate water capacity or management? If yes please explain. no

(If there is a central public water system please continue.)

4) Demands

a) Summer Average Day Demand: 500,000 gal day

b) Winter Average Day Demand (no irrigation): 200,000 gal day

c) Max Day Demand: 639,000

d) Peak Hour Demand: 636 gal

e) Are demands assumed or measured? Please briefly explain methodology: _____
yes metered

f) Is fire flow provided? yes

5) Source Water

a) Description of Source.

i) Type (Surface or Groundwater): groundwater

ii) If surface, what is the source water body: _____

iii) Total Source Water Capacity in Gallons Per Day: _____

iv) General Physical Condition of Well(s) or Intake: good

v) Are water rights limiting development? If so explain: no

vi) Is physical pumping capacity limiting? If so explain: no

vii) Please list known source water quality issues, if any: none

b) Is there raw water storage? If so please describe: yes above ground tank

c) Do you pump directly to distribution? If yes please describe pumping, metering and treatment works: no

d) Please describe any known deficiencies with the source water not covered in the above:

6) Water Treatment System

a) Current Capacity: no treatment

b) Current Average Daily Flow Being Treated: _____

c) Are there plans for capacity increase? If so please explain: no

d) Please describe the treatment type (e.g., filtration, reverse osmosis, UV, etc.): _____

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

h) Please describe the maintenance requirements and schedule: _____

7) Finished Water Storage

a) Multiple storage facilities? If yes please describe: no

b) Type (e.g., elevated steel, buried concrete, etc.): above ground bolted steel tank

c) Total Working Volume: 530,000

d) Total Volume Dedicated to Fire Flow: _____

e) Inlet Pipe Size: 10"

f) Outlet Pressure at Ground Level: 95

g) Outlet Pipe Size: 10"

h) Age of Storage Tank/Reservoir: built 1995

i) General Condition: old but good

j) Known Inadequacies: leaks

k) Please describe the maintenance requirements and schedule: clean and inspect every three years

8) Distribution System

a) Description of distribution system: pvc, cast iron, ac pipe

i) General Condition: good but old

ii) Age of Newest/Oldest Pipe or Component in Use: 2022 and ?

iii) Pipe Material Types: ac, pvc, cast iron

iv) Number of Residential Services: 665

v) Number of Non-Residential Services: _____

vi) Multiple Pressure Zones? If yes please describe: no

vii) Maximum Normal Pressure: ?

viii) Minimum Normal Pressure: ?

ix) Typical Main Size: 6"

x) Number of Fire Hydrants and Approximate Average Spacing: 120 hydrants dont know spacing

b) Are there any known under-sized mains? If so explain and quantify: no

c) Is the system generally looped? yes

d) Is there a maintenance schedule? If so Explain: yes valve exersize every year

e) When was the last known water main break and how frequent are they?

last summer, not very frequent

f) Are there known unmetered flow and leakage losses? If yes provide as much detail as possible:

no

g) Please describe any other known deficiencies not mentioned above: _____

9) Are source water flow records kept?

a) Daily: YES / NO

b) Weekly: YES / NO

c) Monthly: YES / NO

d) How far back in time are records available? 7 years

10) Are masterplan and/or design reports available?

a) Facility Plans, please provide the year it was adopted and any details: _____

b) Preliminary Engineering Reports (PERs), please provide the year it was adopted and any details:

new this year getting done now

c) Other: _____

APPENDIX J.2

SURVEY RESPONSES FOR WATER
SHERIDAN, MT

The logo for HYALITE features the word "HYALITE" in a bold, dark grey, sans-serif font. A small, light green circle is positioned to the left of the letter "H", partially overlapping its vertical stroke.

Due Date: Mid January

Scott Hazelton 406-475-2969

shazelton@hazeliteeng.com

Water Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 416

b) Population: 637 or 694 if include nursing home, etc.

ex:
Hospital
Nursing Home
Schools
Dentist

c) Commercial/Industrial Uses: _____

2) All On-Site/Individual Wells? 2 onsite, one a mile NW of town

a) Is deep groundwater limiting development? No

b) Is water quality limiting development? No

c) Are low yield wells limiting development? only slightly

d) Are there any existing or planned large public or community systems within the planning area? If

so please explain. 18 acre subdivision with 50(+)

proposed units. Another 60 acres soon to

be on the market within town limits

Planning to drill another well not associated with subdivisions

e) Are there any other known issues with water supply via wells within the planning area? _____

No

- 3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate water capacity or management? If yes please explain. no

Apparently we are short of water according to DEQ standards if our largest well is taken off line.

(If there is a central public water system please continue.)

4) Demands

- a) Summer Average Day Demand: 146,348 g 248,752
- b) Winter Average Day Demand (no irrigation): 70,000 rough estimate or
- c) Max Day Demand: 332,000 289,085 gpd
- d) Peak Hour Demand: 311 gpm
- e) Are demands assumed or measured? Please briefly explain methodology: _____

Flow meter is read daily. The numbers were put together by Peter Ham of WWC engineering.

- f) Is fire flow provided? yes

5) Source Water

- a) Description of Source.

- i) Type (Surface or Groundwater): groundwater

ii) If surface, what is the source water body: _____

iii) Total Source Water Capacity in Gallons Per Day: 400 gpm

iv) General Physical Condition of Well(s) or Intake: _____

#1 is 30+ years, #5 is 20+ years, #6 online
and new in 2020

v) Are water rights limiting development? If so explain: No

vi) Is physical pumping capacity limiting? If so explain: yes. Manifold building

needs possible reconfiguration.

vii) Please list known source water quality issues, if any: None

b) Is there raw water storage? If so please describe: yes 300,000 gal storage

tank put in in 1976-or 1977

c) Do you pump directly to distribution? If yes please describe pumping, metering and treatment

works: yes. 3 wells to common header with a

flow meter on outtake; distributed throughout town

then to storage tank. Storage tank gravity feeds back to

town when pumps are off. No treatment.

d) Please describe any known deficiencies with the source water not covered in the above:

None

6) **Water Treatment System**

No treatment of the water.

a) Current Capacity: _____

b) Current Average Daily Flow Being Treated: _____

c) Are there plans for capacity increase? If so please explain: _____

d) Please describe the treatment type (e.g., filtration, reverse osmosis, UV, etc.): _____

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

h) Please describe the maintenance requirements and schedule: _____

7) Finished Water Storage

- a) Multiple storage facilities? If yes please describe: one tank

- b) Type (e.g., elevated steel, buried concrete, etc.):
above ground tank

- c) Total Working Volume: 300,000

- d) Total Volume Dedicated to Fire Flow: 260,000 (?)

- e) Inlet Pipe Size: 12"

- f) Outlet Pressure at Ground Level: ?

- g) Outlet Pipe Size: 12"

- h) Age of Storage Tank/Reservoir: 1977

- i) General Condition: Good

- j) Known Inadequacies: minor rusting or corrosion

- k) Please describe the maintenance requirements and schedule: Every 3 to 5 years
we have a diving company clean and examine
it. Last cleaned in 2021.

8) Distribution System

- a) Description of distribution system: 3 working wells, manifold building,
distribution lines to town, storage tank, well 6 line
is approximately 1 mile from well to manifold building
- i) General Condition: Well 1 1990 good, Well 5 2000 good
needs rehab, Well 6 2019 - fairly new
certainly some mainline needs replacing
- ii) Age of Newest/Oldest Pipe or Component in Use: Not sure of oldest
Newest is 2019/2020
- iii) Pipe Material Types: PVC, AC, galvanized
- iv) Number of Residential Services: 413
- v) Number of Non-Residential Services: not sure
- vi) Multiple Pressure Zones? If yes please describe: Yes, Sheridan is
built on a slope. East side pressure is lower than
West side pressure
- vii) Maximum Normal Pressure: 130 ish lbs
- viii) Minimum Normal Pressure: _____
- ix) Typical Main Size: 4, 6, 8 and 10 inch
- x) Number of Fire Hydrants and Approximate Average Spacing: approximately 50
about every block
- b) Are there any known under-sized mains? If so explain and quantify: _____
Not sure

c) Is the system generally looped? yes but there are some
dead ends

d) Is there a maintenance schedule? If so Explain: No

e) When was the last known water main break and how frequent are they?

Dec. 6, 2022

2017 ?

Jan 8, 2016

Every 5 or 6 years ?

f) Are there known unmetered flow and leakage losses? If yes provide as much detail as possible:

Park irrigation systems are not recorded

Town hall at Fire Department

g) Please describe any other known deficiencies not mentioned above:

9) Are source water flow records kept?

a) Daily: YES / NO

b) Weekly: YES / NO

c) Monthly: YES / NO

d) How far back in time are records available? Not sure, possibly 2012

10) Are masterplan and/or design reports available?

a) Facility Plans, please provide the year it was adopted and any details: _____

"Jumbled" mess!

b) Preliminary Engineering Reports (PERs), please provide the year it was adopted and any details:

Many copies of everything.

c) Other: _____

APPENDIX J.3

SURVEY RESPONSES FOR WATER
TWIN BRIDGES, MT

 **HYALITE**

Water Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 230

b) Population: 434

c) Commercial/Industrial Uses: 34

2) All On-Site/Individual Wells? No (only 1 on West side of the River)

a) Is deep groundwater limiting development? No

b) Is water quality limiting development? No

c) Are low yield wells limiting development? No

d) Are there any existing or planned large public or community systems within the planning area? If

so please explain. The Old Children Center on West Side of River
Property is in a sale pending with new owners.

e) Are there any other known issues with water supply via wells within the planning area? No

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate water capacity or management? If yes please explain. NO

(If there is a central public water system please continue.)

4) Demands

a) Summer Average Day Demand: 113 000. GPD

b) Winter Average Day Demand (no irrigation): 50 000.

c) Max Day Demand: X

d) Peak Hour Demand: X

e) Are demands assumed or measured? Please briefly explain methodology: _____

We don't have daily logs.

f) Is fire flow provided? Yes.

5) Source Water

a) Description of Source.

i) Type (Surface or Groundwater): 2 Deep Wells

ii) If surface, what is the source water body: NA

iii) Total Source Water Capacity in Gallons Per Day: Approx 1,000,000 GPD

iv) General Physical Condition of Well(s) or Intake: Both wells are old. We have done a PER on our water system. That's our study showed the need to update these wells.

v) Are water rights limiting development? If so explain: No

vi) Is physical pumping capacity limiting? If so explain: No

vii) Please list known source water quality issues, if any: None

b) Is there raw water storage? If so please describe: Yes 300,000 gal. storage tank & a big pond in the ground.

c) Do you pump directly to distribution? If yes please describe pumping, metering and treatment works: Yes by both Pumps, Meter @ the Pumps & No treatment

d) Please describe any known deficiencies with the source water not covered in the above:

NA

6) Water Treatment System

We don't treat water

a) Current Capacity: _____

b) Current Average Daily Flow Being Treated: 0

c) Are there plans for capacity increase? If so please explain: _____

d) Please describe the treatment type (e.g., filtration, reverse osmosis, UV, etc.): _____

No treatment needed

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

h) Please describe the maintenance requirements and schedule: _____

8) Distribution System

a) Description of distribution system: 80% 6" & 8" PVC / 10% 4" & 6" Cast Iron / 5% 6" AC

i) General Condition: ALL PVC is good except the main valves has steel bolts that are failing. / Cast Iron is of need of replacement along with the AC mains.

ii) Age of Newest/Oldest Pipe or Component in Use: Cast Iron & AC was installed in the 1960's. PVC is in good shape.

iii) Pipe Material Types: _____

→ iv) Number of Residential Services: 230

→ v) Number of Non-Residential Services: 34

vi) Multiple Pressure Zones? If yes please describe: No

vii) Maximum Normal Pressure: 72 psf

viii) Minimum Normal Pressure: 70 psf.

ix) Typical Main Size: 6" & 8"

x) Number of Fire Hydrants and Approximate Average Spacing: 52 with Avg spacing of 400'

b) Are there any known under-sized mains? If so explain and quantify: Some of the Cast Iron is 4"

7) Finished Water Storage

- a) Multiple storage facilities? If yes please describe: yes → We still have
An Steel 50,000 gal Elevated tank that has been out of
service since 2000. Presently using Steel 300,000 tank.
- b) Type (e.g., elevated steel, buried concrete, etc.): Elevated steel tank not in
service.
- c) Total Working Volume: New tank 300,000
- d) Total Volume Dedicated to Fire Flow: _____
- e) Inlet Pipe Size: 12"
- f) Outlet Pressure at Ground Level: In town 70 psi
- g) Outlet Pipe Size: 12"
- h) Age of Storage Tank/Reservoir: New tank 2001 / Old Elevated 1917
- i) General Condition: New tank in good condition / Old
Tank need alot of work
- j) Known Inadequacies: _____

- k) Please describe the maintenance requirements and schedule: New Tank's
Cleaned & Camer with in every 10 years & last
done in 2021

c) Is the system generally looped? Yes with only 3 non-looped mains

d) Is there a maintenance schedule? If so Explain: Yes / Flushing done 2x
A year & Hydrant exercising done 2x a year.

e) When was the last known water main break and how frequent are they?
None

f) Are there known unmetered flow and leakage losses? If yes provide as much detail as possible:
None known

g) Please describe any other known deficiencies not mentioned above:

9) Are source water flow records kept?

a) Daily: YES / NO

b) Weekly: YES / NO

c) Monthly: YES / NO

d) How far back in time are records available? 2000

10) Are masterplan and/or design reports available?

a) Facility Plans, please provide the year it was adopted and any details: Yes

PER was done in 2021

b) Preliminary Engineering Reports (PERs), please provide the year it was adopted and any details:

2021

c) Other: _____

APPENDIX J.4

SURVEY RESPONSES FOR WATER VIRGINIA CITY, MT

HYALITE

VC

Water Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 149, 116 OCCUPIED, 30 NON FAMILY

b) Population: 200

c) Commercial/Industrial Uses: 05

2) All On-Site/Individual Wells? 1

a) Is deep groundwater limiting development? NOT YET (25 MORE POSSIBLE)

b) Is water quality limiting development? NO

c) Are low yield wells limiting development? NO WELLS

d) Are there any existing or planned large public or community systems within the planning area? If

so please explain. NOT AT THIS TIME

e) Are there any other known issues with water supply via wells within the planning area? NO

VC

-
-
- 3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate water capacity or management? If yes please explain. YES, LOW PRESSURE

(If there is a central public water system please continue.)

4) Demands

- a) Summer Average Day Demand: 120,000 gal.
- b) Winter Average Day Demand (no irrigation): 25,000 gal.
- c) Max Day Demand: 200,000
- d) Peak Hour Demand: 15,000
- e) Are demands assumed or measured? Please briefly explain methodology: MEASURED
7 DAY CHART
- f) Is fire flow provided? YES

5) Source Water

- a) Description of Source.
- i) Type (Surface or Groundwater): GROUND WATER (SPRINGS)

VC

ii) If surface, what is the source water body: SPRINGS

iii) Total Source Water Capacity in Gallons Per Day: 250 gal. min.

iv) General Physical Condition of Well(s) or Intake: _____

v) Are water rights limiting development? If so explain: POSSIBLY, IN DEVELOPMENT

vi) Is physical pumping capacity limiting? If so explain: NO

vii) Please list known source water quality issues, if any: NONE

b) Is there raw water storage? If so please describe: NOT YET

c) Do you pump directly to distribution? If yes please describe pumping, metering and treatment

works: NO, GRAVITY FED

VC

d) Please describe any known deficiencies with the source water not covered in the above:

6) Water Treatment System

a) Current Capacity: 500,000 GAL.

b) Current Average Daily Flow Being Treated: 25,000 GAL.

c) Are there plans for capacity increase? If so please explain: NOT CURRENTLY

d) Please describe the treatment type (e.g., filtration, reverse osmosis, UV, etc.): 12.5 HYPOCHLORITE LIQUID

e) Age of Treatment System: 23 YEARS

f) Condition of Treatment System: GOOD

g) Known Inadequacies of Treatment System: NO MIXER IN WATER TANK

h) Please describe the maintenance requirements and schedule: DAILY CHECK

VC

7) Finished Water Storage

- a) Multiple storage facilities? If yes please describe: NO

- b) Type (e.g., elevated steel, buried concrete, etc.): _____

- c) Total Working Volume: 500,000
- d) Total Volume Dedicated to Fire Flow: 480,000
- e) Inlet Pipe Size: 6"
- f) Outlet Pressure at Ground Level: 12 PSI
- g) Outlet Pipe Size: 12", 8"
- h) Age of Storage Tank/Reservoir: 23 YEARS
- i) General Condition: EXCELLENT

- j) Known Inadequacies: NONE

- k) Please describe the maintenance requirements and schedule: 5 YEAR INSPECTION

VE

8) Distribution System

a) Description of distribution system: 12", 10", 8", 6", 4", 2"

i) General Condition: FAIR

ii) Age of Newest/Oldest Pipe or Component in Use: 23 YEARS, 50 YEARS

iii) Pipe Material Types: PVC, TRANSIET

iv) Number of Residential Services: 149

v) Number of Non-Residential Services: ~~81~~ 81

vi) Multiple Pressure Zones? If yes please describe: YES, 2 PRESSURE

vii) Maximum Normal Pressure: 150 PSI

viii) Minimum Normal Pressure: 12 PSI

ix) Typical Main Size: 6"

x) Number of Fire Hydrants and Approximate Average Spacing: 41, 400'

b) Are there any known under-sized mains? If so explain and quantify: YES, 4" + 2"

VC

c) Is the system generally looped? YES

d) Is there a maintenance schedule? If so Explain: _____

e) When was the last known water main break and how frequent are they?

FEB. 2019

f) Are there known unmetered flow and leakage losses? If yes provide as much detail as possible:

NOT KNOWN

g) Please describe any other known deficiencies not mentioned above: _____

9) Are source water flow records kept?

a) Daily YES / NO

b) Weekly: YES / NO

c) Monthly: YES / NO

VE

d) How far back in time are records available? 2010

10) Are masterplan and/or design reports available?

a) Facility Plans, please provide the year it was adopted and any details: _____

b) Preliminary Engineering Reports (PERs), please provide the year it was adopted and any details:

2015 PERs

c) Other: _____

APPENDIX K

SURVEY RESPONSES FOR WASTEWATER

HYALITE

APPENDIX K.1

SURVEY RESPONSES FOR WASTEWATER ALDER, MT

HYALITE

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 100

b) Population: 125

c) Commercial/Industrial Uses: 40

2) Is your community all On-Site/Individual Systems or is there a central system?

Central System

a) Is the lack of a central system limiting development?

No

b) Is high (shallow) groundwater limiting development?

Yes

c) Is high nitrate concentration in the groundwater limiting development?

No

d) Are floodplains limiting development by limiting where drainfields can be built?

Yes

e) Are unsuitable soils or shallow bedrock limiting development?

No

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

No, landlocked

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

No

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: 1/2 gravity, 1/2 grinder pump to lift station

ii) General Condition: _____

iii) Age of Newest/Oldest Pipe: 20 years

iv) Age of Newest/Oldest Manhole in Use: 20 years

v) Pipe Material Types: PVC

vi) Describe the number and condition of any lift stations: Controls obsolete

working good

b) Are there any known under-sized mains? If so explain and quantify.

No

c) Are there any identified under-sized lift stations? If so please explain and quantify.

No

d) Are gravity mains on a regular jetting schedule? If so please explain:

No

e) Are force mains on a pigging schedule? If so please explain:

No

f) When was the last known sewer backup on a public main and how frequent are they?

Never

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

Little to none

5) Treatment System

a) Design Capacity: 200

b) Current Average Day Flow Being Treated: 15000

c) Are there plans for capacity increase? If so please explain: No

d) Treatment Type: _____

i) Large Central Septic/Drainfield: YES / NO

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes: _____

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: 20

f) Condition of Treatment System: Poor

g) Known Inadequacies of Treatment System: Sprinkler system and UV need work

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): Field Irrigation

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: No permit

c) Disposal System Design Capacity: _____

d) Current Average Day Flow Being Disposed of: _____

e) Are there plans for capacity increase? If so please explain: No PER in progress

f) Disposal Type, please circle one or list here: _____

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

iv) Other: _____

g) Age of Disposal System: _____

h) Condition of Disposal System: _____

i) Known Inadequacies of Disposal System: _____

7) Are flow records being kept currently: YES / NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: Weekly 2013

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

c) Other: PER in progress

APPENDIX K.2

SURVEY RESPONSES FOR WASTEWATER ENNIS, MT

HYALITE

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 665

b) Population: 1100

c) Commercial/Industrial Uses: 0

2) Is your community all On-Site/Individual Systems or is there a central system?

central system

a) Is the lack of a central system limiting development?

no

b) Is high (shallow) groundwater limiting development?

no

c) Is high nitrate concentration in the groundwater limiting development?

no

d) Are floodplains limiting development by limiting where drainfields can be built?

no

e) Are unsuitable soils or shallow bedrock limiting development?

no

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

no

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

no

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: under ground pipe

ii) General Condition: good but old

iii) Age of Newest/Oldest Pipe: 2022

iv) Age of Newest/Oldest Manhole in Use: ?

v) Pipe Material Types: ac,pvc,castiron

vi) Describe the number and condition of any lift stations: 1 lift station in good condition

b) Are there any known under-sized mains? If so explain and quantify.

no

c) Are there any identified under-sized lift stations? If so please explain and quantify.

no

d) Are gravity mains on a regular jetting schedule? If so please explain:

yes twice a year

e) Are force mains on a pigging schedule? If so please explain:

no

f) When was the last known sewer backup on a public main and how frequent are they?

2021 not frequent

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

some infiltration along the river

5) Treatment System

a) Design Capacity: 24mgd

b) Current Average Day Flow Being Treated: 11mgd

c) Are there plans for capacity increase? If so please explain: no

d) Treatment Type: lagoon

i) Large Central Septic/Drainfield: YES / NO

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes:

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: _____

f) Condition of Treatment System: _____

g) Known Inadequacies of Treatment System: _____

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): flow limit is .24 mgd

85percentage removal

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: _____

c) Disposal System Design Capacity: .24mgd

d) Current Average Day Flow Being Disposed of: .11mgd

e) Are there plans for capacity increase? If so please explain: no

f) Disposal Type, please circle one or list here: discharge to river

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

iv) Other: _____

g) Age of Disposal System: 14 years

h) Condition of Disposal System: good

i) Known Inadequacies of Disposal System: none

7) Are flow records being kept currently: YES / NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: 7 years

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

c) Other: _____

APPENDIX K.3

SURVEY RESPONSES FOR WASTEWATER HARRISON, MT

HYALITE

Sewer Assessment Survey

1) Population Within Service Area

- a) Equivalent Dwelling Units: 76
- b) Population: ?
- c) Commercial/Industrial Uses: 24

2) Is your community all On-Site/Individual Systems or is there a central system?

Central

- a) Is the lack of a central system limiting development?

N/A

N/A

- b) Is high (shallow) groundwater limiting development?

N/A

- c) Is high nitrate concentration in the groundwater limiting development?

- d) Are floodplains limiting development by limiting where drainfields can be built?

N/A

- e) Are unsuitable soils or shallow bedrock limiting development?

- f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

Not at this time.

- 3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

The sewer district is imposing restrictions as the system is at max capacity.

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

- a) Please describe the collection system.

i) Type: Two lagoon system

ii) General Condition: Fair

iii) Age of Newest/Oldest Pipe: 22 years

iv) Age of Newest/Oldest Manhole in Use: 22 years

v) Pipe Material Types: PVC

vi) Describe the number and condition of any lift stations:

One lift station in fairly good condition.

- b) Are there any known under-sized mains? If so explain and quantify.

No

- c) Are there any identified under-sized lift stations? If so please explain and quantify.

No

- d) Are gravity mains on a regular jetting schedule? If so please explain:

Yes - 5 to 8 rotations a year

The whole system gets jetted in a five year period.

e) Are force mains on a pigging schedule? If so please explain:

No

f) When was the last known sewer backup on a public main and how frequent are they?

N/A

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

Pipe leading to lagoons are in rough condition. Needs to be replaced, approximately 3/4 of a mile of pipe.

5) Treatment System

a) Design Capacity: 100 edu's

b) Current Average Day Flow Being Treated: _____

* c) Are there plans for capacity increase? If so please explain: At present, we are

having a PER done to determine if expansion is possible.

d) Treatment Type: Treated through a lagoon system with discharge through pvt.

i) Large Central Septic/Drainfield: YES / NO No

ii) Lagoons: YES / NO

(1) Facultative: YES / NO ?

(2) Aerated: YES / NO

Any Additional Notes: _____

iii) Mechanical Treatment Plant: YES (NO)

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: 22 years

f) Condition of Treatment System: Fair

g) Known Inadequacies of Treatment System: Needs to be expanded but
no more capacity.

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): _____

No permit needed as discharge is through a pivot.

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: N/A

c) Disposal System Design Capacity: 100 edu's - we are at capacity.

d) Current Average Day Flow Being Disposed of: _____

*

e) Are there plans for capacity increase? If so please explain: _____

See 5 C.

f) Disposal Type, please circle one or list here: _____

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

Discharge through pivot.

iv) Other: _____

g) Age of Disposal System: 22 years

h) Condition of Disposal System: fair

i) Known Inadequacies of Disposal System: Regular repairs needing to be

done.

7) Are flow records being kept currently: YES / NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY Quarterly

b) How far back are these records available: Quarterly for one year.

Yearly for 22 years.

8) Are there masterplan and/or design reports available: ~~YES~~ / NO

a) Facility Plans: ~~YES~~ / NO

b) Preliminary Engineering Reports (PERs): YES ~~NO~~ but in the process.

c) Other: _____

APPENDIX K.4

SURVEY RESPONSES FOR WASTEWATER SHERIDAN, MT

HYALITE

Due Date: Mid January
Sheridan

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 416

b) Population: 637

c) Commercial/Industrial Uses: _____

2) Is your community all On-Site/Individual Systems or is there a central system?

Central system

a) Is the lack of a central system limiting development?

No

b) Is high (shallow) groundwater limiting development?

No

c) Is high nitrate concentration in the groundwater limiting development?

No

d) Are floodplains limiting development by limiting where drainfields can be built?

Maybe

e) Are unsuitable soils or shallow bedrock limiting development?

No

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

Yes. 18 acre Crossings subdivision with 50+ proposed units

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

No

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: Aerated lagoon ; eventually discharged through pivot irrigation

ii) General Condition: Very good

iii) Age of Newest/Oldest Pipe: 2012 newest ?

iv) Age of Newest/Oldest Manhole in Use: 2012 ?

v) Pipe Material Types: clay and pvc

vi) Describe the number and condition of any lift stations: 2 good condition

b) Are there any known under-sized mains? If so explain and quantify.

c) Are there any identified under-sized lift stations? If so please explain and quantify.

No

d) Are gravity mains on a regular jetting schedule? If so please explain:

No

e) Are force mains on a pigging schedule? If so please explain:

No

f) When was the last known sewer backup on a public main and how frequent are they?

no idea

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

Some groundwater infiltration in late June

Some stormwater, but Main Street has a stormwater system separate from wastewater system

5) Treatment System

a) Design Capacity: 701

b) Current Average Day Flow Being Treated: 100,000 gallons

c) Are there plans for capacity increase? If so please explain: No

d) Treatment Type: aerated and storage lagoons with pivot irrigation

i) Large Central Septic/Drainfield: YES / NO

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes:

1 aerated lagoon 9.2 million gallons

3 storage lagoons at ~ 10 million gallons apiece

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: 10 years

f) Condition of Treatment System: good

g) Known Inadequacies of Treatment System: _____

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): _____

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: _____

c) Disposal System Design Capacity: _____

d) Current Average Day Flow Being Disposed of: _____

~~2000~~ 20 million gallons in a two week period
through pivot irrigation

e) Are there plans for capacity increase? If so please explain: No

f) Disposal Type, please circle one or list here: _____

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

Pivot irrigation

iv) Other: _____

g) Age of Disposal System: _____

h) Condition of Disposal System: _____

i) Known Inadequacies of Disposal System: _____

7) Are flow records being kept currently: YES / NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: ?

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

c) Other: _____

o+m Manual 2012

APPENDIX K.5

SURVEY RESPONSES FOR WASTEWATER
TWIN BRIDGES, MT

 **HYALITE**

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 530

b) Population: 434

c) Commercial/Industrial Uses: 34

2) Is your community all On-Site/Individual Systems or is there a central system?

All on Site

a) Is the lack of a central system limiting development?

Land lock & limited service supplied to West Side of the Beavershead River.

b) Is high (shallow) groundwater limiting development?

No

c) Is high nitrate concentration in the groundwater limiting development?

No

d) Are floodplains limiting development by limiting where drainfields can be built?

Yes

e) Are unsuitable soils or shallow bedrock limiting development?

No

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

The old Children Center are West of River.

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

No

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: 8" AC Pipe with 3 Lift Stations.

ii) General Condition: 8" AC Pipe is in good shape for the age. Lift stations are in need of updating.

iii) Age of Newest/Oldest Pipe: 95% of 8" AC was built in 1964

iv) Age of Newest/Oldest Manhole in Use: 95% of Manholes Built 1964. Good shape for age.

v) Pipe Material Types: AC 95% / 5% PVC.

vi) Describe the number and condition of any lift stations: All 3 Lift Stations

are in need of pumps & correct up dating.

b) Are there any known under-sized mains? If so explain and quantify.

No

c) Are there any identified under-sized lift stations? If so please explain and quantify.

No

d) Are gravity mains on a regular jetting schedule? If so please explain:

No on a regular schedule. We clean our own as work load allows.

e) Are force mains on a pigging schedule? If so please explain:

No - Never have

f) When was the last known sewer backup on a public main and how frequent are they?

2 years ago - Not very frequent.

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

Storm water is not evident & we have fixed any bad collection mains. But we allow private pumps pumps to discharge in the system.

5) Treatment System

a) Design Capacity: 7031 SBR 936

→ b) Current Average Day Flow Being Treated: 30,000 GPD Avg for 2022

c) Are there plans for capacity increase? If so please explain: No

d) Treatment Type:

i) Large Central Septic/Drainfield: YES / NO

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes:

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: Original Built 1964

f) Condition of Treatment System: Good

g) Known Inadequacies of Treatment System: No

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): We still maintain a discharge Permit MT0028797 but presently don't discharge.

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: _____

c) Disposal System Design Capacity: _____

d) Current Average Day Flow Being Disposed of: _____

e) Are there plans for capacity increase? If so please explain: No

f) Disposal Type, please circle one or list here: NA

- i) Surface Water: YES / NO
 - (1) Continuous Flow: YES / NO
 - (2) Batch Release: YES / NO
- ii) Groundwater: YES / NO
 - (1) Traditional Drainfield: YES / NO
 - (2) Rapid Infiltration: YES / NO
- iii) Land Application: YES / NO

iv) Other: _____

g) Age of Disposal System: _____

h) Condition of Disposal System: _____

i) Known Inadequacies of Disposal System: _____

7) Are flow records being kept currently: YES / NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: 2000

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

c) Other: _____

APPENDIX K.6

SURVEY RESPONSES FOR WASTEWATER VIRGINIA CITY, MT

HYALITE

VC

Sewer Assessment Survey

1) Population Within Service Area

a) Equivalent Dwelling Units: 149

b) Population: 200

c) Commercial/Industrial Uses: 65

2) Is your community all On-Site/Individual Systems or is there a central system?

CENTRAL SYSTEM

a) Is the lack of a central system limiting development?

YES

b) Is high (shallow) groundwater limiting development?

NO

c) Is high nitrate concentration in the groundwater limiting development?

NO

d) Are floodplains limiting development by limiting where drainfields can be built?

NO

e) Are unsuitable soils or shallow bedrock limiting development?

NO

f) Are there any existing or planned large public or community systems within the planning area? If so please explain.

NO

VC

3) Are there building restrictions being imposed by Montana DEQ or any other state or federal agency due to inadequate sewer capacity or management? If yes please explain.

NO

(If there is a central collection, treatment, and disposal system please continue)

4) Collection System

a) Please describe the collection system.

i) Type: _____

ii) General Condition: GOOD

iii) Age of Newest/Oldest Pipe: 11 YEARS , 49 YEARS

iv) Age of Newest/Oldest Manhole in Use: 10 YEARS , 49 YEARS

v) Pipe Material Types: PVC

vi) Describe the number and condition of any lift stations: 1 , NEW PUMPS

ON THE HORIZON

b) Are there any known under-sized mains? If so explain and quantify.

NO

c) Are there any identified under-sized lift stations? If so please explain and quantify.

NO

d) Are gravity mains on a regular jetting schedule? If so please explain:

MORE RANDOM

VC

e) Are force mains on a pigging schedule? If so please explain:

f) When was the last known sewer backup on a public main and how frequent are they?

11 YEARS, VERY RARE

g) Please explain stormwater inflow and groundwater infiltration (I&I) dynamics within the collection system, and any known impacts to treatment and disposal.

KNOWN INFILTRATION WAS ADDRESSED IN 2011, JUST PUMPING MORE WATER

5) Treatment System

a) Design Capacity: 250 UNITS

b) Current Average Day Flow Being Treated: 20,000

c) Are there plans for capacity increase? If so please explain: NO

d) Treatment Type: FACULTATIVE LAGOONS

i) Large Central Septic/Drainfield: YES / NO

ii) Lagoons: YES / NO

(1) Facultative: YES / NO

(2) Aerated: YES / NO

Any Additional Notes:

VC

iii) Mechanical Treatment Plant: YES / NO

(1) Activated Sludge: YES / NO

(2) Sequencing Batch Reactor (SBR): YES / NO

(3) Package Plant: YES / NO

(4) Other: _____

e) Age of Treatment System: 18 YEARS

f) Condition of Treatment System: GOOD

g) Known Inadequacies of Treatment System: WILLOWS

6) Disposal System

a) Description of Discharge Permit (Flow and Concentration limits): NO PERMIT
FIELD IRRIGATION

b) Are the requirements of the discharge permit being met? YES / NO

If NO please explain: _____

c) Disposal System Design Capacity: _____

d) Current Average Day Flow Being Disposed of: _____

VC

e) Are there plans for capacity increase? If so please explain: _____

f) Disposal Type, please circle one or list here: _____

i) Surface Water: YES / NO

(1) Continuous Flow: YES / NO

(2) Batch Release: YES / NO

ii) Groundwater: YES / NO

(1) Traditional Drainfield: YES / NO

(2) Rapid Infiltration: YES / NO

iii) Land Application: YES / NO

iv) Other: _____

g) Age of Disposal System: _____

h) Condition of Disposal System: _____

i) Known Inadequacies of Disposal System: _____

7) Are flow records being kept currently: YES/NO

a) Please Circle One: DAILY, WEEKLY, MONTHLY

b) How far back are these records available: 2010

VC

8) Are there masterplan and/or design reports available: YES / NO

a) Facility Plans: YES / NO

b) Preliminary Engineering Reports (PERs): YES / NO

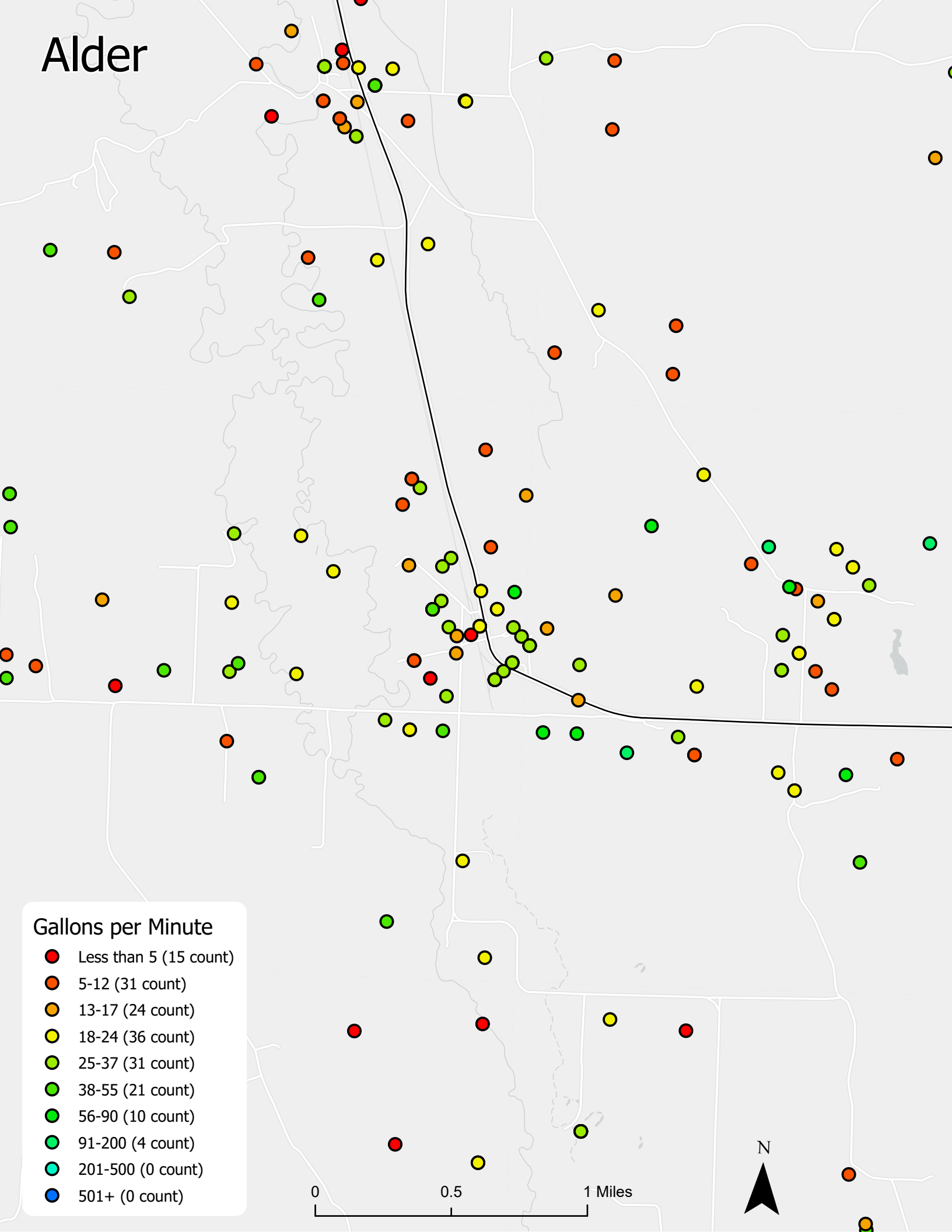
c) Other: _____

APPENDIX L

GROUND WATER INFORMATION CENTER
GALLONS PER MINUTE
COMMUNITY MAPS

 **HYALITE**

Alder



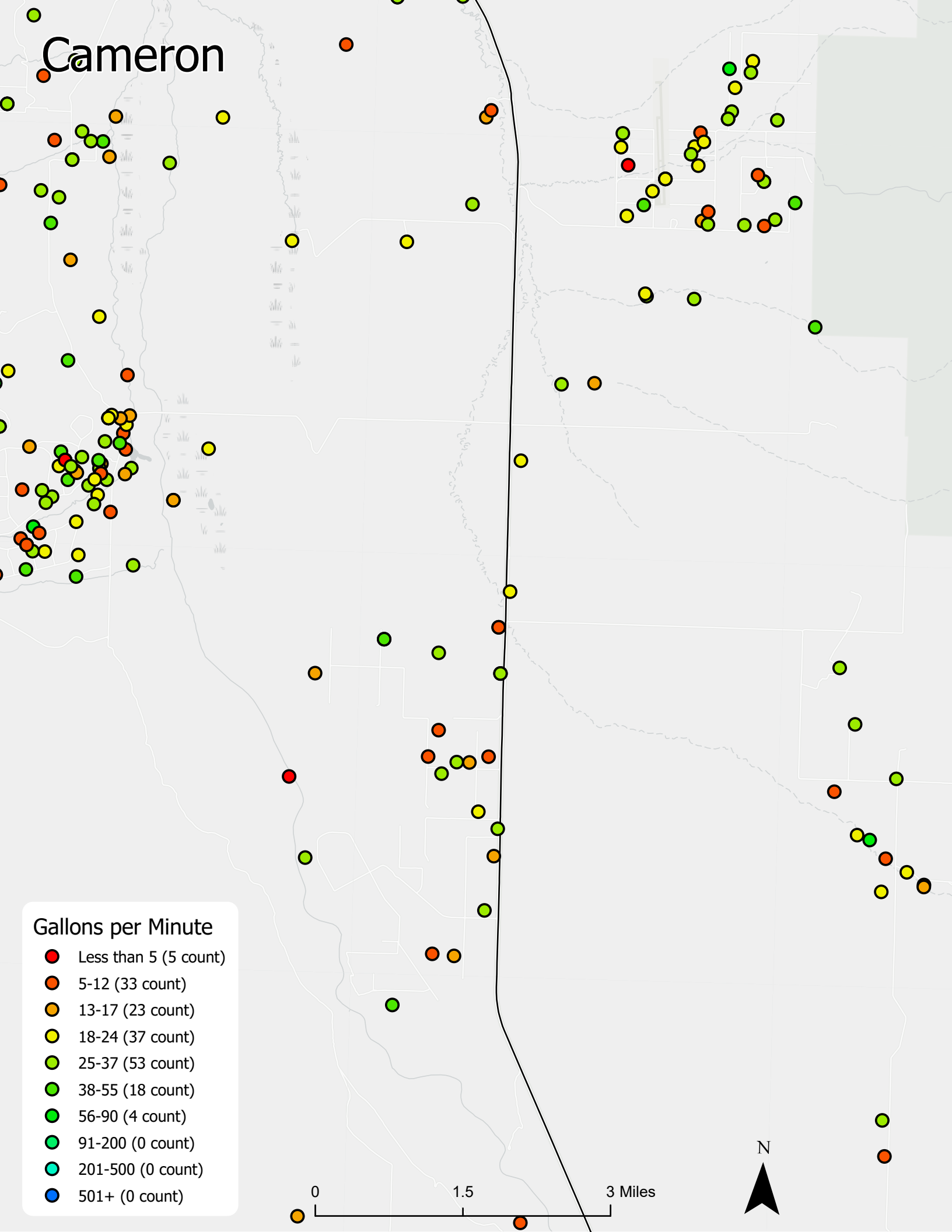
Gallons per Minute

- Less than 5 (15 count)
- 5-12 (31 count)
- 13-17 (24 count)
- 18-24 (36 count)
- 25-37 (31 count)
- 38-55 (21 count)
- 56-90 (10 count)
- 91-200 (4 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.5 1 Miles



Cameron



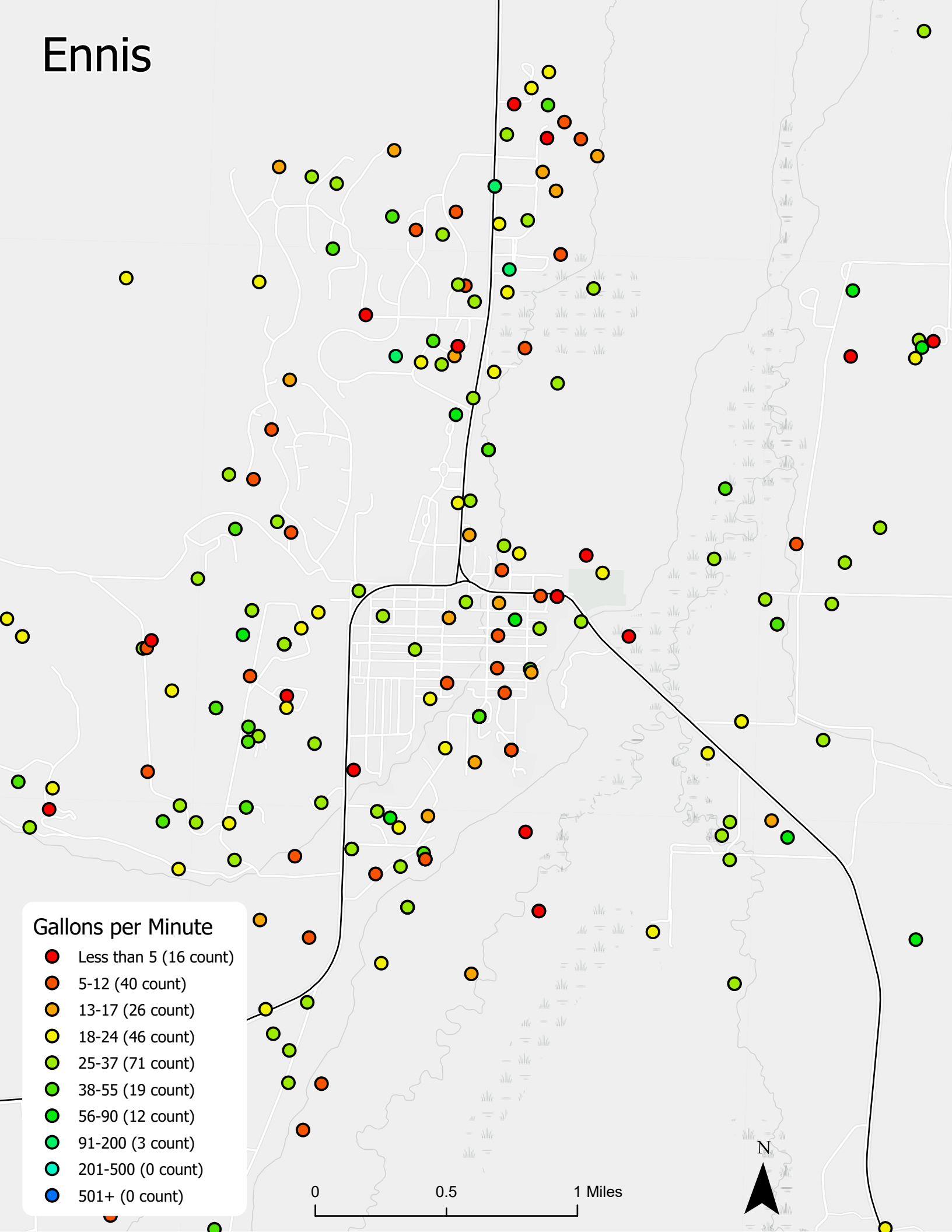
Gallons per Minute

- Less than 5 (5 count)
- 5-12 (33 count)
- 13-17 (23 count)
- 18-24 (37 count)
- 25-37 (53 count)
- 38-55 (18 count)
- 56-90 (4 count)
- 91-200 (0 count)
- 201-500 (0 count)
- 501+ (0 count)

0 1.5 3 Miles



Ennis



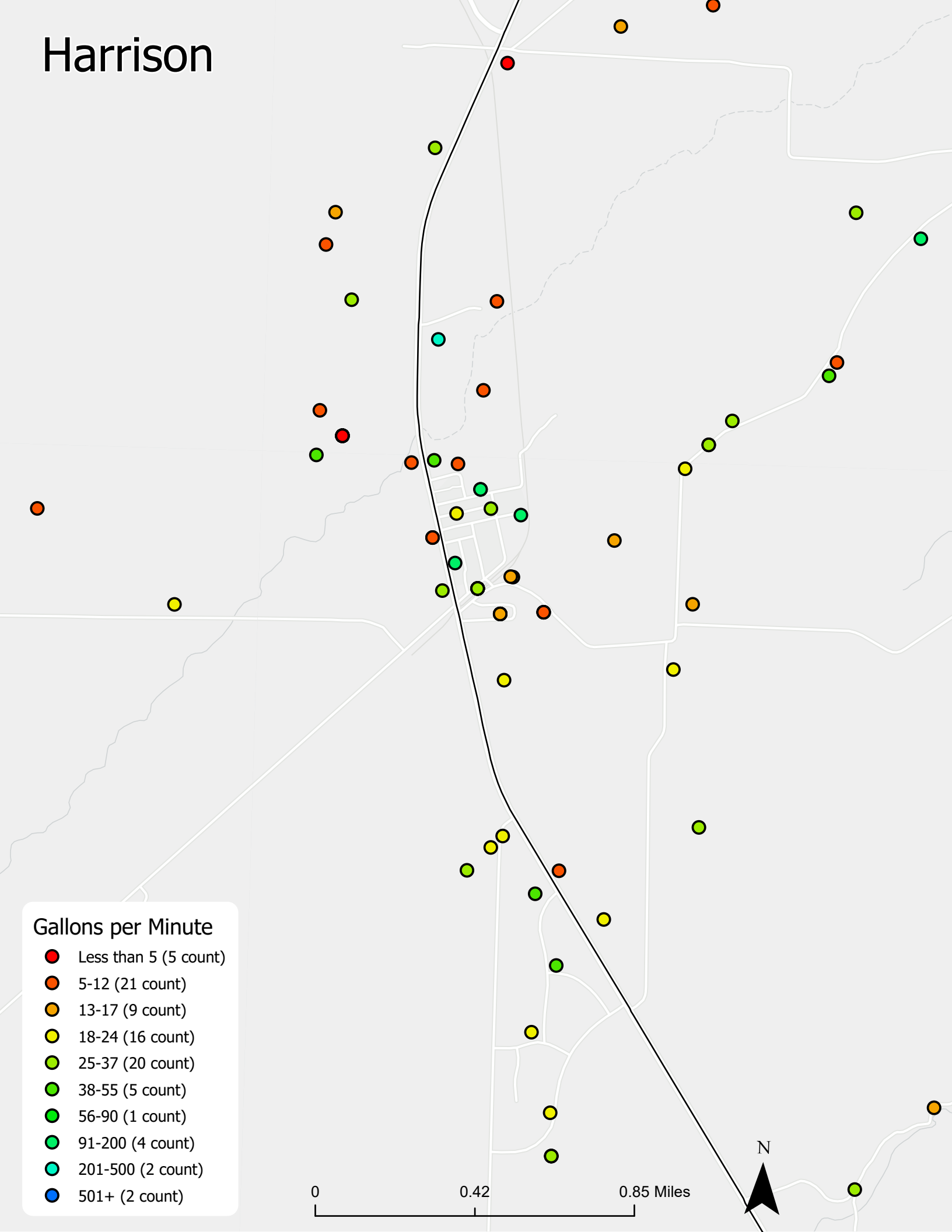
Gallons per Minute

- Less than 5 (16 count)
- 5-12 (40 count)
- 13-17 (26 count)
- 18-24 (46 count)
- 25-37 (71 count)
- 38-55 (19 count)
- 56-90 (12 count)
- 91-200 (3 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.5 1 Miles



Harrison



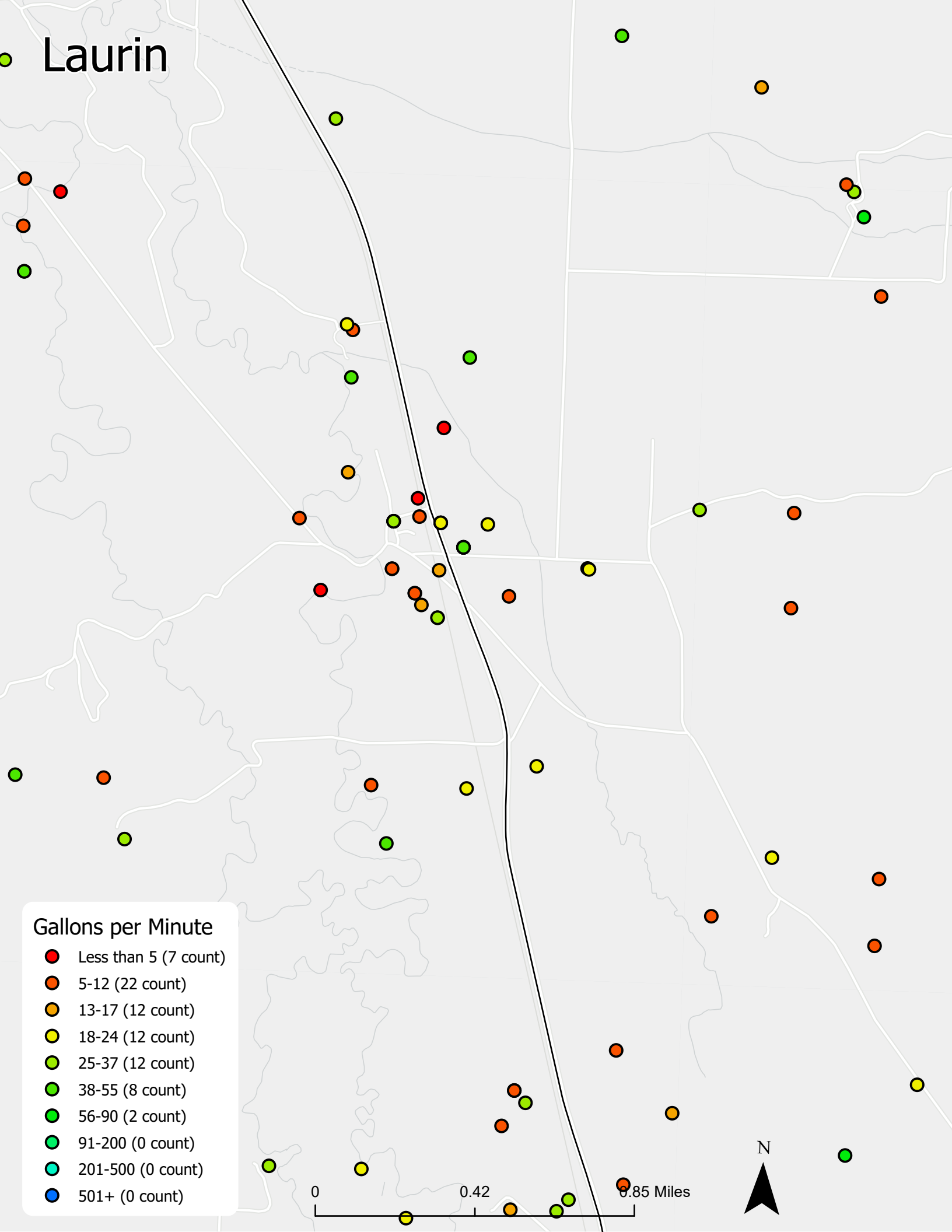
Gallons per Minute

- Less than 5 (5 count)
- 5-12 (21 count)
- 13-17 (9 count)
- 18-24 (16 count)
- 25-37 (20 count)
- 38-55 (5 count)
- 56-90 (1 count)
- 91-200 (4 count)
- 201-500 (2 count)
- 501+ (2 count)

0 0.42 0.85 Miles



Laurin



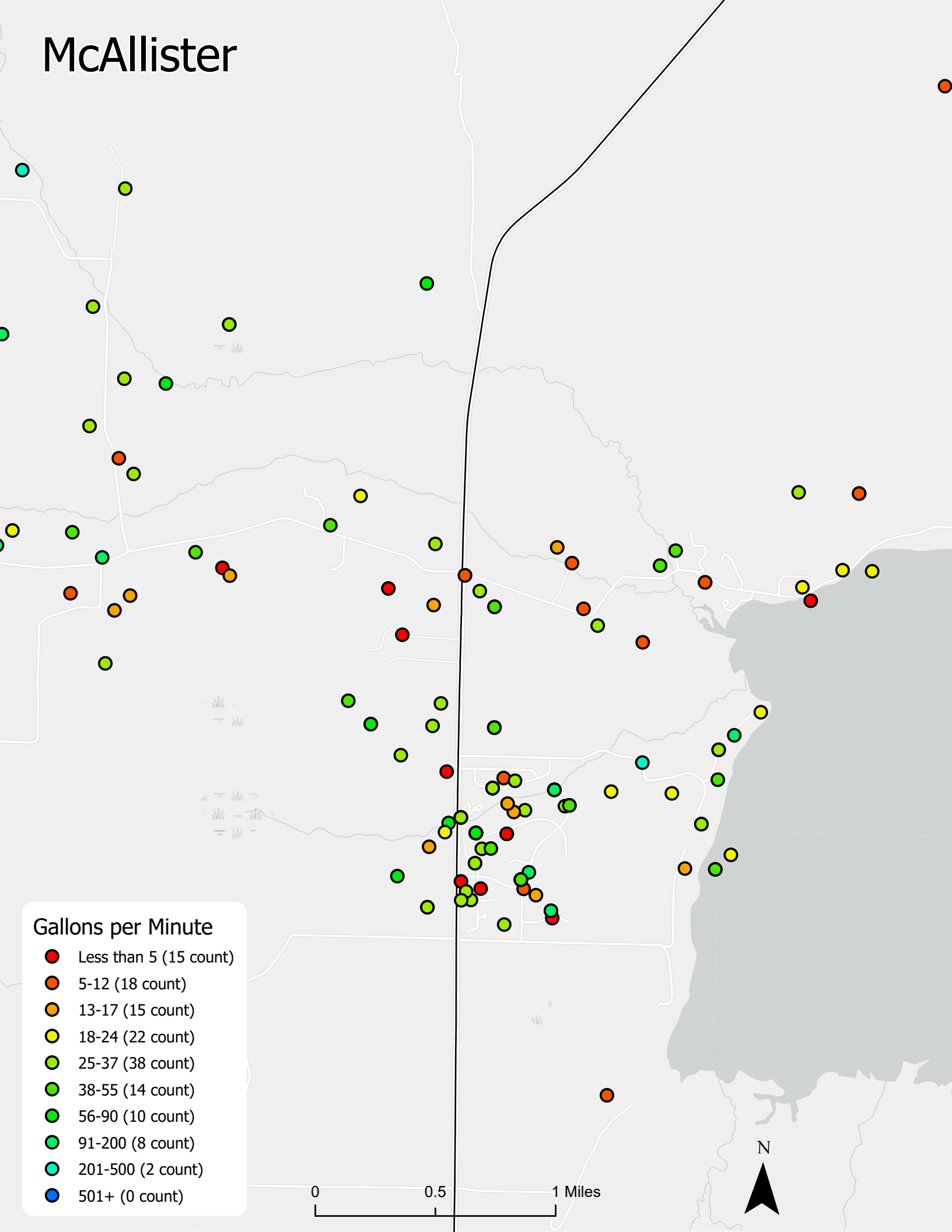
Gallons per Minute

- Less than 5 (7 count)
- 5-12 (22 count)
- 13-17 (12 count)
- 18-24 (12 count)
- 25-37 (12 count)
- 38-55 (8 count)
- 56-90 (2 count)
- 91-200 (0 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.42 0.85 Miles



McAllister



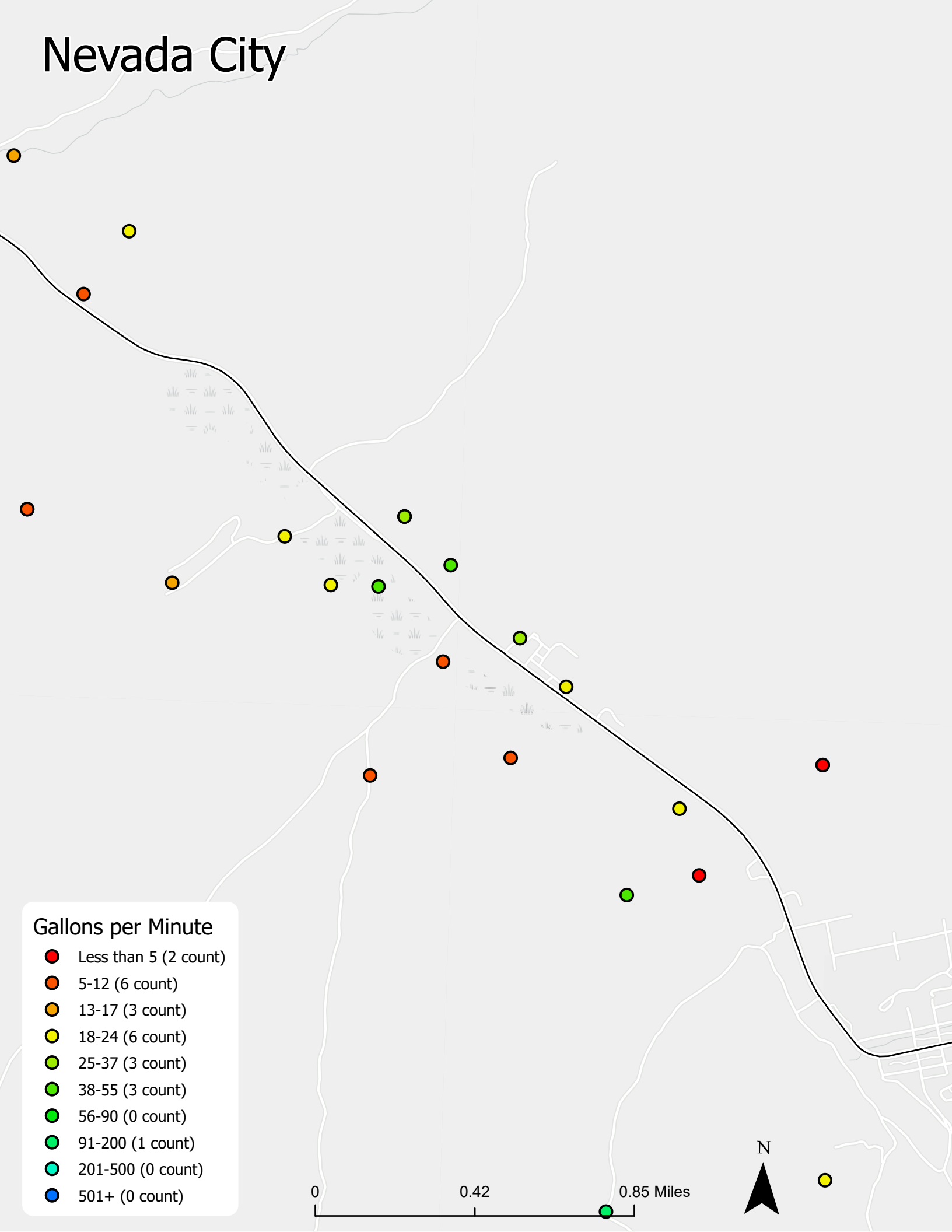
Gallons per Minute

- Less than 5 (15 count)
- 5-12 (18 count)
- 13-17 (15 count)
- 18-24 (22 count)
- 25-37 (38 count)
- 38-55 (14 count)
- 56-90 (10 count)
- 91-200 (8 count)
- 201-500 (2 count)
- 501+ (0 count)

0 0.5 1 Miles

N

Nevada City



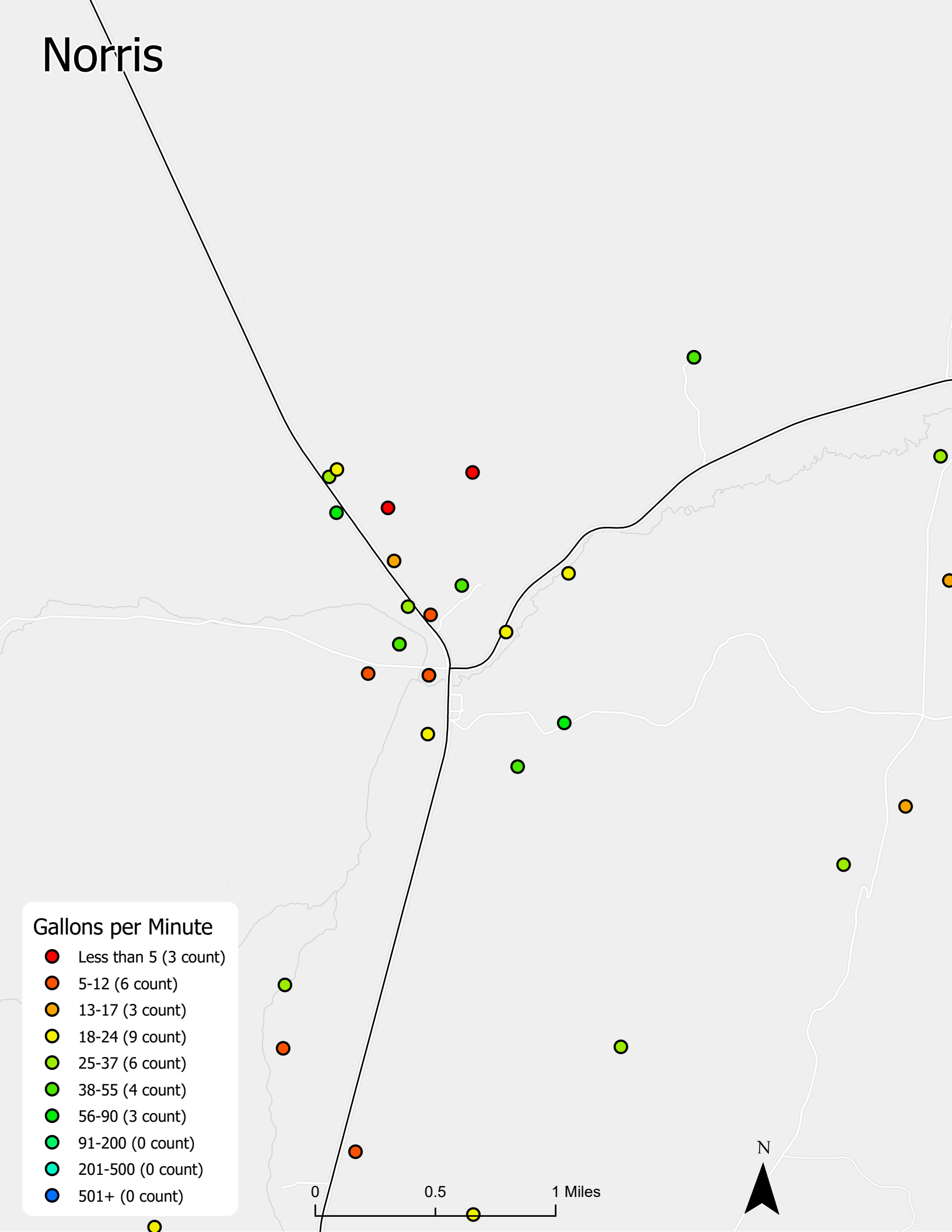
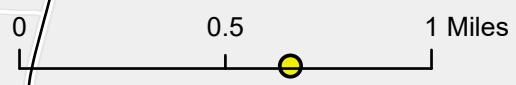
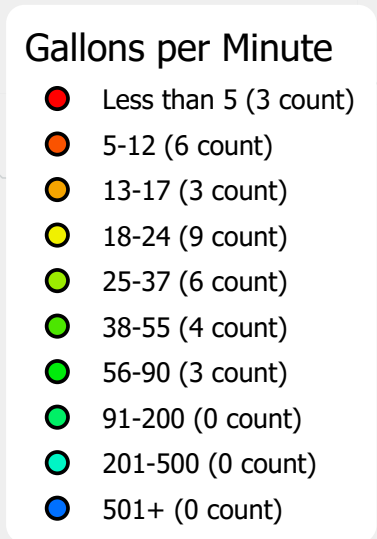
Gallons per Minute

- Less than 5 (2 count)
- 5-12 (6 count)
- 13-17 (3 count)
- 18-24 (6 count)
- 25-37 (3 count)
- 38-55 (3 count)
- 56-90 (0 count)
- 91-200 (1 count)
- 201-500 (0 count)
- 501+ (0 count)

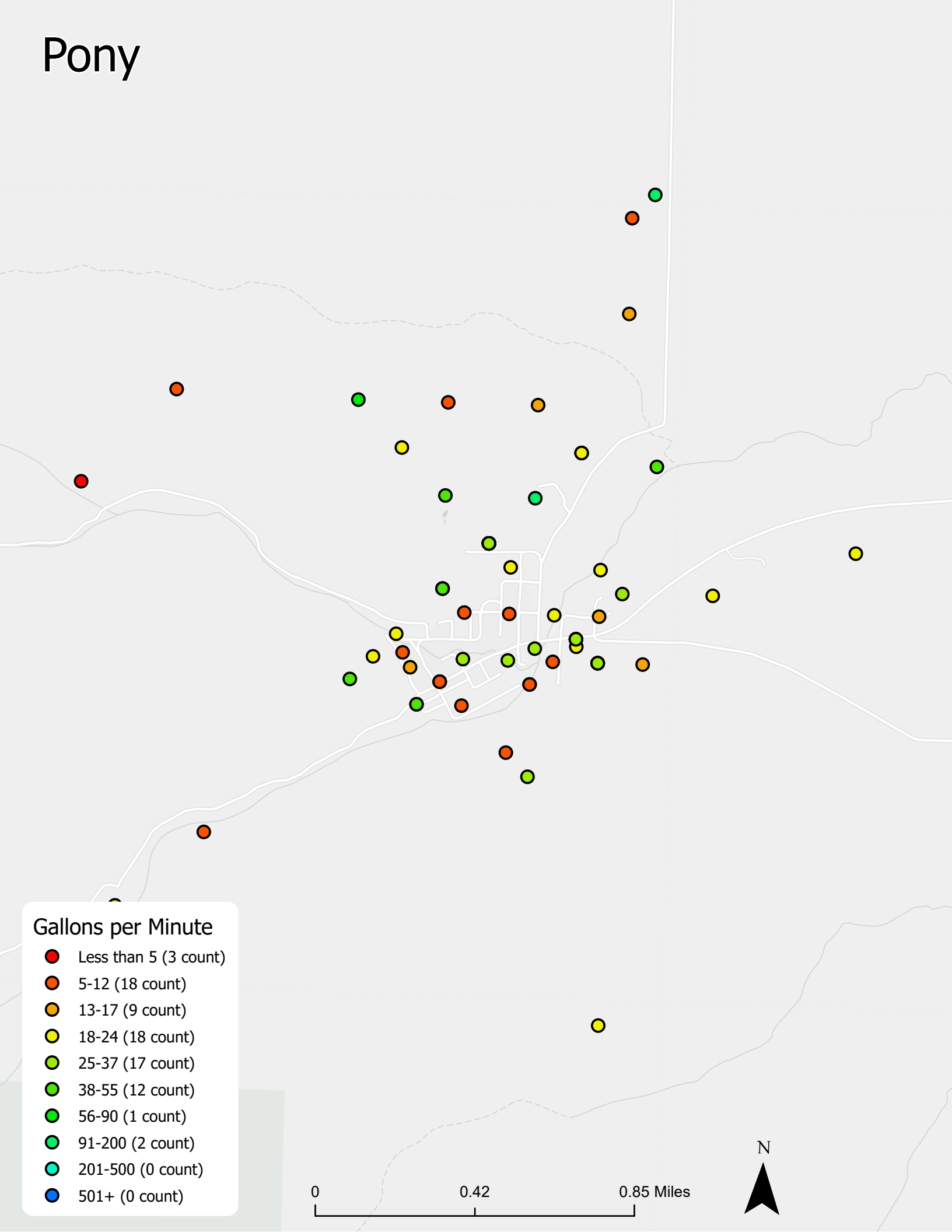
0 0.42 0.85 Miles



Norris



Pony



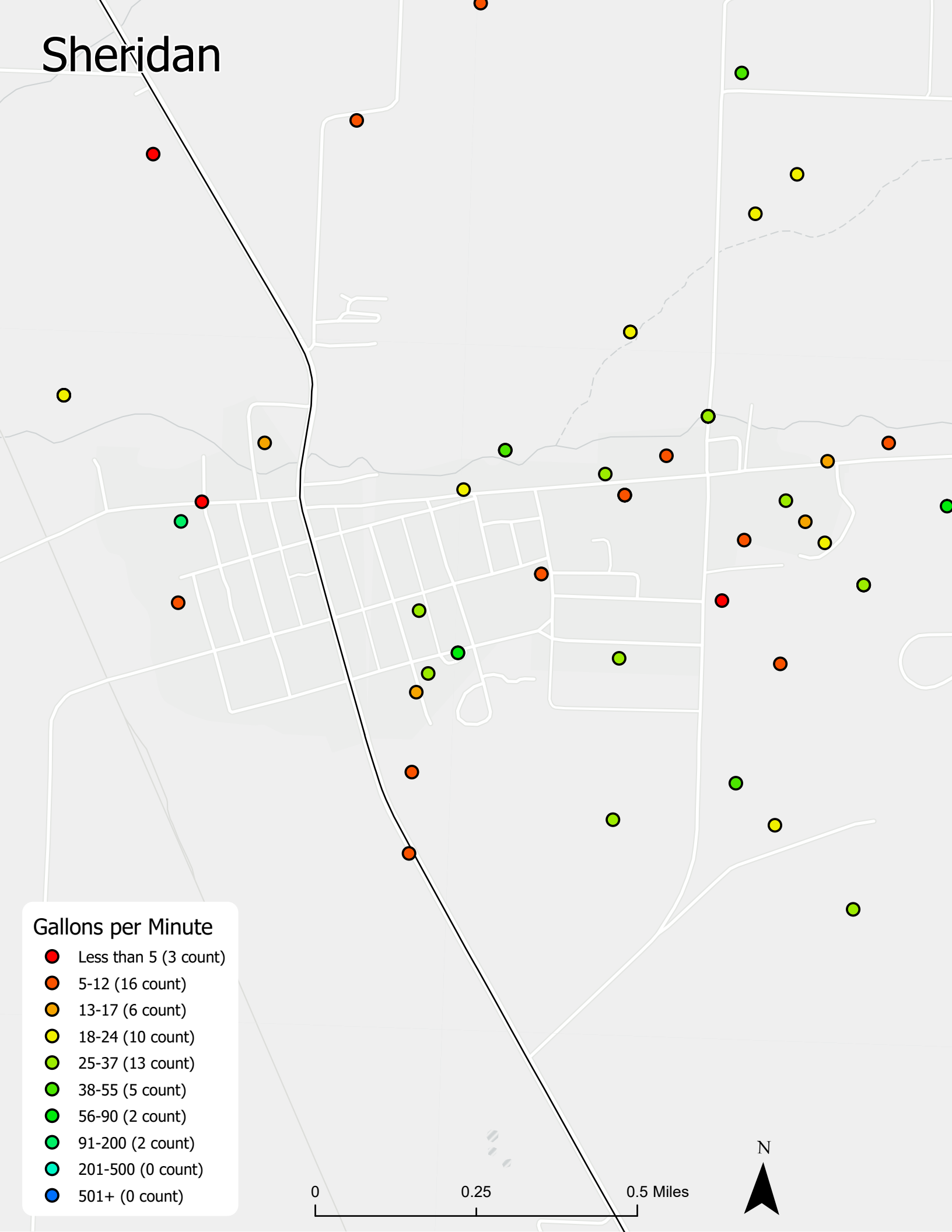
Gallons per Minute

- Less than 5 (3 count)
- 5-12 (18 count)
- 13-17 (9 count)
- 18-24 (18 count)
- 25-37 (17 count)
- 38-55 (12 count)
- 56-90 (1 count)
- 91-200 (2 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.42 0.85 Miles



Sheridan



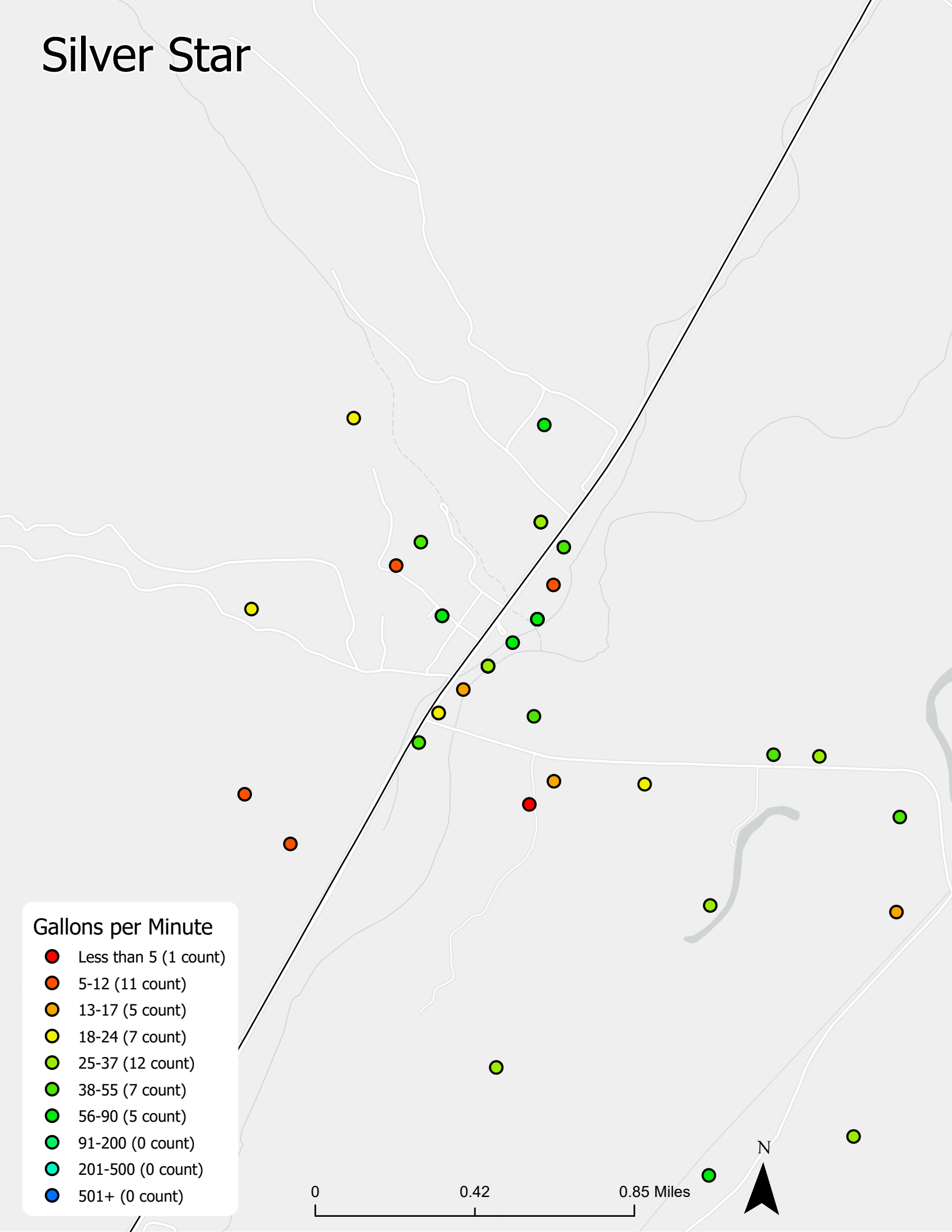
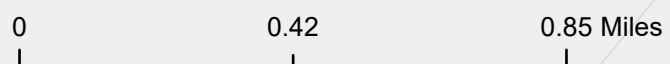
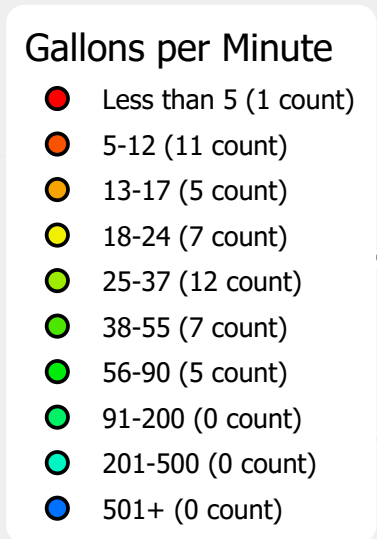
Gallons per Minute

- Less than 5 (3 count)
- 5-12 (16 count)
- 13-17 (6 count)
- 18-24 (10 count)
- 25-37 (13 count)
- 38-55 (5 count)
- 56-90 (2 count)
- 91-200 (2 count)
- 201-500 (0 count)
- 501+ (0 count)

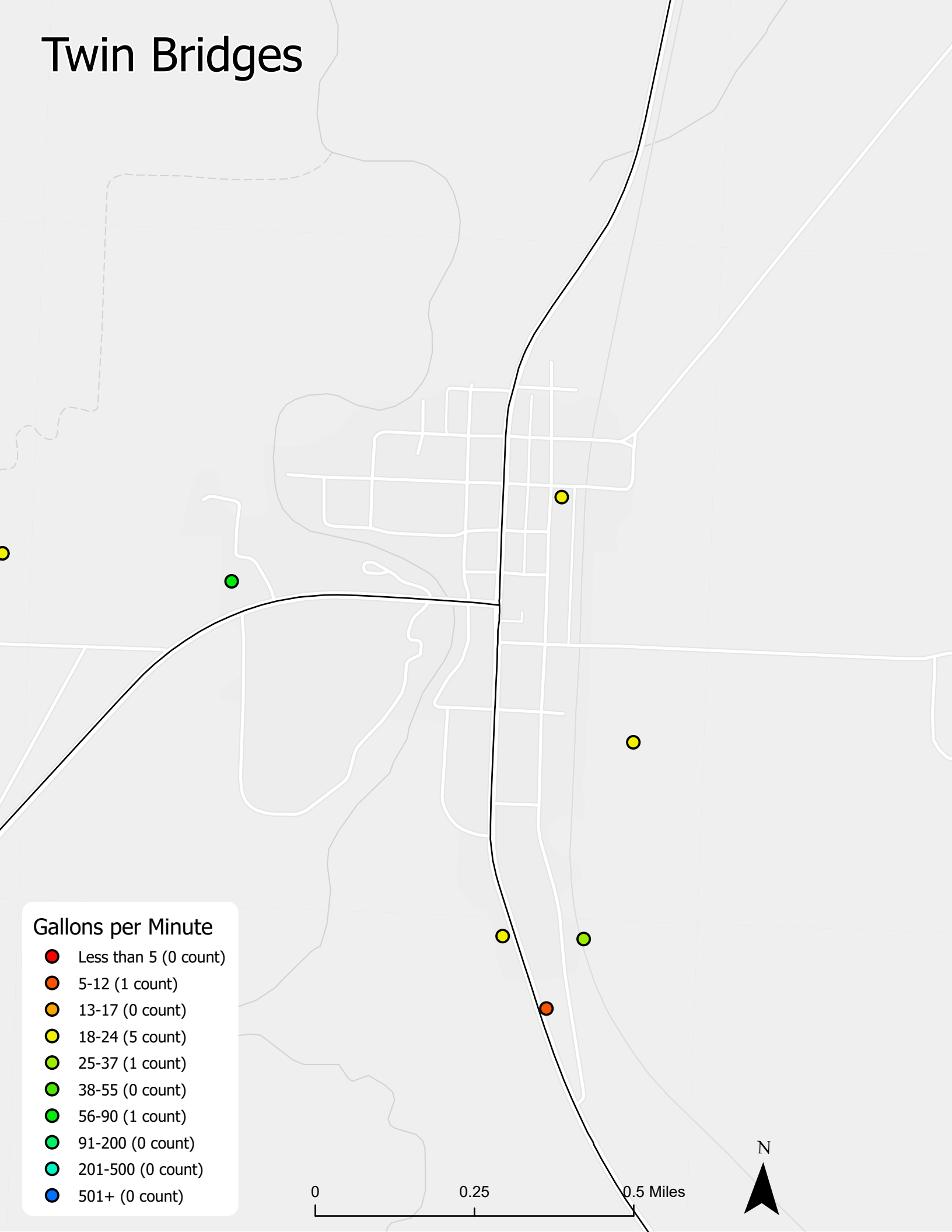
0 0.25 0.5 Miles



Silver Star



Twin Bridges



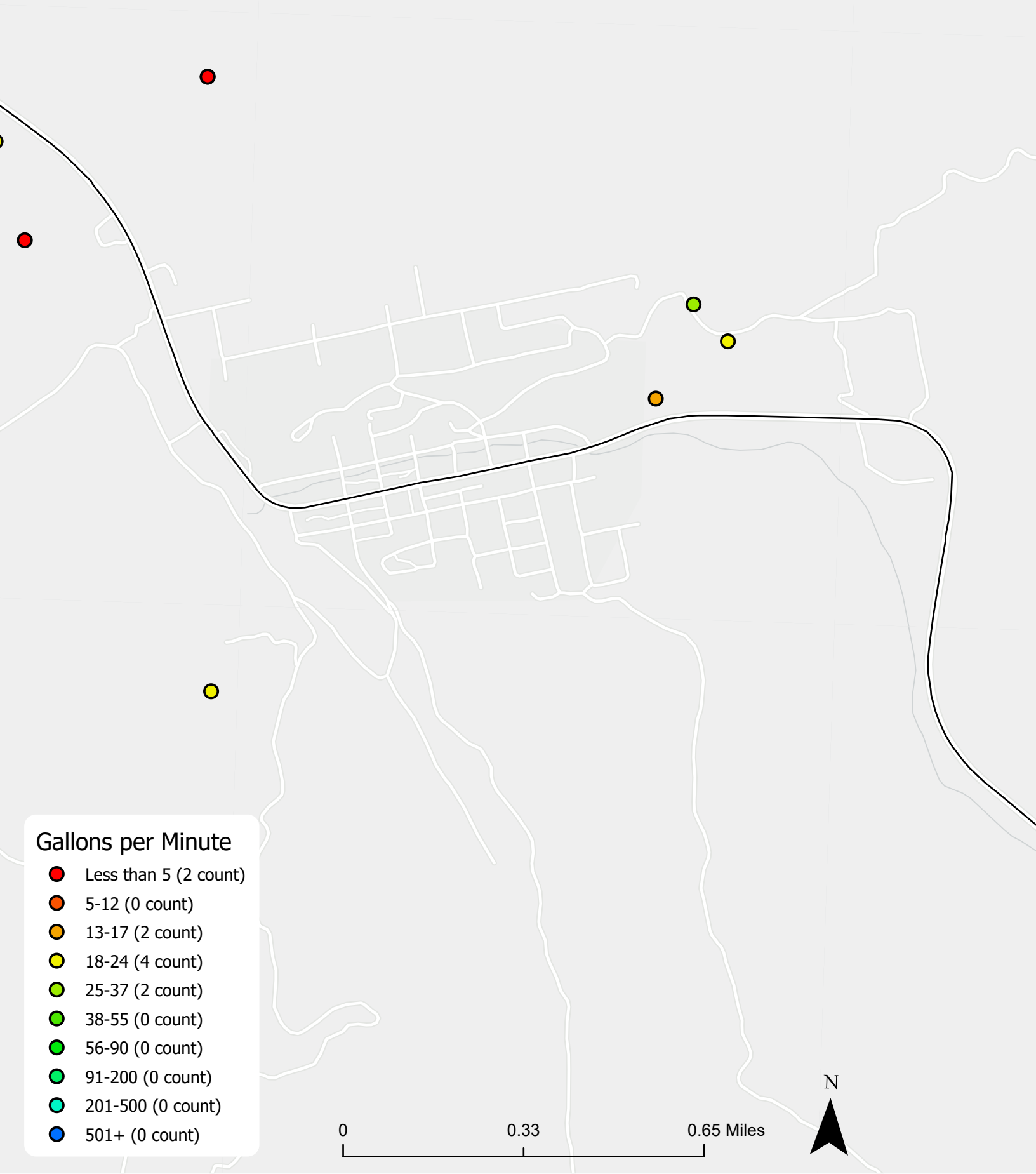
Gallons per Minute

- Less than 5 (0 count)
- 5-12 (1 count)
- 13-17 (0 count)
- 18-24 (5 count)
- 25-37 (1 count)
- 38-55 (0 count)
- 56-90 (1 count)
- 91-200 (0 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.25 0.5 Miles



Virginia City



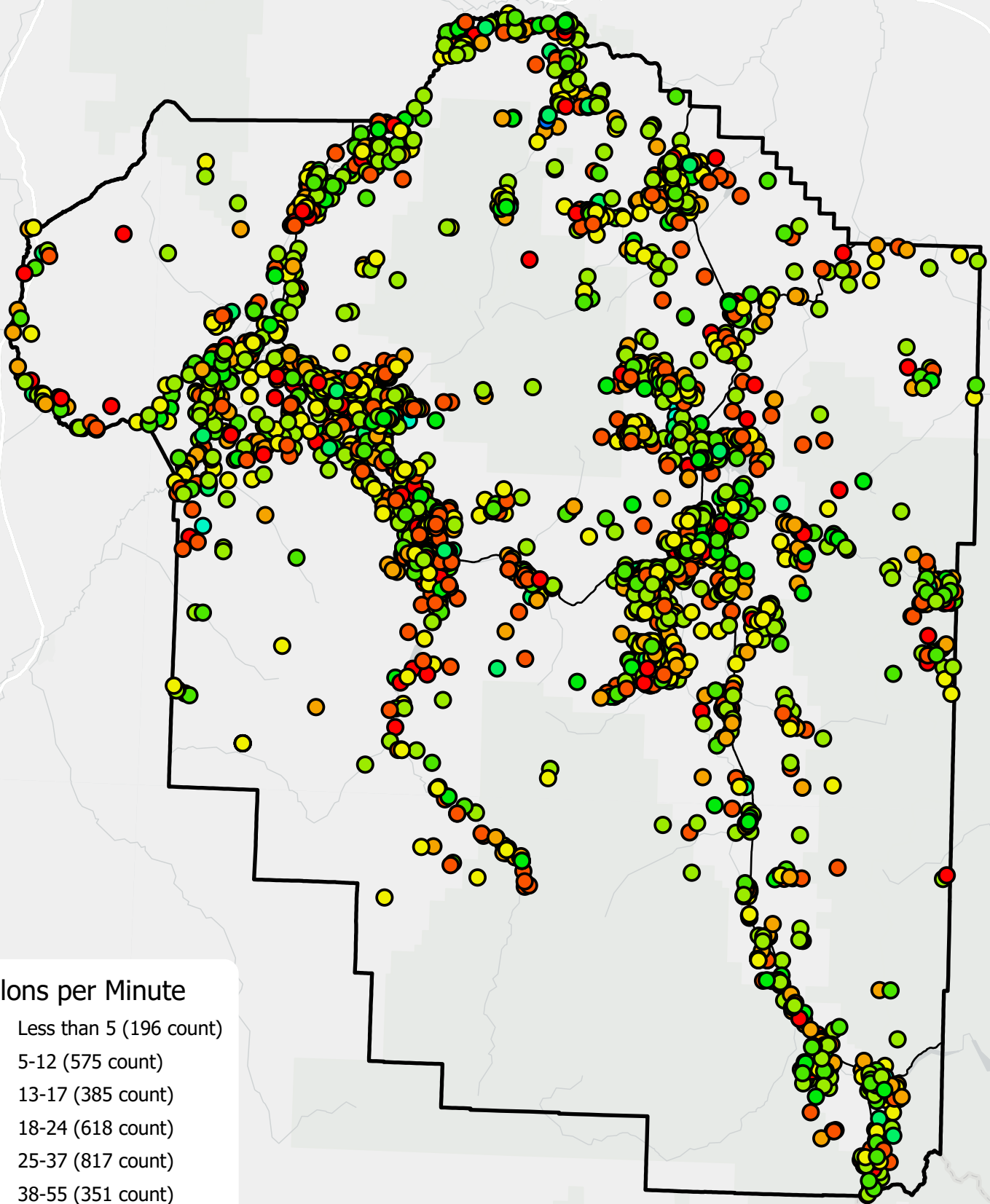
Gallons per Minute

- Less than 5 (2 count)
- 5-12 (0 count)
- 13-17 (2 count)
- 18-24 (4 count)
- 25-37 (2 count)
- 38-55 (0 count)
- 56-90 (0 count)
- 91-200 (0 count)
- 201-500 (0 count)
- 501+ (0 count)

0 0.33 0.65 Miles



Madison County



Gallons per Minute

- Less than 5 (196 count)
- 5-12 (575 count)
- 13-17 (385 count)
- 18-24 (618 count)
- 25-37 (817 count)
- 38-55 (351 count)
- 56-90 (175 count)
- 91-200 (68 count)
- 201-500 (13 count)
- 501+ (4 count)

0 12.5 25 Miles

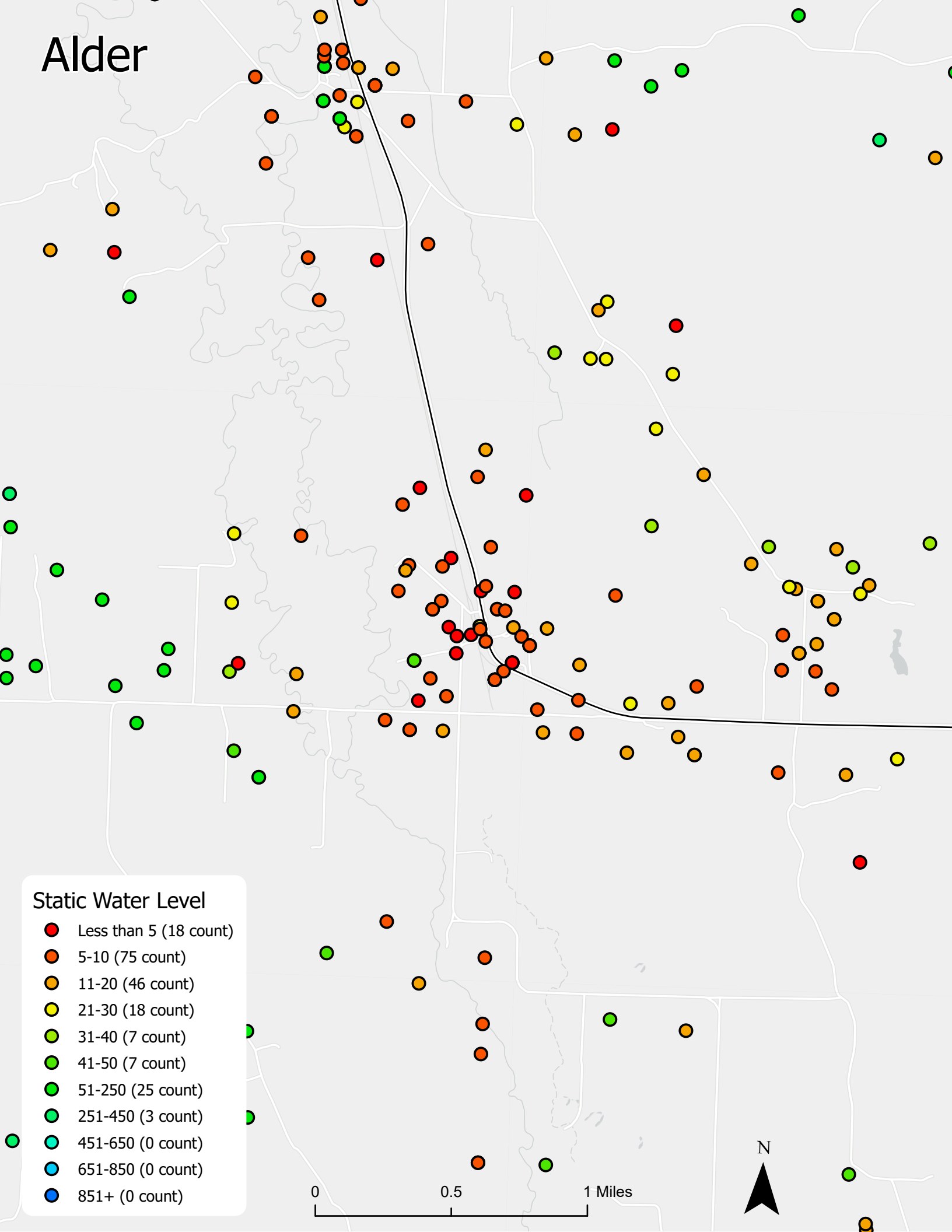
N

APPENDIX M

GROUND WATER INFORMATION CENTER
STATIC WATER LEVEL
COMMUNITY MAPS

 **HYALITE**

Alder



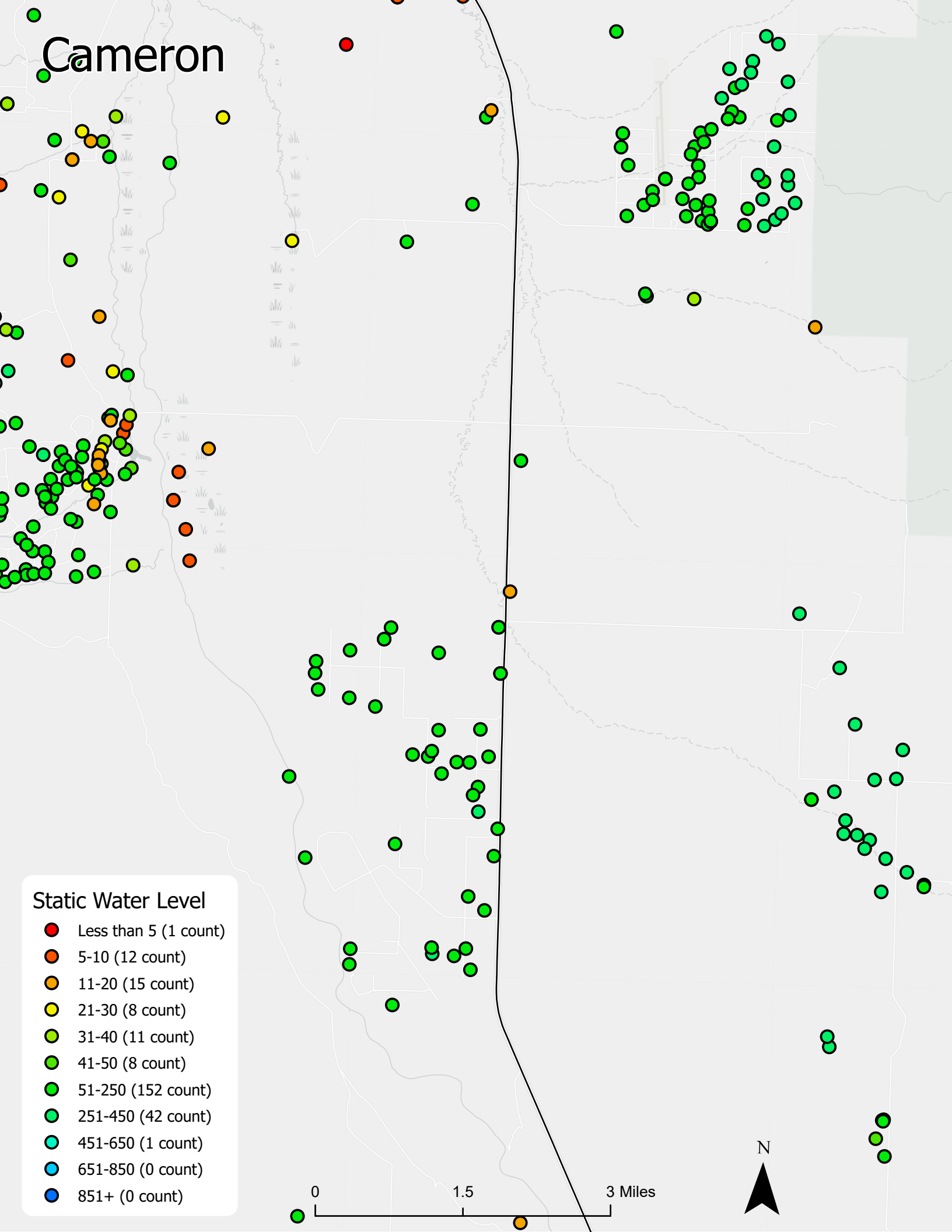
Static Water Level

- Less than 5 (18 count)
- 5-10 (75 count)
- 11-20 (46 count)
- 21-30 (18 count)
- 31-40 (7 count)
- 41-50 (7 count)
- 51-250 (25 count)
- 251-450 (3 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

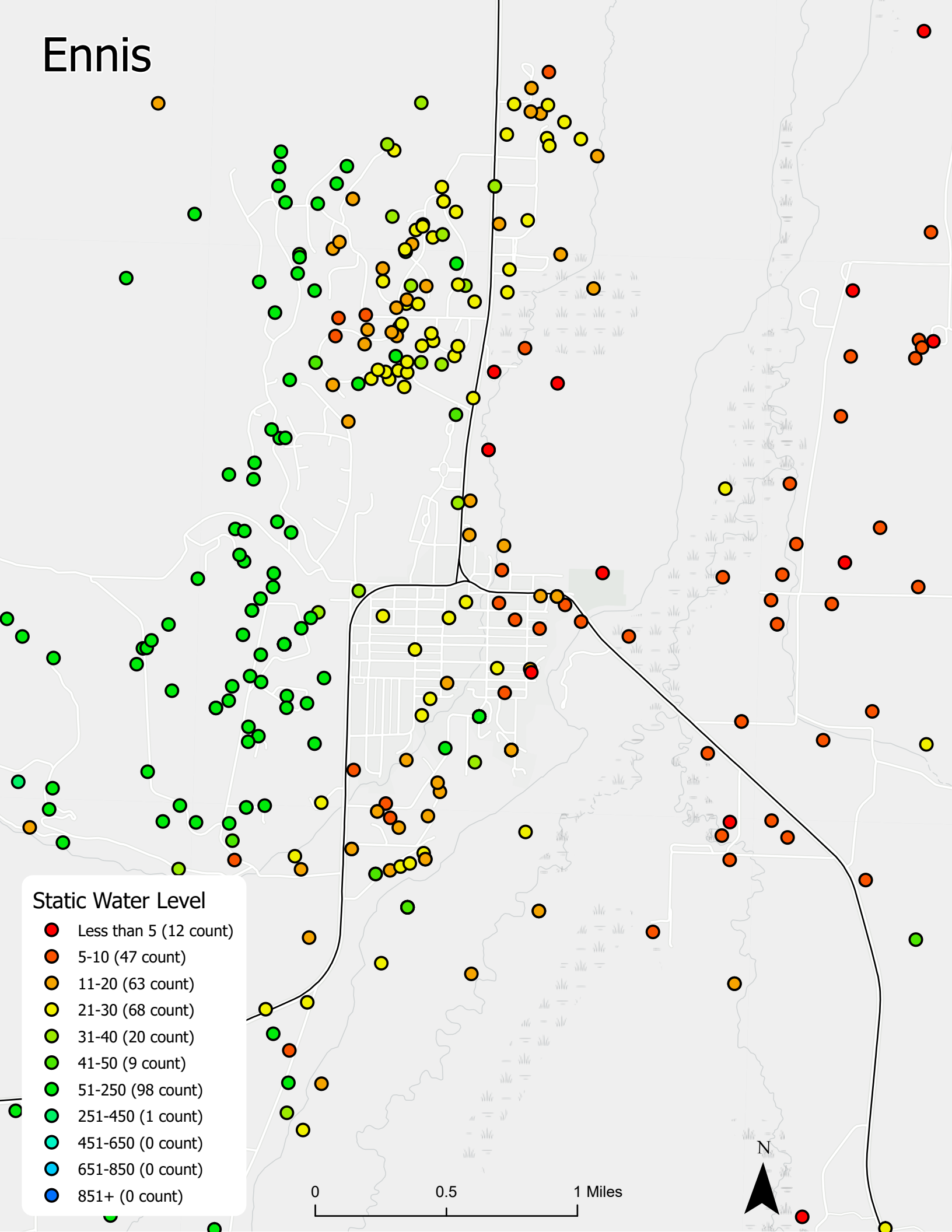
0 0.5 1 Miles



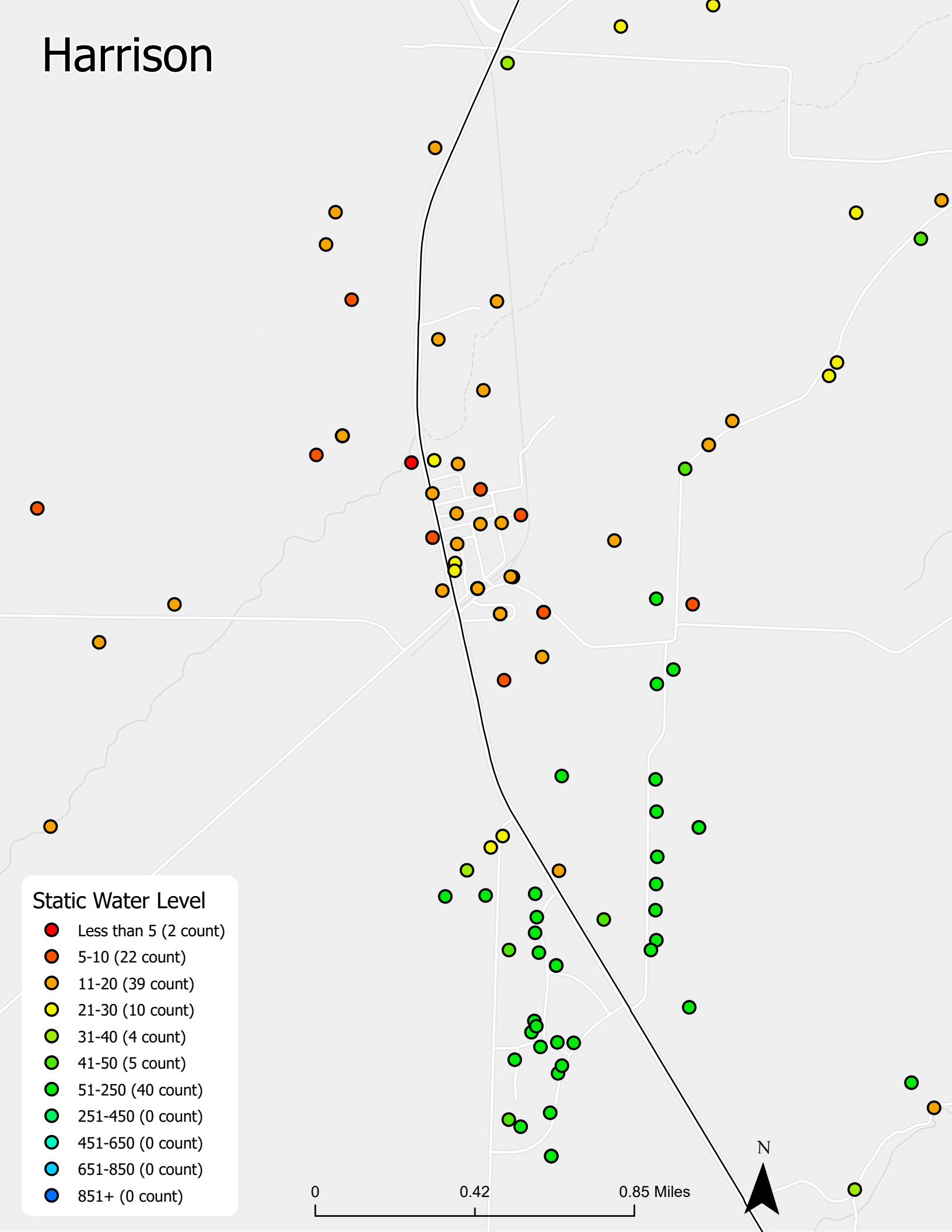
Cameron



Ennis



Harrison

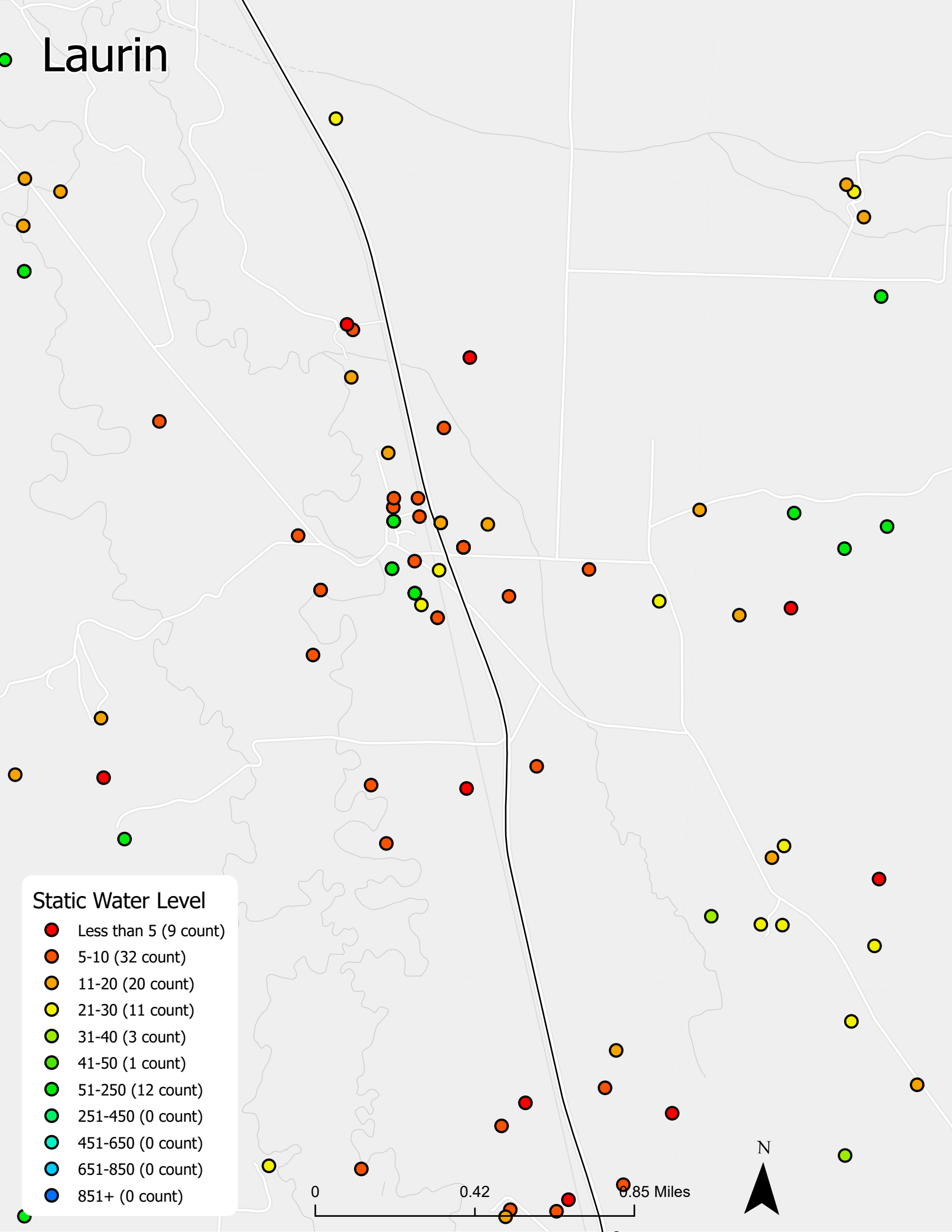


Static Water Level

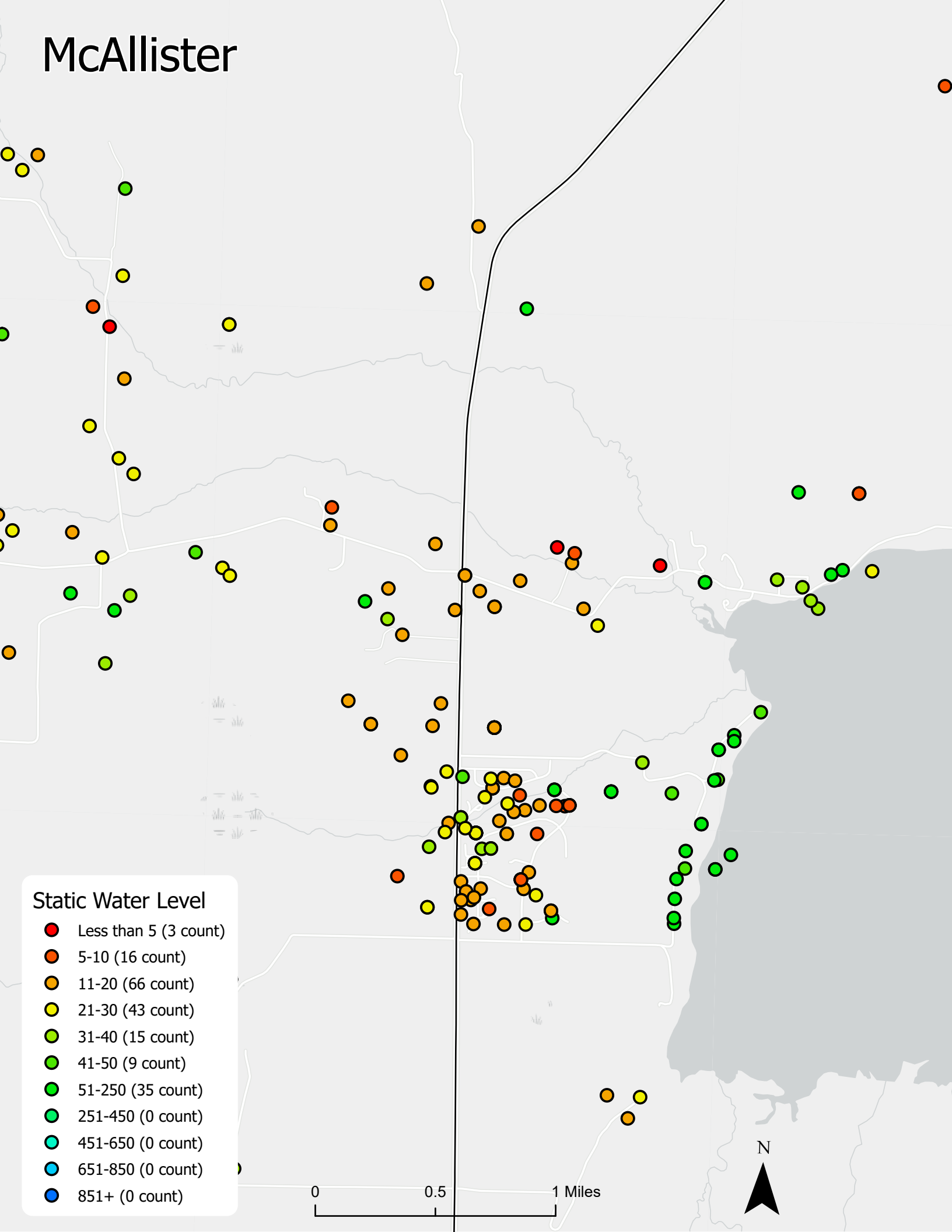
- Less than 5 (2 count)
- 5-10 (22 count)
- 11-20 (39 count)
- 21-30 (10 count)
- 31-40 (4 count)
- 41-50 (5 count)
- 51-250 (40 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

0 0.42 0.85 Miles

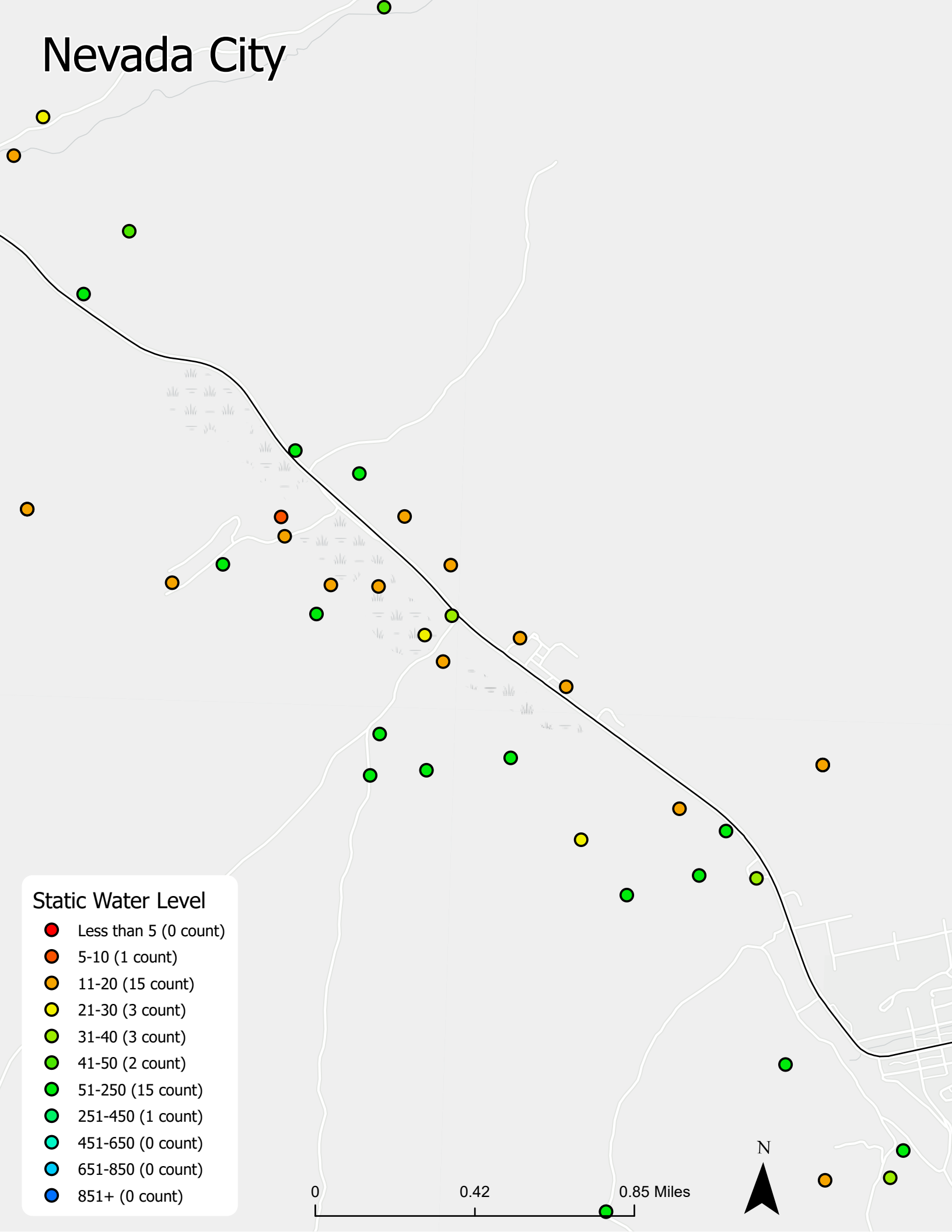
N



McAllister



Nevada City



Static Water Level

- Less than 5 (0 count)
- 5-10 (1 count)
- 11-20 (15 count)
- 21-30 (3 count)
- 31-40 (3 count)
- 41-50 (2 count)
- 51-250 (15 count)
- 251-450 (1 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

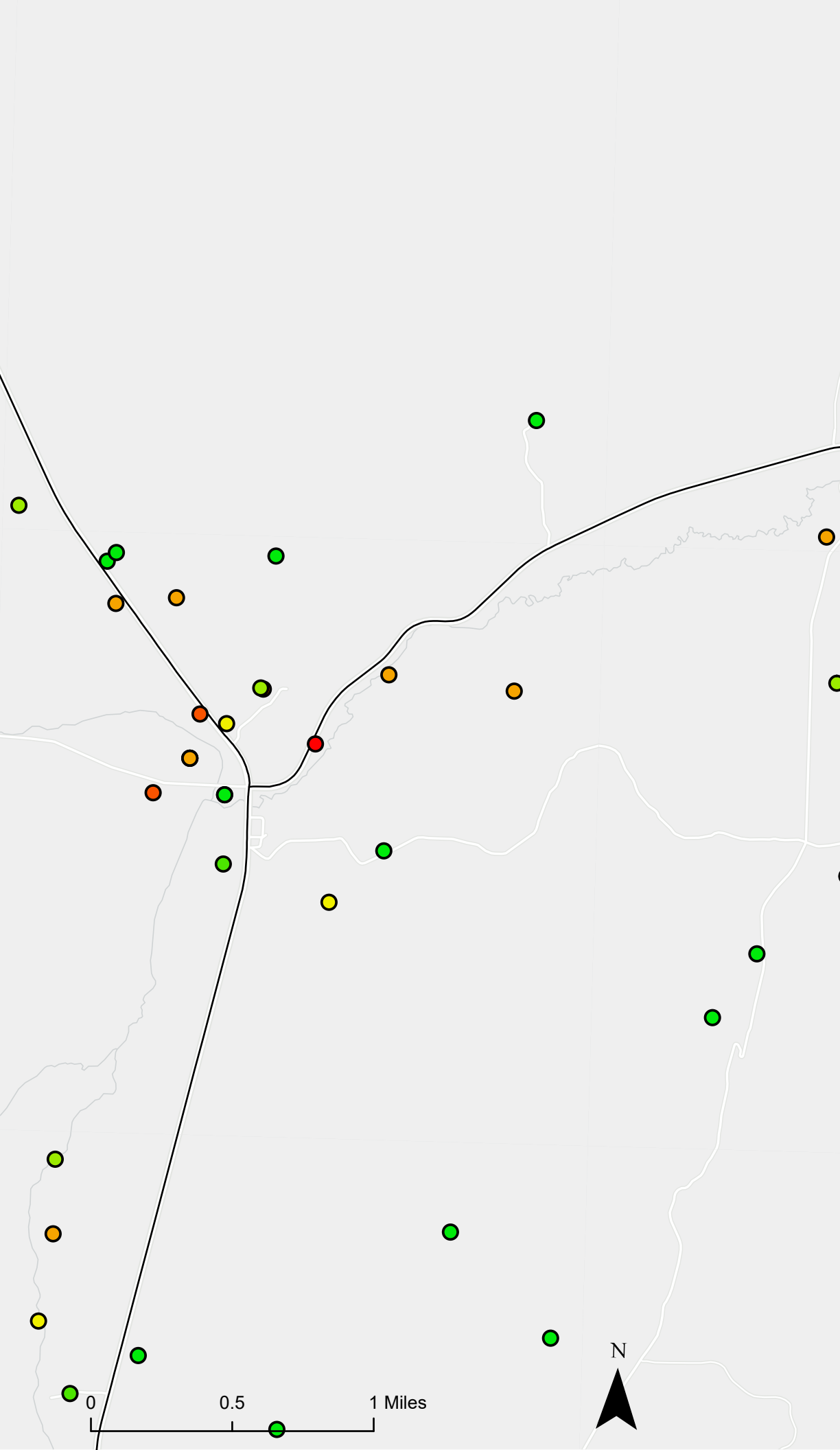
0 0.42 0.85 Miles



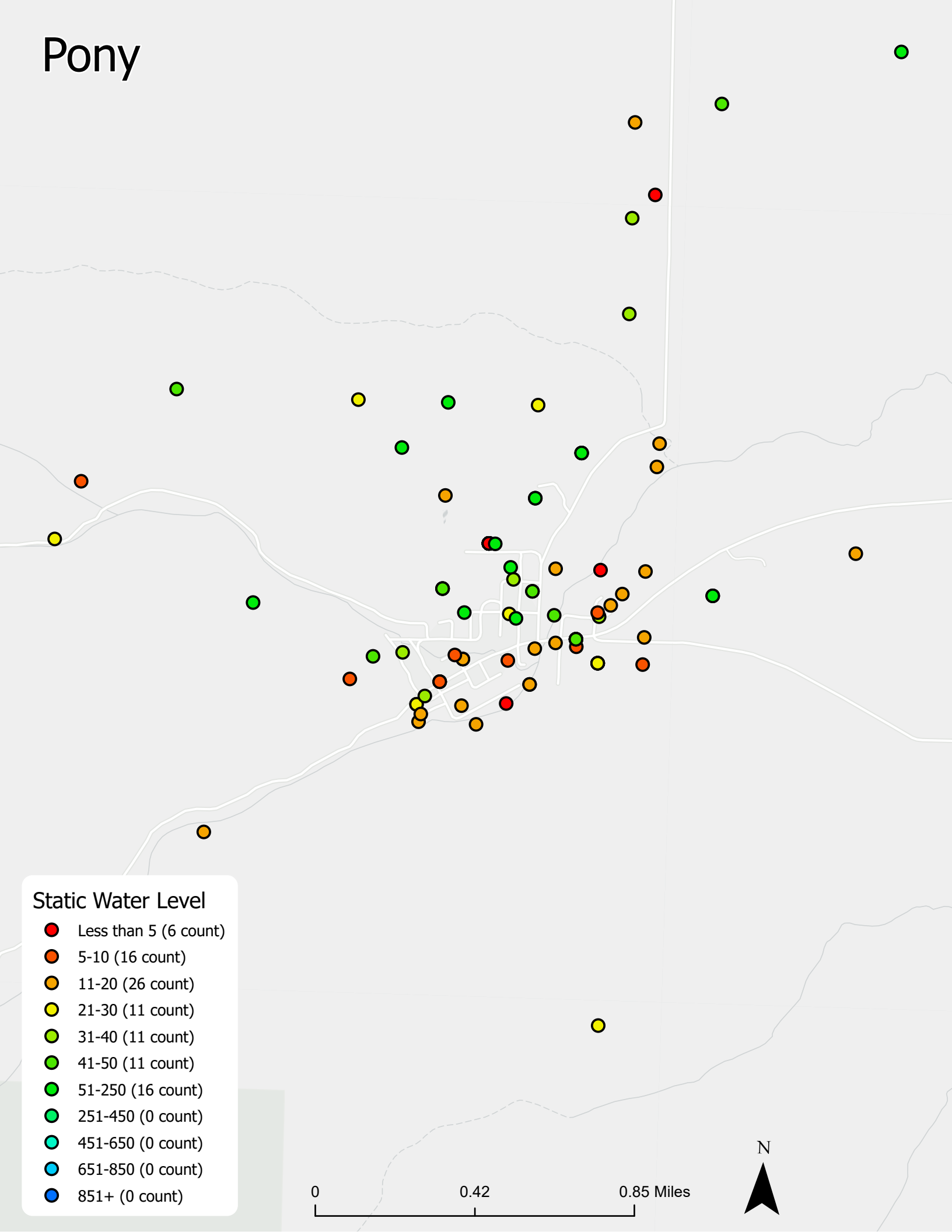
Norris

Static Water Level

- Less than 5 (3 count)
- 5-10 (4 count)
- 11-20 (8 count)
- 21-30 (3 count)
- 31-40 (6 count)
- 41-50 (2 count)
- 51-250 (13 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)



Pony



Static Water Level

- Less than 5 (6 count)
- 5-10 (16 count)
- 11-20 (26 count)
- 21-30 (11 count)
- 31-40 (11 count)
- 41-50 (11 count)
- 51-250 (16 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

0 0.42 0.85 Miles

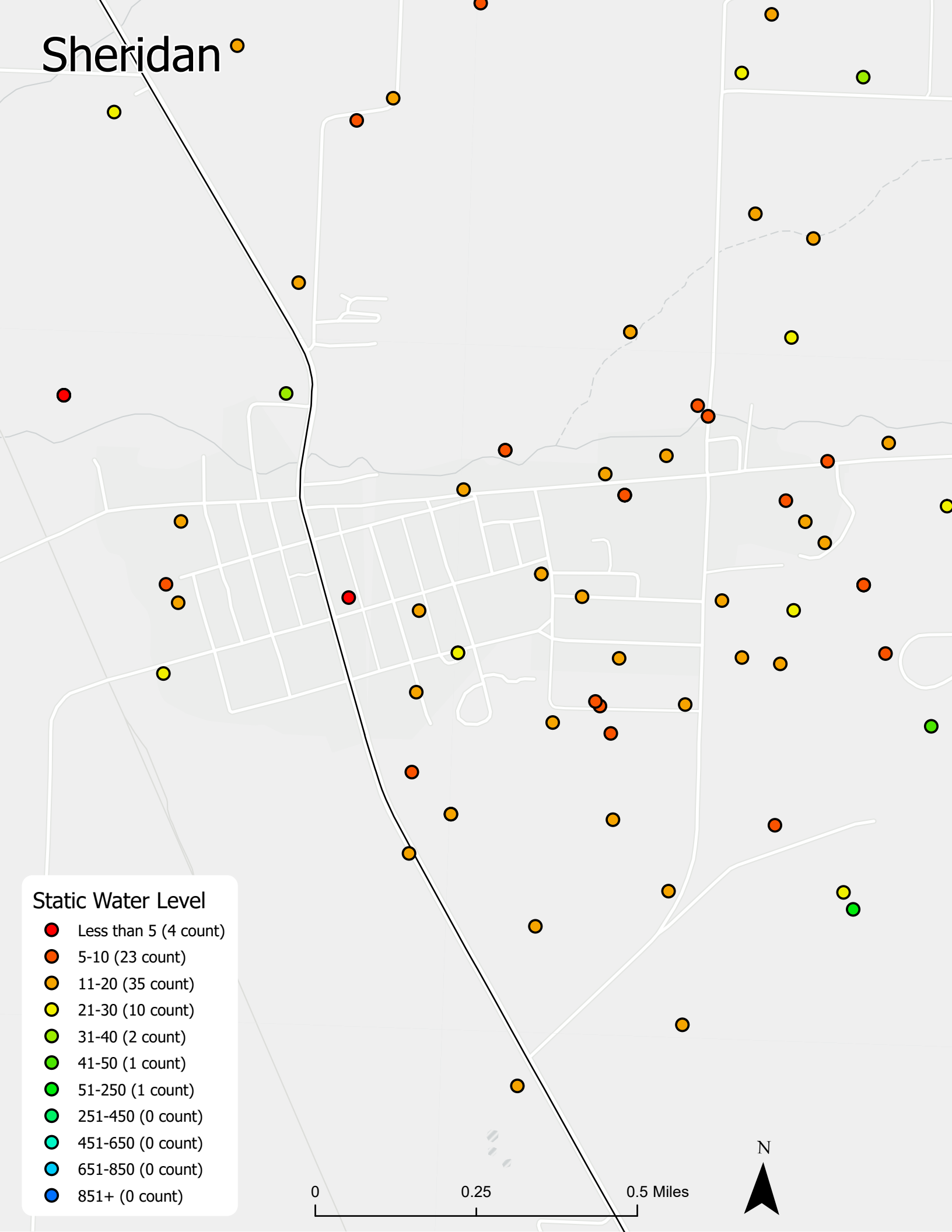


Sheridan

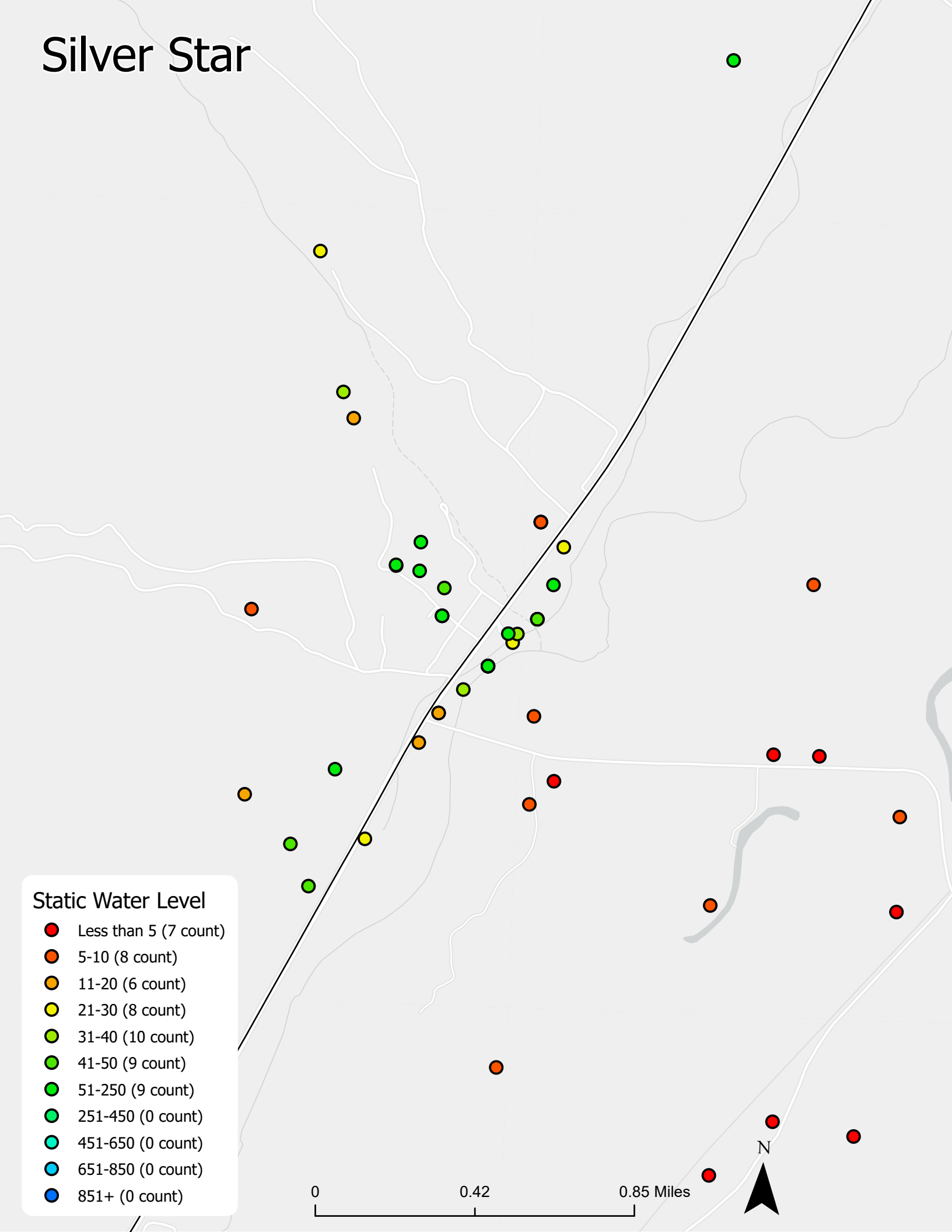
Static Water Level

- Less than 5 (4 count)
- 5-10 (23 count)
- 11-20 (35 count)
- 21-30 (10 count)
- 31-40 (2 count)
- 41-50 (1 count)
- 51-250 (1 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

0 0.25 0.5 Miles



Silver Star



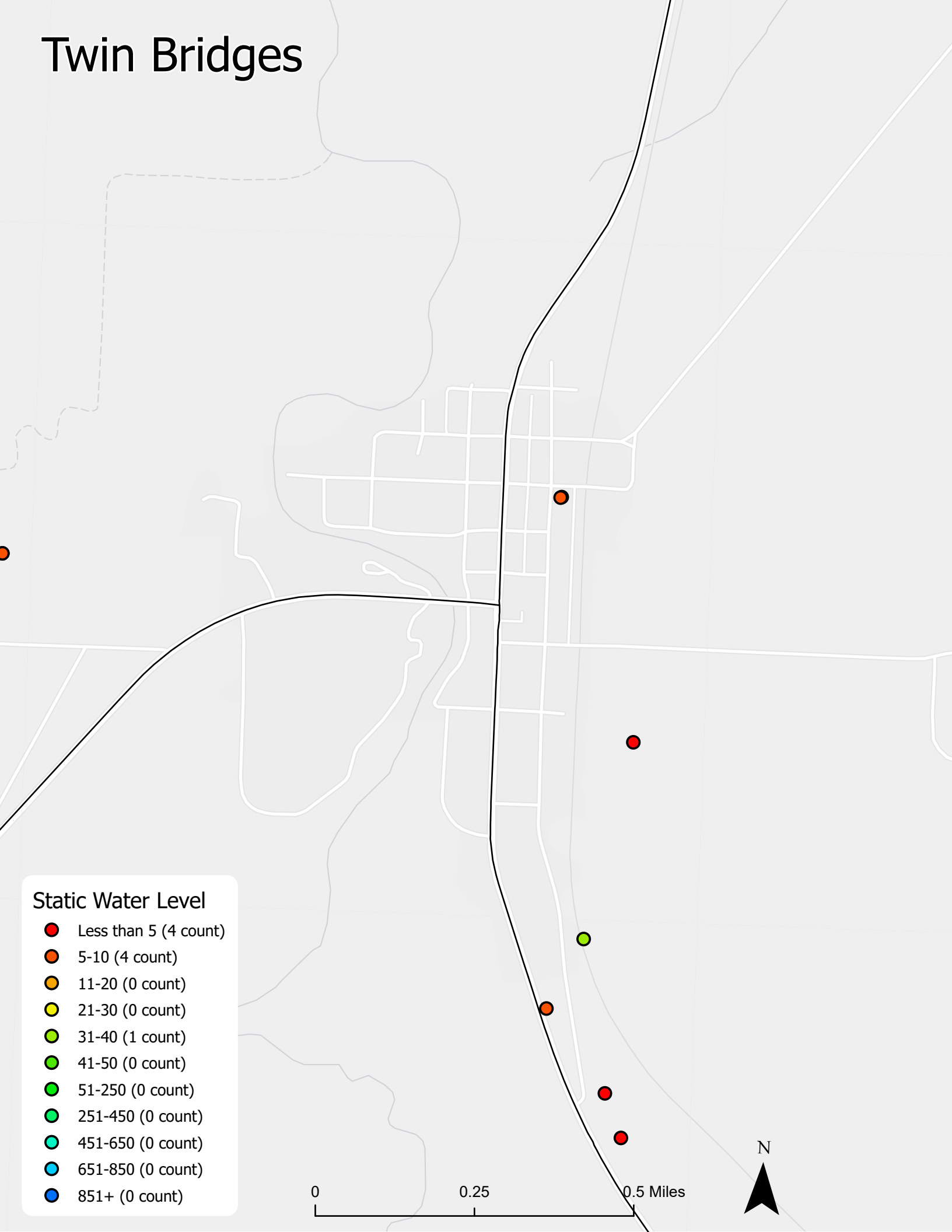
Static Water Level

- Less than 5 (7 count)
- 5-10 (8 count)
- 11-20 (6 count)
- 21-30 (8 count)
- 31-40 (10 count)
- 41-50 (9 count)
- 51-250 (9 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

0 0.42 0.85 Miles



Twin Bridges



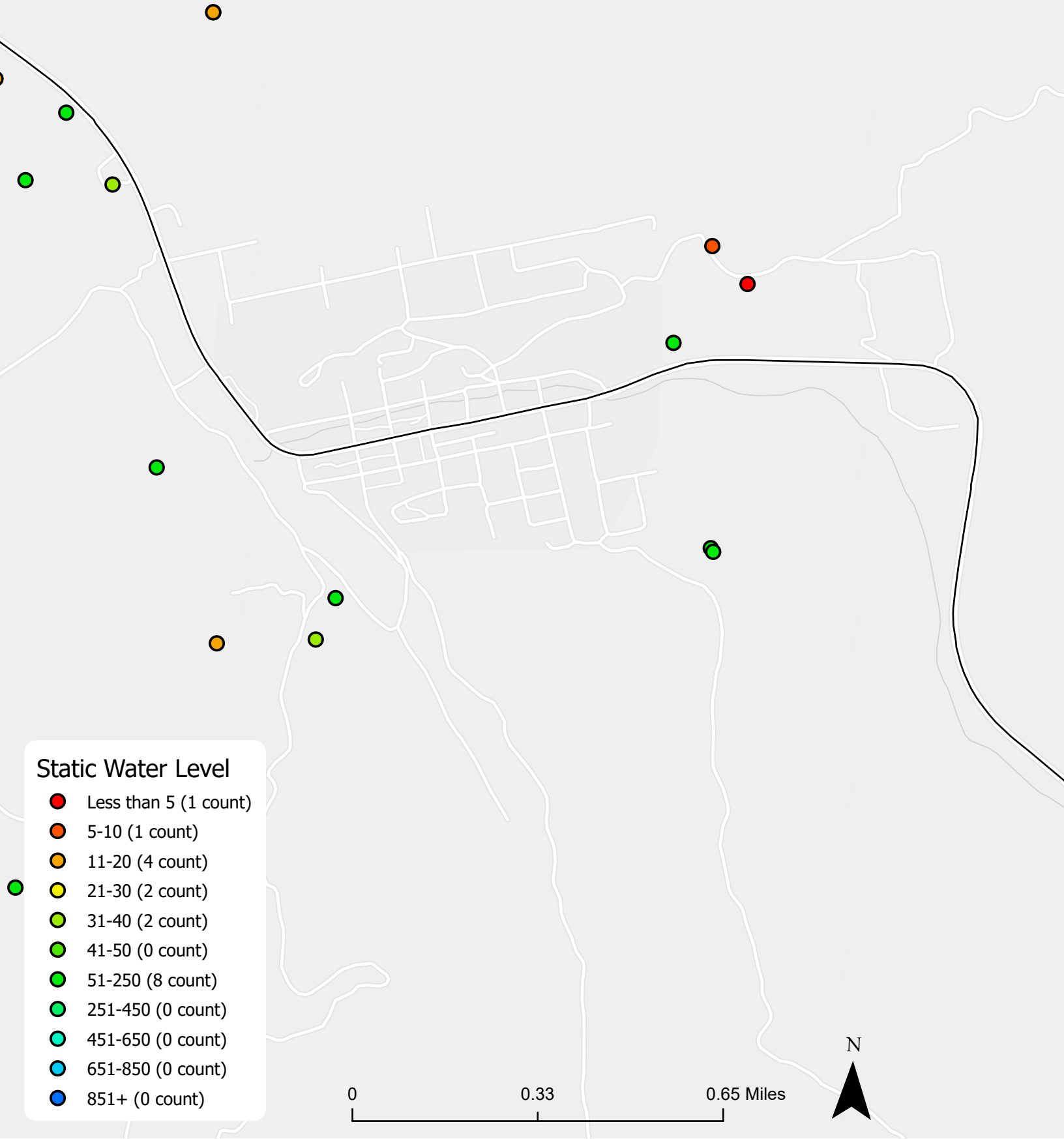
Static Water Level

- Less than 5 (4 count)
- 5-10 (4 count)
- 11-20 (0 count)
- 21-30 (0 count)
- 31-40 (1 count)
- 41-50 (0 count)
- 51-250 (0 count)
- 251-450 (0 count)
- 451-650 (0 count)
- 651-850 (0 count)
- 851+ (0 count)

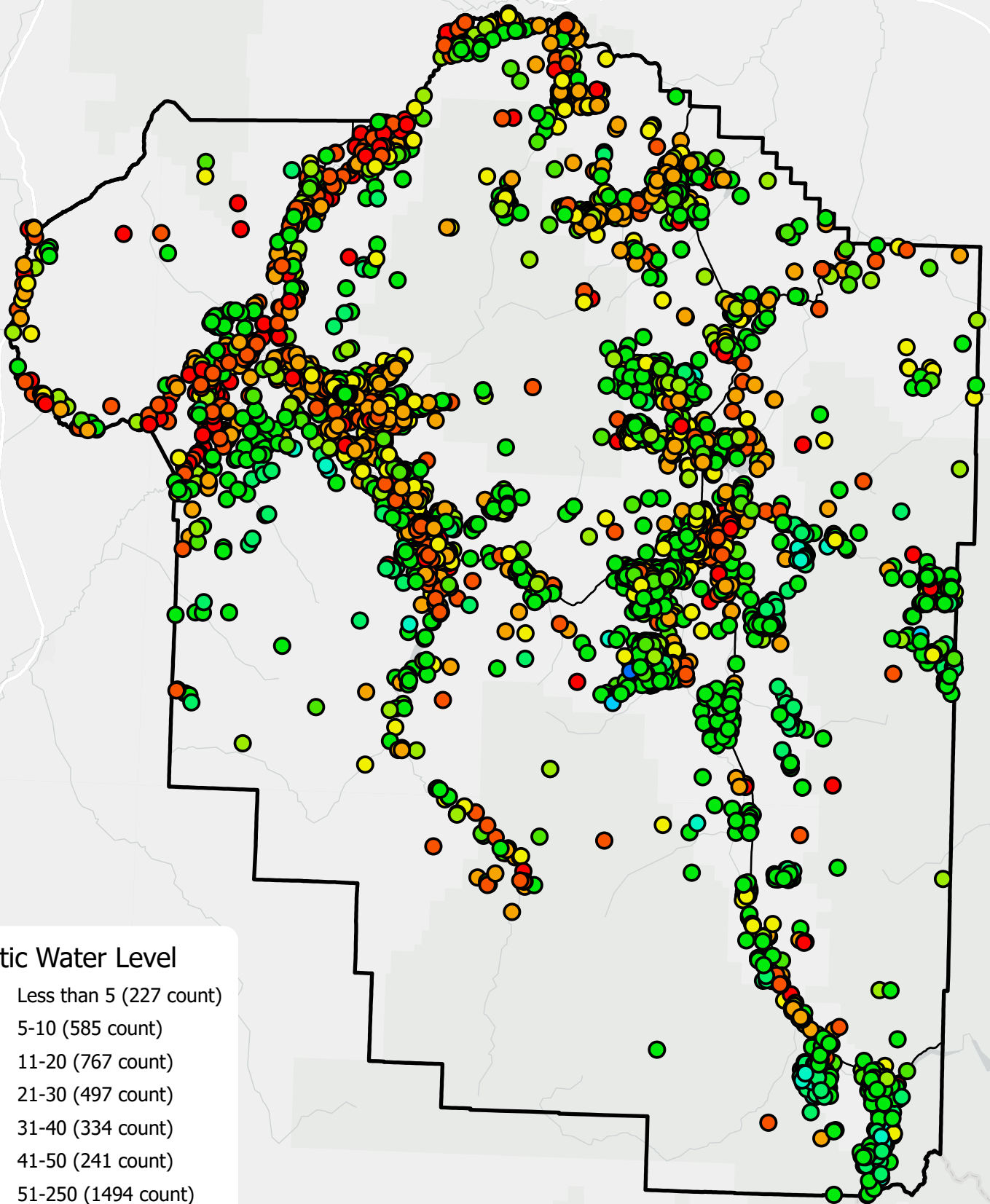
0 0.25 0.5 Miles



Virginia City



Madison County



Static Water Level

- Less than 5 (227 count)
- 5-10 (585 count)
- 11-20 (767 count)
- 21-30 (497 count)
- 31-40 (334 count)
- 41-50 (241 count)
- 51-250 (1494 count)
- 251-450 (186 count)
- 451-650 (34 count)
- 651-850 (3 count)
- 851+ (1 count)

0 12.5 25 Miles

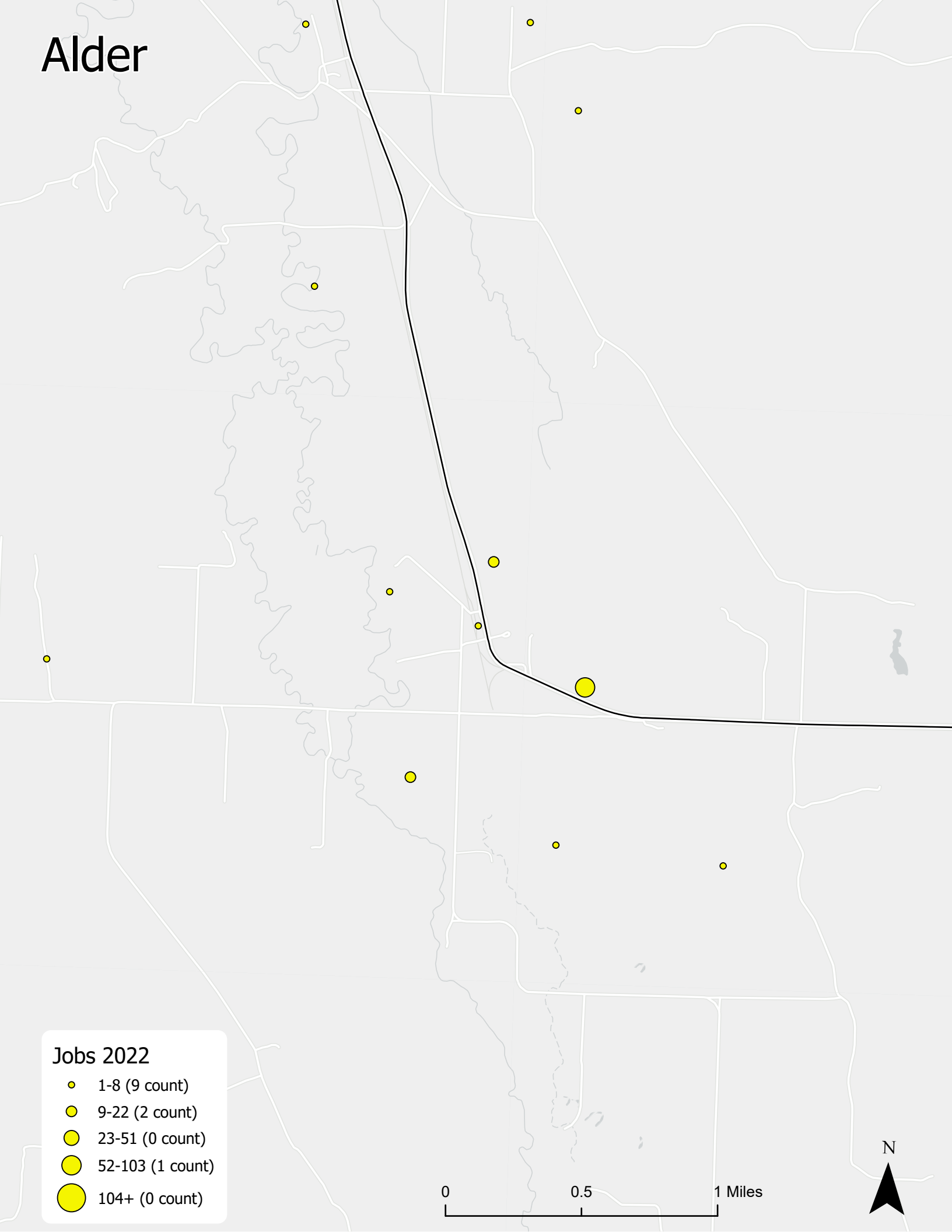


APPENDIX N

EMPLOYMENT COUNT COMMUNITY MAPS

 **HYALITE**

Alder



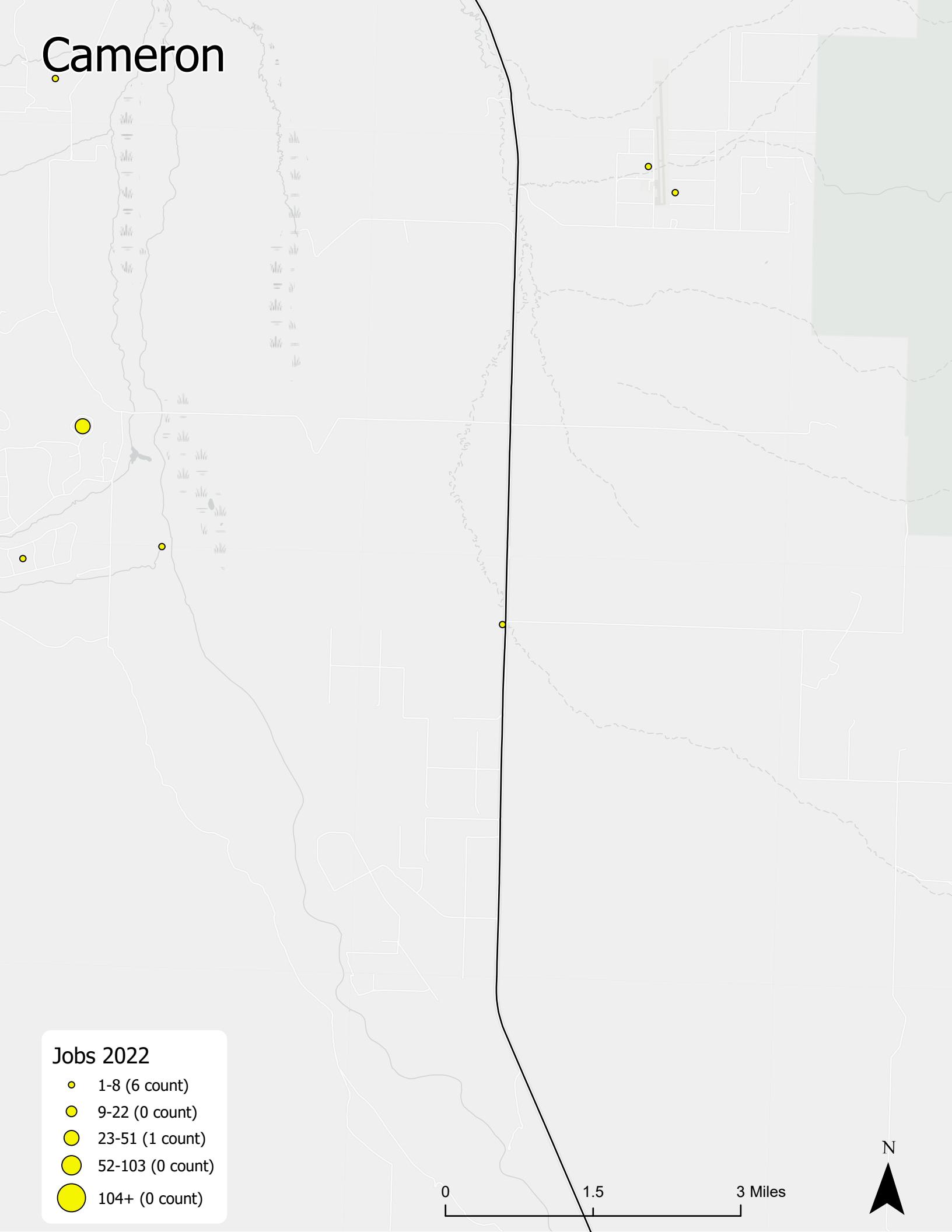
Jobs 2022

- 1-8 (9 count)
- 9-22 (2 count)
- 23-51 (0 count)
- 52-103 (1 count)
- 104+ (0 count)

0 0.5 1 Miles



Cameron



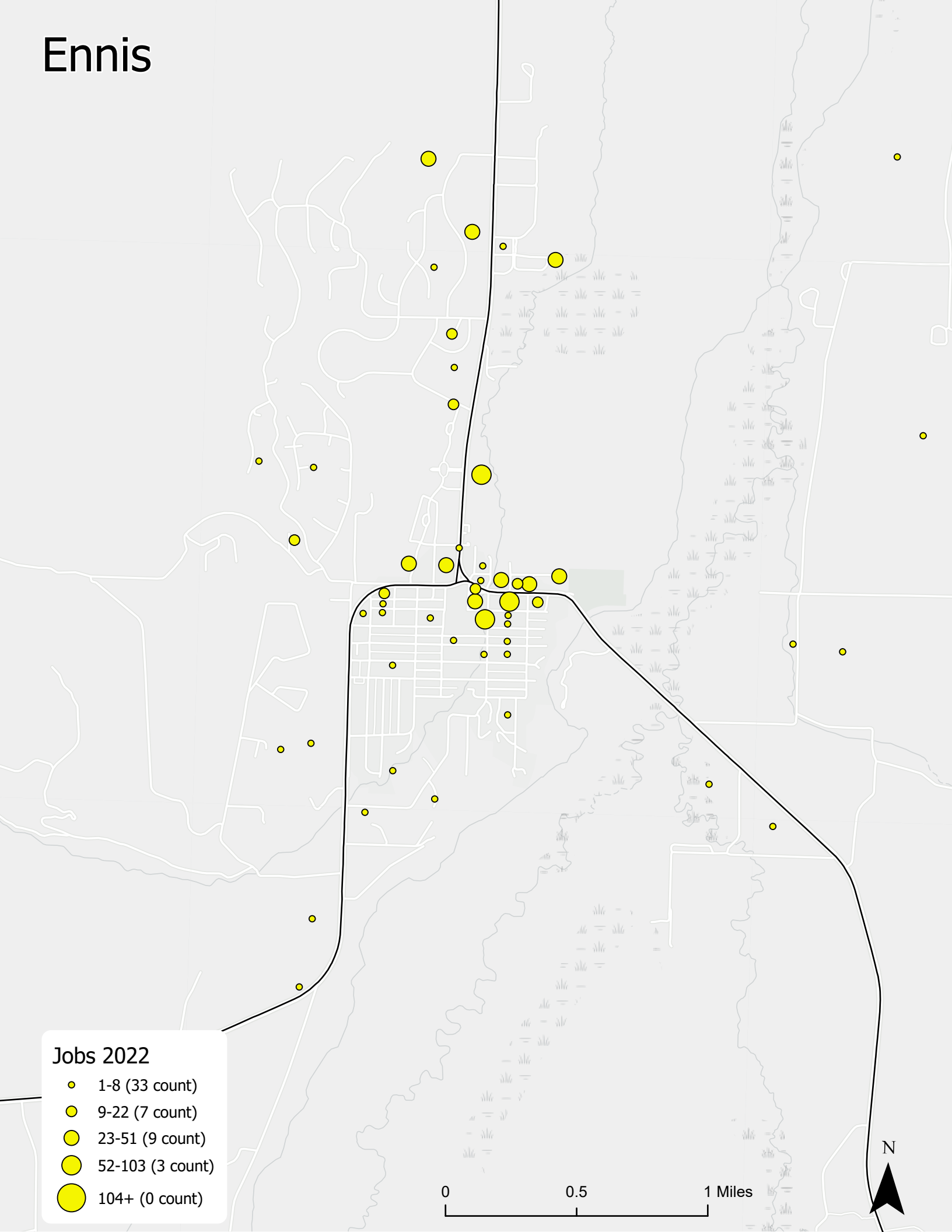
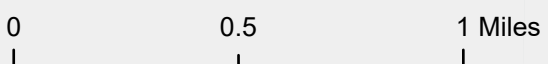
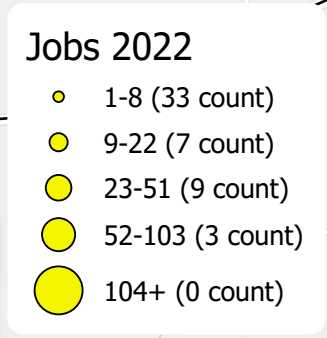
Jobs 2022

- 1-8 (6 count)
- 9-22 (0 count)
- 23-51 (1 count)
- 52-103 (0 count)
- 104+ (0 count)

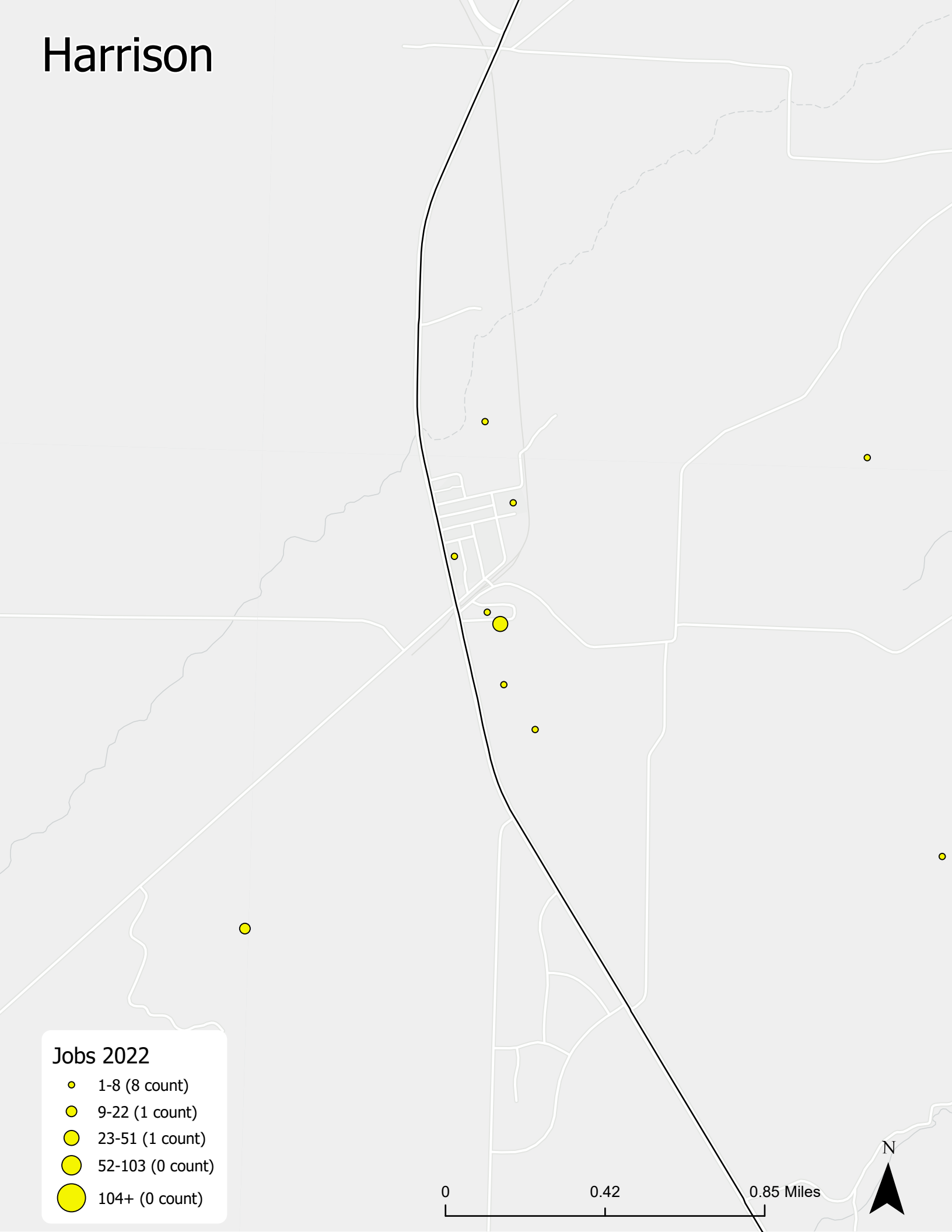
0 1.5 3 Miles



Ennis



Harrison



Jobs 2022

- 1-8 (8 count)
- 9-22 (1 count)
- 23-51 (1 count)
- 52-103 (0 count)
- 104+ (0 count)

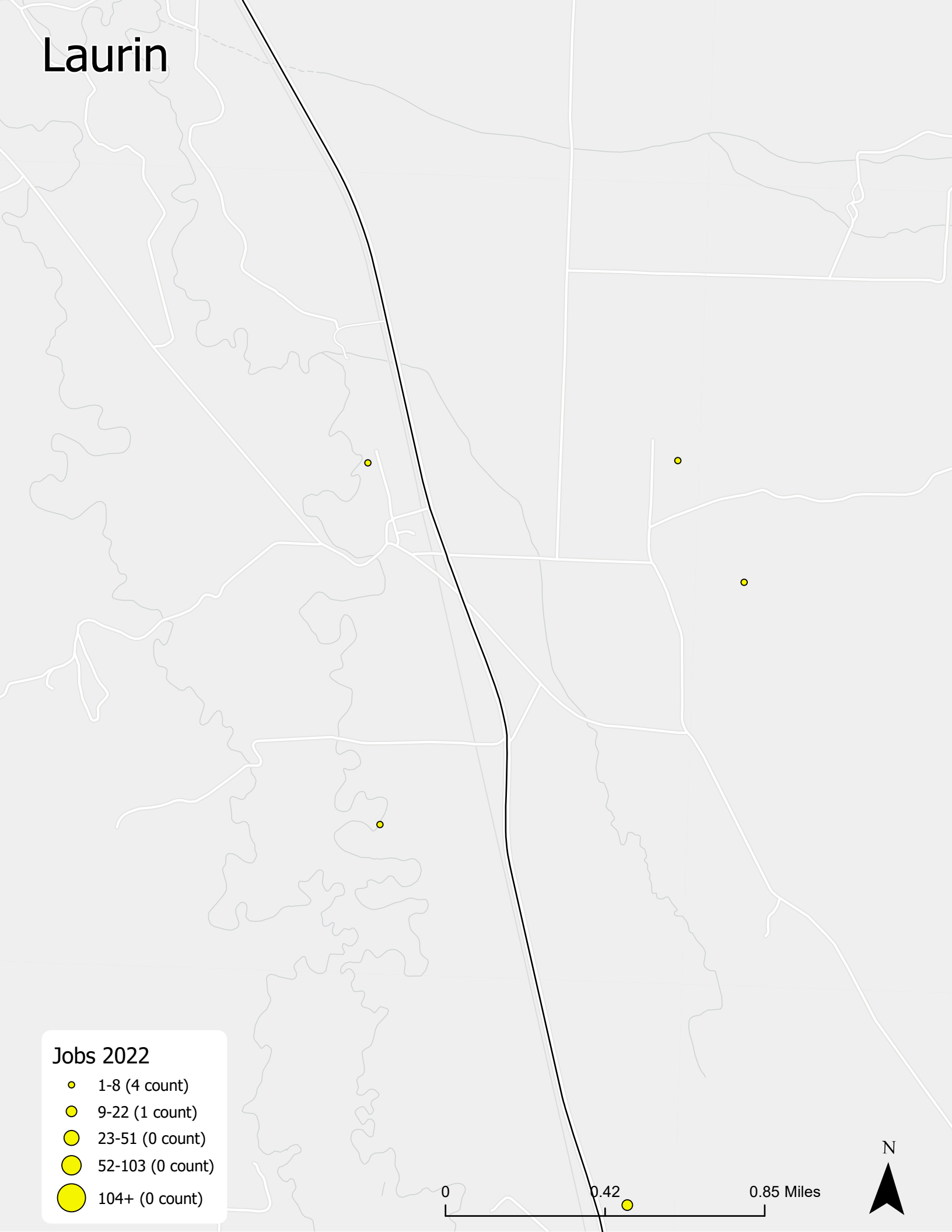
0 0.42 0.85 Miles



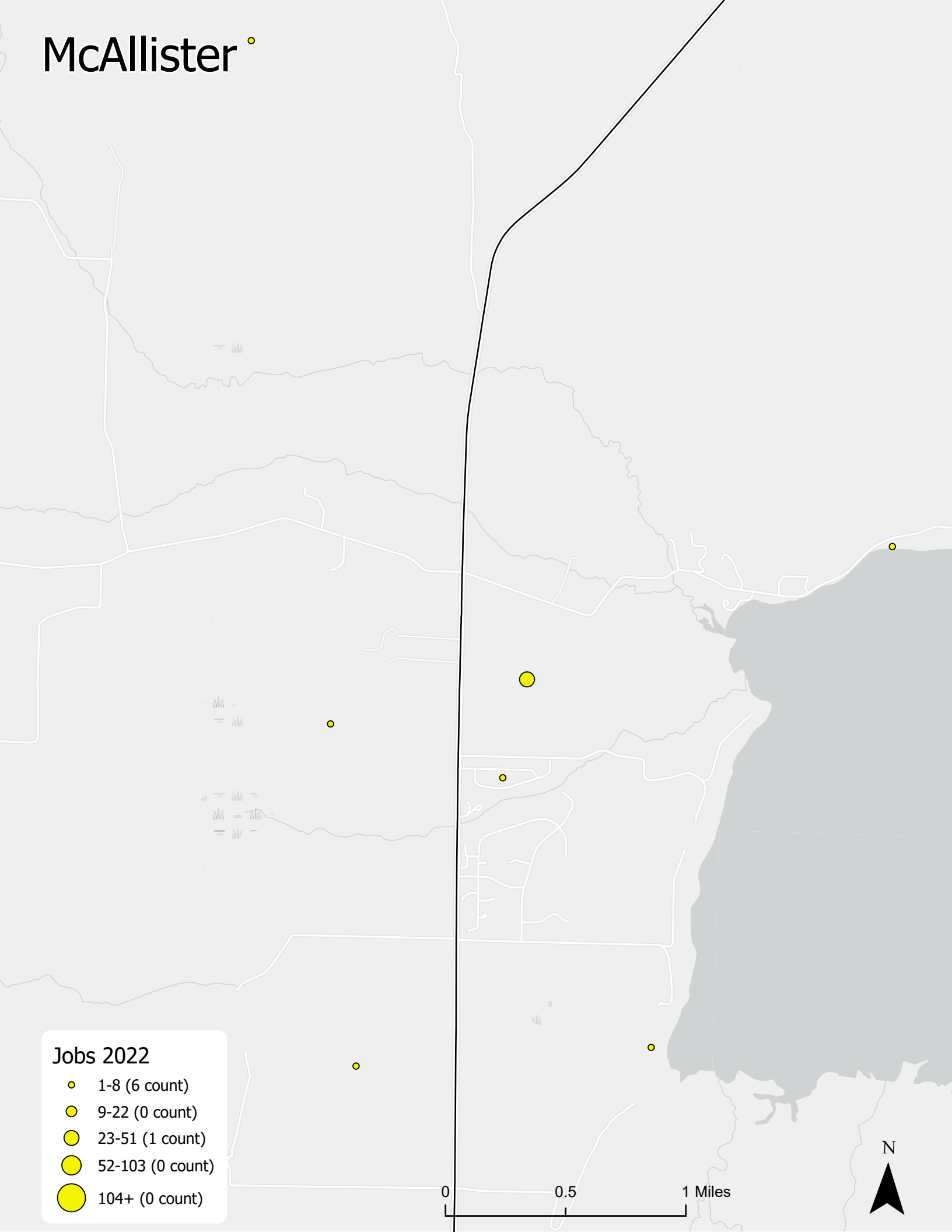
Laurin

Jobs 2022

- 1-8 (4 count)
- 9-22 (1 count)
- 23-51 (0 count)
- 52-103 (0 count)
- 104+ (0 count)



McAllister



Jobs 2022

- 1-8 (6 count)
- 9-22 (0 count)
- 23-51 (1 count)
- 52-103 (0 count)
- 104+ (0 count)

0 0.5 1 Miles



Nevada City

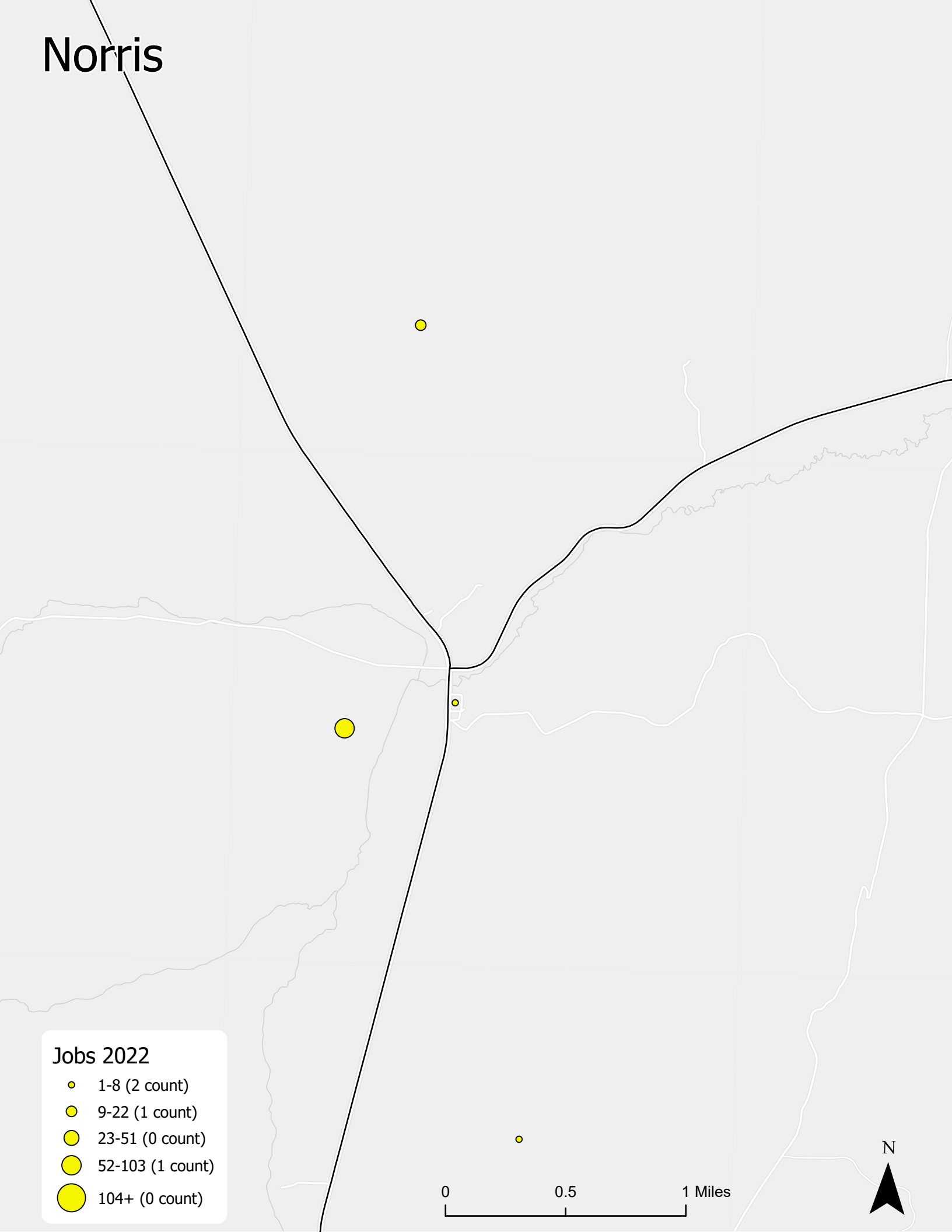
Jobs 2022

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- 9-22 (2 count)
- 23-51 (0 count)
- 52-103 (1 count)
- 104+ (0 count)

0 0.42 0.85 Miles



Norris



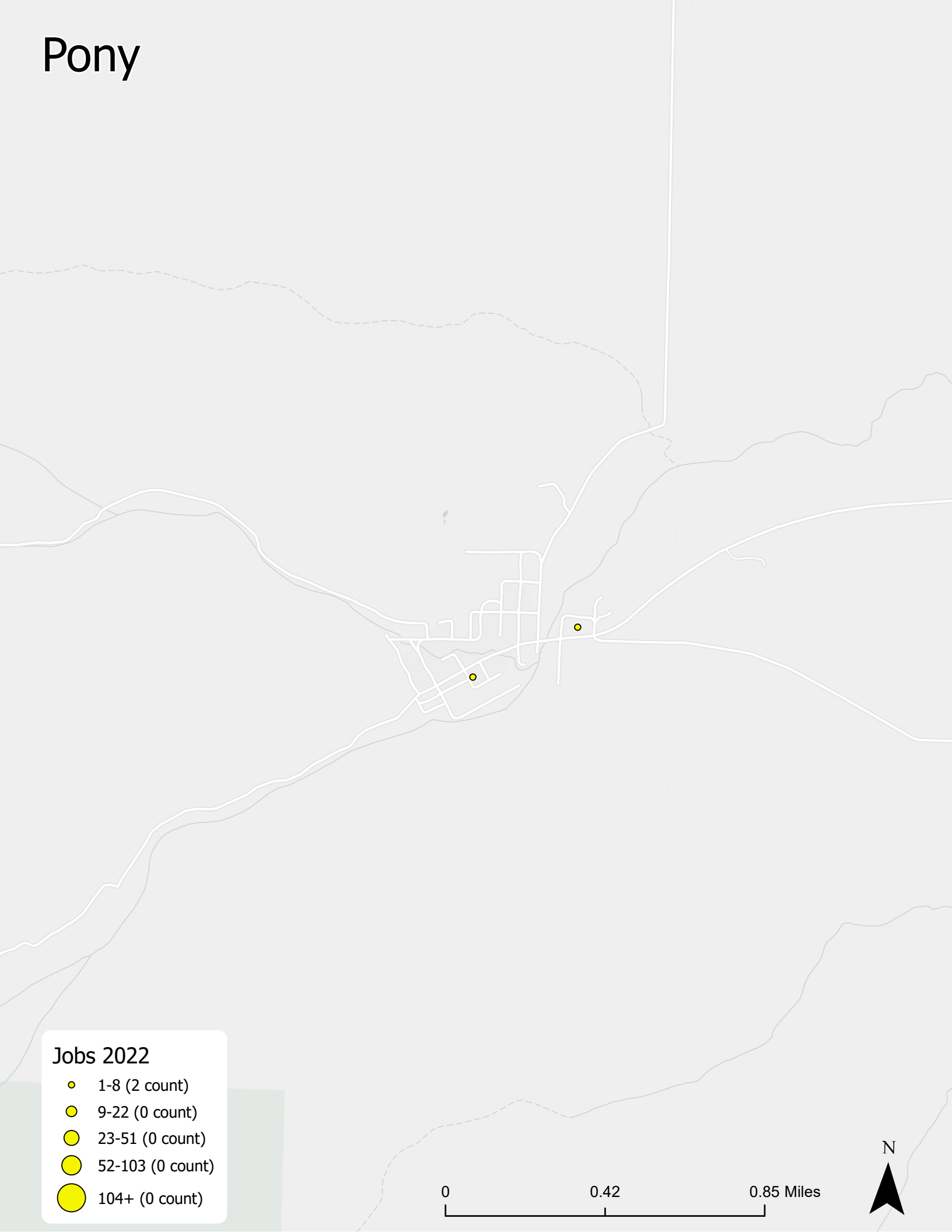
Jobs 2022

- 1-8 (2 count)
- 9-22 (1 count)
- 23-51 (0 count)
- 52-103 (1 count)
- 104+ (0 count)

0 0.5 1 Miles



Pony



Jobs 2022

- 1-8 (2 count)
- 9-22 (0 count)
- 23-51 (0 count)
- 52-103 (0 count)
- 104+ (0 count)

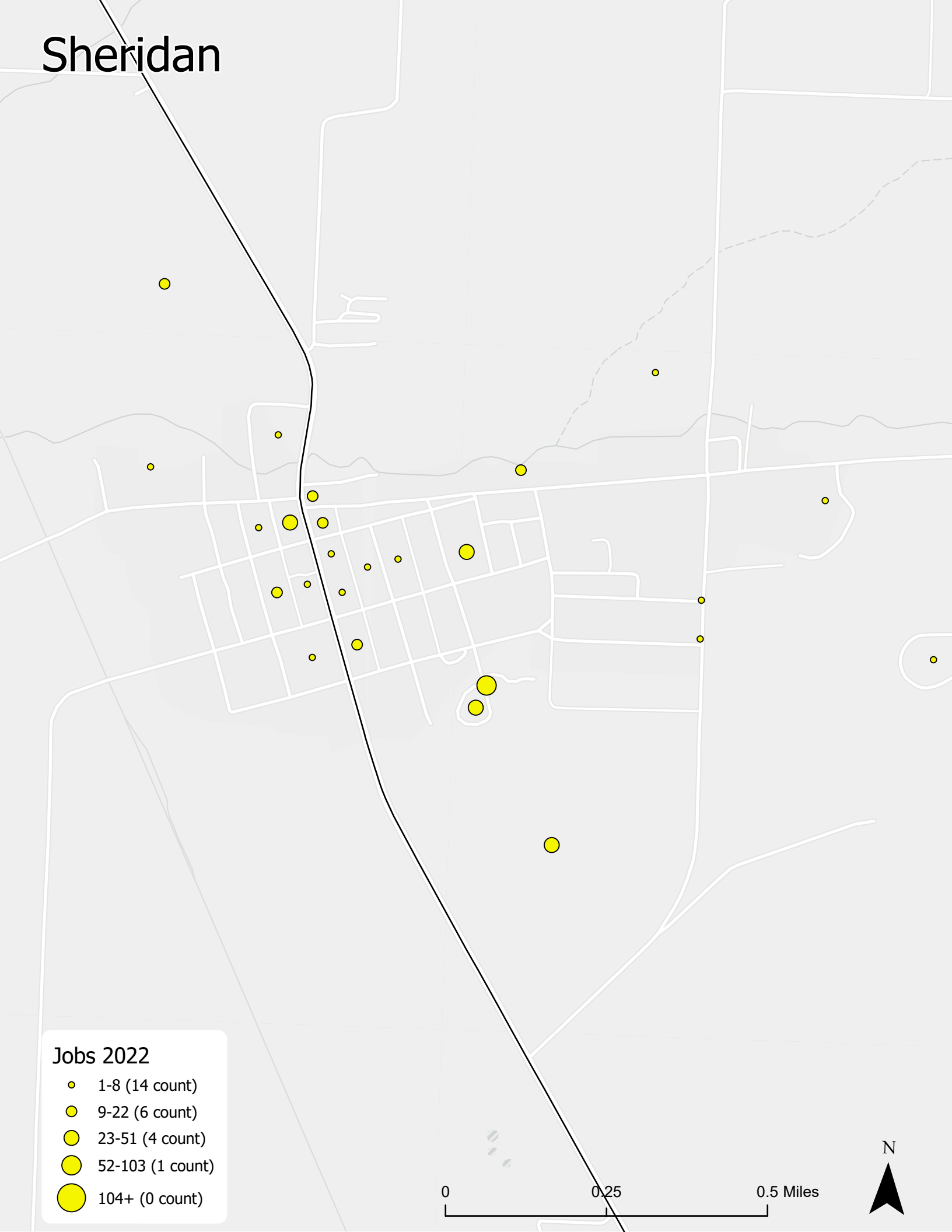
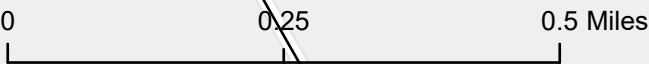
0 0.42 0.85 Miles



Sheridan

Jobs 2022

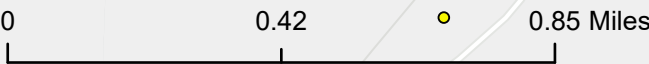
- 1-8 (14 count)
- 9-22 (6 count)
- 23-51 (4 count)
- 52-103 (1 count)
- 104+ (0 count)



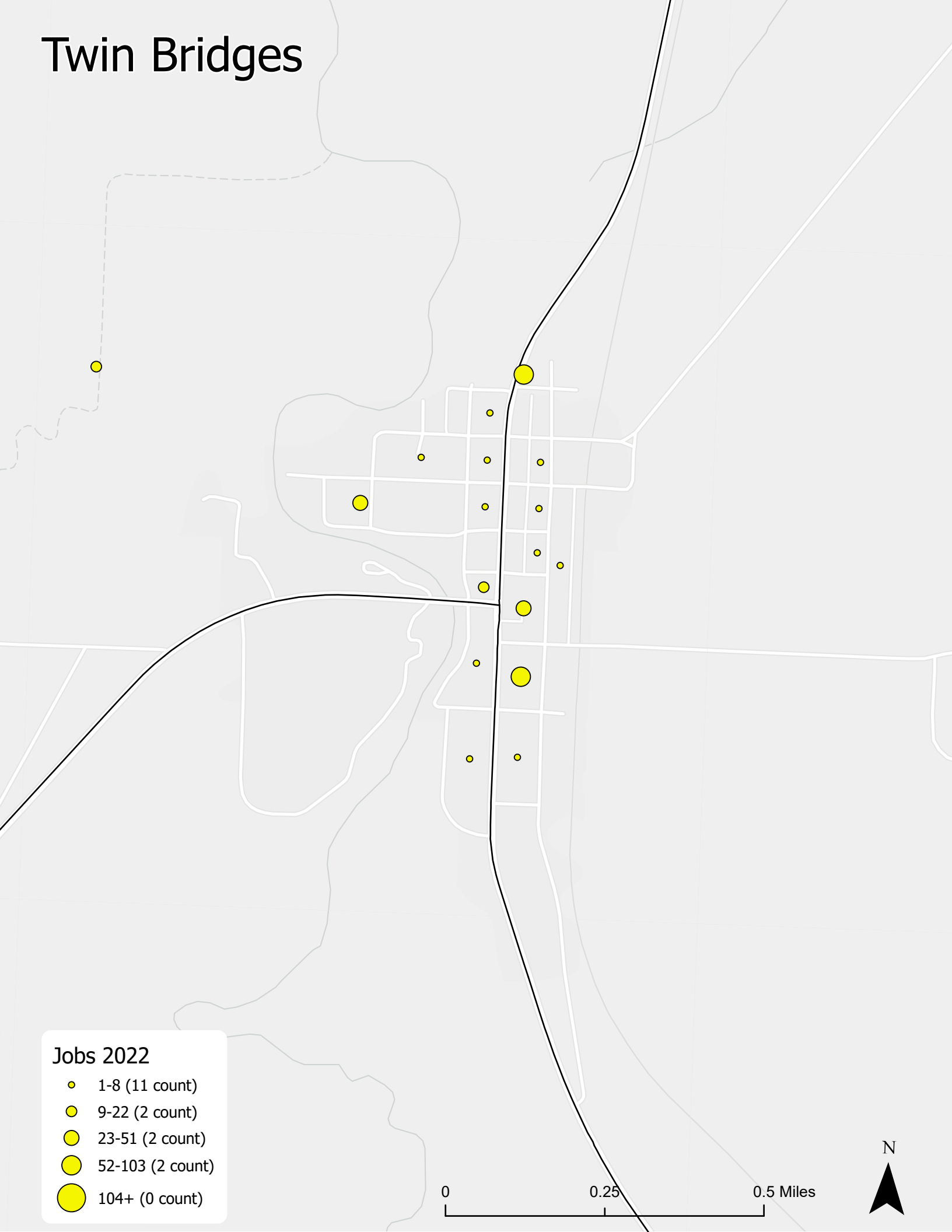
Silver Star

Jobs 2022

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- 9-22 (0 count)
- 23-51 (0 count)
- 52-103 (0 count)
- 104+ (0 count)



Twin Bridges



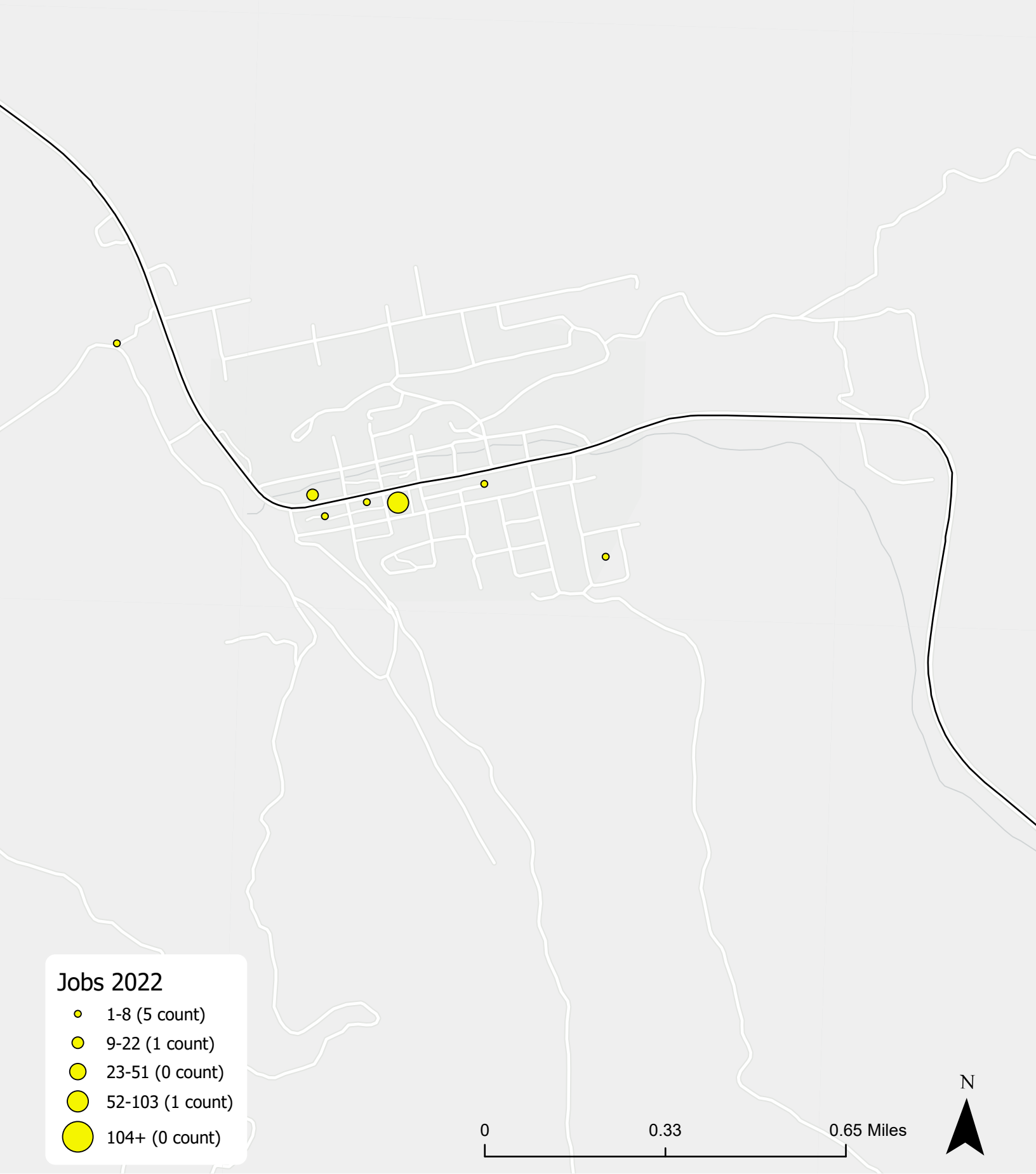
Jobs 2022

- 1-8 (11 count)
- 9-22 (2 count)
- 23-51 (2 count)
- 52-103 (2 count)
- 104+ (0 count)

0 0.25 0.5 Miles



Virginia City



Jobs 2022

- 1-8 (5 count)
- 9-22 (1 count)
- 23-51 (0 count)
- 52-103 (1 count)
- 104+ (0 count)

0 0.33 0.65 Miles

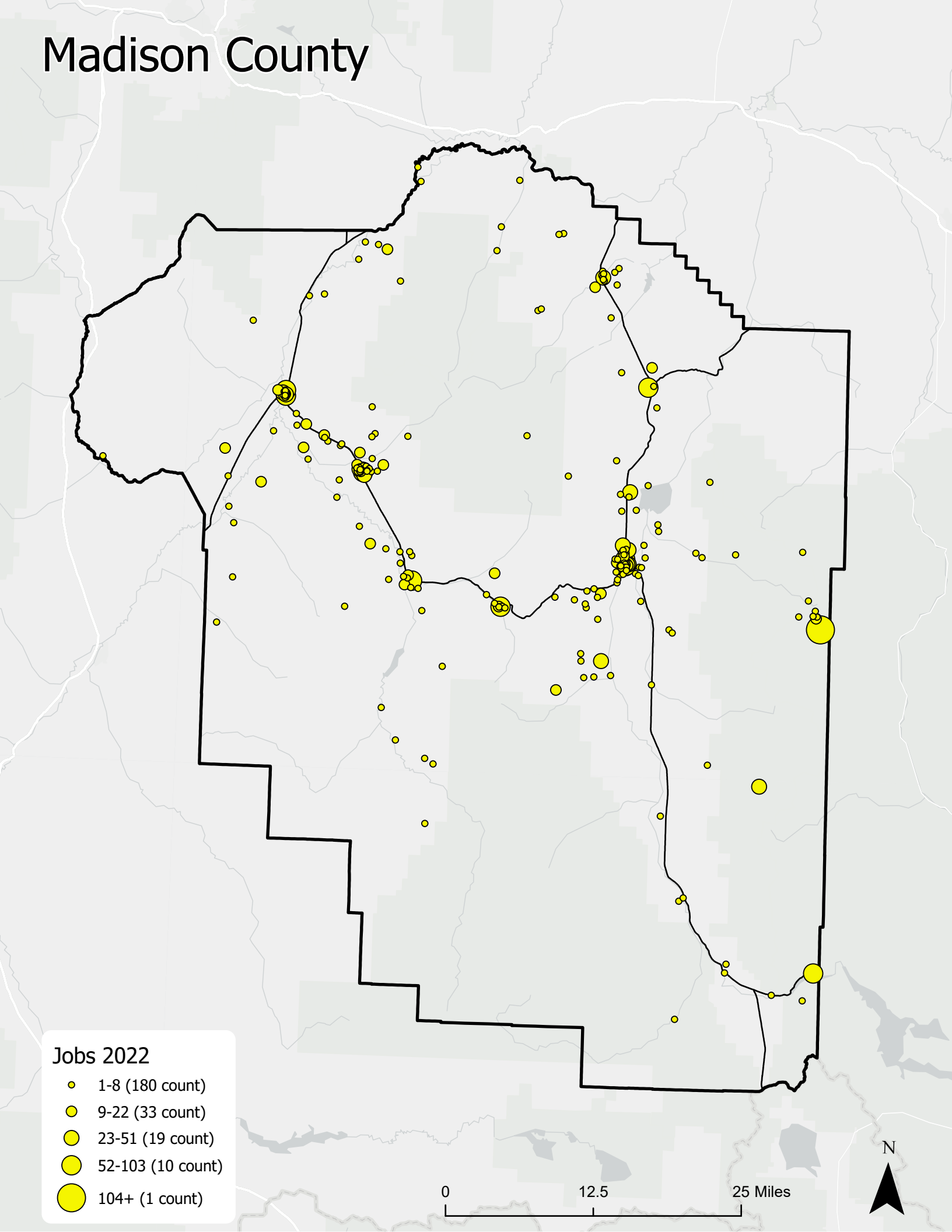


Madison County

Jobs 2022

- 1-8 (180 count)
- 9-22 (33 count)
- 23-51 (19 count)
- 52-103 (10 count)
- 104+ (1 count)

0 12.5 25 Miles

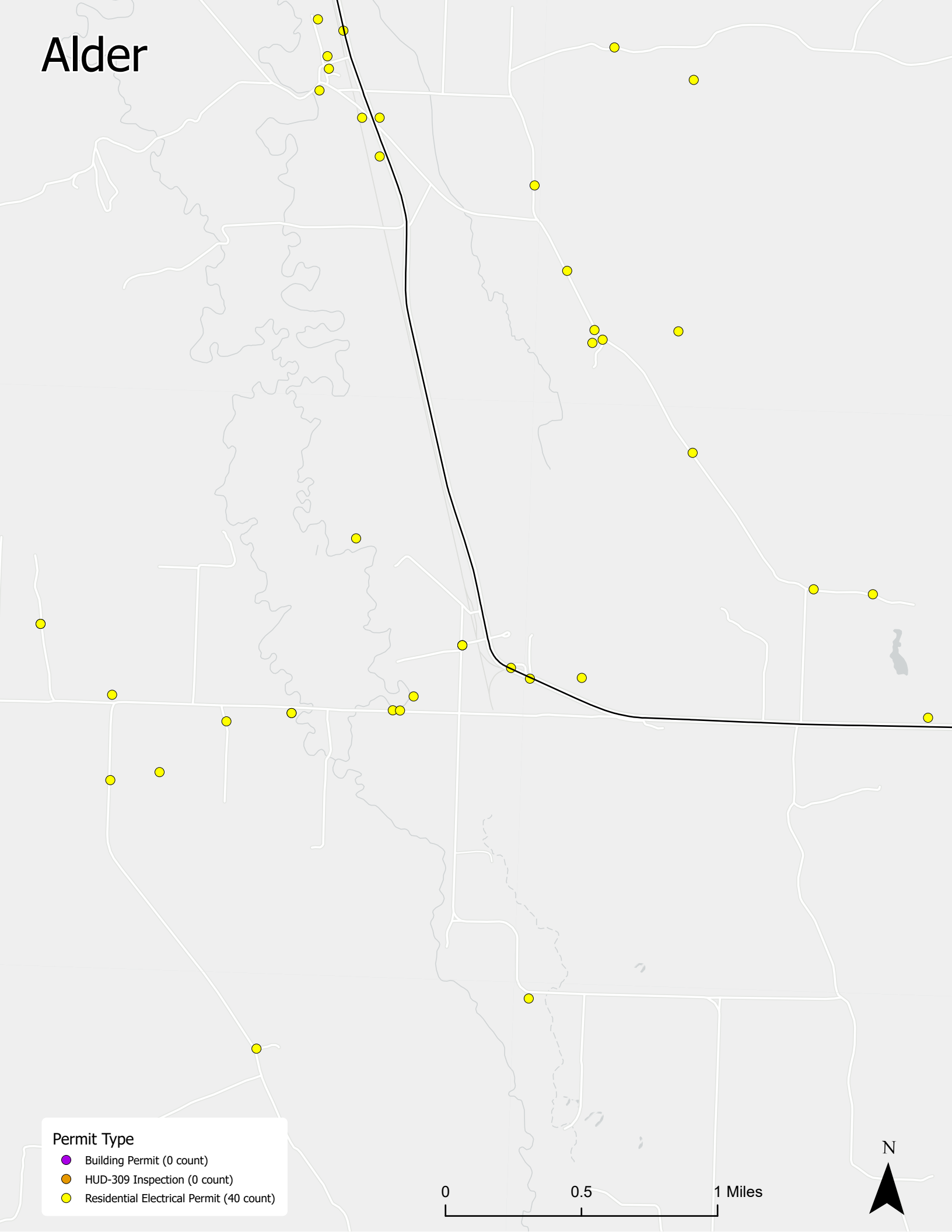


APPENDIX O

RESIDENTIAL BUILDING STARTS COMMUNITY MAPS

HYALITE

Alder



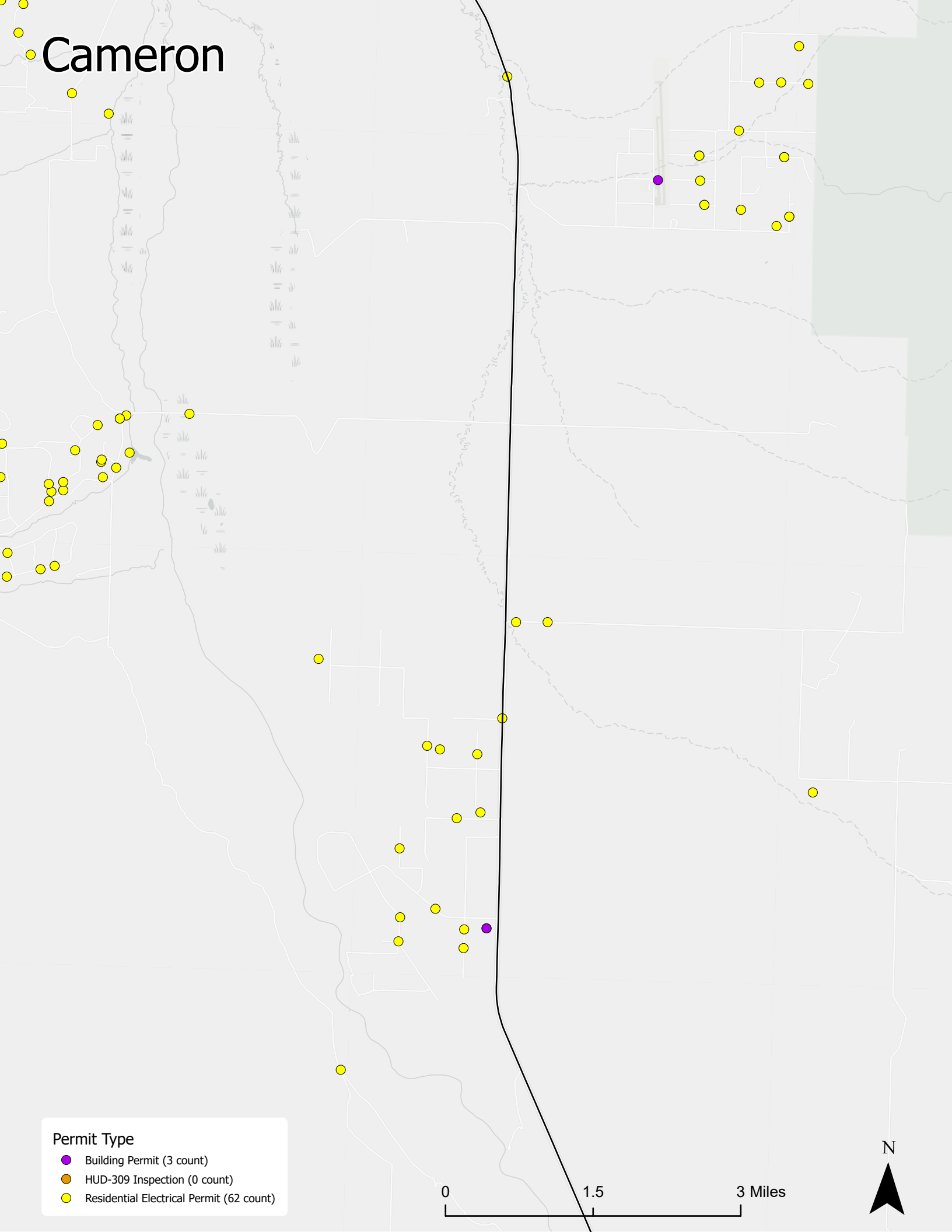
Permit Type

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- HUD-309 Inspection (0 count)
- Residential Electrical Permit (40 count)

0 0.5 1 Miles



Cameron



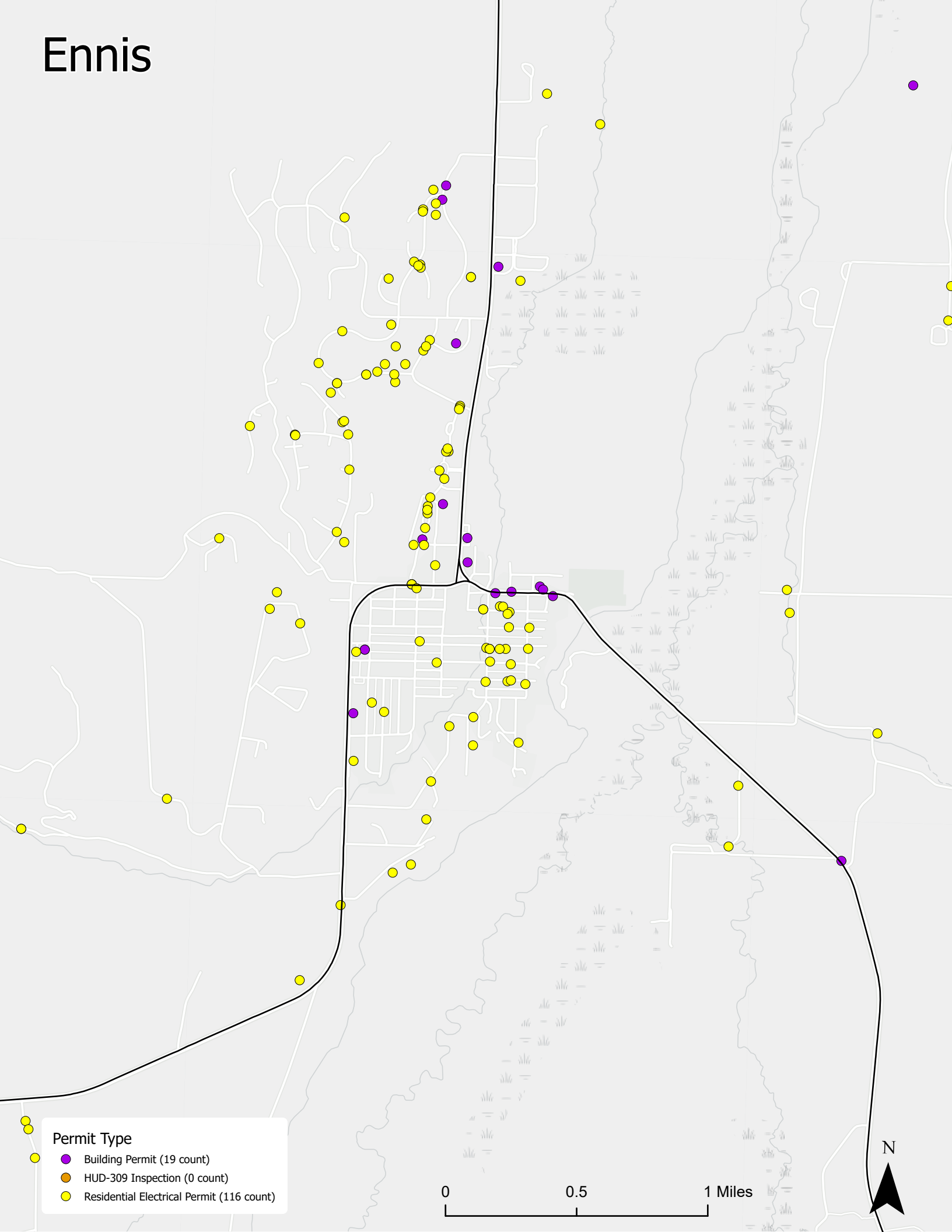
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0 1.5 3 Miles

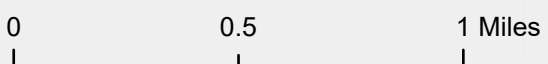


Ennis



Permit Type

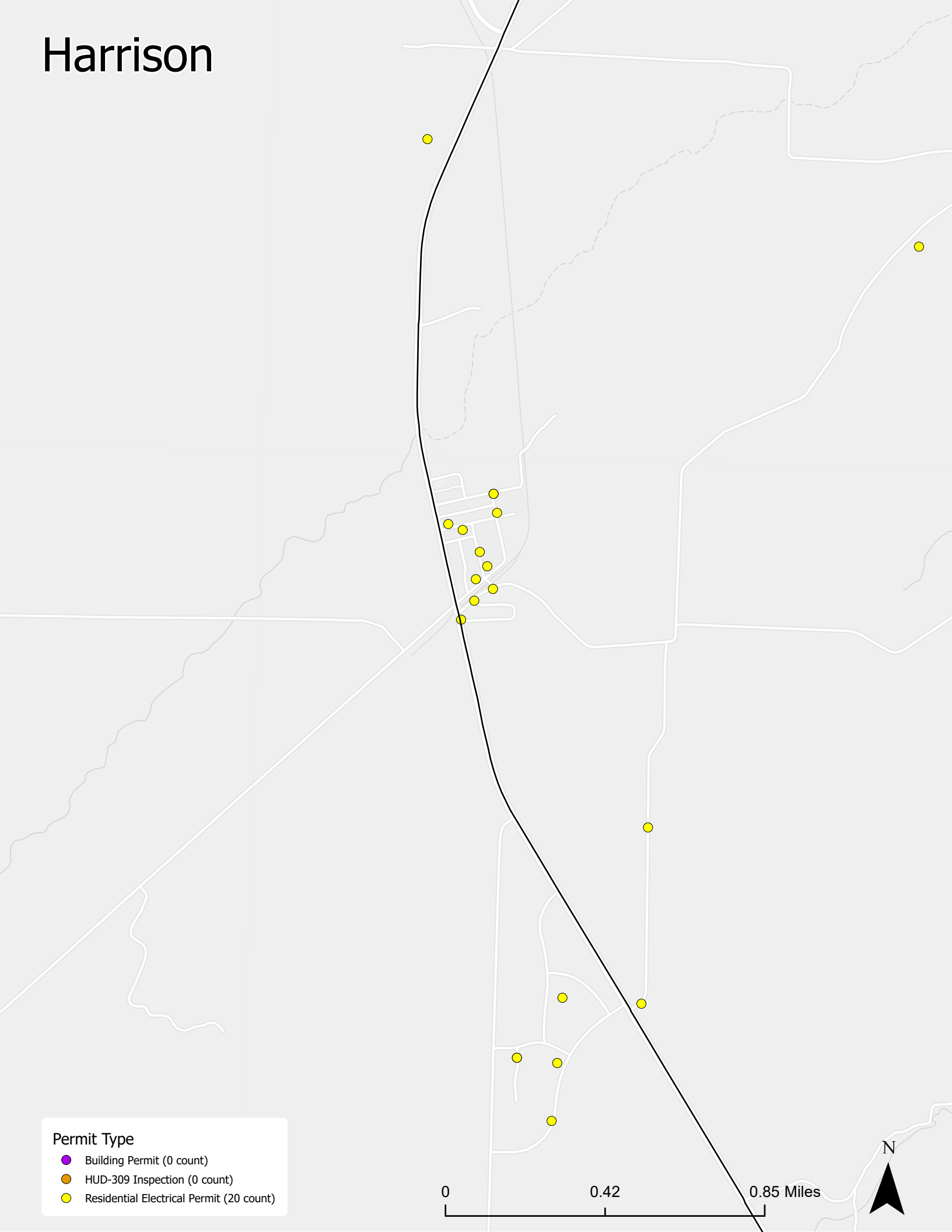
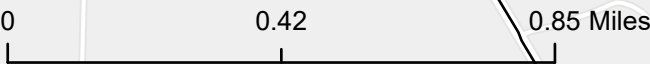
- Building Permit (19 count)
- HUD-309 Inspection (0 count)
- Residential Electrical Permit (116 count)



Harrison

Permit Type

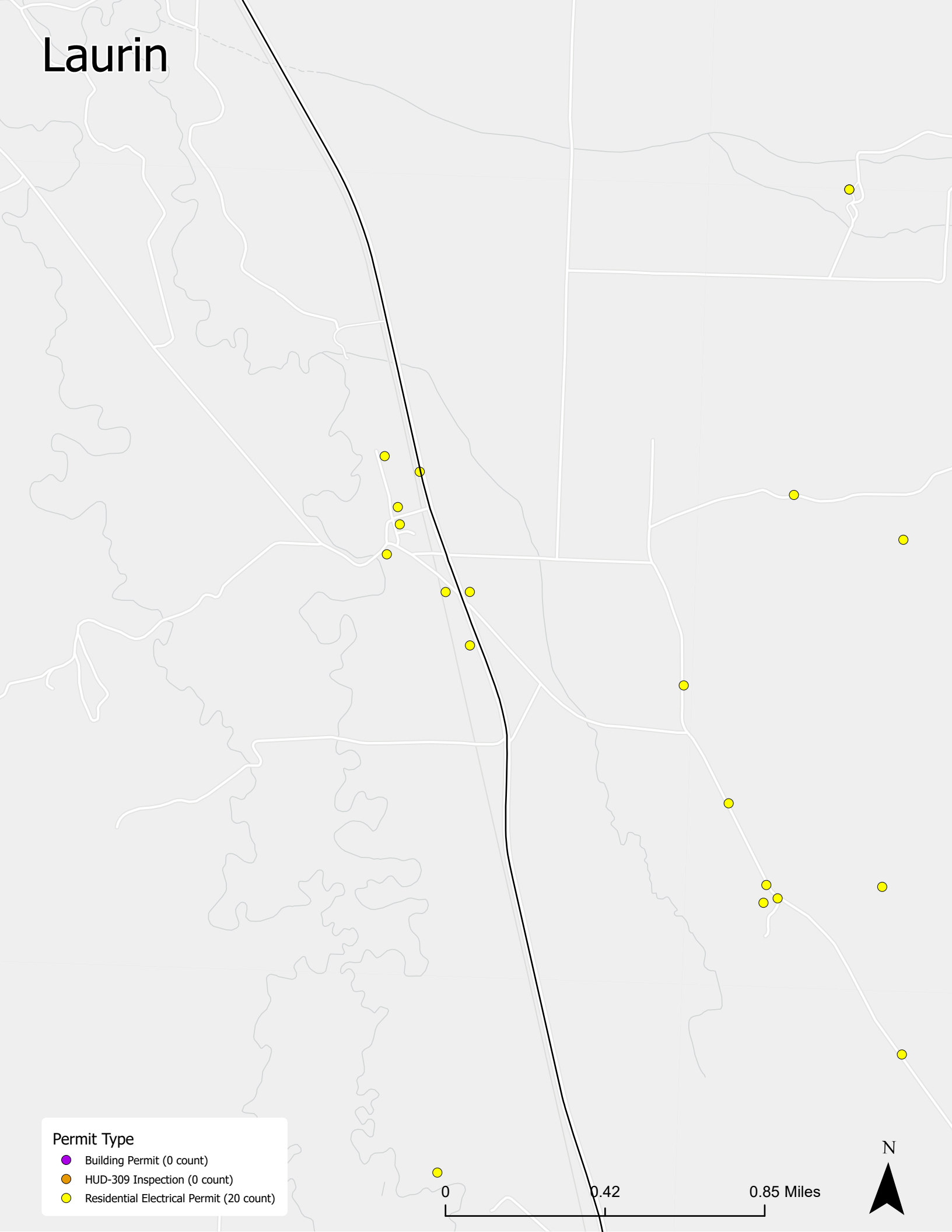
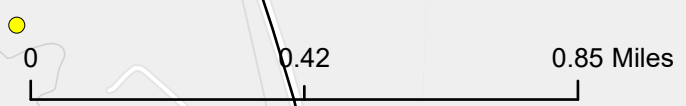
- Building Permit (0 count)
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- Residential Electrical Permit (20 count)



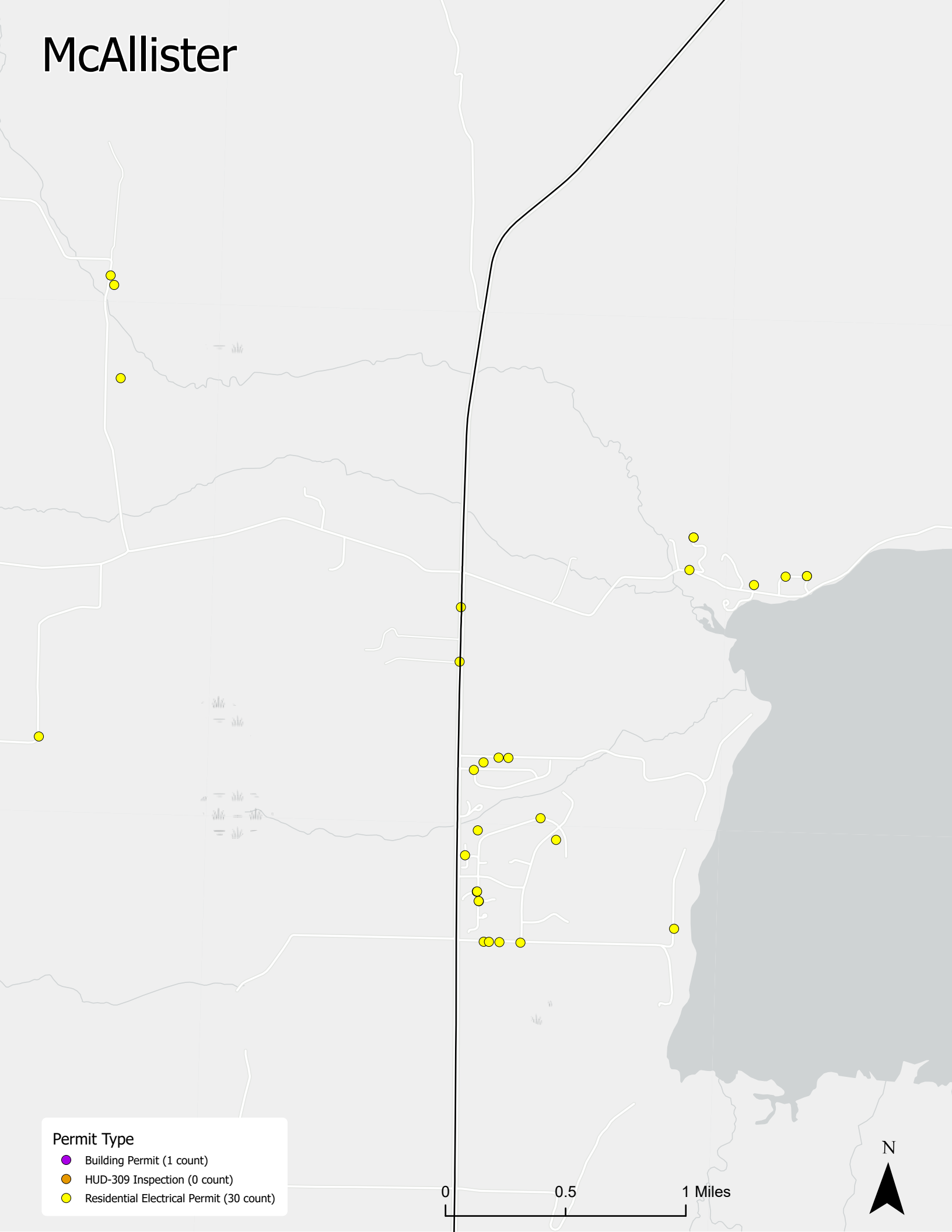
Laurin

Permit Type

- Building Permit (0 count)
- HUD-309 Inspection (0 count)
- Residential Electrical Permit (20 count)



McAllister



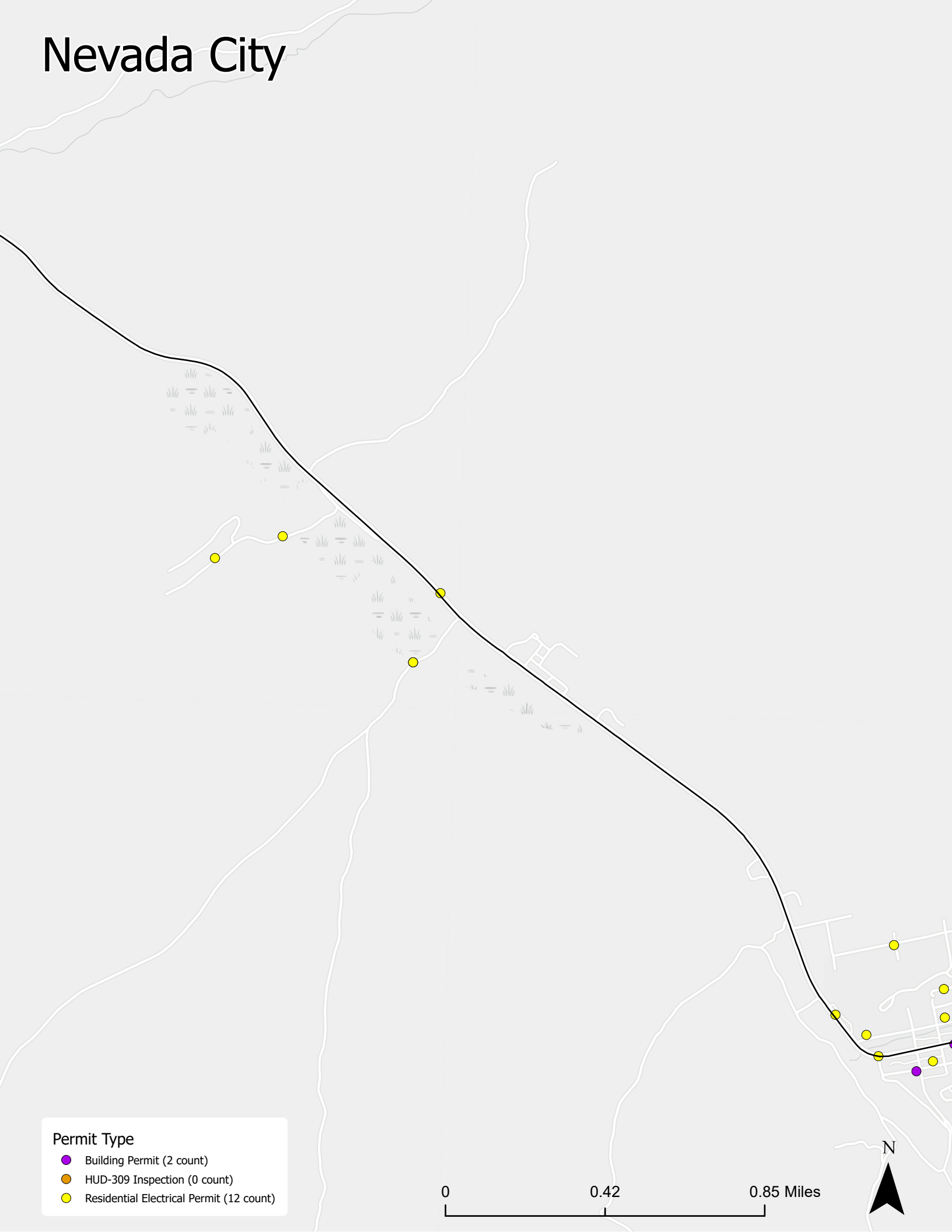
Permit Type

- Building Permit (1 count)
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- Residential Electrical Permit (30 count)

0 0.5 1 Miles

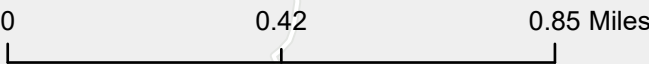


Nevada City



Permit Type

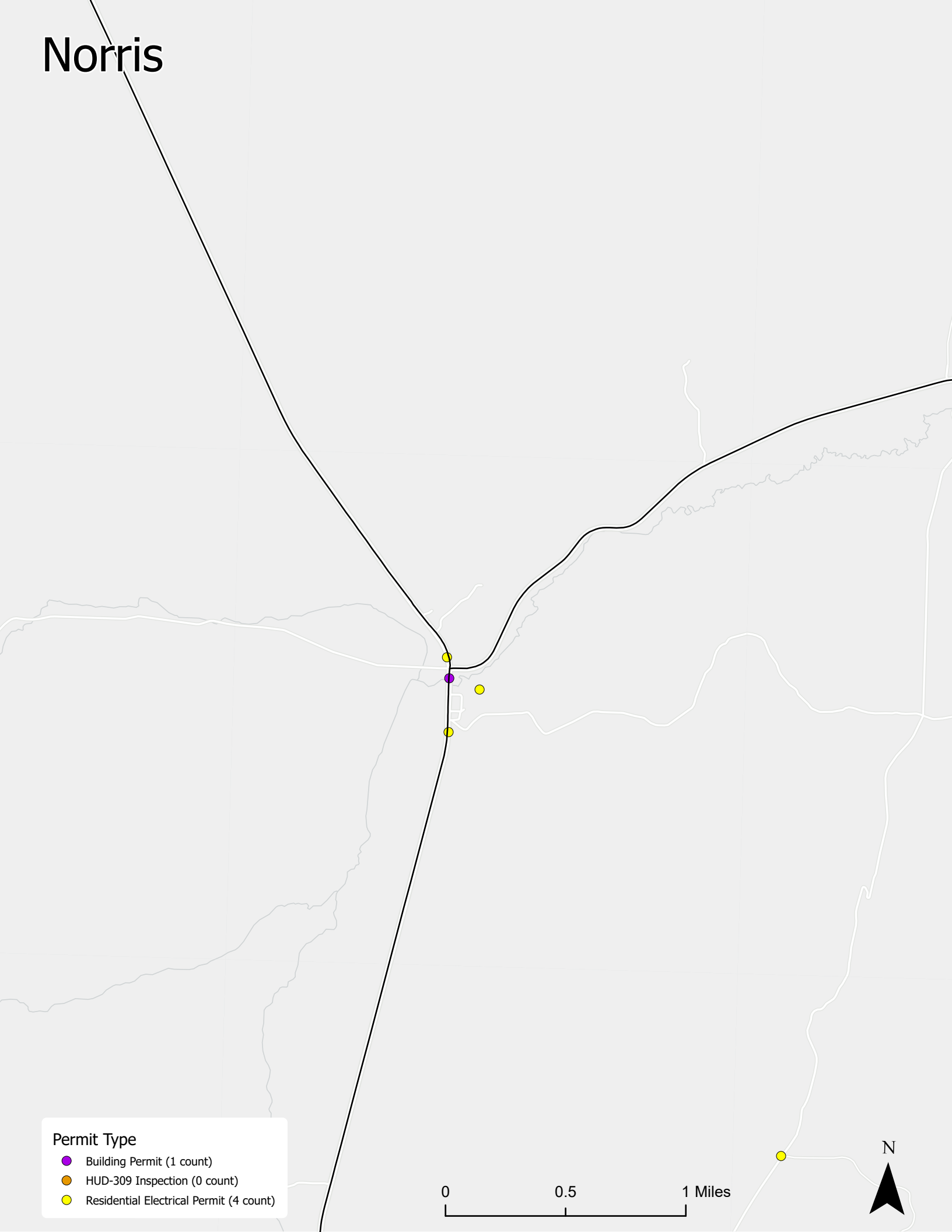
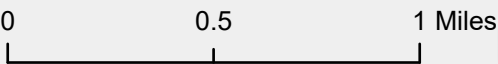
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- Residential Electrical Permit (12 count)



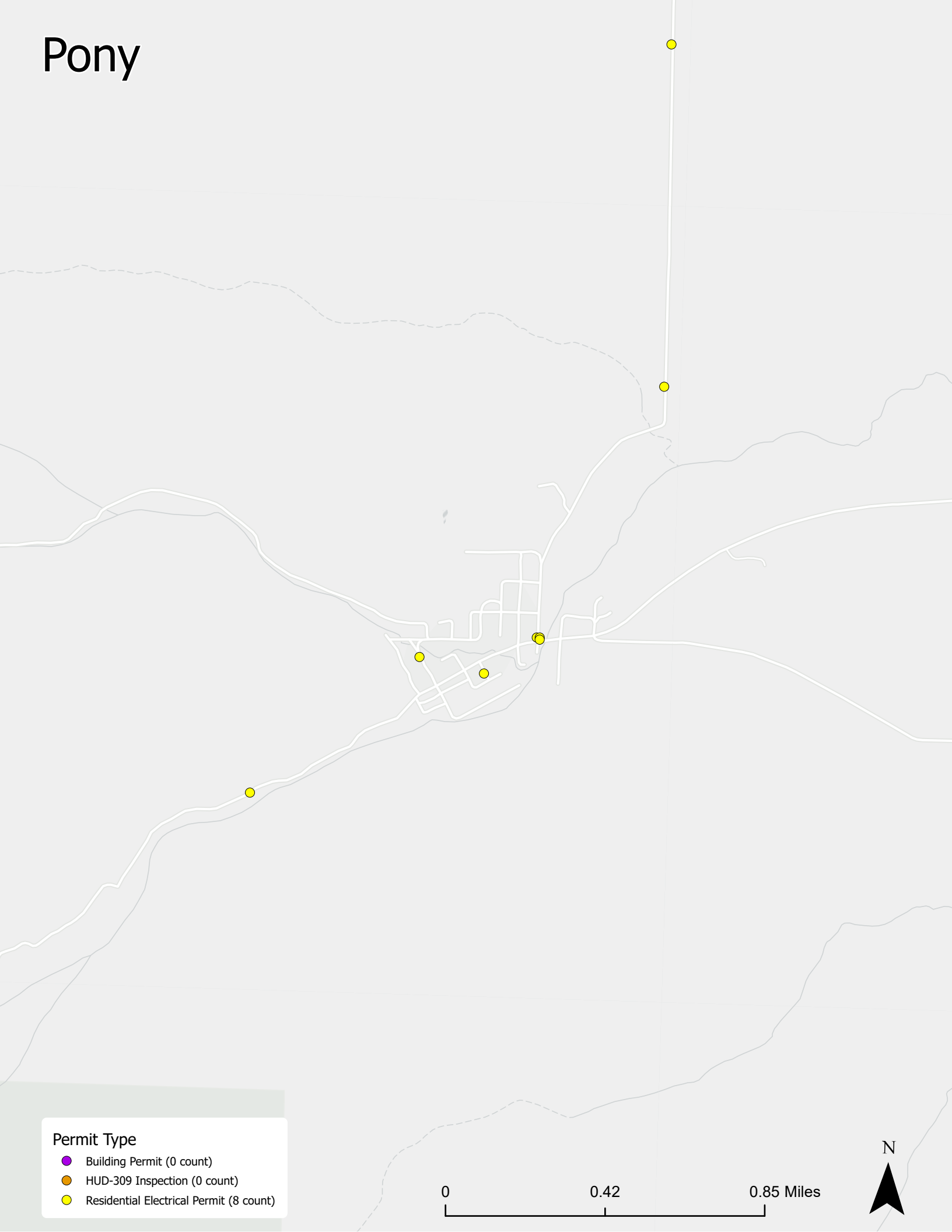
Norris

Permit Type

- Building Permit (1 count)
- HUD-309 Inspection (0 count)
- Residential Electrical Permit (4 count)



Pony



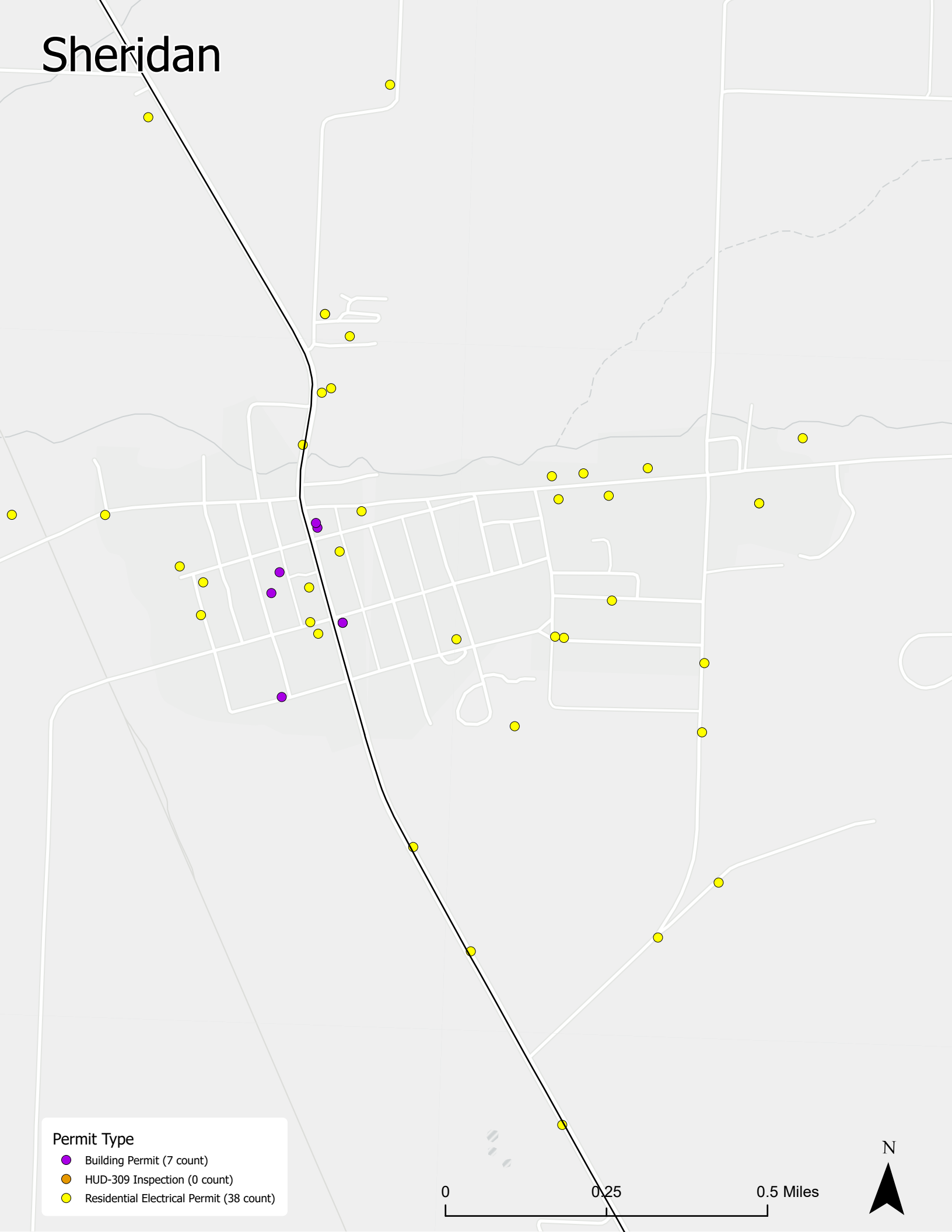
Permit Type

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- HUD-309 Inspection (0 count)
- Residential Electrical Permit (8 count)

0 0.42 0.85 Miles



Sheridan



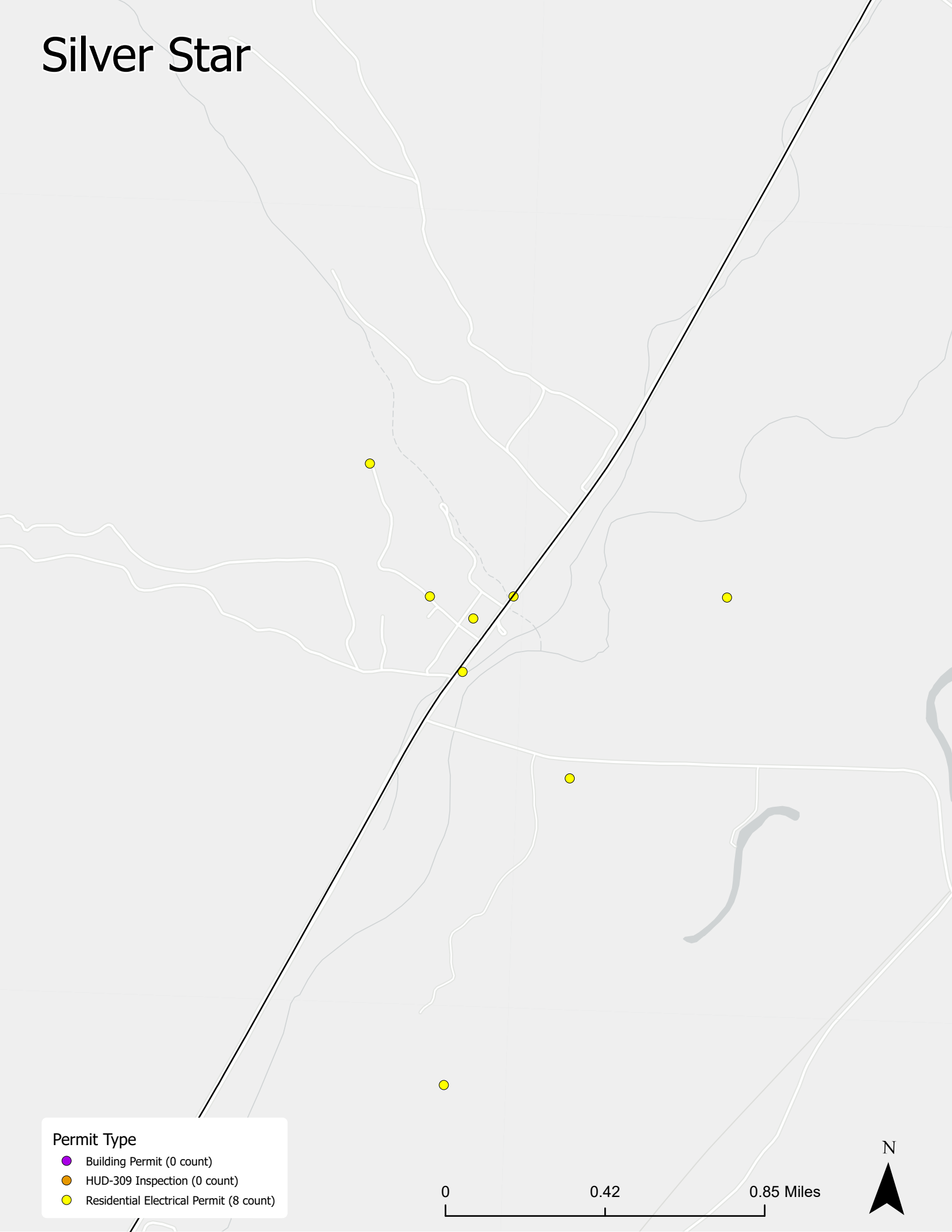
Permit Type

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- Residential Electrical Permit (38 count)

0 0.25 0.5 Miles

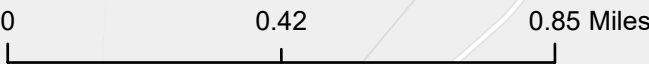


Silver Star

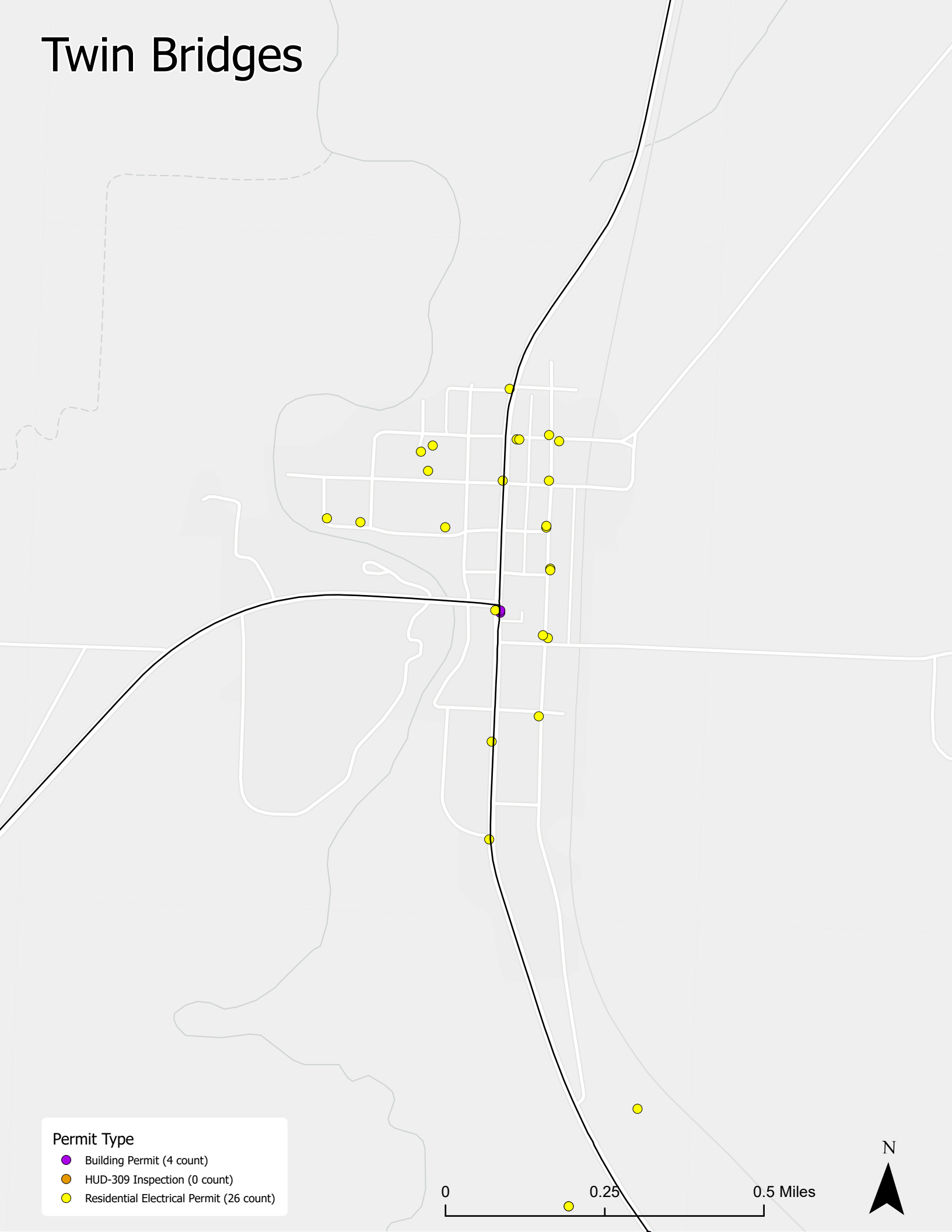


Permit Type

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- HUD-309 Inspection (0 count)
- Residential Electrical Permit (8 count)



Twin Bridges



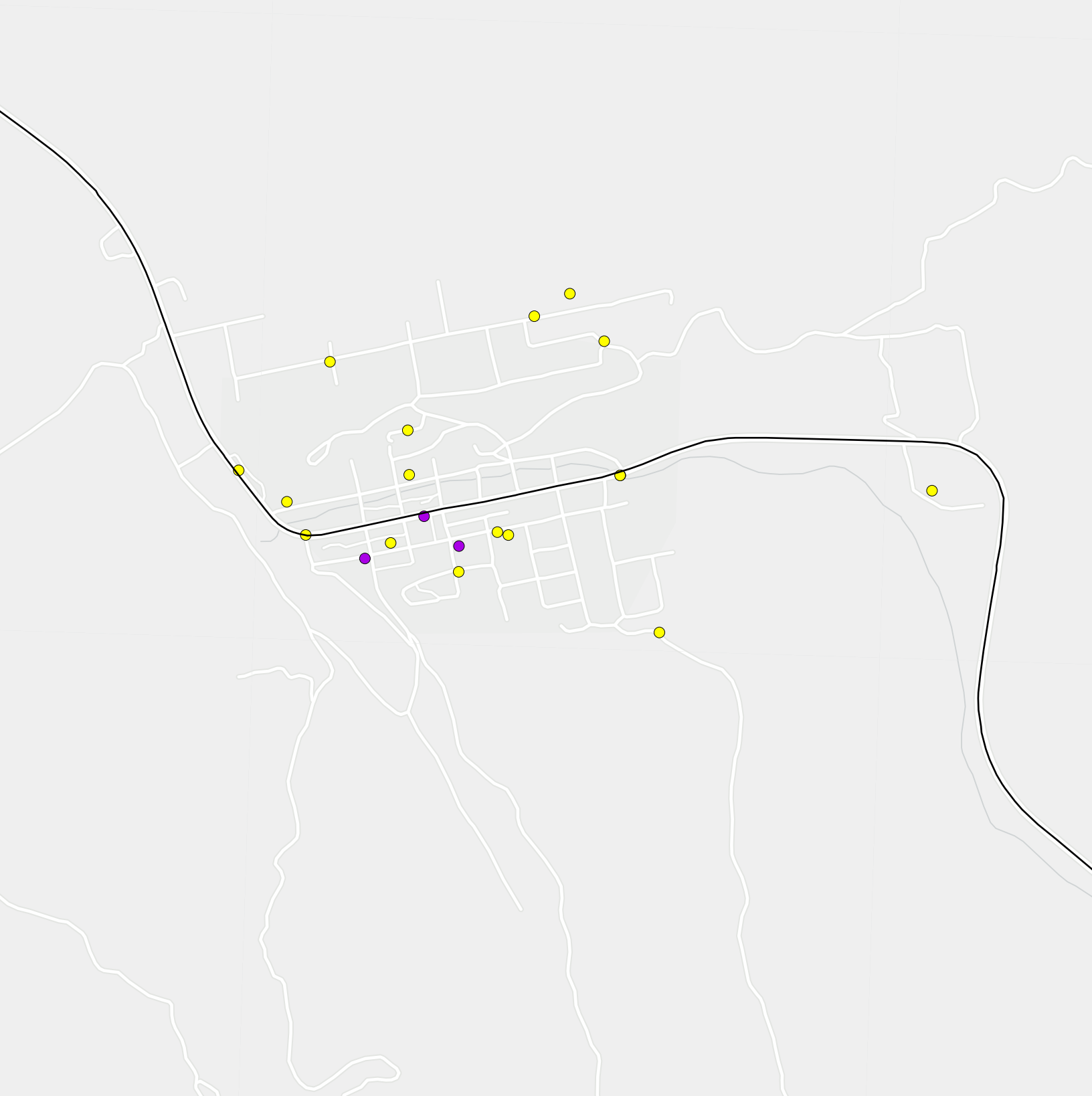
Permit Type

- Building Permit (4 count)
- HUD-309 Inspection (0 count)
- Residential Electrical Permit (26 count)

0 0.25 0.5 Miles

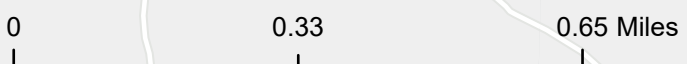


Virginia City

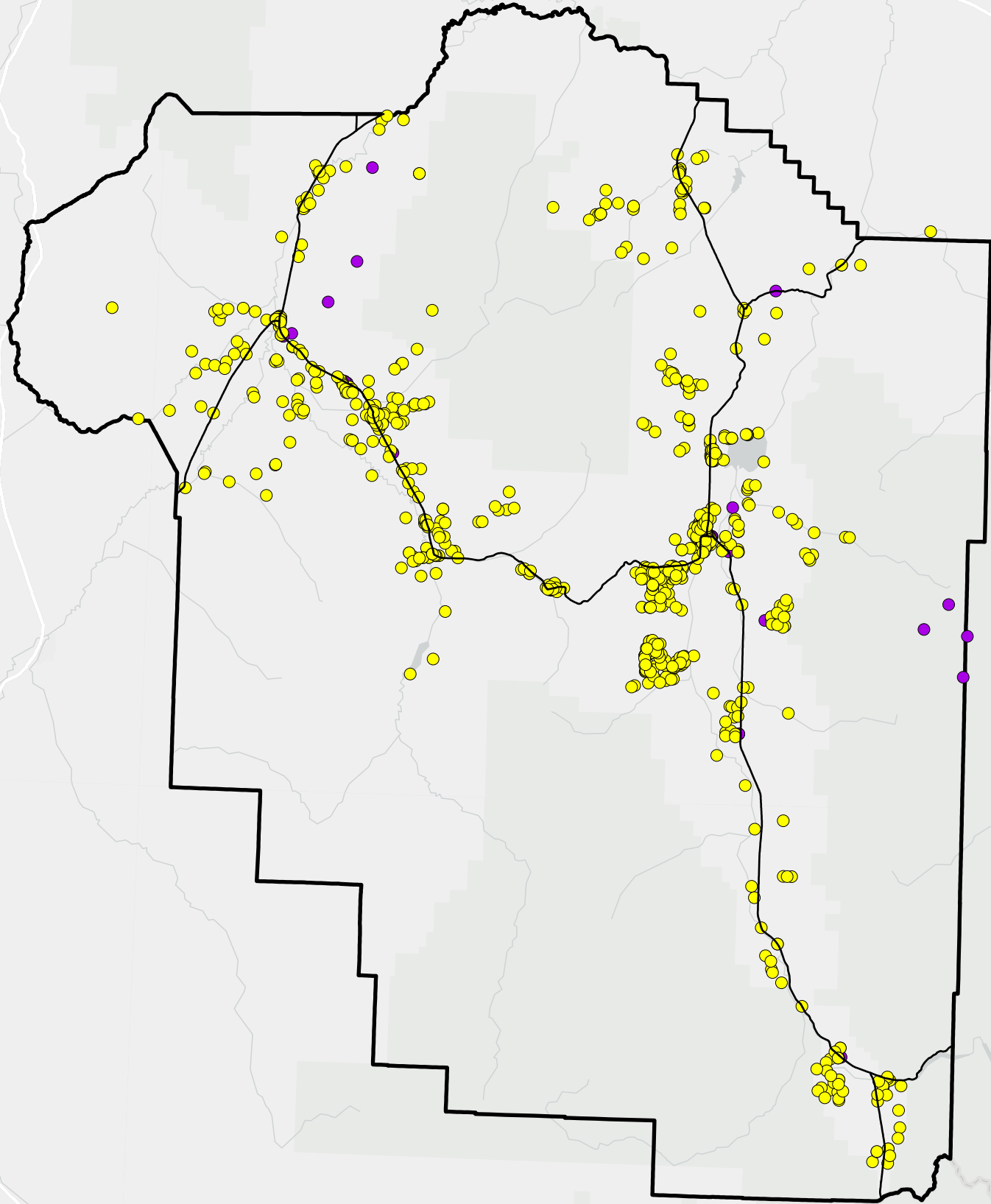


Permit Type

- Building Permit (3 count)
- HUD-309 Inspection (0 count)
- Residential Electrical Permit (17 count)



Madison County



Permit Type

- Building Permit (58 count)
- HUD-309 Inspection (1 count)
- Residential Electrical Permit (777 count)

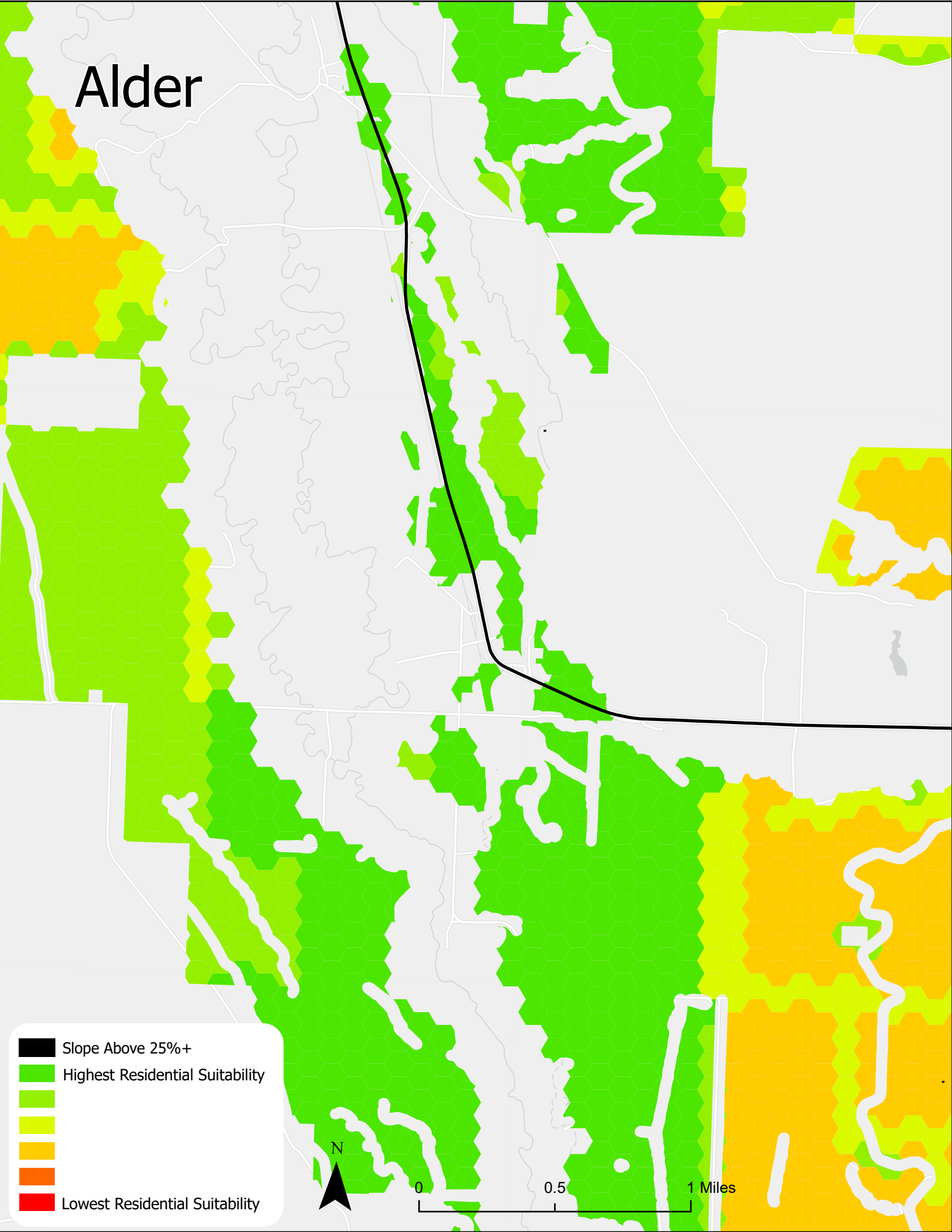
0 12.5 25 Miles



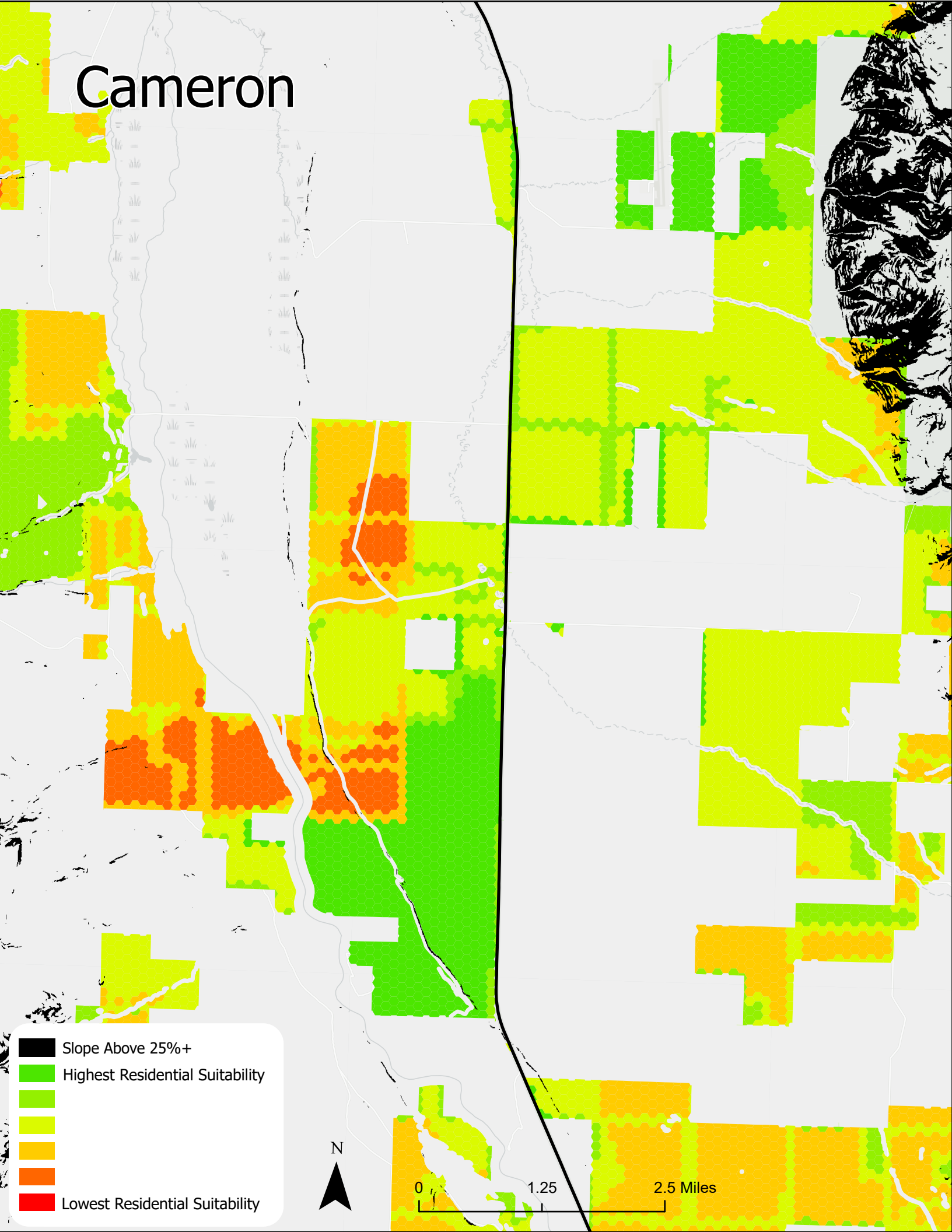
APPENDIX P

COMMUNITY LEVEL SUITABILITY MAPS

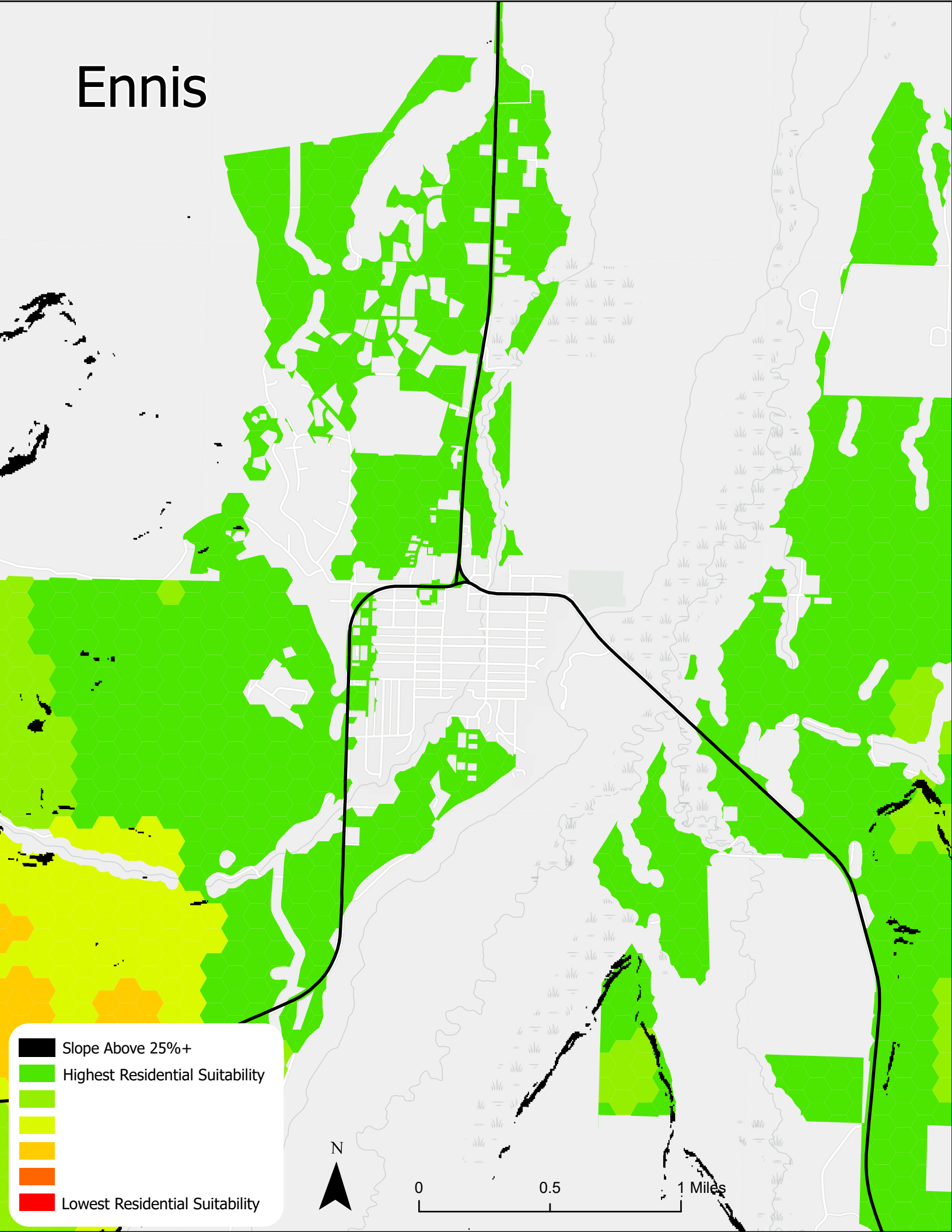
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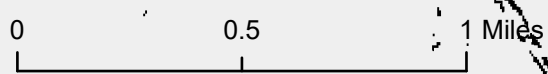
Cameron



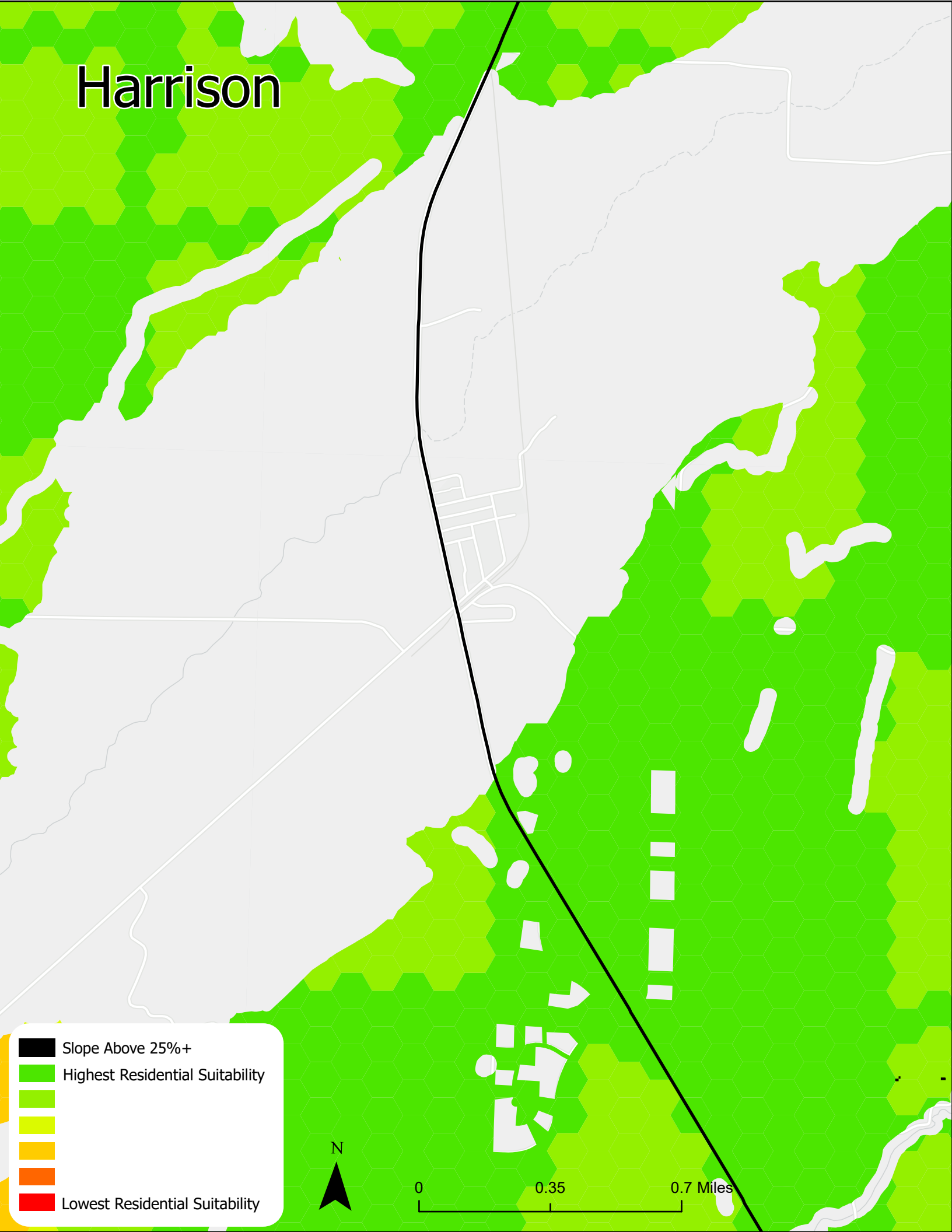
Ennis









-  Slope Above 25%+
-  Highest Residential Suitability
- 
- 
- 
-  Lowest Residential Suitability



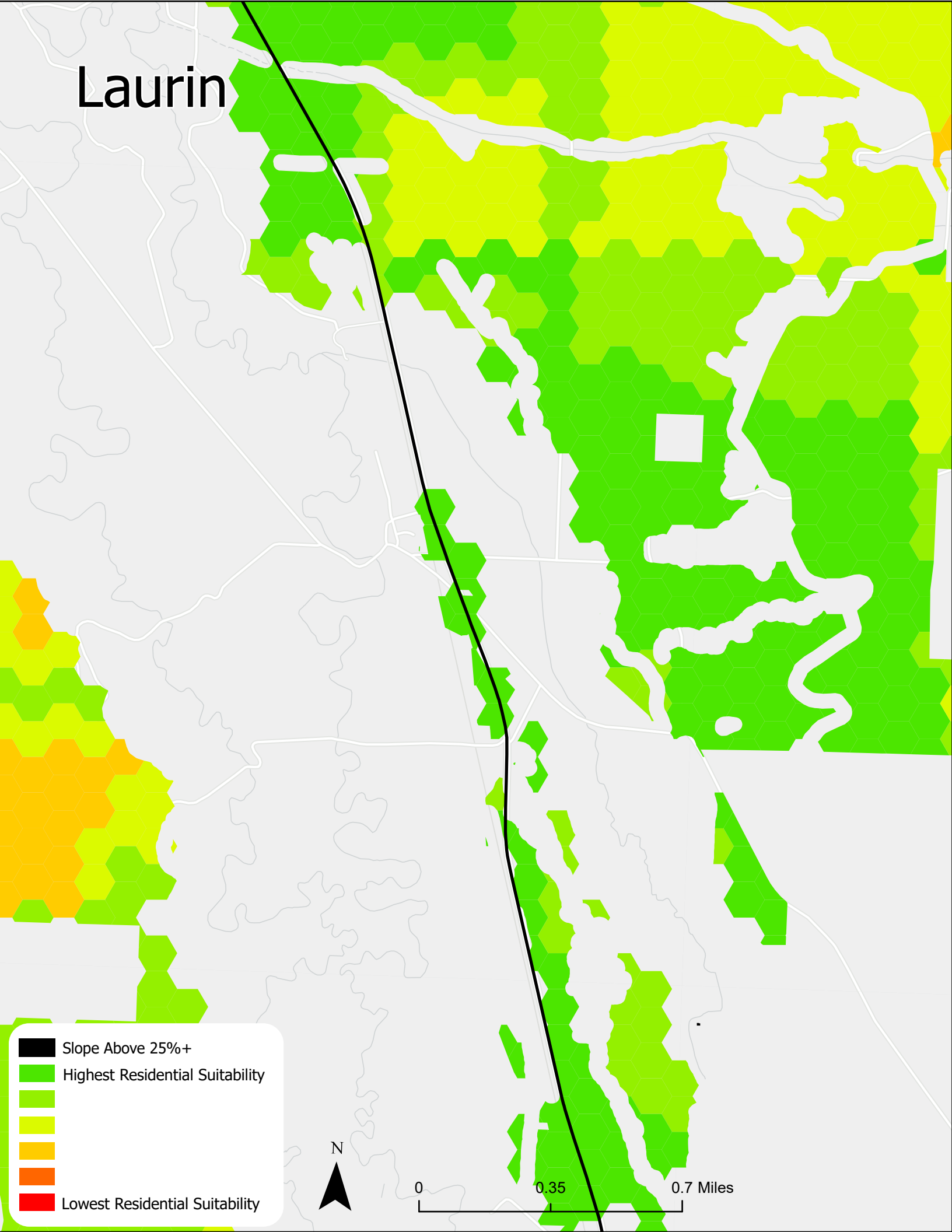
Harrison









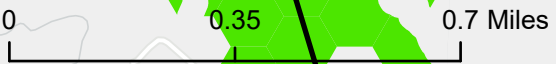
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-  Highest Residential Suitability
- 
- 
- 
-  Lowest Residential Suitability



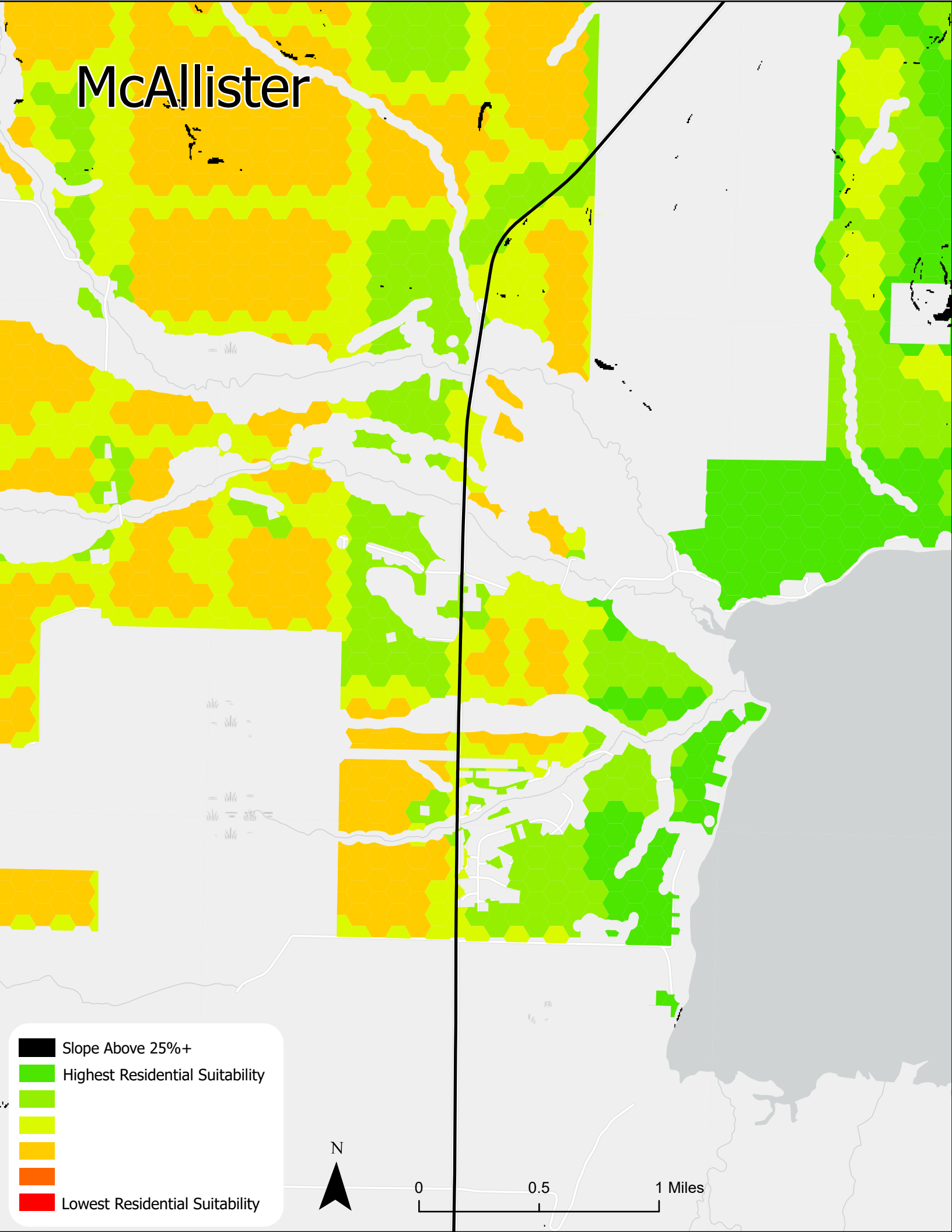
Laurin



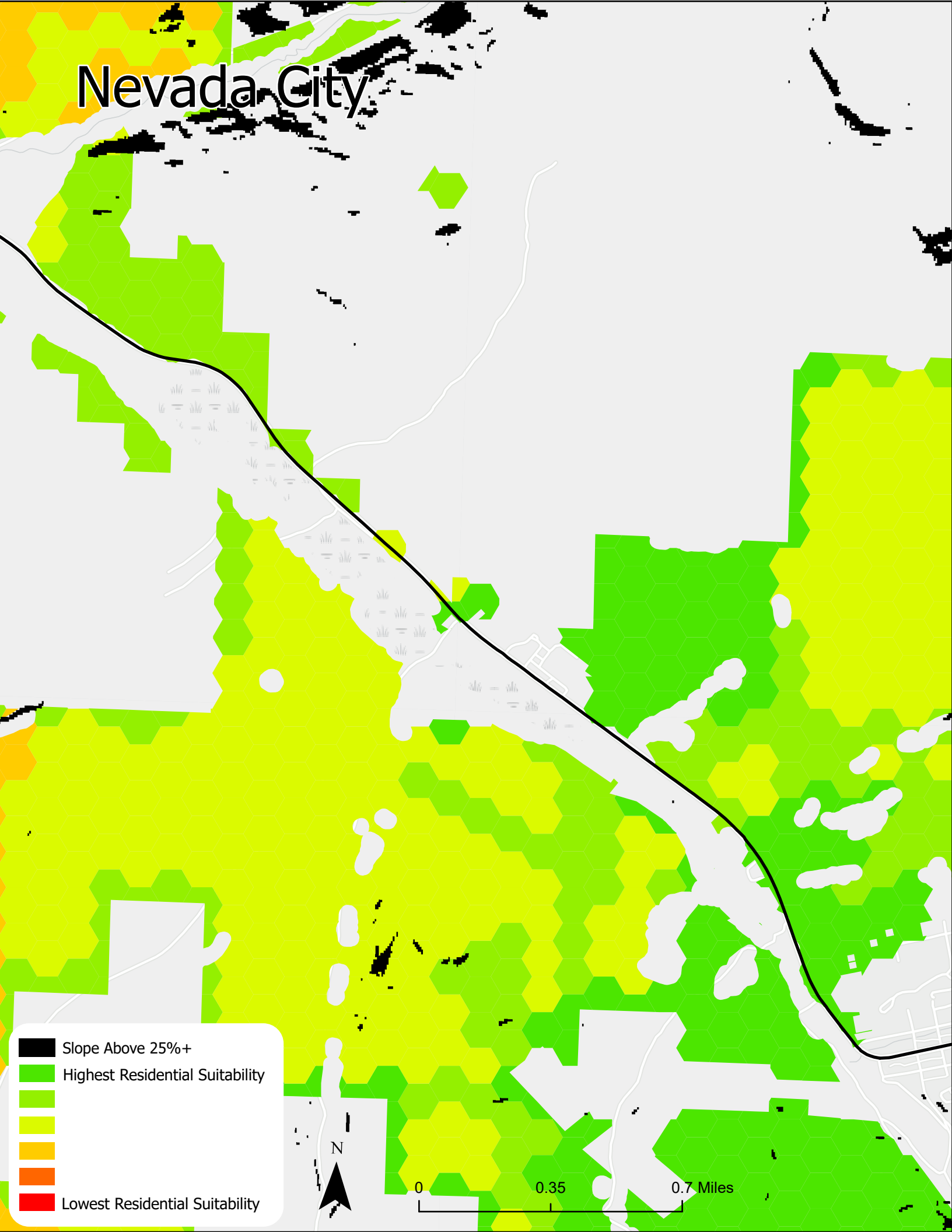
-  Slope Above 25%+
-  Highest Residential Suitability
- 
- 
- 
-  Lowest Residential Suitability



McAllister



Nevada City

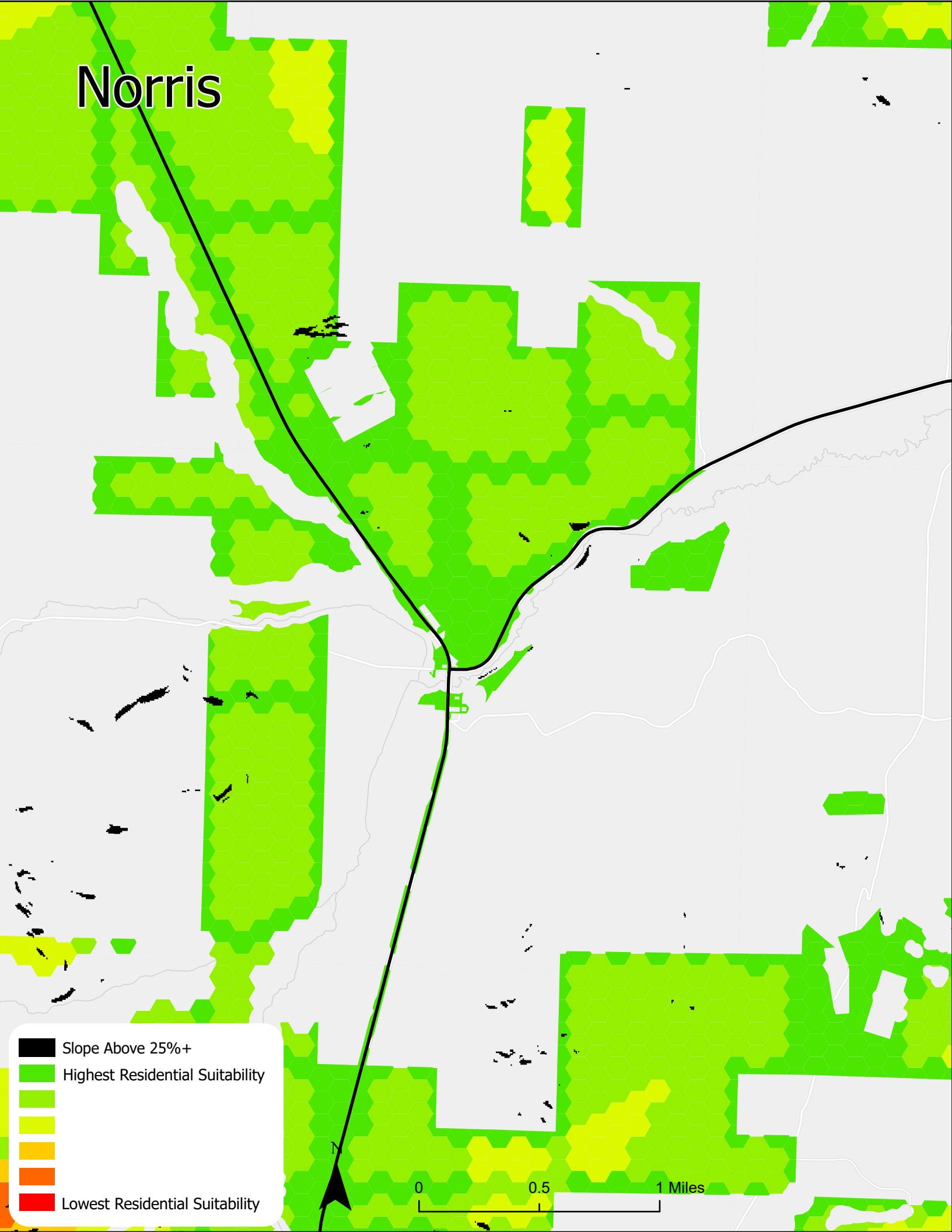









Legend:

- Slope Above 25%+
- Highest Residential Suitability
- High Residential Suitability
- Medium Residential Suitability
- Low Residential Suitability
- Lowest Residential Suitability



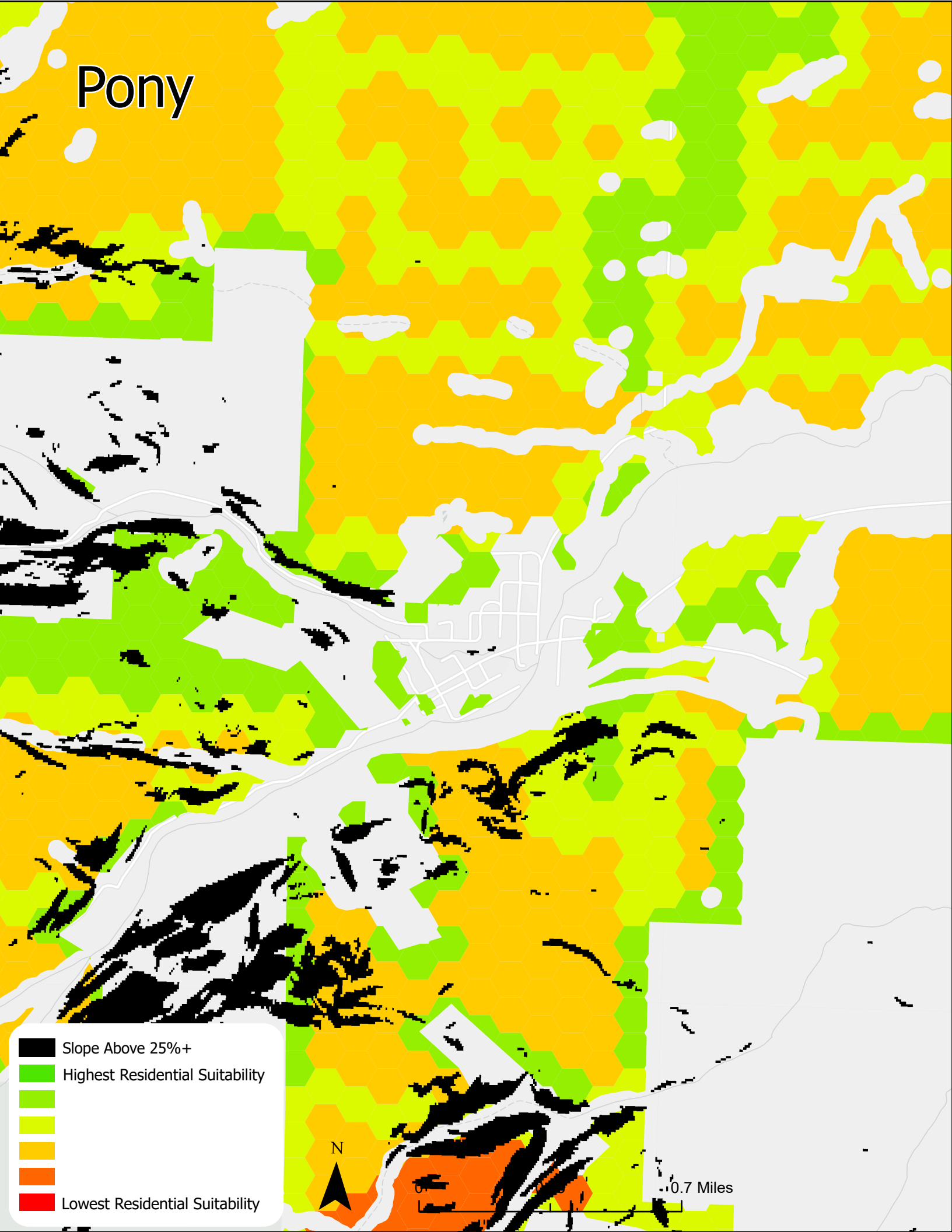
Norris



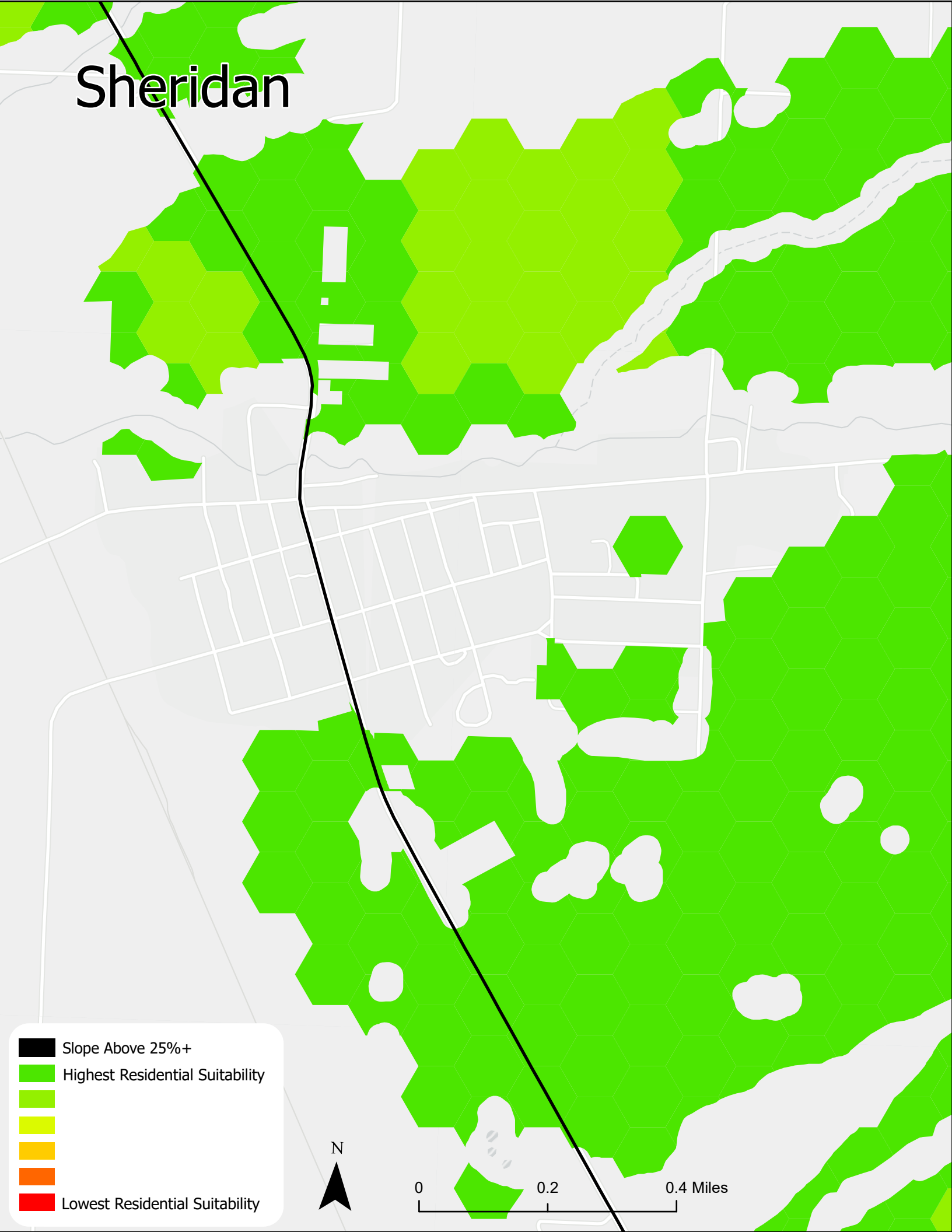
-  Slope Above 25%+
-  Highest Residential Suitability
- 
- 
- 
- 
-  Lowest Residential Suitability



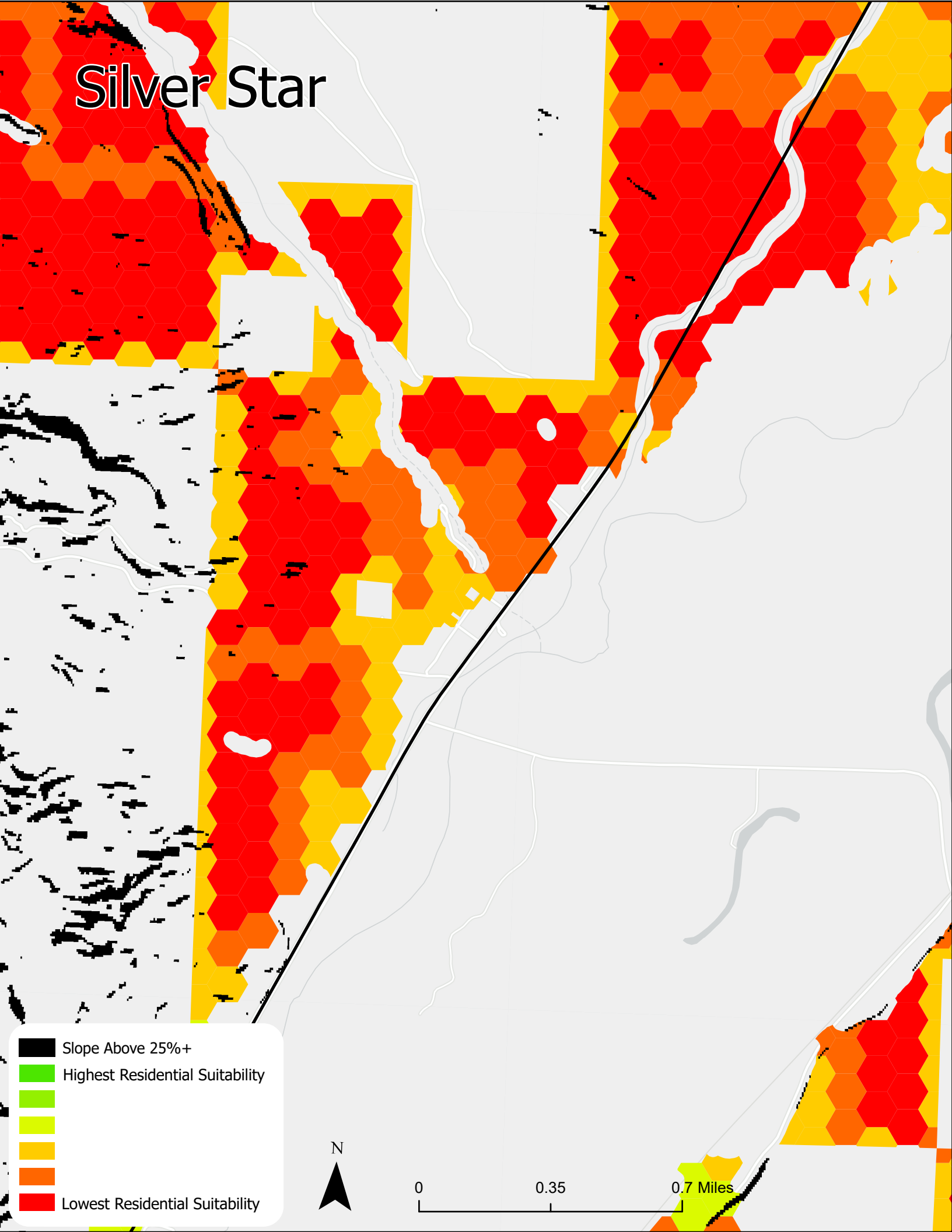
Pony



Sheridan

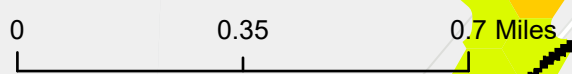


Silver Star

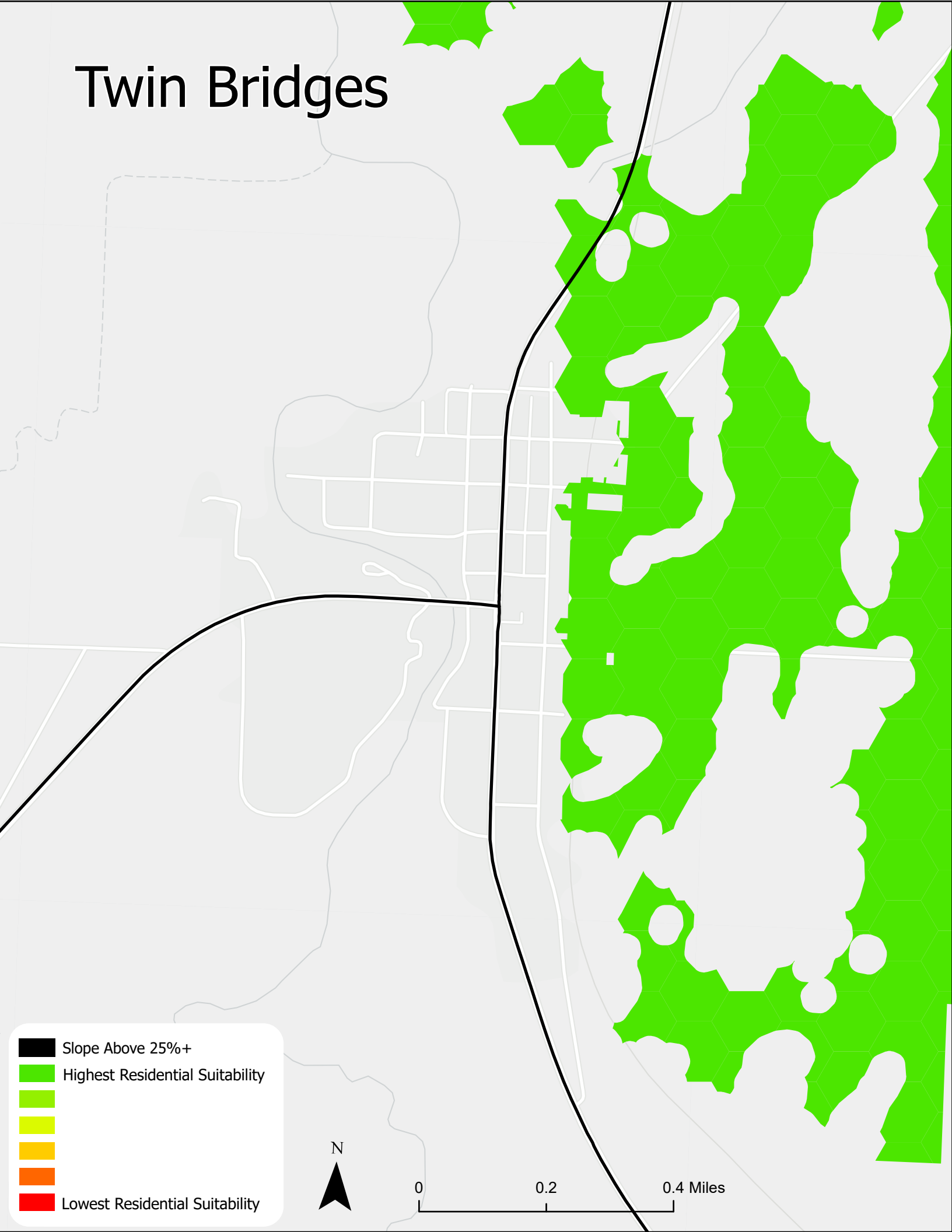









Legend:

- Slope Above 25%+
- Highest Residential Suitability
- High Residential Suitability
- Medium Residential Suitability
- Low Residential Suitability
- Lowest Residential Suitability



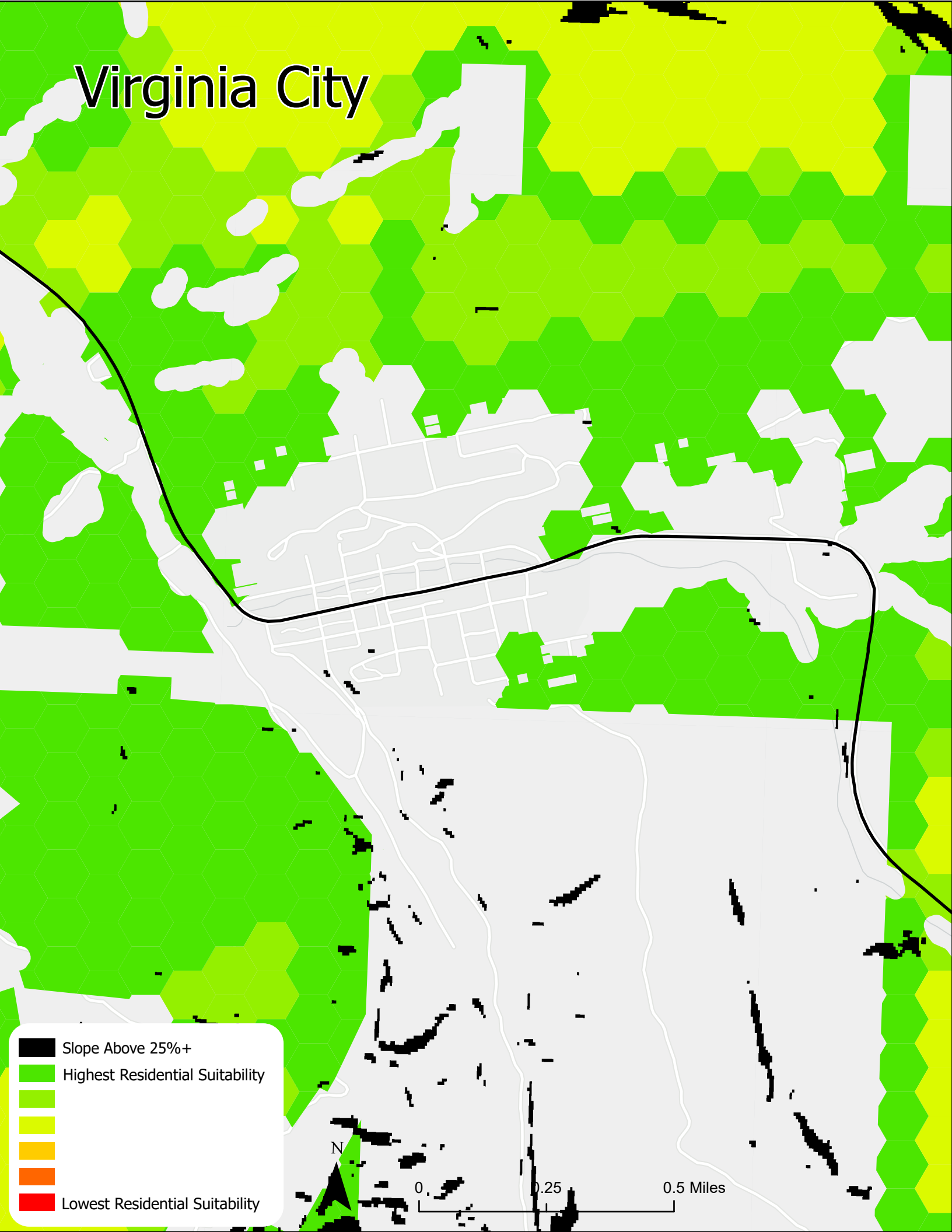
Twin Bridges



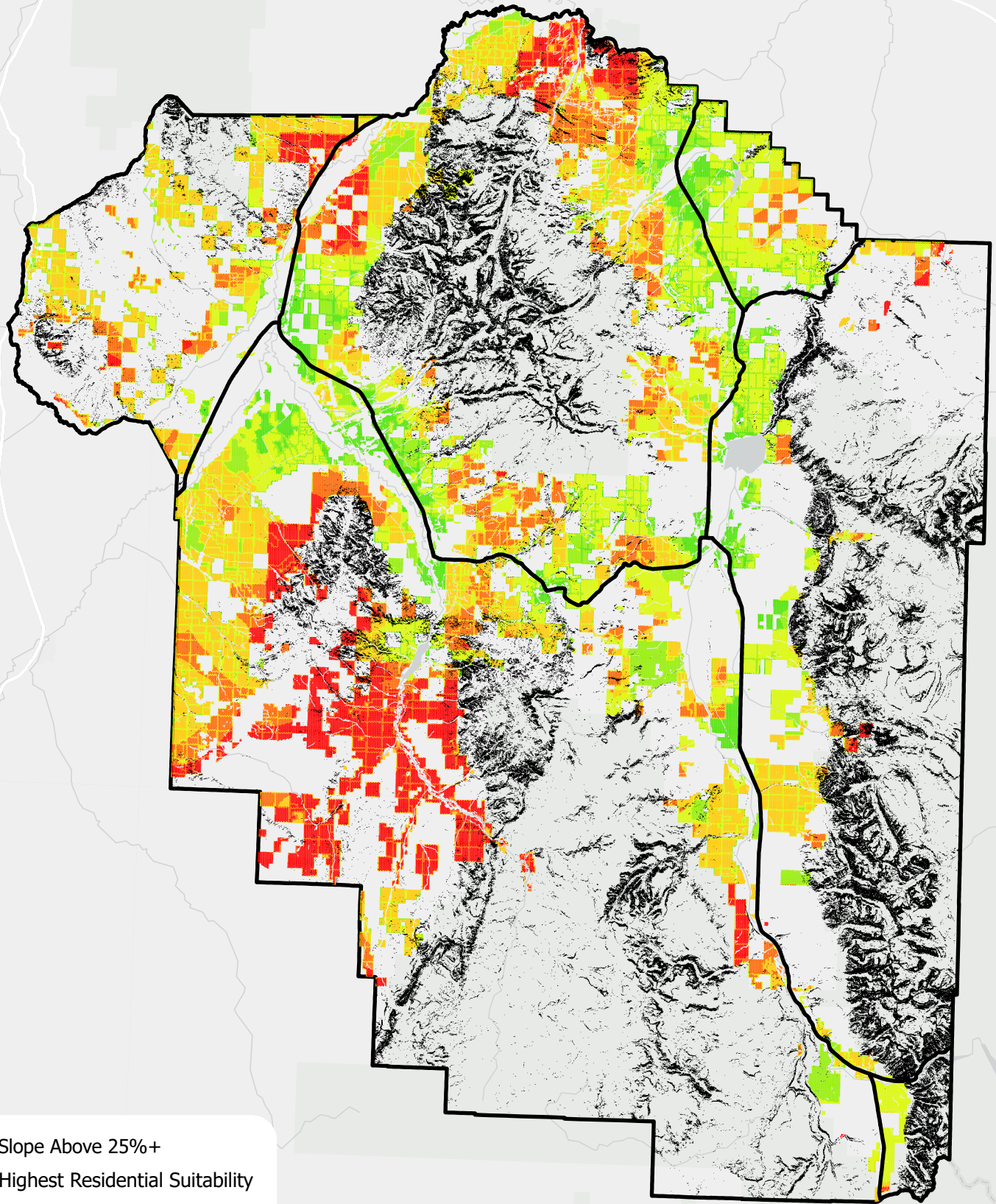
-  Slope Above 25%+
-  Highest Residential Suitability
- 
- 
- 
- 
-  Lowest Residential Suitability









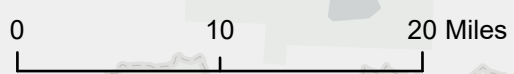
Virginia City



Madison



-  Slope Above 25%+
-  Highest Residential Suitability
- 
- 
- 
-  Lowest Residential Suitability



APPENDIX Q

BIG SKY HOUSING NEEDS

UPDATE: 2022

WRITTEN BY:

WSW CONSULTING

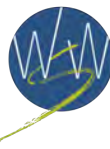
 **HYALITE**

Big Sky Community Housing Needs Update: 2022

September 2022



Prepared by:



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San Anselmo, CA
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Introduction

This report is an update to the 2018 Big Sky Community Housing Assessment and Needs report (“2018 assessment”). It provides updated information about the housing inventory, pending projects and those in the pipeline, jobs and household income, home prices and availability, short-term rental trends, and the number of community housing units needed in Big Sky through 2027. It also updates the area median income (AMI) levels at which market purchase prices and rents are affordable and the corresponding community housing price points needed. It concludes with a brief summary of findings and recommendations.

Report Organization

This update was conducted by evaluating several components of the housing and job market, as summarized in the following sections:

- Area Median Income and Affordable Housing Payments: this section updates employee income by AMI utilizing secondary sources to estimate changes in Big Sky employee household incomes utilized in the 2018 assessment.
- Housing Inventory and Pending/Pipeline Development: this section identifies how many housing units have been added in Big Sky since the 2018 study. In addition, it identifies the number of community housing units produced by tenure and AMI affordability, as well as pending projects and those in the pipeline.
- Jobs and Wages: this section updates rates of job and wage growth since 2017, and projects job growth through 2027.
- Ownership Housing: this section documents how much home price points have changed since the last assessment and provides a current inventory of for-sale homes.
- Rental Housing: this section documents how much market rents have increased since the 2018 assessment, changes in the availability and affordability of market rents, and changes in the short-term rental inventory.
- Housing Needs Update: this section calculates the current and future community housing needs in Big Sky through 2027, presented for both ownership and rental housing and by AMI level.
- Findings and Recommendations: this section summarizes observed housing market and affordability changes, and provides general recommendations, including best practice concepts, for addressing identified needs.

Area Median Income and Affordable Housing Payments

“Affordable” Defined

The term “affordable” may often be associated with low income housing. In resort communities, however, affordability is a problem for households across a broad range of incomes; not just low income.

Housing is affordable when the monthly payment (rent or mortgage) is no more than 30% of a household’s gross income (i.e., income before taxes). Although there is some variation, this standard is commonly applied by federal and state housing programs, local housing initiatives, mortgage lenders and leasing agents. This same definition was used in the 2018 assessment.

Affordable rents and purchase prices meeting this 30% standard can be calculated for various income levels and are often expressed as a percentage of the Area Median Income (AMI). AMI is published annually by the U.S. Department of Housing and Urban Development (HUD) for each county and represents the Median Family Income of an area. This means that the AMI does not incorporate incomes from non-family single and roommate households, which make up over 40% of households Big Sky. As a result, the AMI is generally higher than the average income of all households.

AMI varies by household size. The median (or middle) income estimate generally falls on or near the 100% AMI rate for a family of four. Households that earn less than 100% AMI are identified as earning a lower percentage AMI (e.g., 80% AMI).

Big Sky crosses two counties. The 2022 median family income in Gallatin County is \$104,700 and \$72,600 in Madison County. This represents an annual average increase of about 8% and 3%, respectively, since the 2018 assessment. Like in the 2018 assessment, this update uses the AMI for Gallatin County because the majority of the local population resides in Gallatin County and the higher Gallatin County AMI is more reflective of incomes in Big Sky than that of Madison County.

Gallatin County AMI by Household Size: 2022

AMI Level	1-person	2-person	3-person	4-person
30%	\$20,900	\$23,850	\$26,850	\$29,800
60%	\$41,760	\$47,760	\$53,700	\$59,640
80%	\$55,650	\$63,600	\$71,550	\$79,500
100%	\$69,600	\$79,600	\$89,500	\$99,400
120%	\$83,520	\$95,520	\$107,400	\$119,280
150%	\$104,400	\$119,400	\$134,250	\$149,100
200%	\$139,200	\$159,200	\$179,000	\$198,800
300%	\$250,560	\$286,560	\$322,200	\$357,840

Source: US Dept. of Housing and Urban Development (HUD)

Income Distribution of Households

The distribution of households in the Big Sky area by AMI is used to understand the mix of housing and price points needed to sustain the resident population. To better approximate employed households, the below figures exclude households heading by persons age 62 and over and include households in Big Sky and Gallatin Gateway CCDs. As shown:

- Over 60% of renters earn below 100% AMI. The current rental market is affordable for households earning 110% or more, if units can be found.¹
- Only about 20% of owners earn over 300% AMI, which is slightly below the income needed to afford the median priced condominium sold through July 2022.²

Households by AMI: Big Sky/Gallatin CCD, 2022

AMI Range	Rent	Own	Total
<60%	31%	8%	16%
60 to 80%	15%	6%	9%
80 to 100%	15%	11%	12%
100 to 120%	10%	10%	10%
120 to 150%	7%	23%	18%
150 to 200%	10%	15%	13%
200 to 300%	9%	9%	9%
300% or more	3%	18%	13%
Total	100%	100%	100%

Source: Ribbon Demographics, LLC; HUD; Consultant team

Affordable Housing Prices

The average household size in Big Sky is about 2.5 persons, which was the average in the 2018 assessment. Due to very little change in this figure since 2018, 2.5 persons per household is used throughout this update like in 2018. The below table shows the affordable rents and home purchase prices at various household incomes and the respective AMI level for an average-sized household in 2022.

- Because the maximum affordable rent is solely based on 30% of household income, the maximum rent figures increased by 40% relative to the 2018 figures, the same amount as incomes.
- The maximum purchase price, however, only increased by about 13%. Rising mortgage rates in 2022 reduces the purchasing power of households.

¹ See *Rental Housing* section for more information.

² See *Ownership Housing* section for more information.

Maximum Affordable Housing Costs (2022)

AMI Equivalent*	Household Income	Max Rent	Max Purchase Price**
30%	\$25,350	\$635	\$80,200
60%	\$50,730	\$1,270	\$160,500
80%	\$67,575	\$1,690	\$213,800
100%	\$84,550	\$2,115	\$267,500
120%	\$101,460	\$2,535	\$321,100
150%	\$126,825	\$3,170	\$401,300
200%	\$169,100	\$4,230	\$535,100
250%	\$211,375	\$5,285	\$668,900
300%	\$304,380	\$7,610	\$963,200

Source: Consultant team

*AMI for the average sized 2.5-person household earning the respective income.

**Assumes 30-year mortgage at 7% with 5% down and 20% of the payment covering taxes, insurance and HOA fees.

Interest rates significantly affect the affordable purchase price of homes. Mortgage rates increased significantly in the first half of 2022. As a result, affordable purchase prices in the above table assume an average mortgage interest rate of 7%, which is approximately one percentage point higher than prevailing rates. In comparison, an assumed rate of 5% was used in 2018.

For every 1%-point rise, the purchasing power of a household decreases by about 10%. This should be considered when evaluating the affordability of housing and establishing prices for new affordable homes.

Interest rates, which rose in the first half of 2022, affect the affordable purchase price of homes.

Housing Inventory and Planned/Pending Development

The 2018 assessment characterized the housing inventory that is deed restricted as “shockingly low.” At that time, only Big Sky Apartments (36 units) were restricted to ensure rents would be affordable for residents. The LIHTC project provides rentals affordable for households earning up to 60% AMI.

New Housing Inventory

New housing built since 2018 is identified below by two categories:

- Community housing – residences intended and suitable for year-round occupancy. These include residences for rent or ownership that meet the diverse needs of residents and employees in different life stages that call Big Sky home.
- Employer/seasonal units – units designed and managed for seasonal employees (e.g., dorms, lock-offs). Such accommodations typically include shared bedrooms, kitchens, and bathrooms and are necessary for J-1 Visa hires, for example.

While employer units for seasonal employees are important and essential in Big Sky, the community housing gap identified in the 2018 assessment related to the need for residences suitable for year-round occupancy to improve the year round stability, diversity, and resiliency of the Big Sky community and economy. It was noted in that study that seasonal employee housing was expected to be provided in addition to the community housing estimates. As such, only community housing is counted against the community housing needs identified in the 2018 assessment (see *Community Housing Needs Update* section).

Based on tracked development, a total of 319 units have been built since the 2018 assessment. About 54% are employer units (173 units, 509 beds) and 46% are community housing (146 units).

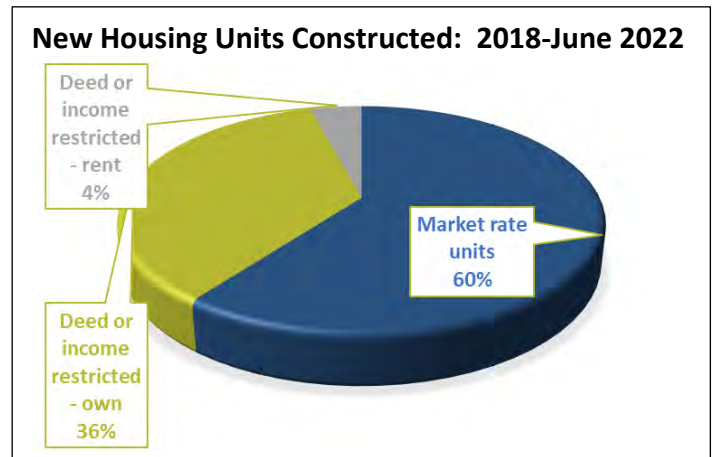
New Housing Units Constructed: 2018 through June 2022

	Big Sky Total	Ownership	Rentals
Total	319	52	267
Community housing (year-round occupancy)	146	52	94
Market Rate	88	0/no info	88
Below Market (deed restricted)	58	52	6
Employer/seasonal units (dorms/lock-offs)	173 (509 beds)	0	173 (509 beds)

Source: Big Sky Housing Trust, Lone Mountain Land Company

Of the community housing units, 58 (40%) are deed- or income-restricted to serve the local year-round workforce, more than doubling the supply of deed-restricted community housing.

- Meadow View Condos is a 52-unit deed restricted affordable ownership housing development sponsored by the Big Sky Community Housing Trust. Finished in the summer of 2021, it is fully sold and occupied. Homes are restricted for households earning 80% to 150% AMI.
- Habitat of Gallatin Valley and the Big Sky School District partnered to produce 6 additional rental housing units for teachers earning up to 60% AMI.



Pending and Pipeline Housing

This section summarizes pending and pipeline housing projects, meaning:

- **Pending:** units that are already under construction, have been approved, or are actively being planned with some certainty that they will be built in the next five years.
- **Pipeline:** residential development projects that are being discussed or are early in the planning process. They do not have approvals and many project details are still uncertain or unknown.

As shown below, community housing development is anticipated to pick up in relation to seasonal employer units:

- About 776 new community housing units are pending. Of these, 183 (24%) are anticipated to be deed- or income-restricted units.
- An estimated 650 units are in the pipeline, which is subject to change.

Number of Housing Units Pending or in the Pipeline

	Big Sky Total	Canyon	Gateway	Meadow	Mountain
Pending (anticipated by 2027)					
Community housing (year-round occupancy)	776	294	323	59	100
Market Rate	593	270	323	0	0
Below Market (deed restricted)	183	24	0	59	100
Employer/seasonal units (dorms/lock-offs)	310 (1,376 beds)	12	116	102	80
Pipeline (details/timing uncertain)	650	97	0	188	365

Source: Big Sky Housing Trust, Lone Mountain Land Company

Over half of the 183 pending deed- or income-restricted units will be located in the Mountain area and roughly one-third in the Meadow. This includes:

- 52 rental units in the Meadow, with at least half restricted to 40% to 80% AMI and the rest capped between 100% and 150% AMI (still being determined).
- 7 ownership units in the Meadow at 150% AMI.
- 100 ownership units in the Mountain area restricted to 100% to 150% AMI.
- 24 single family homes for rent in the Canyon area with unknown AMI limits at this time.

Pending Community Housing Development by Own/Rent

	Big Sky Total	Own	Rent	Mix of own/rent (or unknown)
Community housing (year-round occupancy)	776	117	92	567
Market Rate	593	10	16	567
Below Market (deed restricted)	183	107	76	0

Source: Big Sky Housing Trust, Lone Mountain Land Company

If all pending deed restricted community housing developments are built by 2027, there will be a total of 277 deed or income-restricted housing units serving Big Sky's community. Over half of these units will be for ownership.

Projected Total Deed-Restricted Community Housing Units in 2027

	Big Sky Total	Ownership	Rentals
Existing before 2018	36		36
Built since 2018	58	52	6
Pending (by 2027)	183	107	76
TOTAL	277	159	118

Source: 2018 Assessment, Big Sky Housing Trust, Lone Mountain Land Company

Jobs and Wages

Job Growth and Projections

There were an estimated 4,718 jobs in Big Sky in 2021, or about 700 more than in 2017. The previous assessment projected that jobs would be between 4,605 and 4,915 by 2023; however, a higher than anticipated rate of job growth meant that jobs reached this level in 2021. From 2017 to 2021, jobs grew by an estimated 4.1% per year on average in Big Sky. Job growth in Gallatin and Madison Counties combined was much slower (2.9% per year on average).

Through 2027, an estimated 675 to 1,275 jobs will be added in Big Sky depending on whether jobs are created at the long-term average rate of growth, or more recent rates of growth. As was the case in 2018 assessment, the state job growth estimate of 1.4% per year for the southwest region is likely low based on the amount of development that is pending and historic growth rates in the area (see *Housing Inventory and Planned/Pending Development* section).

The low and high 2027 job growth projections are based on the following rates:

- Low of 2.3% per year: this is the long-term rate of growth in wage and salary jobs from 2007 to 2021. There were two recessions over this time period.
- High: these are the 2017 to 2021 rates of growth, 2.9% in the two counties and 4.1% in Big Sky. To grow at this pace, housing will have to be available and affordable for employees so that employers can compete for and attract new employees to the area.

Job Estimates and Projections: 2021 to 2027

	# of Jobs		Average Yearly % growth			
	2017	2021	2027 (low)	2027 (high)	(low)	(high)
Big Sky area	4,019	4,718	5,394	6,002	2.3%	4.1%
Counties total*	85,862	96,360	110,155	114,562	2.3%	2.9%
% of County jobs in Big Sky	4.7%	4.9%	4.9%	5.2%	-	-

Source: QCEW county and Zip code (59716 & 59730); BEA county data; Consultant team

*Sum of Gallatin County and Madison County jobs

Wages

From 2016 to 2021, wages in the Big Sky area increased by 8.6% per year, almost double the rate from 2013 to 2017 (4.5%). This is lower than the rate of wage growth in Madison County, but higher than in Gallatin County. On average, employees in Big Sky are paid almost \$53,000 per year.

	2016	2021 [1]	Annual Yearly % growth
Gallatin County	\$40,969	\$55,221	6.2%
Madison County	\$35,134	\$54,575	9.2%
Big Sky area	\$34,876	\$52,698	8.6%

[1] preliminary data subject to revisions

Source: QCEW county and Zip code (59716 & 59730); Consultant team

Ownership Housing

Home Sale Prices

Home prices were too high for most workforce households in 2014. Affordability eroded further by the time the 2018 assessment was completed, and it has all but evaporated in 2022, with the exception of income- or deed-restricted inventory.

The average price of single-family sales in 2022 (through August 1) was almost \$3 million, and \$1.3 million for condominiums, requiring at least 7-times the average wage paid in Big Sky (absent substantial assets) to be able to afford to purchase homes.

- Since 2017, median annual sale prices of single-family homes and condominiums increased by 19% to 25% per year.
- The average sale price of single-family homes in 2017 was \$386 per square foot. Sales through Aug. 1, 2022, averaged \$901 per square foot; a 133% increase.
- The average sale price per square foot of condominiums (\$800) increased by 158% from the \$310 per square foot in 2017.

Change in Sale Prices: 2017 to 2022

	2017 (thru Nov. 15)	2019	2020	2021	2022 (thru Aug. 1)	Avg yearly % change (2017-2022)
Single-family						
Median sale price	\$1,030,000	\$960,000	\$1,299,500	\$1,917,500	\$2,450,000	19%
Average sale price	\$1,235,113	\$1,709,538	\$1,665,622	\$2,344,140	\$2,967,402	19%
Avg sale price/sq ft	\$386	\$484	\$441	\$633	\$901	18%
Condo/Townhome						
Median sale price	\$390,000	\$429,225	\$550,000	\$802,000	\$1,182,500	25%
Average sale price	\$520,341	\$570,240	\$696,333	\$909,689	\$1,341,706	21%
Avg sale price/sq ft	\$310	\$366	\$395	\$536	\$800	21%

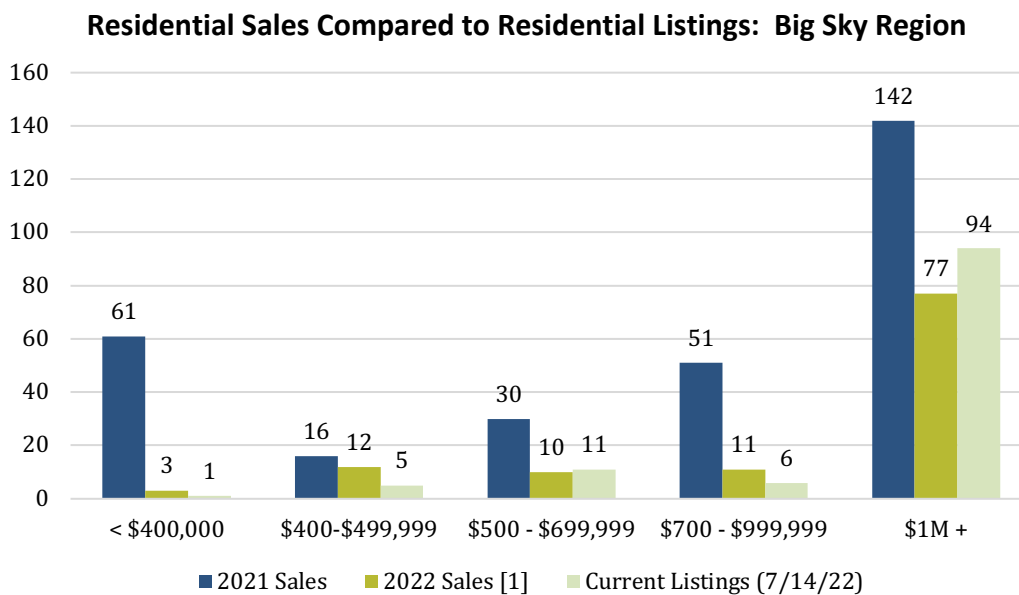
Source: The Big Sky Real Estate Company, MLS, consultant team

Active Listings

There are fewer housing units for sale this summer (117 total) than in the summer of 2017 (191 total) – a 39% drop. For-sale inventory is at or near record lows.

Relative to 2021 sales, current listings represent about 4.7 months of inventory overall. Inventory varies by price:

- There is less than one-month supply of homes for sale for \$500,000 or less (6 homes total). About 70% of resident households need homes priced below \$500,000.
- There is nearly an 8-month supply of homes priced over \$1 million.

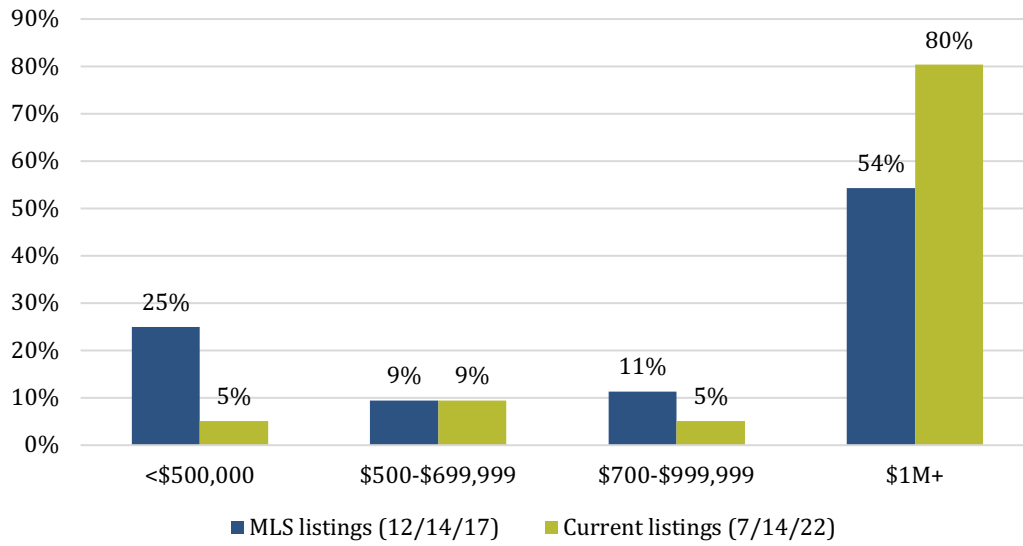


Source: The Big Sky Real Estate Company, MLS, consultant team

Although homes for sale below \$500,000 were not plentiful in 2017, availability at this price has continued to decline.

- In 2017, 25% of homes for sale were priced below \$500,000. All but one were condominiums which tended to be older/in need of repairs or designed for second homeowners (e.g., high HOA fees and prices exceeding \$500/square foot).
- In 2022, only 5% of homes were for sale below \$500,000 (6 total). Four are partial ownership or timeshare only, one is a 440 square foot unit that was built in 1974 and is priced over \$1,000/square foot, and the sixth unit is priced over \$1,100/square foot in a ski-in/ski-out, high amenity complex.

Residential Listings Compared: 2017 and 2022



Rental Housing

Rental Rates

The average rent per bedroom is near \$1,150 per month, up from about \$850/month in 2018. Current rents are affordable for households earning about 110% AMI. Almost half (48%) of renters need rents below \$1,700 per month, which is now very difficult to find.

Changes by unit size for professionally managed units are shown in the below table and illustrate that:

- The average price of rental units increased by about \$600 per month, or 38% since the 2018 assessment.
- Studio and one bedroom units have increased the most (68%).
- Over the past couple of years, property managers report that average rent has increased by between \$100 and \$300 each year for properties that retain the same renter. The highest typical annual increase has been closer to \$500 in the past few years, with a few exceptions.

As rents have increased, property managers note that tenants either figure it out and retain their unit, move out and leave the area or potentially utilize camping and van-living options in the summer, or units may be leased by employers who help subsidize the increase for their employees.

Market Rents: 2018 Assessment Compared to Summer 2022

	2018 Assessment (mid point of Professionally-Managed Market Rents)	Summer 2022 (Professionally-Managed Average Market Rents)	Percent Change
0/1 Bedroom	\$850	\$1,428	68%
2 Bedroom	\$1,700	\$2,258	33%
3 Bedroom	\$2,700	\$3,125	16%
4 Bedroom	NA	\$3,592	NA
Overall Average	\$1,700	\$2,338	38%

Source: Big Sky Community Housing Trust, local property managers, consultant team

Available Rentals

The 1% rental vacancy rate as of the 2018 assessment is now zero, and has been since at least 2020. Property managers report that renters “take what they can get.”

There were only five rentals publicly advertised in June 2022 in the Big Sky area. Two of the five were rooms for rent, with one being contingent on employment at a local restaurant, and two excluding pets. All listings (except for the employment unit) advertised lease terms for 7-months or less.

Big Sky Public Listings: June 2022

Type	Rent	Lease Duration/Terms
Room for rent	\$850	Employer-provided
Room for rent	\$1,250	6 months
Studio	\$1,600	7 months
Studio	\$2,500	6 months/no pets
1 bed / 1 bath	\$2,500	6 months/no pets

Source: Apartments.com, Craigslist, Facebook, DiscoverBigSky.com, GoBigRentals.com

Loss of Long-Term Rentals

As stated in the 2018 assessment³, the majority of rental inventory in Big Sky relies upon owners leasing condominiums and other owned-homes. This results in unstable rental stock. Primary factors affecting the supply of long-term rentals in recent years (similar to findings in 2018) includes:

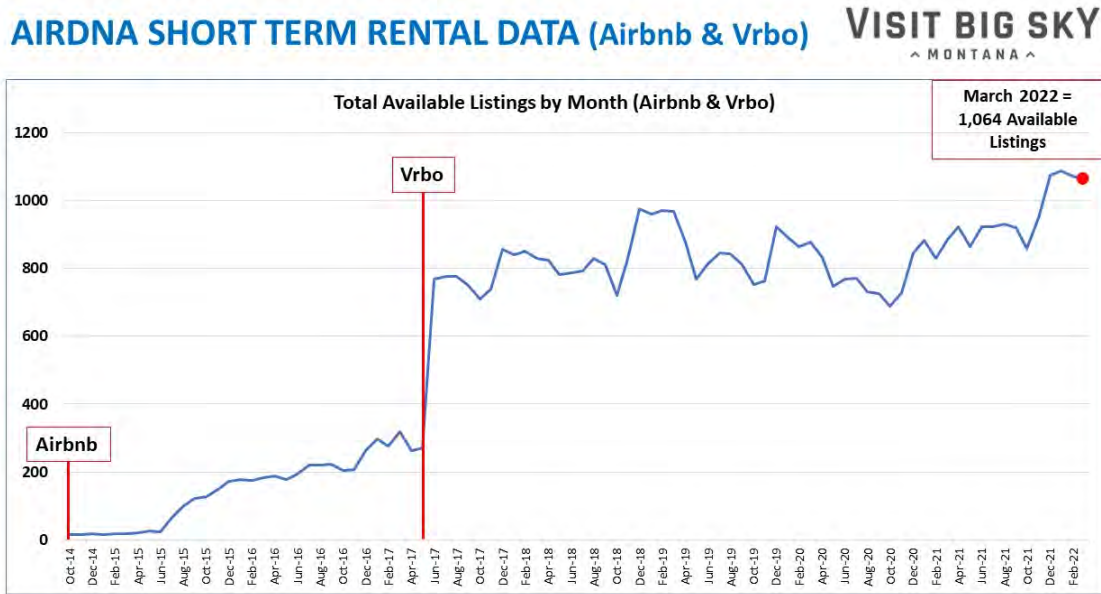
- Owners selling homes. New buyers, given high housing prices, typically opt to short-term rent (if they rent at all) to help cover costs. One property manager reported losing 10 to 12 rentals over the past few years to owner/landlords selling their home (or about 8% of their long-term rental inventory).
- Short-term rental competition. Owners can typically get a higher yearly return for short-term renting their homes in Big Sky over long-term leases. Short-term renting also provides flexibility for the owner to utilize the home.

Short-Term Rentals

The purchase of homes for short-term rental purposes by investment buyers or second home owners increases home prices and reduces the potential availability of homes for long-term rentals and/or for purchase by local residents.

³ See pp. 53 and 57 from the 2018 assessment regarding the mix of rentals by unit type and renters being forced to move for various reasons, including the owner selling the rental (26%) and the owner converting to a short-term rental (23%).

The rising trend in short-term rentals in Big Sky was noted as a huge problem in the 2018 assessment, and the trend has continued. Since the 2018 assessment, the number of short-term rentals in Big Sky has increased 33%, from 800 in February 2018 to 1,064 in March 2022 and now comprise over 20% of the total housing stock.⁴



Source: AirDNA

The prior use of short-term rentals is not tracked in Big Sky; it is uncertain how many units would be rented by their owners long-term to residents if short-term renting was not an option. The community survey conducted for the 2018 assessment showed that long-term rentals were being lost to owners selling homes or short-term rental conversion at a rate of about 5% per year. Information from property managers and short-term rental growth over the past 5 years support that this has continued, although unit conversion has not been tracked.

⁴ Source: AirDNA data as compiled by Visit Big Sky

Community Housing Needs Update

Current “Catch-Up” Needs

Catch up in 2021 refers to the number of units needed to catch up to meet current community housing needs that are in short supply.

For the purposes of this update, catch-up is calculated by:

- Updating the total housing needs calculated in the 2018 assessment for the time period between 2017 and 2021.
- Subtracting the number of community housing units constructed or approved since the 2018 assessment from total needs.

Updated 2018 Assessment Estimates

The 2018 study projected housing needs through 2023. This included two estimates:

- Housing units needed to catch-up with current deficits by providing housing units for in-commuting employees who want to live in Big Sky.
- Housing units needed to keep-up with future demand for housing based on projected job growth and jobs vacated by retiring employees.

Updated estimates are based on:

- A four-year, rather than six-year, need. Estimates presented in the 2018 assessment covered from 2017 to 2023. Revised estimates show needs from 2017 through 2021; and
- Updated actual and estimated job growth between 2017 and 2021 from the Montana Department of Labor and Industry, showing that a total of 700 jobs were added. This is higher than anticipated: about 700 jobs were instead projected to be added by 2023 (i.e., two years later).

These estimates do not include resident housing lost due to owners selling homes or conversion to short-term rentals, a topic of concern in Big Sky, and should, therefore, be considered conservative.⁵

⁵ See *Rental Housing – Short-term rentals* section for more information.

Update of Housing Needs: 2017 to 2021

	2018 Assessment (2017 to 2023)		Updated (2017 to 2021)
	Low	High	
Catch-Up	335	335	335
In-commuters (39% want to move to Big Sky)	335	335	335
Keep-Up	225	320	265
Retiring employees (3.2% in five years)	55	55	55
New jobs (69% of employees living in Big Sky)	170	265	210
TOTAL through 2021	560	655	600
Market-rate (no more than 45%)	250	295	270
Below-market (at least 55%)	310	360	330

Revised estimates of need for 2017 to 2021 show that about 600 housing units were needed for local residents and employees to address deficiencies in 2017 and keep up with job growth and retiring employees. Most of these units needed to be priced below market (330 units).

Community Housing Produced

Accounting for community housing that has been constructed since 2017 shows that a remaining 272 below-market units and 182 market-rate units are needed.⁶

Estimated Remaining Community Housing Needs: 2017-2021

	Total need	Built 2017 - 2021	Remaining Catch-up
Below Market (deed restricted)	330	58	272
Ownership (below 150% AMI)	145	52	93
Rental (below 100% AMI)	185	6	179
Market Rate	270	88	182
Ownership	95	0/no info	95
Rental	175	88	87

NOTE: Differences are due to rounding

⁶ See *Housing Inventory* section for more detail on built and pending projects.

Keep Up Needs (2021 to 2027)

It is estimated that between 265 to 445 community housing units are needed to keep up with changes through 2027. As done in the 2018 assessment, the need for community housing units through 2027 is based on:

- Projected job growth. As outlined in the *Jobs and Household Income* section, jobs are projected to increase by between 675 to 1,285 positions by 2027. A range is presented to account for the historical growth rate (2.3%) and the more recent, higher rate of growth (4.1%); and
- Jobs vacated by retirees. The rate of retirement over the next five years is assumed to be the same as in the prior assessment – about 3% of employees – resulting in the need for an additional 65 housing units by 2027.

Assumptions regarding the mix of units by ownership and rental are the same as those used in the 2018 assessment, which can be referenced for more detail. This includes:

- About 40% of new units should be for ownership and 60% for rent. This takes into account that most in-commuters that would move are renters, as are the majority of new workers to the area initially (an estimated 70%). It is also in line with the rental shortage experienced in Big Sky (near 0% vacancy rate).

The precise ratio, however, is somewhat dependent upon the Area’s desired direction and housing policy. While the rental market is very tight and rentals are needed to help fill jobs and allow employees to enter the community, ownership is needed long term to reduce housing stress and build stability, security, and satisfaction among residents making their living in the region.

Keep Up Needs: 2021 to 2027

	Low	High
Retiring employees	65	65
New jobs	200	380
Total Keep Up Needs	265	445
Ownership	105	180
Rentals	160	265

Total Needs (2021 to 2027)

Just over 800 community housing units are needed in Big sky through 2027 to provide housing opportunities for local residents and employees. About 70% of needed homes should be

community housing units that are priced below-market. This means below 250% AMI for ownership and 100% AMI or less for rentals.⁷

Based on pending development projects through 2027, the market rate component of community housing needs will be met. Below-market (deed restricted) development will fall short by about 390 units, 60% of which should be rentals.

Total Needs: Catch-Up Plus Keep-Up, 2021 to 2027

	Total	Ownership	Rental
Catch-up (2021)	454	188	266
Keep-Up (2021 – 2027)*	355	140	215
TOTAL Housing Units	809	328	481
Below market/deed restricted (70%)	575	262	313
Market rate (30%)	234	66	168
Subtract pending development from total needs			
Pending development (by 2027)	776	-	-
Below market (deed restricted)	183	107	76
Market rate	593	- uncertain	-
Remaining Housing Need (through 2027)			
Remaining Housing Need (through 2027)**	392	155	237
Below market (deed restricted)	392	155	237
Market rate	0	-	-

NOTE: differences are due to rounding

*Represents the mid-point of estimated housing need based on low and high estimated job growth rates. Full range is between 265 to 445 units needed.

**Represents the mid-point of estimated housing need based on low and high estimated job growth rates. Full range is between 300 to 480 units needed.

Community housing units are needed for owners earning under 250% AMI and renters earning under 100% AMI due to continued rising housing costs and scarce supply since the 2018 assessment. As shown above, market-rate community housing needs are expected to be met if pending and pipeline development projects are built. Below-market deed restricted community housing will still be needed:

- Housing units should generally be priced based on the income distribution of households in the area (see *Introduction – Income Distribution of Households*), which is illustrated in the below table. Figures should be used as a guideline and not an absolute.

⁷ Below market need has increased since the 2018 assessment, at which time 60% of community housing needed to be below market, meaning below 200% AMI for ownership and mostly below 80% AMI for rentals.

- Home purchase prices for locals should range as low as about \$200,000 up to about \$700,000. This would provide ownership opportunities for households earning between \$65,000 through \$200,000 per year (between about 80% and 250% AMI). The for-sale market is not providing a sufficient supply of homes in this price range.
- Homes affordable for households earning under \$60,000 per year to purchase are also undersupplied; however, producing homes at this price will not occur without substantial subsidies or programs such as Habitat for Humanity. These households also often have trouble qualifying for loans and meeting down payment purchase requirements.
- New rentals should be mostly priced for households earning under \$85,000 (or about 100% AMI). There is also a shortage of rentals priced up to about \$2,500 for two- and three-bedroom units in Big Sky.

Total Needs by Tenure and Price: 2021 - 2027

AMI Range	Max Household Income (2.5-person household)	Max Affordable Home Price or Rent	# of Units	% of Units*
OWNERSHIP				
<=60%	\$50,730	\$160,500	-	-
60.1-80%	\$67,575	\$213,800	15	9%
80.1 - 120%	\$101,460	\$321,100	40	27%
120.1 - 150%	\$126,825	\$401,300	50	32%
150.1 - 200%	\$169,100	\$535,100	35	23%
200.1 - 250%	\$211,375	\$668,900	15	9%
>250% (market rate)	>\$211,375	<\$668,900	-	-
TOTAL	-	-	155	100%
RENTALS				
<=30%	\$25,350	\$635	50	21%
30.1-60%	\$50,730	\$1,270	55	24%
60.1-80%	\$67,575	\$1,690	50	21%
80.1-100%	\$84,550	\$2,115	50	21%
100.1 - 120%	\$101,460	\$2,535	35	15%
>120% (market rate)	>\$101,460	>\$2,535	-	-
TOTAL	-	-	237	100%

*Adjusted from AMI household distributions (p. 4) based on distribution needed for below-market community housing only.

NOTE 1: Shading indicates where there is a shortage of community housing supply. Special note for rentals provided in the lighter shaded price point:

- <30% - rentals at this price assist fixed income/special needs population; employees typically earn too much to qualify at this level.
- 100.1 – 120% should be 2- and 3-bedroom units.

NOTE 2: differences are due to rounding

Findings and Recommendations

Housing Market and Development Trends

The housing market in Big Sky has continued to become less affordable and available for residents making their living in the area since the 2018 Housing Assessment:

- Housing prices and rents have increased significantly. The availability of housing for sale or rent that locals can afford is slim to nonexistent.
- The rise in interest rates in the first half of 2022 have decreased local household's ability to afford to purchase homes and get established in the area.
- Short term rentals have continued to grow and now comprise over 20% of the total housing unit inventory in Big Sky. Investors buying short term rentals drives up housing prices; units rented short term are no longer available for residents needing long-term/year-round rentals.
- Concurrently, the number of jobs and need for employees has increased faster than any other Gallatin County community, reaching estimated 2023 levels by 2021. In the scarce labor force environment, housing that is suitable and affordable for employees is a strong competitive advantage.

A significant number of housing units have been constructed in Big Sky since 2018, but fell short of meeting year-round community housing needs. This includes:

- A notable 500 beds (173 units) for seasonal employees, including lock-off rentals with shared kitchens and living areas, dormitory product, and converted hotels. This provides beds for the more transient workforce needed by area resorts and other businesses.
- 146 community housing units, 58 of which are deed restricted to ensure occupancy by residents making their living in the area and to retain affordability over time. Many year-round residents also hold seasonal jobs, or dual-seasonal jobs, and provide a more stable, consistent base of employees in the community.

In the high-cost, highly-competitive housing market, residents working locally do not have the resources to compete with higher-wage out of area buyers, renters, and investors.

Homes that are deed restricted for occupancy by local employees are removed from the fierce competition with outside interests and provide a secondary market of local housing options that retain their affordability over time. Having a sufficient supply of housing for households making their living in the area helps to sustain local businesses, ensure quality resident and visitor services, and retain a diverse and vibrant community.

Community Housing Needs Through 2027

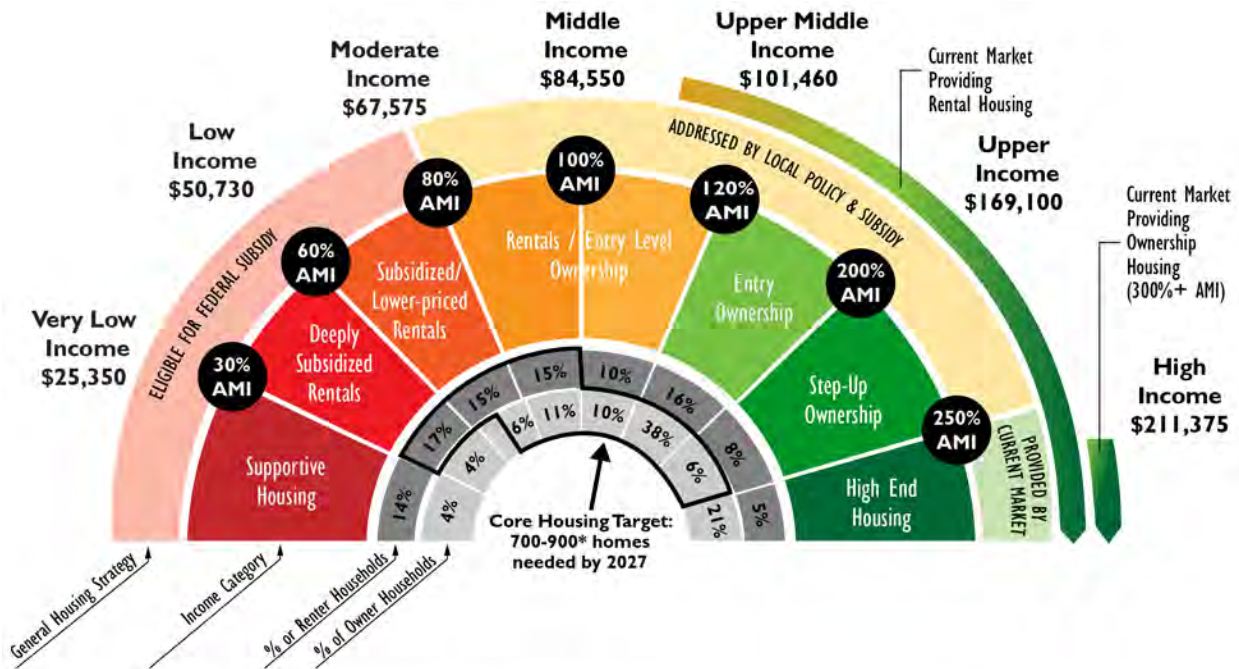
Big Sky has a heavy lift to increase the availability of community housing opportunities to sustain a vibrant community of residents and ensure quality services and amenities for residents and visitors alike. Importantly, **addressing community housing needs is more than just adding supply – it is adding supply at the right price to support the resident and employee community.**

The housing bridge, below, illustrates the community housing needs in Big Sky through 2027. The housing bridge illustrates the mix of housing needed by residents making their living in Big Sky and at which income level. It shows where the market is providing housing and where it is not; and how much additional housing is needed to address current shortfalls and keep up with future job growth at various price points. More specifically:

- Renters must earn at least \$90,000 per year to afford the average rental on the market, if they can find one.
- Households making their living locally are mostly priced out of market rate ownership housing. Households earning under \$250,000 per year have a scant handful of properties to choose from – most of which are designed as high-amenity condominiums for visitors (small, with high HOA fees), or older one-bedroom units. Units for families are out of reach.
- To address the current housing shortfall and keep up with future job growth, **at least 70% of the 700 to 900 homes needed to support local residents and employees by 2027 in Big Sky will need to be priced below market.** Addressing housing needs will require local policies, subsidies, and creative partnerships, building upon the existing achievements of the community, local organizations, employers, and developers.

Current planned and pending development projects will address the market housing component of estimated needs, as well as 183 deed restricted community housing units. **If development occurs as planned, between 300 and 480 more units will be needed at below-market prices.** This is a very big challenge, one that can only be met by a concerted and coordinated effort by the Big Sky community.

Spectrum of Housing Needs: Big Sky Area, 2022



*Excludes "pending" development projects. This drops to 300 to 480 (all below market) if pending development occurs as planned.

Source: Ribbon Demographics, LLC, US Department of Housing and Urban Development (HUD), Consultant team
 Incomes represent an average-sized 2.5-person household

General Recommendations

Increase supply of stable rental inventory. The majority of rental inventory in Big Sky relies upon owners leasing condominiums and other owned-homes. This results in unstable rental stock. Owner-leased homes are susceptible to being sold and/or converted to short-term rentals, or otherwise removed from the long term rental inventory. Only 6 deed restricted rentals designed for year-round community occupancy were constructed since 2018. **At least 60% of the community housing inventory needed should be rentals.**

Add more stable rental inventory by building apartments designed (i.e., not lock-offs, dorms, etc.) and priced for year-round occupancy by singles and families making their living in Big Sky. Ensure units cannot be rented short-term and protect units from being converted to condominiums so that they will remain as year-round rental options for residents.

Employer housing assistance. Employer housing subsidies, stipends, and master leasing opportunities are common in the tight housing market environment. While this helps employees of participating businesses locate and afford housing, recognize that housing stipends/employer-subsidized rents support further rent hikes. Master leasing existing units removes housing opportunities from other employees in the community. To the extent that rental owners reside outside of Big Sky, or employees lease units outside of the area, subsidies

paid are largely not recycled back into the Big Sky economy. Finally, housing tied to a specific job or employer also stifles the ability for employees to advance their careers by gaining experience with other employers (i.e., if the employee leaves their job, they also lose their housing).

Employer-assisted housing programs should be part of the solution, but should be secondary to new community housing development. The benefits and drawbacks to various approaches need to be recognized and balanced.

Short-term rental management. Over 20% of the housing stock is being used for short-term rentals. This impacts the need for community housing on both the supply and demand side:

- Short-term rentals increase prices and decrease supply of homes available for residents.
- Employees are needed to service short-term rentals; employees need housing.

Work with the county to increase enforcement and consider restrictions on short-term rentals in the community. Examples to consider:

- The city of Whitefish has restrictive zoning that permits short-term rentals in only certain zones in the city.
- Other communities cap the number of short-term rental permits issued, number issued by neighborhood, or even distance between short-term rentals (e.g. no more than one every 500-feet).
- Deed restrict new housing development prohibiting units from being short-term rented to protect new housing stock from converting to transient visitor use.
- Lobby for increased state legislative flexibility to more actively manage short term rentals and their impacts (e.g., charge housing impact fees, HOA flexibility to regulate, differential lodging and/or property tax treatment, etc.).

Commercial development and community housing. Big Sky recognizes the connection between commercial development and the need for additional housing for employees that will be filling new jobs. Absent a mandatory commercial linkage/housing impact fee program, work with the county and/or developers to encourage that all new commercial developments pay fee or build deed restricted housing for employees. The future business owner and employees will thank you; new commercial space that also includes employee housing provides a marketing advantage over commercial space alone.



Community housing development. Producing more year-round housing opportunities for residents making their living in Big Sky will take substantial planning, partnership, and financial coordination to achieve. It is also very important to produce housing product that promotes community, sustains families, and supports residents as life circumstances change. **Community**

housing means creating homes, not just beds, for residents. This means producing housing for livability and durability FIRST, and financing SECOND. Although this seems counter-intuitive, starting with “we only have \$\$ to spend” will guarantee that short cuts are taken with the product, compromising its suitability and quality for residents over the long term. When a quality product is designed and brought forth, market the design to acquire the financial resources needed (e.g., philanthropy, state/federal sources, local public subsidies, etc.). *Quality community housing requires development flexibility/incentives and, commonly, direct subsidies to produce.*

- Learn from Bridger View – a mixed-income ownership development in Bozeman, in which 50% of homes are permanently deed restricted for local residents.⁸ This project was achieved with substantial philanthropic contributions and coordination with public, private, and non-profit entities. Big Sky has the ability to replicate the quality provided by this product through its local partners and resources.
- Leverage all financing sources. Elevate Big Sky, Resort Tax, and voluntary collections from the real estate community provide substantial local contributions for community housing.

Revisit a recommendation from the 2018 Housing Action Plan to pursue a voluntary real estate transfer assessment on new high-end/second homeowner product. High-cost, majority second-homeowner markets benefit significantly from this funding strategy. State legislation permits the imposition of voluntary transfer fees that are contributed to a 501(c)(3). *Coordinate with the clubs and developers of new high-end/second homeowner product to voluntarily place a covenant on new development requiring up to a 1% transfer assessment upon sale that is contributed to a 501(c)(3) for housing.*

Pursue another LIHTC development in Big Sky to provide a stable source of affordable rentals for households earning 80% and below.

- Code and zoning incentives. Work with the county to implement code changes to incentivize the private market to produce more deed-restricted community housing units. Developers can utilize certain incentives in exchange for providing some deed restricted community housing.

Common community housing incentive policies include: deed-restricted housing by right in specified zones, development/impact fee deferral until sale/occupancy, priority processing for deed restricted projects, reduced parking requirements where sensible/shared parking permissions, and density bonuses for deed restricted units.

A density bonus incentive is strongly recommended in high-cost areas like Big Sky, in lieu of straight upzoning, to promote more community housing development.

Upzoning will simply allow more units to be built with no guarantees that any units will be provided at prices the community can afford. Utilization of a density bonus will ensure that some deed restricted units are built as part of the development.

⁸ For more information, see <https://bridgerview.org>

Appendix A

Methodology

Secondary and Local Data Sources

A variety of sources of published information were used in the preparation of this update, including but not limited to:

- U.S. Census Longitudinal Employer Household Dynamics (LEHD).
- Ribbon Demographics, LLC, income data for 2022.
- Employment information from the Quarterly Census of Employment and Wages (QCEW), the US Bureau of Economic Analysis (BEA), and the Montana Department of Labor and Industry.
- 2022 Area Median Income from the Department of Housing and Urban Development.
- Current MLS listings, recent home sales and historic sale trends from the Big Sky Real Estate Company.
- Publicly listed rentals from various sources, including Apartments.com, Craigslist, Zillow, Facebook, Discoverbigsky.com, Lonepeaklookout.com, Explorebigsky.com, Gobigrentals.com, and Apartmentsinbigsky.com. Additional rental data provided by local property managers.
- Big Sky Community Housing Trust and local builders/developers provided information about current, pending, and pipeline development projects.

Acronyms

The following acronyms are used in this assessment.

ACS	American Community Survey
AMI	Area Median Income
BEA	US Bureau of Economic Analysis
BSCHT	Big Sky Community Housing Trust
HUD	United States Department of Housing and Urban Development
LIHTC	Low-Income Housing Tax Credit
MLS	Multiple Listing Service
QCEW	Quarterly Census of Employment and Wages

Definitions

The following terms are used in this assessment:

Affordable Housing	As used in this assessment, housing is affordable if the monthly rent or mortgage payment is equal to or less than 30% of gross household income (before taxes). When housing costs exceed 30% of income, the household is considered to be Cost Burdened.
Area Median Income (AMI)	<p>A term that generally refers to the median incomes published annually for counties by the US Department of Housing and Urban Development (HUD). Each year, HUD adjusts the area median household income based on a variety of factors such as the area economy and household growth. AMI is used to set income and rent limits for affordable housing programs statutorily linked to HUD income limits (e.g. low-income housing tax credit rentals). AMI varies by household size and is published each year by HUD for households at various income levels, as follows:</p> <ul style="list-style-type: none">• Extremely Low Income – At or below 30% AMI• Very Low Income –Between 31% and 50% AMI• Low Income – From 51% to 80% AMI• Moderate Income – From 81% to 100% AMI
American Community Survey (ACS)	The ACS is part of the Decennial Census Program of the U.S. Census. The survey was fully implemented in 2005, replacing the decennial census long form. Because it is based on a sample of responses, its use in smaller areas (under 65,000 persons) is best suited for monitoring general changes over time rather than for specific numeric counts due to potentially high margins of error.
Average household size	There are about 2.5-persons per household in Big Sky. This refers to the number of persons living in a housing unit that is located in Big Sky – includes all adults (employed or not) and children.

Average employees per employed household	<p>There are about 1.8 employed persons per household that is employed in Big Sky. This refers to the average number of adult employees (18 or older) residing in households with at least one adult who is employed in Big Sky (i.e. excludes households that have no working adults – retired or otherwise unemployed). This figure is used to estimate the number of housing units needed by employees filling jobs in Big Sky.</p> <p>The average number of employed persons in all households in Big Sky (which would include retired/non-working households) is lower; about 1.5.</p>
Average year-round jobs	<p>Refers to the average number of jobs available in Big Sky throughout the year. It represents the sum of jobs during each month (Jan. to Dec.) divided by the number of months in the year (twelve).</p> <p>The number of jobs in Big Sky changes throughout the year. Many employers hire for only the summer or winter seasons. The number of jobs is highest in the winter months, lowest during the shoulder season (spring, fall) and moderately higher in the summer months. Average year-round jobs condenses this fluctuation into one number for ease of reporting and to understand on average how many jobs the community supplies.</p>
Catch-up Needs	<p>The number of housing units needed to catch up to meet the current shortfall in housing available for the workforce.</p>
Community Housing	<p>Residences intended and suitable for year-round occupancy. These include residences for rent or ownership that meet the diverse needs of residents and employees in different life stages that call Big Sky home.</p>
Cost Burdened	<p>When housing costs exceed 30% of a household's gross (pretax) income. Housing costs include rent or mortgage and may or may not include utilities, homeowner association fees, transportation or other necessary costs depending upon its application. Households are severely cost-burdened when housing costs comprises 50% or more of gross income.</p>

Employer/seasonal housing	Units designed and managed for seasonal employees (e.g., dorms, lock-offs). Such accommodations typically include shared bedrooms, kitchens, and bathrooms and are necessary for J-1 Visa hires, for example
In-commuter	Refers to an employee that works in Big Sky, but that lives outside the community (e.g. in Bozeman, Belgrade, Ennis, etc.) and must travel into Big Sky for work.
Keep-up Needs	Keep-up refers to the number of housing units needed to keep up with job growth and the housing units needed to house employees filling jobs over the next 5-years.
Occupied housing unit	Occupied housing unit means housing units that are occupied by persons that consider Big Sky as their usual place of residence or that have no usual place of residence elsewhere. (US Census definition). Occupied units are commonly referred to as Big Sky resident households or Big Sky households throughout this assessment.
Seasonal job	A job that lasts only during one season. In Big Sky, many employers hire employees to work only for the winter season (e.g. November/December through March/April) and/or the summer season (e.g. June through September).
Seasonal resident employee	An employee that lives in Big Sky or elsewhere in the region for only part of the year (e.g. for the winter season) and is employed in Big Sky. These are persons that are recruited from outside the area to fill seasonal jobs in Big Sky.
Year-round job	A job that lasts throughout the year, with no starting or ending date tied to the seasons.
Year-round resident employee household	A household that lives in Big Sky or elsewhere in the region year-round and that has at least one person employed in Big Sky

APPENDIX R

STAKEHOLDER QUESTIONS

HYALITE

Madison County Housing Needs Assessment Community Question List

- What is the biggest hurdle to housing in your community?
- How would you describe the existing housing type?
- Was there anything in the Existing Capacity Report that was surprising?
- What are the factors that have created this housing issue within Town (wealthier residents moving in, lack of housing, lack of infrastructure, second or vacation homes, etc.)?
- What type of housing (Apartments, Duplexes, Additional Single-Family Residences, etc.) would fix the housing concerns in your community?
- What is currently being done to address the housing issue?
- Would you prefer to see infill and densification or additional subdivisions maintaining existing density?
- Are there specific areas of Town that are more suitable for denser development?
- What areas of Town are best suited for mixed use?
- Would the community be open to denser development that protects environmental resources?
- What is a housing project or type that you have seen in other communities that would work well in Town?
- In a perfect scenario how does the situation work itself out?
- Is there anything else that needs discussion or review?



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