LAKE TAHOE BASIN

COMMUNITY WILDFIRE PROTECTION PLAN

2025

Acknowledgements

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Contributing Authors: Isaac Powning, Martin Goldberg, Kim George, Thea Graybill, Jason Brand, Michelle McLean, James Gatzke, Rhiana Jones, Mark Lara, Jason Pollard, Carrie Thaler, Lisa Herron, Mike Vollmer, Keegan Schafer, April Shackleford, Kim Boyd, Anna Higgins, Cheyanne Neuffer, Mike Boyce, Brian Newman, Bruce Barr, Brian Garrett, Jamie Roice-Gomes, Christina Restaino

GIS Specialist: Cara Moore
Project Coordinator, Editor: Cheyanne Neuffer
Tahoe Basin Focus Group Lead and Author: Carlie Murphy

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Mutual Agreement

The Tahoe Fire and Fuels Team developed this Community Wildfire Protection Plan (CWPP) in partnership with the communities it serves. The Lake Tahoe Basin Multi-Agency Coordinating Group provided review and oversight. The entities listed below participated in the development of and/or reviewed and are in support of the Lake Tahoe Basin Community Wildfire Protection Plan:

USDA Forest Service Lake Tahoe Basin Management Unit
Erick Walker, Forest Supervisor

Nevada Division of Forestry
Kacey KC, State Forester - Nevada

North Lake Tahoe Fire Protection District
Ryan Sommers, Fire Chief

Tahoe Douglas Fire Protection District
Scott Lindgren, Fire Chief

South Lake Tahoe Fire Rescue
Jim Drennan, Fire Chief

Lake Valley Fire Protection District
Chad Stephen, Fire Chief

Fallen Leaf Lake Fire Department
Gary Gerren, Fire Chief

North Tahoe Fire Protection District
Steve Leighton, Fire Chief

CAL FIRE Nevada-Yuba - Placer Unit (NEU)
Brian Estes, Unit Chief

CAL FIRE Amador - El Dorado Unit (AEU)
Mike Blankenheim, Unit Chief

Washoe County
Alexis Hill, Washoe County Commissioner, District 1

City of South Lake Tahoe
Joe Irvin, City Manager

El Dorado County
Brooke Laine, District V Supervisor

Placer County
Cindy Gustafson, District 5 Supervisor

Douglas County
Wesley Rice, Douglas County Commissioner

Washoe Tribe of Nevada and California
Serrell Smokey, Chairman

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Executive Summary

Wildfire is an essential ecological process in the Sierra Nevada. Both wildfires and Native American cultural burning have shaped Lake Tahoe's forests and ecosystems. However, extensive logging and over a century of fire suppression have resulted in overstocked, unhealthy forests with high fuel loads, increasing the risk of severe wildfires. Recent regional fires, such as the Rim Fire (2013), King Fire (2014), and Caldor Fire (2021), have underscored the need for comprehensive wildfire management.

The Lake Tahoe Basin sets the gold standard in wildfire preparedness through over 20 years of extensive multi-jurisdictional collaboration, strategic planning, funding success, and proactive wildfire mitigation measures. Since the formation of the multi-organization Tahoe Fire and Fuels Team (TFFT) in 2008, federal, state, and local land managers and fire agencies, non-governmental organizations, and community groups have worked tirelessly to implement comprehensive wildfire mitigation strategies. These include educating residents and visitors, developing fire adapted communities, creating defensible space, and implementing wildland-urban interface fuel reduction treatments including prescribed fire.

Since 2004, over 92,200 acres of forest have been treated around communities, significantly enhancing the region's wildfire resilience. The effectiveness of these efforts was evident during the 2021 Caldor Fire, where treated areas moderated fire behavior and allowed for more effective firefighting.

The primary objectives of the CWPP are to create fire-adapted communities (defensible space and home hardening), restore and maintain fire-resilient landscapes, and provide effective wildfire response. This plan aligns with the National Cohesive Wildland Fire Management Strategy and emphasizes interagency cooperation, community engagement, and strategic prioritization of fuel reduction projects, in accordance with the 2003 Healthy Forest Restoration Act. Key strategies include:

1. Promote community-driven action plans, defensible space, and home hardening initiatives to enhance wildfire preparedness and resilience.
2. Implement prioritized fuel reduction treatments across jurisdictions to reduce wildfire risk to communities and improve ecosystem health.
3. Enhance interagency coordination and strategic planning to facilitate safer and more effective wildfire suppression efforts.

The minimum requirements of a CWPP require community and agency collaboration, prioritization of areas of fuel reduction treatments and recommendations to reduce structural ignitability. This CWPP meets these requirements and more.

Funding

In 2022, the California Tahoe Conservancy awarded a Regional Forest and Fire Capacity grant to Tahoe Resource Conservation District to lead the effort to update the Basin's CWPP. This grant

supports regional efforts to build capacity, develop strategies, and prioritize project areas that enhance ecosystem health, community wildfire preparedness, and wildfire resilience.

Recent Developments

The 2025 Lake Tahoe Basin CWPP update took a new approach from previous versions (2004, 2015) by creating a web-based platform that incorporates cutting-edge software for planning and education, scalable map browsers for better viewing of priority areas and communities, and the ability to provide annual data updates to reflect progress on fuel reduction projects and other changes to the landscape. It also integrates lessons learned from recent fires, particularly the Caldor Fire, which highlighted the importance of defensible space, home hardening, and coordinated response efforts.

Leveraging Vibrant Planet's Land Tender software is a significant advancement for this CWPP update. This comprehensive decision-support platform utilizes advanced data and scientific algorithms to assist land managers in planning landscape fuel reduction treatments and formulating wildfire mitigation strategies. By identifying vulnerable assets and quantifying the benefits of treatment actions, Land Tender allows for the comparison of various treatment scenarios, helping to prioritize efforts in areas that will yield the greatest benefits, ultimately reducing risk to communities and optimizing ecological outcomes.

To enhance accessibility and engagement with our communities, the CWPP utilizes an ArcGIS Hub and StoryMaps. These tools provide interactive and user-friendly platforms for exploring and understanding wildfire risks, planning efforts, and mitigation strategies. This web-based format will make it easier for residents to understand the importance of wildfire preparedness and enhance their ability to engage with ongoing initiatives in their region and communities.

Residents, stakeholders, and decision-makers will use these tools to stay informed about wildfire risks, participate in community planning, and support local efforts to create a more fire-resilient Tahoe Basin.

The Lake Tahoe Basin CWPP represents an innovative, comprehensive, and adaptive approach to wildfire management, aimed at safeguarding lives, property, and natural resources. This plan will guide important fuel reduction work in and around communities while empowering every resident, including underserved and vulnerable communities, with the knowledge and tools to understand wildfire risks, implement preventative measures, and get more involved with their community. The Lake Tahoe Basin CWPP remains a vital tool in the ongoing effort to mitigate wildfire impacts, protect communities, and build a more resilient and fire-adapted Lake Tahoe Basin.

Chapter One: Background & Goals

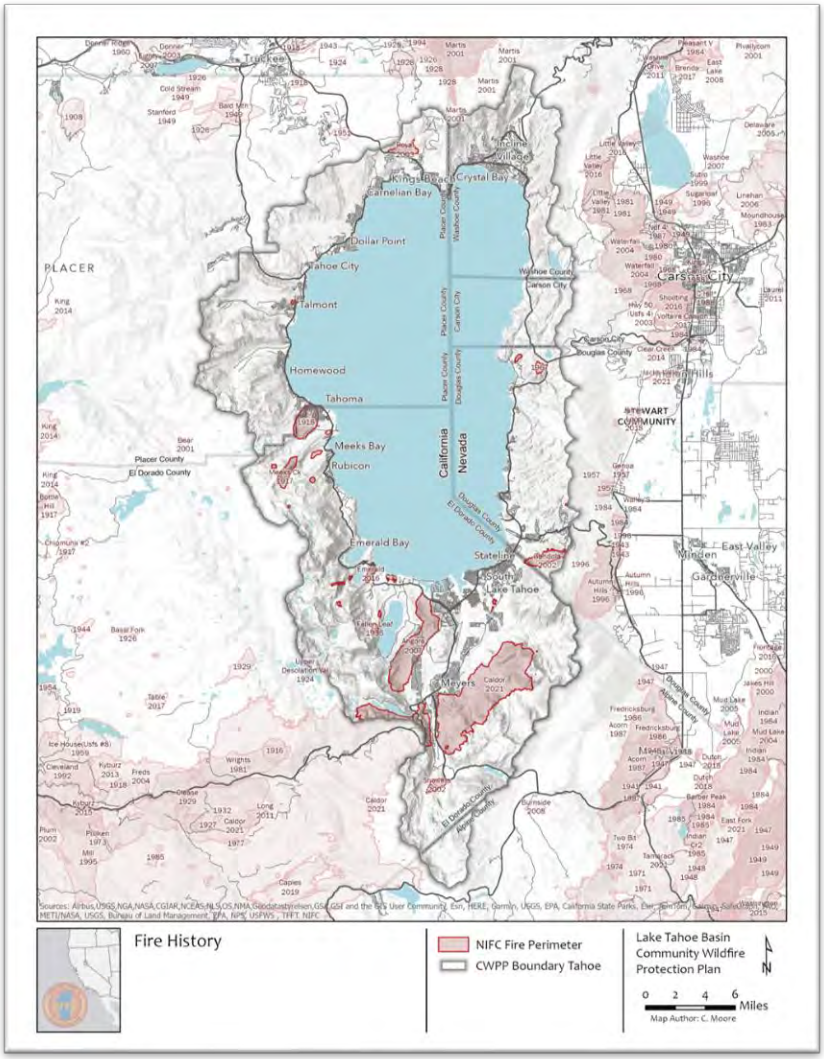
This chapter provides an overview of the Tahoe Basin's background and history, and the purpose of a Community Wildfire Protection Plan (CWPP). It explains how CWPPs are implemented and outlines the primary goals of this document.

1.1 Background

Fire has shaped the landscape of the Sierra Nevada for millennia. Prior to European settlement, natural and Native American fire regimes created and maintained the forests of the Sierra Nevada. Fire plays a vital role in the region's ecology, and plant and animal species have not just adapted to survive wildfire; in fact, many have evolved to require its presence on the landscape.

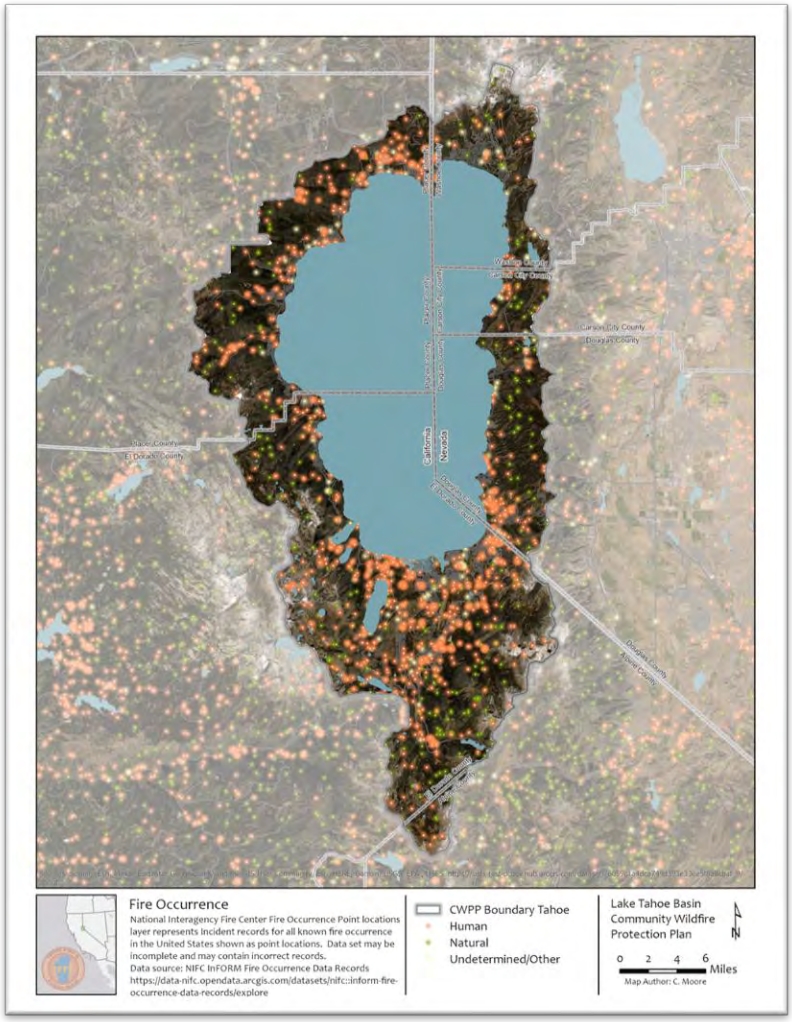
The forests of Lake Tahoe provide many benefits including wildlife habitat, clean air, scenic beauty, and clean water. Over the past several years, forest management activities have focused on fuel reduction in the wildland-urban interface (WUI), the area immediately surrounding communities. WUI treatments have been successful in reducing fuel loadings around communities at risk and in building resilience to stand replacement wildfire, climate change, drought, insects, and disease.

Map 1: Fire History in the Basin



Over the past 20 years, wildfires have become more destructive, larger, and harder to control, as illustrated by the Rim Fire which occurred August of 2013 burning 154,530 acres, the King Fire September of 2014 burning 97,717 acres and most recently the Caldor Fire in August 2021 (221,835 acres total and 10,000 acres in the Tahoe Basin). When the Caldor Fire burned into the Lake Tahoe Basin, it caused a massive evacuation of South Lake Tahoe, threatened the Christmas Valley community, and left a 10,000 acre footprint of burned landscape in the Tahoe Basin. However, due to the heroic efforts of firefighters combined with preparedness efforts completed over the past two decades, no lives or homes were lost.

Map 2: Fire Occurrence in the Lake Tahoe Basin



Brief history

In June 2001, the Martis Fire scorched 14,000 acres near Lake Tahoe, prompting discussions among local Tahoe agencies about wildfire prevention and forest management. A year later, the human-caused Gondola Fire near South Lake Tahoe threatened communities on Kingsbury Grade and served as a pivotal moment, urging heightened wildfire awareness across the Tahoe Basin.

In 2002, Tahoe Basin land management, regulatory, and fire agencies started working together to analyze the growing threat of wildfire and began to develop strategies for updating policies, protecting communities, and treating the wildland-urban interface (WUI). These humble beginnings laid the groundwork for the formation of the highly successful multi-agency Tahoe Fire and Fuels Team in 2008.

During the early years of these agencies working together, many important milestones were met including, UNR Extension Living with Fire program's defensible space guidelines for the Tahoe Basin, the passing of the Healthy Forest Restoration Act in December 2003, and the completion of the Lake Tahoe Basin's first CWPPs for all seven Tahoe Basin fire agencies in 2004.

With CWPPs ready to implement, funding was needed. Unfortunately, the HFRA failed to provide any new funding sources. The need for funding was met by several sources including state funds from California and Nevada. However, the lion's share would ultimately come from the Southern Nevada Public Lands Management Act (SNPLMA) in the form of the "White Pine Amendment" of 2006. This funding source was significant and reliable and from that point forward, Lake Tahoe was implementing fuel reduction projects in earnest. SNPLMA continues to provide the majority of fuel reduction funding to this day and the Bureau of Land Management's SNPLMA Program deserves the Basin's deepest gratitude for partnering with efforts to protect communities and Lake Tahoe.

While many planning efforts and project implementation were underway, the Angora Fire started on June 24, 2007, from an illegal campfire. This wind-driven wildfire consumed 254 residences and burned 3,100 acres. The Angora Fire was a very significant event and would ultimately be a harbinger of even more devastating wildfires to burn in California in the years to come. The Angora Fire became a catalyst that truly galvanized the public's attention and understanding of both the threat and consequences of wildfire and underscored the need for multi-agency collaboration.

In August 2007, following the Angora fire, the Governors of California and Nevada established the California-Nevada Tahoe Basin Fire Commission (Blue-Ribbon Fire Commission) to investigate the causes of the Angora Fire and recommend measures to prevent another catastrophic wildfire in Lake Tahoe. Over eight months, the Commission listened to first responders, agencies, experts, and the public affected by the fire. The Commission developed a set of findings and recommendations, including collaborative solutions for regulatory reform and streamlined processes for fuel reduction project implementation and wildfire prevention efforts. The Emergency California-Nevada Tahoe Fire Commission Report (May 2008) helped create changes in regulations for forest management and defensible space and set the course for the strong inter-agency partnerships that have been working together to address wildfire issues Basin-wide since that time.

It could be said that the greatest outcome of the Blue-Ribbon Fire Commission was the official formation of the multi-agency Tahoe Fire and Fuels Team (February 2008). Even though an ad-hoc multi-agency group had been working together on wildfire issues since 2002, the urgency of the post-Angora fire environment and the Blue Ribbon Commission's recommendations crystallized the commitment of all stakeholders to address wildfire as the number one priority in the Tahoe Basin. The Tahoe Fire and Fuels Team (TFFT) continues to be the Basin-wide forum for all wildfire issues and has become a nationally recognized model for multi-agency wildfire planning and implementation success

With agencies and stakeholders working collaboratively, defensible space and home hardening actions diligently pursued by highly engaged neighborhoods, over 92,200 acres of forest fuel treatments completed around communities, and a thriving Fire Adapted Communities Program, the Tahoe Basin continues to move in the right direction.

1.2 Community Wildfire Protection Plans

In response to the widespread wildland fires during the summer of 2002, President George W. Bush introduced the Healthy Forests Initiative, eventually enacting the Healthy Forests Restoration Act (HFRA) of 2003 (Public Law 108-408). This legislation aimed to safeguard communities by

promoting the thinning of dense forests on federal, state, local, and private lands, enhancing wildfire suppression capabilities and bolstering forests' resilience against insects, disease and drought. Communities were also encouraged to create Community Wildfire Protection Plans (CWPP) to collaboratively identify priority areas within the wildland-urban interface (WUI) for thinning.

CWPPs have become one of the most important wildfire mitigation plans for communities. Many funders of fuel reduction projects have requirements that link back to a CWPP. The Tahoe Basin was the first area in the region to complete a CWPP in 2004, and in 2015 completed the first CWPP update. A lot changed on the landscape since 2004 including over 90,000 acres of fuel reduction projects completed, over 60 Fire Adapted Communities engaged in community scale wildfire prevention actions, and the Caldor Fire that impacted South Lake Tahoe in 2021. This current CWPP update is crucial for planning the next five years of work and positioning Lake Tahoe for continued funding.

The current Lake Tahoe Basin CWPP underwent a thorough and comprehensive update, incorporating the latest information, technology, and mitigation strategies. This enhanced version represents a higher level of planning, utility, and is fully aligned with contemporary wildfire management practices.

Highlights of the 2025 CWPP update include:

- A web based CWPP, designed to offer both professionals and the public an accessible online interface for planning, outreach and comprehensive wildfire mitigation education.
- The capability to provide data and other minor updates to the CWPP annually, providing updated progress on fuel reduction goals while ensuring its alignment with the latest developments and advances in wildfire management.
- Through a collaborative process, the CWPP update engaged Lake Tahoe Basin communities regarding wildfire issues and mitigation strategies.

1.3 CWPP Requirements

Community Wildfire Protection Plans vary in scope and scale but must meet three requirements per the Healthy Forest Restoration Act including:

1. Collaboration: A CWPP must be collaboratively developed. Local and state officials must involve non-governmental stakeholders and federal agencies that manage land near the community.
2. Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel-reduction treatments on both federal and nonfederal land and recommend the types and methods of treatment that, if completed, would reduce risk to the community.
3. Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the plan area.

1.4 Goals of the Lake Tahoe Basin CWPP

The purpose of the Lake Tahoe Basin Community Wildfire Protection Plan is to unite the diverse communities within the Lake Tahoe Basin in a comprehensive and collaborative effort to safeguard lives, homes, critical infrastructure, and the landscape of the Tahoe Basin from the threat of wildfires. This CWPP serves as a strategic blueprint, fostering a shared vision among federal, state, tribal, local authorities, residents, and stakeholders to proactively assess wildfire risks, implement targeted mitigation strategies, and enhance preparedness measures in our communities and across the WUI.

Aligned with the National Cohesive Strategy, the goals of the Lake Tahoe Basin Community Protection Plan are to:

1. Create fire-adapted communities: This plan provides mitigation strategies and community-driven action to help create communities where citizens play their role in being prepared for wildland fire.
2. Restore and maintain fire-resilient landscapes: This plan provides a prioritized list of treatments areas for regional planning based on prioritized locations for fuel reduction treatments. Regional planning will enable land managers to effectively work across jurisdictions, to address risks to ecosystems and communities at a landscape scale and to ensure landscapes are resilient to fire, insect, disease, invasive species, and climate change.
3. Provide effective and efficient wildfire response: The plan outlines areas where strategic treatments should be placed to mitigate wildfire behavior and provide for safe response. Interagency cooperation ensures the implementation of safe, effective, efficient risk-based wildfire management decisions.

The Lake Tahoe Basin CWPP also recognizes and incorporates four key critical emphasis areas identified in the 2023 Addendum Update of the National Cohesive Strategy framework which include:

- Climate change
- Workforce capacity, health, and well-being
- Community resilience (preparation, response, and recovery)
- Diversity, equity, inclusion, and environmental justice

Chapter Two: Multijurisdictional Coordination

The Tahoe Basin is a unique area when it comes to wildland or vegetation fire suppression. The region is comprised of two states and five counties, with private, state, and federal lands intermixed. This chapter discusses how local fire districts/departments, state fire agencies and federal agencies all work together to protect and manage these lands.

2.1 Description of Fire Suppression Resources

Nevada Agencies

- North Lake Tahoe Fire Protection District
- Tahoe Douglas Fire Protection District
- Nevada Division of Forestry

California Agencies

- South Lake Tahoe Fire Rescue
- Lake Valley Fire Protection District
- Fallen Leaf Fire Department
- North Tahoe Fire Protection District
- CAL FIRE Amador- El Dorado Unit
- CAL FIRE Nevada- Yuba- Placer Unit

Federal Agencies

- United States Forest Service (USFS) Lake Tahoe Basin Management Unit

Wildfire knows no boundaries and frequently burns across jurisdictional lines. To ensure effective resource response, mutual aid and automatic aid agreements have been developed and signed by agencies throughout the greater Lake Tahoe area. Three key local agreements are the Lake Tahoe Regional Fire Chiefs Association agreement, Nevada's Wildfire Protection Program, and the California Cooperative Fire Management Agreement Sub-Geographic Annual Operating Plan.

All initial attack ground resources are dispatched utilizing the closest resource framework that ensures the closest appropriate resources will respond no matter the jurisdictional location. All aviation wildfire resources are coordinated by state or federal agencies.

There are also working agreements and partnerships in place with local, state, and federal law enforcement agencies. Law enforcement is responsible for evacuations, as well as search and rescue operations. Some agencies have developed Community Emergency Response Teams or similar programs that provide citizens with emergency response training. These programs provide additional personnel when an emergency incident would benefit from trained, organized volunteers.

2.2 Wildfire Response Capability

The local, state, and federal agencies responsible for fire suppression in the Tahoe Basin have substantial initial attack capability. If more assistance is needed, local, state, and federal agencies can use agreements to request and secure additional resources. Federal and State Responsibility Area cover roughly 95% of the Lake Tahoe Basin, giving US Forest Service and CAL FIRE the largest statutory responsibility for wildland fire suppression.

2.3 Tahoe Fire & Fuels Team and the Multi-Agency Coordinating Group

Tahoe Fire & Fuels Team (TFFT) was formed in 2008 to implement the CWPP, the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction, Wildfire Prevention Strategy (Strategy) and provide a forum for collaboration and planning for all issues related to wildfire. Members are a group of dedicated professionals committed to protecting life, property, and the environment at Lake Tahoe. TFFT includes several working groups on key topics, including public information, data management and Fire Adapted Communities (FAC) development.

The TFFT is overseen by a Multi-Agency Coordinating Group (MAC) which includes the seven Lake Tahoe Basin fire chiefs and nine local agency executives. The MAC provides direction and executive leadership for the TFFT, approves annual operations plans, and assists with identifying funding opportunities.

The TFFT's Fire Public Information Team (Fire PIT) includes aspects of wildland fire prevention public education including press releases, media campaigns, Wildfire Awareness Campaign (May-October), and community events.

The TFFT develops an annual Incident Action Plan (IAP) to guide project implementation for the upcoming year. The IAP focuses on implementing a social science-based outreach strategy with the Tahoe Network of Fire Adapted Communities, promoting wildfire prevention and forest resilience, and coordinating with TFFT sections for aligned objectives and communication.

The Tahoe Fire and Fuels Team (TFFT) developed the Lake Tahoe Forest Action Plan in 2019 to proactively minimize the growing risk of wildfire. The plan charts a path for collaboration across property boundaries to accelerate landscape restoration and community wildfire protection. The TFFT also provides a coordinated, comprehensive, and consistent process to report fuel reduction project planning, accomplishments, and funding sources across all jurisdictions through management of geospatial data and participation in the Lake Tahoe Environmental Improvement Program (Lake Tahoe EIP).

Chapter Three: Community Description

This chapter explores fire history in the Basin, from the Washoe Tribe's traditional practices to the impacts of fire suppression and logging. It examines how changes have led to denser forests, higher wildfire risks, along with the establishment of the wildland-urban interface (WUI) to protect communities.

3.1 Fire Environment

Native American Land Management Practices

Fire is a crucial ecological process in many western mixed conifer forests, including the Lake Tahoe Basin and its surrounding areas. Biological communities within the Lake Tahoe Basin and surrounding areas have evolved adaptations and strategies to accommodate frequent low-to moderate-intensity fires and many plant species require fire to germinate, establish, or to reproduce. Regular fire disturbances reduce competition by replenishing soils with nutrients, cycling carbon, reducing forest density, and significantly influencing stand structure and species composition. Humans have also played a role in shaping this natural system by living seasonally and utilizing fire as a tool for managing the land and its resources.

For thousands of years, the indigenous Washoe people have burned to keep meadows open, propagate culturally significant plants for food, medicine, materials, and forage for game, as well as to clear brush and dead wood for hunting, and various other objectives. Even after the arrival of Euro-American settlers, fire continued to be utilized by people as ranchers and herders burned the land to prepare for grazing while loggers and miners operated seasonally before the harsh winter snowpack forced them to lower elevations. It was not until the 20th century, when more permanent infrastructure was established in the Tahoe Basin, that a policy of fire suppression and exclusion was implemented. Fire regimes and forest structure have changed, however, since Euro-American settlement with virtually no fires and forest structure shifted towards higher stand densities and a greater representation of fire intolerant species.

Background on Wá·šiw people

The Waší·šiw (Wa-She-Shu) or Wá·šiw (Wa-Shu) people, federally recognized as the Washoe Tribe of Nevada and California, are the indigenous inhabitants of the Lake Tahoe Basin along with its surrounding areas and have lived in the area since time immemorial. *Dá?aw* (Lake Tahoe) is both the geographical and spiritual center of their homelands. *Wá·šiw* creation stories speak of how when *Wá·šiw* people were brought to this region, *Nenťúšu* told the plants, medicines, and animals to grow strong to provide the people nourishment and thus bestowed the *Wá·šiw* people with the responsibility to care for the region. Stewardship was ingrained into the culture as a way of life.

Before being forcibly removed and excluded from the Tahoe Basin, the Waší·šiw lived semi-nomadically according to the seasons. Families migrated between their respective campsites, occasionally burning at the beginning of the season or at the end of the season depending on the burn's desired objectives. During ?amšák (spring), families would gradually return to the lake from the lower valleys. As everyone continued to gather, it was important to socialize, renew relationships,

visit relatives, play various games, and host competitions such as races and archery tournaments. In early June, thousands of game fish would begin to spawn filling the waterways of the Tahoe Basin, and many medicinal plants and foods such as wild onions, potatoes, and turnips began to ripen and became available to harvest. When fish runs ended in *ćigábat* (summer), families dispersed into the mountains to numerous alpine lakes where fish and game were bountiful. In *ʔóʔoš* (fall), the mountain whitefish began to spawn. Families focused on harvesting and preparing their winter stores. Families would begin moving back to lower elevations to tend to their *ťágɨm* (pine nut) groves and begin harvesting, some groups moved west to harvest acorns and trade.

The culmination of the harvest season was the Pine Nut festival or ťágɨm *gumsabáy* in which families gathered to celebrate, dance, give thanks for the harvest and pray. Fall was also a time for the best hunting and rabbit drives. During *gális* (winter), food was scarce, and families mostly ate what they had stored and prepared throughout the year. During this time, families told stories, wove baskets, blankets, made tools and clothing.

For the Washoe people most, if not all, culturally significant plants have developed fire adaptations and strategies for exploiting, avoiding, promoting, or resisting fire. See Appendix C: Culturally Significant Plants on culturally significant plants to the Washoe.

3.2 Fire History in the Tahoe Basin

Historic fire return intervals are highly variable in the Tahoe Basin due to topography, aspect, elevation, and vegetation types. In the mid to lower elevations of the Lake Tahoe Basin, low to moderate intensity fires historically burned every 8-15 years (USDA 2000). These low to moderate intensity surface fires consumed pine needles, dead material, small shrubs and trees. These fires decreased competition between trees promoting resilient open forests.

Before Euro-American settlement, large, widely spaced trees with little understory vegetation characterized lower-elevation montane forests in the Basin. Because frequent fires reduced surface and ladder fuels, fire intensities were low and there was little mortality of mature trees. As Euro-Americans settlers arrived in the Basin, the fire regime and fuel hazards changed. Between 1875 and 1895, large-scale timber harvesting resulted in most of the old growth forests in the Lake Tahoe Basin being clear-cut. Additionally, large numbers of livestock removed herbaceous vegetation and fires set by ranchers at the end of the summer grazing season killed tree seedlings that were regenerating in some of the clear-cuts.

By 1900, after the Comstock logging, the forests in the Basin were comprised of individual stands of seedlings, smaller trees, brush, and some remaining old growth forests. Livestock grazing was reduced significantly by 1930, allowing vegetation to regenerate. The drought period from 1929 to 1934 limited regeneration and increased tree mortality and fuel hazards in the Basin. However, fewer acres burned during this time because the federal government had adopted a fire exclusion policy in 1924.

Although forest stands have successfully regenerated since the Comstock era, decades of fire suppression and lack of ongoing forest management resulted in denser forests. Recent estimates

indicate that lower montane forests have four times the density of trees and upper montane forests have twice the density of trees when compared to forest conditions prior to 1870.

Consequently, current second growth forest stands are more susceptible to insects and disease and are more vulnerable to the effects of drought and climate change. Without sources of natural disturbance such as fire or active forest management, forest vegetation continues to grow. Tahoe forests are overcrowded, and there are many small, understory trees that create ladder fuels that can carry fire into the forest canopy. Additionally, drought periods contribute to increased mortality in forest and riparian vegetation, which leads to increased fuel loading and risk of high intensity fire.

In response to the increasing threat of wildfire in the Tahoe Basin, many Tahoe agencies, in the Basin, in partnership with the public, have teamed up to work towards establishing a forest that is more resilient to the effects of wildfire while seeking to protect life, property and the natural resources within the Basin. It is imperative that fire is reincorporated into modern land management practices in addition to fuels reduction to restore health and resiliency to the land and resources so that they may remain for generations to come.

3.3 Current Conditions

Lake Tahoe is the largest alpine lake in North America and a major tourist destination known for its scenic vistas and clear waters. The clear blue waters of Lake Tahoe are vital for water supply, wildlife habitat, the natural setting, and the tourism economy. The Basin lies east of the Sierra Crest and west of the Carson Range. This location causes significant variation in precipitation patterns between the “rain shadow” on the east side of the Basin, and the crest of the west slope. The Basin represents the typical high elevation Sierra Nevada ecosystem, however subtle differences between the west and the east shore and elevation gradients (topography) cause substantial differences in vegetative composition, fuel moistures, and growth rates.

Tahoe’s West Shore is close to the highest peaks in this region of the Sierra. This proximity can produce substantial precipitation as storms are pushed over the crest. This orographic lifting process is what causes the crest to have some of the deepest snowpacks in the Continental United States. As storms continue to move eastward over the Lake, the lifting process ceases, and precipitation totals drop dramatically. As a result, the Nevada side (east side) of Lake Tahoe receives less precipitation as compared with the west side each year. This “rain shadow” effect is quite pronounced and easily seen by observing the changes in vegetation as one travels from west to east.

Weather

The Basin has a Mediterranean climate with cold snowy winters and warm dry summers. The highest elevation is Freel Peak, rising to over 10,800 feet. Mean annual precipitation ranges from over 55 inches for watersheds on the west side of the Basin to about 26 inches near the Lake on the east side. Most of the precipitation falls as snow between November and April, and rainstorms combined with rapid snowmelt can cause flooding. There is a typically pronounced annual runoff of snowmelt in late spring and early summer, the timing of which varies from year to year. Some years, summertime monsoon thunderstorms from the Great Basin can bring intense rainfall, especially to high elevations on the northeast side of the Tahoe Basin. These thunderstorms often bring lightning. They

occasionally bring lightning with little rainfall, known as dry lightning, which can cause multiple wildfire ignitions in a brief period. Tahoe's proximity to the Sierra Crest and high elevation leads to significant winds throughout the year. Winds generally prevail from the south; however westerly winds will also blow frequently.

Topography

Tahoe Basin topography is variable with gently sloping areas near the Lake's edge surrounded by tall Sierra Nevada Mountains. Most of the residential and commercial development is found in gently sloping areas near the lakeshore and river valleys. Slopes quickly increase moving away from these areas, and many neighborhoods have been developed on the middle of the slope, often with steep drainages nearby. The area beyond is typically difficult to traverse with few roads, presenting challenges for wildfire suppression.

Fuel and Vegetation Types

Though most of the Tahoe Basin is forested, there are also meadows (grasses), and shrublands that can play a significant role in wildfire spread. Meadows are typically a mix of grasses and include wetland species in wetter meadows, while dryer upland sites in some areas are dominated by shrub species such as manzanita (*Arctostaphylos sp*) and whitethorn (*Ceanothus sp*). Wildfire can move very fast in grasslands and shrublands, especially when driven by high winds. Due to the changes in elevation and aspect, the Tahoe Basin is home to many tree species. Typical tree species are Jeffrey pine (*Pinus jeffreyi*), white fir (*Abies concolor*), lodgepole pine (*Pinus contorta*) and to a lesser extent, incense cedar (*Calocredrus decurrens*) and sugar pine (*Pinus lambertiana*). At higher elevations mountain hemlock (*Tsuga mertensiana*), red fir (*Abies magnifica*), western white pine (*Pinus monticola*) and whitebark pine (*Pinus albicaulis*) are present. Tahoe also has a small amount of western juniper and aspen stands scattered through wetter areas.

All these forest types are adapted in one way or another to wildfire. Shade intolerant species, like Jeffery pine, need wildfire to regenerate as bare mineral soil and full sun are optimal for germination. Shade intolerant species such as white fir grow in the shade of other species and readily regenerate in the understory of most forest types creating ladders fuels that can bring wildfire up into the canopy of larger trees.

Comstock-era logging followed by fire exclusion, livestock grazing, and other past management practices have significantly altered ecological conditions throughout the Basin causing increased stand density (more trees), increased fuel accumulation, less old growth trees replaced with smaller trees, less species diversity, and less age diversity (most trees are aged 120-160 years old). The legacy of Comstock logging continues to contribute to increased forest vulnerability to insects, disease, and drought as well as high severity, stand-replacing wildfire.

3.4 Wildland-Urban Interface Designation

The wildland-urban interface (WUI) is defined in the Healthy Forest Restoration Act of 2003 (Public Law 108-148). The Act specified that federal agencies are required to use the wildland-urban interface defined in the CWPP development process. The WUI refers to areas where wildland

vegetation meets human infrastructure (such as residential homes, businesses, or other structures). The Tahoe Basin WUI includes the Community WUI Intermix, Defense and Threat Zones.

Defense and Threat Zone

Community WUI Intermix / Urban Core: Community WUI Intermix is the built environment (also defined as "Urban Core" by the US Forest Service) and is a subset of the Defense Zone. This area refers to portions of this interface where structures are closely intermingled with wildland vegetation, increasing the risk of fire spreading from the natural environment to human-built structures, and vice versa.

WUI Defense Zone: The Defense Zone is generally a ¼ mile buffer from Community WUI Intermix. All areas within the Defense Zone are a priority for fuels reduction; specifically fuels reduction in wildland areas and defensible space within the built areas.

WUI Threat Zone: The Threat Zone is generally a 1¼ mile buffer from WUI Defense. The Threat Zone is an extension of the Defense Zone with the important distinction being that not every area within the Threat Zone may be a priority for treatment. Area treatments within the threat zone are designed to reduce fuels in target areas where fires are known to start, where a fire start is likely to grow and threaten communities.

General Forest / Non-WUI Forest Lands: This includes areas of the Basin that are beyond the WUI. The majority of the general forest is under USFS ownership.

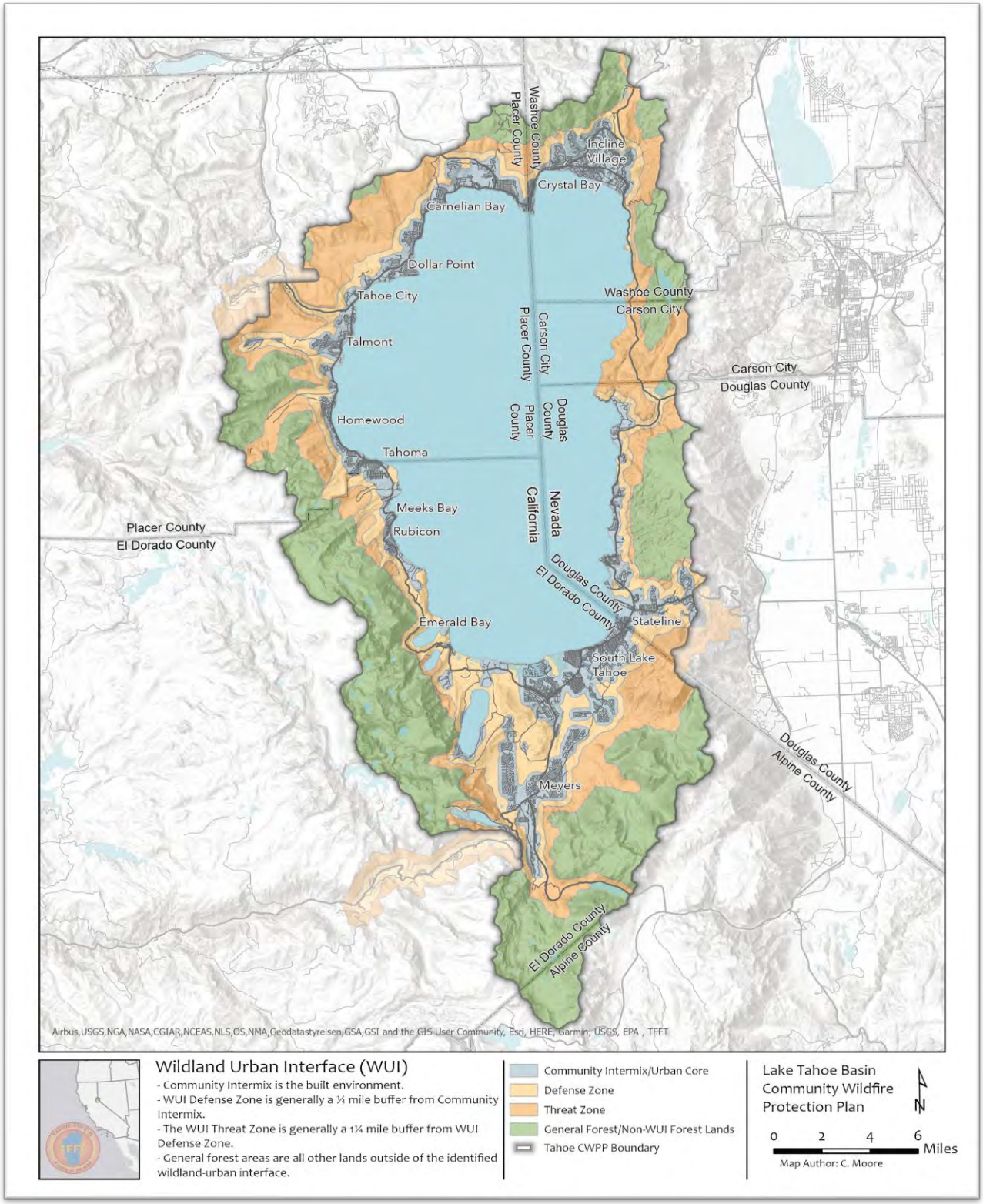
Wildland-Urban Interface Acres by Zone

The total acres of each zone in the wildland-urban interface are shown in the table below and map above.

Table 1: Total of acres of each zone in the Tahoe Basin WUI

Zones	Acres
Wildland-Urban Interface (Community WUI Intermix + Defense Zone + Threat Zone)	129,710
Community WUI Intermix	35,419
Defense Zone	39,076
Threat Zone	55,215
General Forest	88,783

Map 3: Lake Tahoe Basin Wildland-Urban Interface (WUI)



Chapter Four: Mitigation Strategies

This chapter briefly discusses the methods used in the Lake Tahoe Basin to prepare for wildfire. These strategies include forest fuels reduction methods and steps that residents can take to prepare themselves, their homes, and their families for the next wildfire. The chapter also highlights how proactive measures were crucial in protecting South Lake Tahoe during the Caldor Fire.

4.1 Fuels Reduction Projects

Fuels reduction and forest health projects are designed to change vegetation conditions to modify fire behavior and reduce the potential for high-intensity wildfire by altering three primary fuel conditions as necessary: surface fuels, ladder fuels, and tree density. This is accomplished through the implementation of a variety of treatments, commonly using more than one treatment type on the same piece of ground to achieve the desired condition. The following describes the most common treatment types currently used in the Tahoe Basin. It is important to note that the vegetation conditions that pose a fuels hazard are dynamic, with continued growth, needle-cast, litter-fall, and new growth of understory vegetation continually occurring. As such, future treatments will need to occur over time in the same area to sustain the benefits of the previous treatments. Treatments completed to date have focused on the highest priority areas, primarily those closest to communities.

4.2 Methods

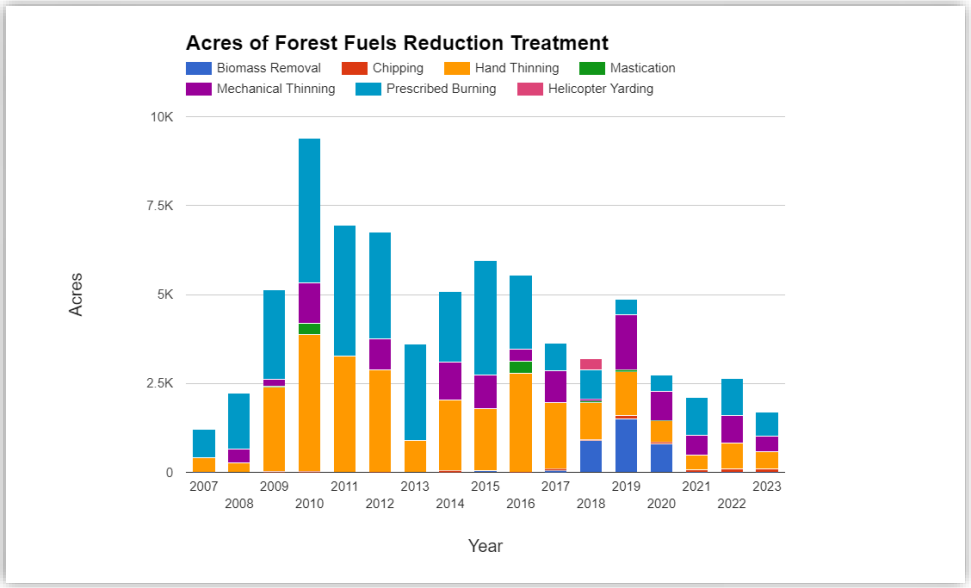
Depending on the fuel reduction treatment prescribed, and equipment used, large volumes of slash (branches and wood) can be generated on-site. Slash can be removed, reconfigured by mechanical equipment, chipped on site, or piled for burning. If slash, chips, and small trees can be removed, they can be transported to a biomass facility, composted, or used for landscaping material. Markets for these types of biomasses are few and long hauling distances are financially infeasible for this low-grade material.

Hand Thinning

Hand and mechanical thinning are used to remove ladder fuels and reduce tree densities that contribute to high intensity fire behavior. Hand thinning is conducted with crews who cut brush and trees with chainsaws and pile the resulting material for later burning. Hand thinning is used to cut smaller trees (generally less than 14 inches diameter) on steep slopes where machines cannot operate, or in environmentally sensitive areas where some machines can have a significant environmental impact. Hand thinning is not as effective as mechanical thinning at restoring tree densities to desired conditions because many of the trees in a stand can be greater than 14 inches diameter. However, hand thinning is effective at removing sufficient fuel to modify fire behavior and in many cases is a good initial treatment. Production rates with hand crews vary with fuel type and density. In general, a 10-person crew can treat .5 to 2 acres daily, depending on the type and amount of material that is removed.

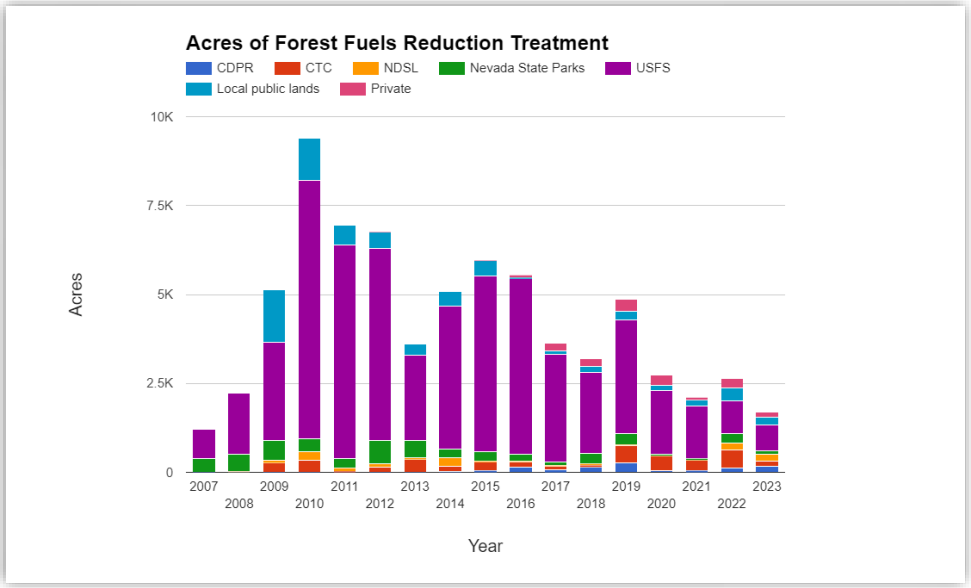
Mechanical Thinning

Mechanical thinning utilizes equipment (cut to length, feller buncher, etc.) with hydraulically driven saws to cut trees, and a separate piece of equipment (forwarder) to 'forward' the logs to the landing. Mechanical thinning equipment is confined by regulations in the Tahoe Basin to slopes less than 30% (slopes greater than 30% may be allowed under specific conditions and approval) and typically outside of stream environment zones. However, some low pressure mechanized equipment may be allowed in stream environment zones under the right conditions and when approved by Tahoe Regional Planning Agency (TRPA) and the Lahontan Regional Water Quality Control Board (LRWQCB) and/or the Nevada Division of Forestry (Nevada Revised Statute [NSR] 528.053).



Graph 1: Acres of Forest Fuels Reduction Treatment - Treatment Type

Lake Tahoe EIP Tracker



Graph 2: Acres of Forest Fuels Reduction Treatment - Property Ownership

Lake Tahoe EIP Tracker

Over the Snow

Mechanized equipment can be operated over-the-snow to minimize or fully mitigate any impact to the ground, especially on sensitive lands such as stream environment zones. Over the snow logging has been done in the Tahoe Basin; however, the weather is rarely cold enough to provide good conditions for a long enough time to complete a project. Over the snow logging requires very cold temperatures during the day and is best when the ground is frozen solid.

Mastication

Mastication uses excavators with grinding heads or purpose-built machines to grind small trees, surface fuels and dead and down wood into chips. Mastication provides a quick and cost-effective method to modify fire behavior by altering the fuel structure. Mastication does not remove fuel; it redistributes fuel into chips that are left on the ground to decompose in place. Like other mechanical methods, rocky sites, sites with heavy downed logs, and sites dominated by large trees are difficult places to operate mastication equipment. Sparks from mastication heads have the potential to start fires and, when working on public land, these machines are subject to the same activity-level restrictions that apply to most other machines.

Chipping

Chipping may be used as an alternative to pile burning for removing cut vegetation. However, its usefulness is reduced because of the necessity to carry material to the chipper. There are mobile tracked chippers that can operate in the forest; however, these machines are subject to the same regulations as other mechanical systems. Chipped material can be removed from the site or broadcast onto the forest floor. Chips that are removed from the site can be transported to a

biomass facility where they can be converted to electricity, heat, landscaping material, or other products. Chipping is an effective method for fuel reduction in neighborhoods as material can be chipped curbside and removed to an appropriate location.

Helicopter Logging

Helicopter logging, also known as Heli-logging, is a logging technique employing helicopters to airlift cut trees from forests using cables attached to the aircraft. This method is commonly employed in remote and hard-to-reach forest locations. By utilizing helicopters, the need for extensive infrastructure is minimized, which can minimize the environmental footprint of logging operations. However, this method can be very expensive and has limited utilization potential in the Tahoe Basin.

4.3 Prescribed Fire

Prescribed fire managers use different methods to remove excess vegetation (fuels) and reintroduce low-intensity fire into forests. Historically, low-intensity wildfires ignited by lightning or native peoples routinely burned through fire adapted ecosystems of the Sierra Nevada. These low-intensity fires burned at low temperatures and moved slowly across the ground removing forest debris such as pinecones, needles, limbs, dead and downed trees, and ladder fuels. Prescribed fires are intended to mimic these naturally occurring low-intensity fires that are essential to fire-adapted ecosystems.

Prescribed fire conditions

Prescribed fires may take place any time of year when conditions are favorable. Fall and winter typically bring cooler temperatures and precipitation, which are ideal for conducting prescribed fire operations. Each operation follows a specialized burn plan, which considers smoke dispersal conditions, temperature, humidity, wind, and vegetation moisture. All this information is used to decide when and where to safely burn. The TFFT strongly supports the use of prescribed fire under appropriate conditions and works closely with air quality districts to avert smoke impacts on the public.

Environmental Effects

Fire is an integral process in our fire adapted forests. Burning excess vegetation also benefits forest health by making room for new growth which provides forage for wildlife, recycling nutrients back into the soil and reducing the spread of insects and disease. As a sustainable and strategic practice, prescribed fires prove integral in fostering resilient ecosystems while nurturing diverse habitats vital for wildlife conservation and environmental balance.

Prescribed fire smoke

Smoke from prescribed fires is normal and may continue for several days after an ignition depending on the project size, conditions, and weather. Prescribed fire smoke is generally less intense and of much shorter duration than smoke produced by unwanted wildfires. Smoke from prescribed burns, wildfire or wood burning stoves may hang low to the ground at night and in the early morning due to temperature inversions. A temperature inversion is when warm air “caps” cooler air, causing smoke to become trapped in valley bottoms at night and in the early morning. Prior to prescribed fire

ignitions, agencies coordinate closely with local and state air quality agencies to monitor weather for favorable conditions that will disperse smoke, conduct test burns before igniting larger areas to verify how well vegetation is consumed and how smoke rises and disperses before proceeding, post signs on roadways in areas affected by prescribed fire operations, email notifications to the prescribed fire notification list, and update the local fire information line. The TFFT gives as much advance notice as possible before burning, but some operations may be conducted on short notice due to the small window of opportunity for implementing these projects.

Pile burning

Pile burning is done to remove fuels from forests, typically following hand thinning. During hand thinning projects, crews cut small trees, brush and stack material into piles. However, piles need to dry or cure, sometimes for up to three years, and once cured, piles are then burned when conditions are favorable.

Broadcast burning

Broadcast burning involves burning a large area of land uniformly. The goal of broadcast burning is to mimic wildfire and consume surface fuels (i.e. dead leaves, grass, shrubs). Broadcast burning, however, cannot typically be used as an initial treatment as fuel loading on site would burn with undesirable fire behavior. Broadcast burning is desirable for use as maintenance on previously treated projects and the reintroduction of fire into fire dependent ecosystems is great for ecosystem health. Prescribed fire can be challenging to implement due to the limited number of days with the correct conditions (weather, fuel moisture, smoke management, available resources).

4.4 Multiple Resource Benefits of Fuel Reduction Projects

The benefits of fuel reduction and forest health projects are more-fully realized when implemented at a landscape scale. By engaging with multiple stakeholders and multiple landowners, landscape scale fuel reduction projects can be developed that will provide multiple resource benefits, including wildlife habitat, forest health, recreation and scenic resources, enhanced water quality, and carbon sequestration. Landscape scale fuel reduction projects are designed to span multiple ownerships to accomplish fuel reduction across larger acreages and provide greater community protection.

This CWPP supports prioritized fuel reduction and forest health improvement treatments across multiple jurisdictions at a landscape scale that will maximize co-benefits. Socioeconomic benefits include the protection of community assets from wildfire, improved public health and safety, and increased capacity for future projects providing greenhouse gas emission and carbon sequestration benefits.

High-intensity wildfires have extraordinary effects on ecosystem processes and human communities. The projects in this plan will reduce potential fire intensity by reducing surface and ladder fuels, treating overstocked forests and using prescribed fire as a surrogate for the frequent, low-intensity wildfire that historically burned Lake Tahoe Basin. Selective thinning will reduce competition among desired tree species and build resilience to insects, disease and drought. Thinning will favor the

retention of and provide regeneration opportunities for fire-tolerant tree species, such as Jeffrey pine, to promote a structurally diverse forest stand better suited for a wide variety of species.

In addition to protection of environmental assets, reduced potential fire intensity will help prevent damage to high-value community assets, including homes, businesses, municipal watersheds, and utility and water infrastructure. Wildfire can also impact the tourism-based economy of the Basin by damaging recreation and scenic resources. Following the implementation of this plan, wildfires will be less likely to threaten communities will be for fire adapted and prepared for wildfire, and the fires will be more easily controlled, enhancing the safety of the public and emergency responders.

4.5 Reducing Structure Ignitability

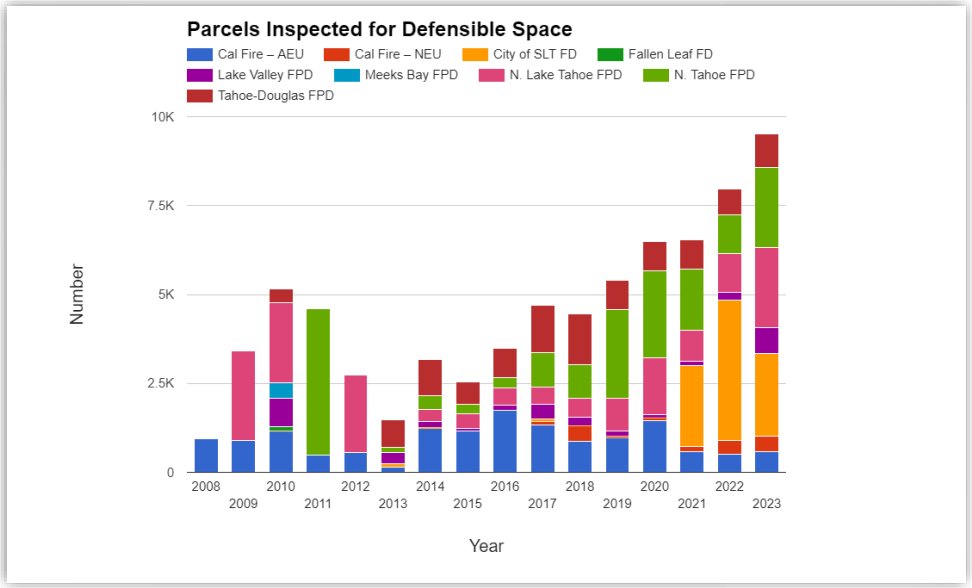
Wildland fire prevention programs in the Tahoe Basin focus on reducing home ignition by removing wildland fuels and opportunities for structure ignition, and then by increasing the structure resilience. The strategy to protect against structure fire is three-pronged, and includes building or retrofitting with ignition resistant construction, creating defensible space, and reducing wildland fuels within the wildland-urban interface.

The following are steps homeowners can take to reduce structure ignitability:

Defensible Space

Property owners within the wildland-urban interface, including homes and businesses, are required to implement and maintain standards for defensible space and limit the ignition sources around their homes and properties. Fuels should be modified consistently with the standards identified in the California Public Resource Code 4291 and the relevant county and city regulations which require landowners to maintain a defensible space around all structures to reduce the risk of damage or destruction caused by wildfire.

In California, California Public Resource Code §4291 applies to all landowners who own or maintain structures on State Responsibility Area (SRA) lands. §4291 requires these landowners to maintain a defensible space around all structures each year to reduce the risk of damage or destruction caused by wildfire. CAL FIRE personnel assigned to Lake Tahoe and California local fire agencies conduct inspections and are responsible for the enforcement of California Public Resource Code §4291.



Graph 3: Parcels Inspected for Defensible Space

Lake Tahoe EIP Tracker

On the Nevada side of the Basin, both North Lake Tahoe Fire Protection District and Tahoe Douglas Fire Protection District have adopted the 2018 International Wildland-Urban Interface Code.

The Living with Fire Defensible Space Guide published by the University of Nevada Cooperative Extension is a useful guide for homeowners to better understand the defensible space options for their homes and community, including additional steps that can be taken to protect your home.

The following are three areas around the home where property owners can reduce ignitability:

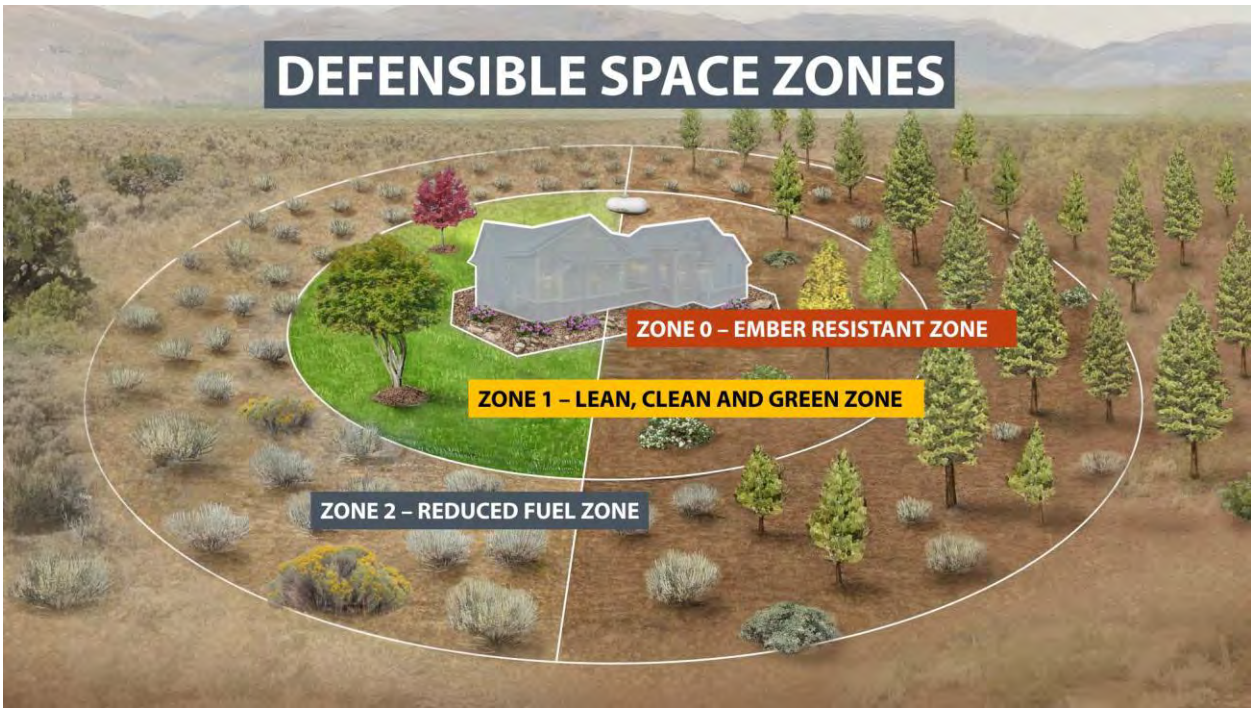
Zone 0: Ember Resistant Zone: extends from the structure out to 5 feet. In this zone, no combustible vegetation or ground covers are permitted. Examples of nonflammable vegetation would be well-irrigated flowers or succulent plants. Compost may be used in limited amounts; however, flammable mulches such as pine needles, shredded bark, bark, and woodchips are prohibited. The use of gravel and rock are preferred.

Zone 1: Lean, Clean, and Green Zone: extends from 5 feet to 30 feet. In this zone, single isolated specimens of flammable plants are permitted, but plants should be kept healthy and free of dead material. Combustible mulches may not be used as a widespread ground cover and mosaic landscaping is encouraged.

Zone 2: Reduced Fuel Zone**:** extends from the Lean, Clean, and Green Zone out, from 30 feet to 100 feet. In general, homeowners should complete at least 100 feet of defensible space, but that distance may be increased up to 300 feet depending on slope, wind, fuel types and the corresponding increase in fire risk. In the Reduced Fuel Zone, isolated patches of native shrubs, trees, and patches of flammable ground covers are allowed; however, they cannot be continuous or

capable of carrying fire to or from the home. Vertical fuel continuity (ladder fuels) where surface fuels are under small or medium-sized trees that are then directly under the larger trees that compose the forest canopy should be removed. These ladder fuels enable surface fire to travel into the forest canopy and produce flame lengths far greater than what firefighters can safely engage.

Figure 1: Defensible Space Zones | Living with Fire



Home Hardening

Ignition resistant construction or home hardening means using materials and building methods that resist ignition. Home hardening addresses the most vulnerable components of a house with building materials and installation techniques that increase resistance to heat, flames, and embers. All plans for new construction and substantial remodels are reviewed by a Fire Marshal's office to ensure compliance with current regulations for construction and materials.

Vulnerable construction elements on the exterior structure envelope include but are not restricted to:

- Roofing, siding, venting, windows
- Gutters can be particularly vulnerable as they can hold light flashy fuels and catch embers
- Decks, walkways and fencing that are combustible can act much like a fuse and wick fire to the structure

Common features where construction methods are as important as construction materials include the gables, gutters, eaves, and venting. These areas of the home can resist fire intrusion or funnel heat and embers into the building envelope. An example is the soffit vents at the gable end of a

structure. The eve overhanging the gable can trap heat, wick embers, and move fire into the attic. Inside corners of the roof are also particularly vulnerable to embers, as winds tend to swirl in the corner, effectively creating a vortex of fire that can reach beyond the roofline. Additional recommendations on home-hardening, read the Home Retrofit Guide. If you are a long-term renter, read Guide for Lake Tahoe Long-Term Renters.

Embers, also referred to as fire brands, are responsible for most of the damage to structures. They can accumulate on your home, deck, or porch and ignite plants, mulch, leaves, fencing, or furniture. They can also be forced into gaps in the home (e.g. attic vents or an open or broken window) and burn the home from the inside out. For more on how to protect your home from embers, read Be Ember Aware.

- Watch this video on preventing home ignition, Part One and Part Two.
- In this video, Dr. Jack Cohen, wildfire behavior and fire science research expert, explains how fireproofing your home can help protect it from wildfire.

4.6 Lessons Learned: Caldor Fire

This chapter highlights how proactive pre-fire measures—including defensible space, home hardening, and WUI fuel reduction treatments—combined with skilled first response and firefighting efforts protected the community of Christmas Valley and the broader South Lake Tahoe area during the Caldor Fire.

The Caldor Fire began in the Middle Fork Cosumnes canyon roughly two miles east of Omo Ranch and four miles south of Grizzly Flat on the Eldorado National Forest (ENF). The fire entered the Tahoe Basin on August 30th, 2021, under Red Flag conditions. The fire was driven by high winds and an extremely receptive fuel bed due to extended drought conditions. The fire burned approximately 221,835 acres, which amounted to 9,885 acres on the Lake Tahoe Basin Management Unit (LTBMU). After burning for over 60 days, the Caldor Fire reached 100% containment on October 21, 2021.

As the Caldor Fire demonstrated, preparing the region for the challenges of the next wildfire requires a collective effort involving agencies, organizations, visitors, and property owners. One of the big lessons learned from the Caldor Fire was that while the risk of destructive wildfires cannot be completely mitigated, collective efforts of Tahoe communities and agencies can significantly improve the region's ability to withstand wildfires. The Caldor Fire presented immense challenges due to a prolonged dry season, multi-year drought, and substantial fuel buildup in dense forests, resulting in unprecedented daily growth of 10,000 to 40,000 acres. Preparations for protecting the Lake Tahoe Basin began well in advance of the Caldor Fire entering the Basin, with local fire chiefs collaborating and forming "immediate need" task forces two weeks before the fire's potential arrival. These task forces comprised various federal, state, and local resources, ready to respond.

Despite the Caldor Fire burning over 10,000 acres in South Lake Tahoe, the coordinated efforts of various agencies and cross-jurisdictional collaborations, particularly the Tahoe Fire and Fuels Team (TFFT), helped mitigate impacts. The fire's impact on previously treated areas was less severe,

helping to preserve the character and ecological value of Lake Tahoe's forests. Long-term restoration and monitoring are still underway.

Early evacuation planning, creating defensible space around homes, home hardening, reducing forest fuels around communities, and Lake Tahoe's world-class first responders all played pivotal roles in the outcome of the Caldor Fire in the Basin. Efforts to reduce forest fuels have been implemented (over 90,000 acres of WUI treatments since 2003), but escalating impacts of climate change, which make the Sierra Nevada region hotter and drier, pose new challenges, including wind-driven fires that can breach fuel breaks. The experience of firefighters during the Caldor Fire has underscored the critical significance of the extensive pre-wildfire preparation efforts that agencies and communities have been working on for over two decades.

Pre Caldor home hardening and defensible space

Enhancing home resilience and creating defensible spaces are crucial aspects of wildfire mitigation. Over the last 12 years, there have been over 63,000 defensible space inspections conducted in the Basin. Other measures like ember-resistant home retrofitting and the installation of Class-A ignition-resistant roofing substantially reduced the risk of wildfire damage. A few years prior to the Caldor Fire, Lake Valley Fire Protection District replaced fifty wood shake roofs in Christmas Valley through a grant program illustrating the effectiveness of these initiatives.

Fire Adapted Communities (FAC) have been growing around the Basin. In a fire adapted community, residents and community leaders work together in their neighborhoods to create defensible space, home-hardening, evacuation preparedness, and more. Notably, work done within these neighborhoods affected by the Caldor Fire contributed to the overall protection of the community.

Successful projects completed

Collaboration and coordination are key elements for planning for wildfire. The Tahoe Fire and Fuels Team (TFFT), a multi-agency organization established in 2008 to address growing concerns of wildfire, successfully completed nearly 7,600 acres of wildland-urban interface (WUI) treatments since the implementation of the plan. The TFFT aims to treat approximately 14,000 additional acres within the WUI by 2025. Over 71,000 acres of total land has been treated for fuel reduction since 2007. When the Caldor Fire reached areas that had undergone fuel reduction, the flames were significantly reduced in height, enabling firefighters to take more effective suppression measures. These initiatives, funded by over $173 million from various sources, have been vital in safeguarding Lake Tahoe's environment and communities.

South Tahoe Public Utility District (STPUD) also played a pivotal role in the firefight against the Caldor Fire. Prior to the Caldor Fire, STPUD staff removed hazardous fuels and critical spare parts from field sites. Their proactive investments in high-capacity wells, the expansion of waterlines, and the installation of fire hydrants enabled them to offer a continuous, high-volume water supply during the firefight. STPUD staff also managed the impact of power outages by driving throughout the fire-affected area to turn on and refuel generators, which powered water tanks and booster stations. Amid challenging conditions, STPUD's water crew repaired over a dozen leaks to maintain adequate water flow and pressure, also reinforcing the need to upsize waterlines and booster stations to

enhance fire hydrant flow throughout the Basin, which is an ongoing priority of the Tahoe Water for Fire Suppression Partnership.

Caldor Evacuation

Effective evacuation planning was another pivotal factor during the Caldor Fire, with 50,000 people evacuated at its peak, including approximately 30,000 from the Tahoe Basin. Years of preparation, online resources, community events, and outreach initiatives had equipped the region for these large-scale evacuations. Law enforcement agencies had well-defined wildfire pre-attack plans, evacuation strategies, and notification systems in place, which contributed to the successful evacuation process.

Chapter Five: Lake Tahoe Basin Water Systems

This chapter discusses the critical role of robust water infrastructure for fire suppression in protecting the environment, economy, and people of the Tahoe Basin from catastrophic wildfire. Many water systems in the Basin were developed between 1930 and 1950 to serve seasonal cabins and domestic use, not designed to meet the demands of fire suppression.

5.1 Lake Tahoe Basin Water Systems Background

The Partnership works to upgrade waterlines to better fight fires. | TCPUD

The Tahoe Water for Fire Suppression Partnership (Partnership), a bistate collaboration of Lake Tahoe Basin municipal water agencies, was formed in response to the 2007 Angora fire which highlighted severe deficiencies in water distribution systems throughout Lake Tahoe communities. The Partnership's mission is to accelerate the installation of improved water infrastructure designed to meet modern firefighting standards. These improvements include upsizing waterlines to improve water flow and pressure, increasing storage capacity to improve duration and reliability, adding additional fire hydrants to improve coverage, improving system interties for hydraulic redundancy, and installing emergency generators to ensure pump stations continue operating during power outages.

Over time, the municipal water agencies have invested in water infrastructure to improve fire suppression capacity in their communities. However, significant portions of the Tahoe Basin are still served by a patchwork of small public and private water systems. Many of these systems rely on original, undersized waterlines within their service areas and some lack interties with neighboring water systems critical to providing backup water supply. These geographically isolated systems are incapable of providing adequate flow and duration of water to meet modern firefighting standards. This patchwork of systems represents a serious deficiency in supplying and moving water between systems and neighborhoods to fight fire and protect lives and structures during a wildfire event.

Investing in water infrastructure for fire suppression within developed communities in the wildland-urban interface (WUI) is essential to ensuring firefighters have access to hydrants, with a reliable supply, duration, and flow rate to extinguish spot fires and protect structures and lives from wildfire. With most of the built environment in Lake Tahoe existing in the WUI, the solution to wildfire management, prevention, and suppression requires a multi-pronged approach.

Therefore, in addition to forest management, defensible space, and structure hardening, water infrastructure for fire suppression plays a critical role. The efforts to improve water systems and provide sufficient water for wildfire response are led by the Partnership in collaboration with the Tahoe Fire and Fuels Team, U.S. Forest Service, and other land managers and regulatory agencies in the Basin.

Improvements include upsizing waterlines to improve flow. | TCPUD

Funding History

With 77% of the Tahoe Basin designated as national forest, the U.S. Forest Service responded to the 2007 Angora Fire by allocating funding between 2009-2019 to Lake Tahoe Basin water agencies for implementation of projects with a direct nexus to improving emergency fire suppression response in the WUI. Through this collaborative funding effort, the Partnership leveraged $20 million in federal funding to install over $52 million of critical fire suppression projects, demonstrating a strong history of putting projects on the ground.

By 2020, these federal funds were no longer available, and the Partnership refocused efforts to identify other appropriate funding sources. Working with the TFFT, the Partnership established specific project criteria used to rank projects through an annual prioritization process. In 2021, this process was formalized, and projects were added to the Lake Tahoe Environmental Improvement Program list and included in the Lake Tahoe Restoration Act (LTRA), an annually appropriated federal budget allocation. Through the LTRA, the Partnership received $2.12 million in 2022 and $2.125 million in 2023. These funds leveraged $16.4 million in local matches for projects that improved fire suppression response by upsizing 24,361 linear feet of waterlines and installing 45 more fire hydrants.

Priorities:

- Accelerate the installation of water infrastructure specifically to improve fire suppression, such as upsizing waterlines, adding fire hydrants, increasing storage capacity, and adding system interties.
- Complete hazard fuel reduction around critical water infrastructure and install emergency backup generators.
- Modify state and federal program funding to include eligibility for water infrastructure projects.
- Coordinate with land managers where it is possible to complete water infrastructure improvements in communities with planned or completed hazard fuel reduction projects.

5.2 5-Year Projected Funding Need

More funding is necessary to increase the pace and scale of these critical investments in water infrastructure for firefighting. The Partnership will continue coordinating funding needs through an established annual prioritization process, in collaboration with the TFFT. This process ensures that

only water infrastructure projects which improve fire suppression capabilities are eligible and further prioritizes shovel ready projects with match funding.

The Partnership is projecting over $125 million in necessary water system improvements over the next five years, all focused on improving water availability for fire suppression. This number does not include necessary investments in the many small, private water systems. The Partnership estimates contributing match funds at a minimum ratio of 2:1.

The water infrastructure for fire suppression improvements over the next five years includes:

- Improving 100,000 linear feet of undersized waterlines
- 3 million gallons of additional water storage volume
- 225 additional fire hydrants
- 5 water system interties

Chapter Six: Fire Adapted Communities

This chapter discusses Fire Adapted Communities, a robust program that helps residents and visitors prepare for wildfire. It also features community-driven recommendations to bolster FAC outreach, connections, and enhance programs and projects.

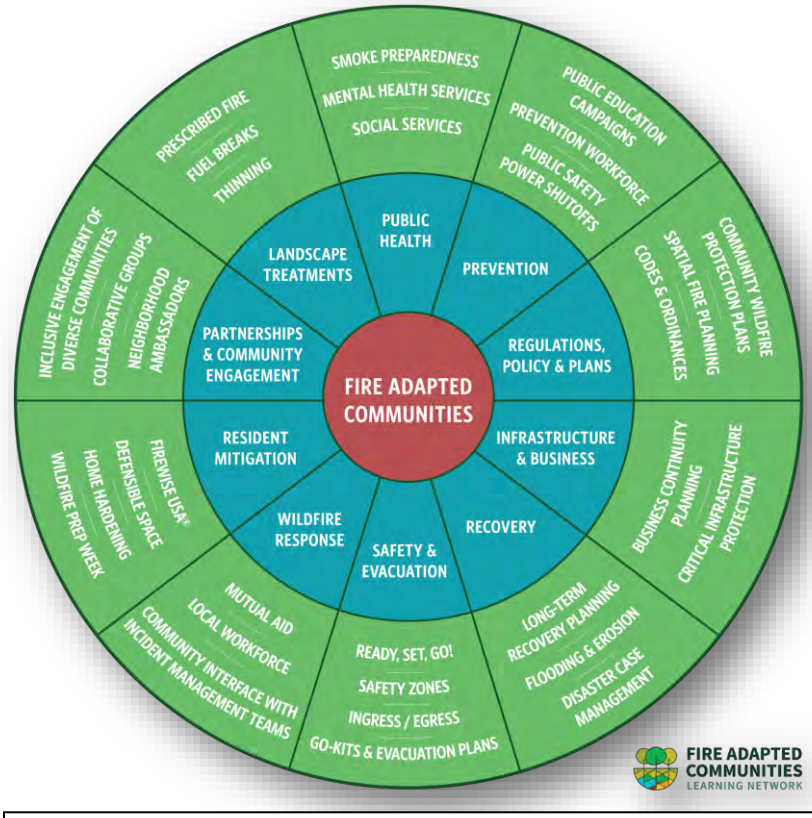
6.1 Background

The Tahoe Network of Fire Adapted Communities (Tahoe Network) is a program designed to help residents and visitors prepare for wildfire. This multi-agency and community collaboration helps residents take individual action to collectively reduce their neighborhood's risk from wildfire. The Tahoe Network is led by Tahoe Resource Conservation District (Tahoe RCD) in collaboration with local fire districts, University Nevada Cooperative Extension (UNCE) and University California Cooperative Extension (UCCE). The FAC program is funded due to the Southern Nevada Public Land Management Act (SNPLMA), which authorized the sale of BLM administered federal lands within a designated boundary in the Las Vegas Valley and required proceeds to be used on projects to fund federal, state and local projects that benefit communities and public lands.

Fire Adapted Communities (FAC) is a framework for community wildfire resilience and is a concept that came out of the National Cohesive Wildland Fire Management Strategy (Strategy) to help communities think about actions they can take to better live with wildfire.

FAC helps residents engage in their community, identify partners, and identify the suite of potential actions and programs communities can do to protect themselves from wildfire. FAC works closely with community members to spearhead and support wildfire preparedness efforts in neighborhoods

Figure 2: Fire Adapted Communities Learning Network Wheel



The FAC Wheel graphic explains the Fire Adapted Communities (FAC) framework. It describes a set of components that make up community wildfire adaptation and gives examples of specific programs and activities that communities can undertake to reduce their wildfire risk and increase their resilience

while helping to connect Neighborhood Leaders around the Basin. Some of the work includes:

- Collaboration with the University of Nevada Reno Cooperative Extension, local fire protection districts, land management agencies and community members to create fire prepared community networks
- Supporting neighborhood preparedness and providing grant funding for curbside chipping and defensible space inspections
- Creating access to fire related educational events, leadership training, workshops, and publications
- Providing guidance for fire preparedness tools such as Firewise USA

Neighborhood Leaders

Neighborhood Leaders play a vital role in the Fire Adapted Communities Program. They coordinate their neighborhoods to work together in getting ready for wildfires. Each neighborhood's involvement can vary in scale. The ultimate objective is to unite, educate, and empower neighborhoods, fostering a culture of wildfire preparedness within the community. FAC relies on Neighborhood Leaders to spearhead wildfire preparedness efforts in neighborhood communities.

Neighborhood Workdays

A Workday can take many forms but typically these are community events organized by the Neighborhood Leaders. The focus is to bring their neighborhood community together to work on fire defensible space. This is an opportunity for communities to support one another and prepare for potential wildfires.

Activities can include:

- Disposing of pinecones and pine needles
- Cutting lower limbs of trees and preparing tree debris for curbside chipping (sign up for chipping services through local fire districts)
- Raking and clearing the 5 feet zone from residence
- Providing neighbors with information on defensible space inspections and organizing neighbors to sign up for inspections (also available by contacting local fire district)

Al Tahoe Neighborhood Workday Summer 2023 | South Lake Tahoe Fire Rescue

Firewise USA

The Firewise USA® recognition program is one of the many tools' neighborhoods can use to address their wildfire risk. Focused on residential action at the parcel scale, the Firewise USA® program is an important piece of the wildfire adaptation puzzle. In the summer of 2024, there were 39 Firewise USA recognized neighborhoods in the Lake Tahoe Basin and more in the works. For more information on Firewise, visit the National Fire Protection Association at www.nfpa.org.

6.2 Recommendations and Future Needs

- Continued capacity building and support to FAC neighborhoods and leaders
- Firewise USA recognition support
- Community outreach on wildfire related topics
- Funding sources for FAC support
- Home hardening outreach and implementation assistance
- Continued funding from FAC to fire districts / agencies to support Chipping and Defensible Space Inspection Programs

The future needs listed above are pulled from recommendations made by residents for strengthening fire adapted communities. The information was derived from the Lake Tahoe Basin CWPP Survey. See table 2 below for more information.

Table 2: Recommendations to bolster FAC Education & Outreach

Education & Outreach	Status	Action
Create additional educational opportunities for full-time residents, second homeowners, renters, and visitors. Educational opportunities can include: o Family focused community events o Virtual and in person workshops o University speaker series o Door to door outreach o Increase hotels/resorts outreach to visitors	In Progress	• Wildfire Safety Expo • Fire Fest • Defensible Space Landscaping Workshops • Community Wildfire Preparedness Workshop • Firewise Workshop
Create a community-based dedicated calendar to make it easy for residents to find relevant meetings about wildfire preparedness.	Completed	Available on the Tahoe Living with Fire website
Fire districts to host community briefings and neighborhood specific training including evacuation preparation and practice.	Under Consideration	
Ensure that all messaging from agencies is clear, understandable, and cohesive.	In Progress	Under review during monthly Tahoe Fire and Fuels Team Public Information Team meetings
Assist vacation rental homes owners to create a wildfire preparation outreach plan for renters.	Under Consideration	
Increase mail to residents with information regarding wildfire preparedness including defensible space, home hardening, burning restrictions, evacuation preparation information, etc.	Under Consideration	

Create one hub for all critical information for both emergencies, regulations, and all other fire related updates.	In Progress	Community Wildfire Protection Plan Hub site
Increase signage around communities about wildfire preparedness.	Under Consideration	

Table 3: Recommendations on FAC Programs & Projects

Programs & Projects	Status	Action
Create more programs and incentives for residents to do work on their property including tree removal, home-hardening and defensible space assistance.	Under Consideration	
Increase community involvement in Firewise, Community Emergency Response Team (CERT), and Fire Adapted Communities (FAC).	In Progress	Outreach including: o TV, Radio interviews o Increasing number of press releases o Attending wider variety of events o Providing presentations at the local sports centers, schools, Family Resource Center and Boys and Girls Clubs
Assist volunteer groups to host neighborhood meetings.	Completed	Work year round to assist community members to host wildfire preparedness meetings and education
Host additional community workdays around the Basin.	In Progress	Working with multiple new neighborhoods around the lake on their community workdays
Create anonymous avenues for neighbors to point out problemed areas.	Under Consideration	
Organize volunteer groups that help fire districts with wildfire mitigation, prevention, and education.	Under Consideration	
Work with the community to update building codes to require home hardening and other wildfire preparedness measures.	In Progress	Provide information as relates to city and county ordinances

Table 4: Recommendations on building connections for FAC

Build Connections	Status	Action
Increase wildfire preparedness focus and outreach on those who speak Spanish as their primary language, elderly, and disabled populations in the community.	In Progress	o Providing presentations in English and Spanish o Providing publications in English and Spanish o Outreach at local Family Resource Centers o Working to create assistance for those in need of resources within neighborhoods
Create community volunteer groups to reach underserved and other hard-to-reach communities.	In Progress	Collaborating with the California Conservation Corps and local High Schools
Build stronger relationships between fire districts and the public such as station visits, pancake breakfasts, community events, etc.	In Progress	Community leaders organize events with their local fire stations i.e. Al Tahoe June 1st Community Barbecue
Increase collaboration and communication with agencies, fire districts, federal and state fire agencies, and local organizations.	In Progress	o Tahoe Fire and Fuels Team PIT meetings o The FAC team works directly with fire and land management agencies and the community to make connections
Bolster the feeling of "community" between full time residents, second homeowners, and renters.	In Progress	Community meetings are taking place with proposed upcoming workshop
Create "Meet your Neighbor" opportunities.	In Progress	Working with neighbors to provide Meet and Greets, community events year round
Host more community-led meetings about wildfire preparedness.	Under Consideration	

Chapter Seven: Underserved & Vulnerable Populations

While agencies and organizations manage programs to serve all residents of Lake Tahoe, it is evident that there remains a significant number of residents classified as part of a vulnerable population who may not be receiving the specialized assistance and information they need to adequately prepare for wildfires. This chapter provides a synopsis of the findings and recommendations for adapting existing programs to better serve the needs of these populations.

Of the over 50,000 people residing in the Lake Tahoe Basin, 19.67% are over 65 years old, 17.52% speak Spanish as their primary language, and 8.38% of working age have a disability (2021 U.S. Census Bureau American Community Survey). While the majority of the population of Lake Tahoe are not part of a vulnerable population, there remains a significant number of people who require more specialized assistance than they are currently receiving.

To understand the needs of these underserved populations, focus groups and interviews were conducted in early 2023 with 45 residents of Lake Tahoe who self-identified as being part of one or several of the identified vulnerable populations. Participants included 20 residents who speak Spanish as their primary language, 7 participants with disabilities, and 18 residents over 65 years old. The findings suggest that these populations experience unique challenges that often make preparing for wildfire challenging.

7.1 Depth of Knowledge & Understanding

Past wildfire experiences have provided motivation and a thorough understanding of what preparing entails; however, a vast majority of vulnerable populations remain unable to prepare in the ways they know they should due to financial constraints, lack of understanding of technical concepts, and/or physical or mental inability to perform wildfire preparation activities. A keen understanding of the risk of wildfires, coupled with an inability to prepare in the ways they know they must, results in vulnerable populations living in fear and largely without the specialized assistance they require.

Knowledge gaps

Although a majority of participants provided extensive details about how they should prepare, including specific ways to maintain defensible space, pack a go-bag, and sign up for emergency alerts, two significant gaps in knowledge exist. The most notable knowledge gap is among the Spanish-speaking population, where it is evident that wildfire preparation and forest management information in Spanish has been minimally distributed. During interviews and focus groups, Spanish-speaking populations offered insight into preventing wildfires and house fires, including extinguishing candles and using caution when cooking with charcoal, but had not previously learned concepts related to defensible space, home hardening, or evacuation planning.

The second significant knowledge gap across populations is the concept of home hardening, which was a new concept for a majority of participants. After learning about home hardening, all populations agreed that home hardening actions would be unavailable to them due to a lack of technical expertise, homeownership status, mobility limitations, and/or financial constraints. Of the participants who owned homes and had previously retrofitted them, it became evident that the

retrofits (e.g., replacing a roof or windows) occurred not because it would decrease a home's wildfire risk, but because these items required replacement due to leaks or insurance.

7.2 Attitudes Toward Existing Programs

Although participants share a thorough understanding of wildfire risks and associated preparation activities, vulnerable populations remain disappointed by existing wildfire preparation and forest management programs. The most significant complaint across populations is the lack of depth in the information currently distributed by agencies and organizations, with most participants anxious to learn more about the complexities associated with forest management projects and individual risk-reducing activities. This is especially prevalent when preparing for evacuations, where widespread concern exists that agencies and organizations are withholding life-saving information before and during evacuations.

Frustrations about defensible space inspection programs are also prevalent, primarily due to the "know it all" attitude of inspectors and a perceived lack of compassion for unique situations, including mobility limitations and financial constraints, that often make it impossible for vulnerable populations to prepare without outside assistance. There remains continuous disappointment by the lack of enforcement by agencies, which is largely considered the only tactic to get individuals, including vulnerable populations, to complete the work. Additionally, vulnerable populations feel they do not receive one-on-one support and rarely have a re-inspection of their property, which leaves them feeling unsure of their compliance status after completing the work to their best ability and understanding.

Finally, vulnerable populations remain frustrated by public land management agencies for their lack of follow-through on publicly owned land near or in neighborhoods and an inability of agencies to share detailed information about the forest management techniques being used on projects and the rationale behind chosen techniques. Examples of this frustration include agencies that promise to treat property on a certain timeline but never do, using forest management techniques that don't appear to align with the goals of the agency or project.

7.3 Obstacles

While vulnerable populations recognize they must prepare and know how to prepare, a majority remain underprepared due to a myriad of obstacles that can be unique to an individual or applied across populations. A distinction between the level of preparation available to individuals exists based on homeownership status, with those who rent feeling as though they are unable to prepare due to being at the mercy of a landlord or property management company and homeowners feeling they are unable to prepare due to compounding obstacles, such as finances, limited mobility, motivation, and time. The following paragraphs highlight the most common obstacles facing vulnerable populations; however, many additional obstacles exist that make preparing uniquely challenging and individualized for members of vulnerable populations.

Preparing is Cost-Prohibitive

The most common obstacle vulnerable populations encounter is that preparing for wildfire is cost-prohibitive, especially for those who rely on social security or disability benefits and barely have the income to support themselves, let alone the high costs often associated with preparing. Additionally, many members of vulnerable populations experience mobility challenges and therefore are unable to complete activities on their own, which requires them to hire a contractor, something that is often cost-prohibitive. Several participants who own homes and have previously completed defensible space work shared that the reason they were able to complete the work was because they could take advantage of a matching grant but have been unable to maintain the defensible space long-term without additional assistance.

Beyond defensible space, packing a go-bag isn't considered cost-prohibitive because the necessary items are typically on hand, but evacuations themselves are cost-prohibitive, especially if evacuations result in hotel rooms and/or fuel expenses. Although most participants shared that they had evacuated during previous wildfires, such as the Caldor Fire, several shared that they were unable to evacuate due to financial constraints and fearfully hid in their homes waiting for the wildfire to pass, feeling as though it was their only option. Similarly, many participants felt they put themselves and their families in danger by waiting too long to evacuate due to being unable to miss a day of pay or afford an additional night in a hotel.

Access to Information & Support

Although financial constraints are the cornerstone of why vulnerable populations are unable to prepare, access to information emerged as an even more critical obstacle, specifically for individuals with disabilities and for those who do not speak English. While ADA-accessible content was noted as being of critical importance and an area of improvement for programs, emergency information and resources in Spanish appeared to be the most significant obstacle that exists. Additionally, Spanish-speaking participants shared that evacuations have been especially challenging for them because family members are often spread across the Lake Tahoe Basin at any given moment, with children at school, parents at work, and family members at home. The logistics of coordinating family members and important documents has caused immense anxiety among this population, and many admit that they are unable to prepare in the ways they would like because they are unable to wrap their minds around evacuation logistics and don't know where to find this information or who they can trust for individualized assistance in Spanish. Similarly, those with disabilities and/or older adults with mobility challenges share concerns about their unique evacuation challenges and feel under-prepared and under-supported in their efforts to establish an evacuation plan due to a lack of individualized support from agencies and organizations.

Motivation

Gaining access to life-saving information in the language and format required and having the financial ability or support to implement required actions is a necessary first step; however, after those criteria are met, an individual must have the motivation and ability to follow through on actions. This is especially evident among populations with disabilities and older adults who are often living in "survival mode" and are largely unable to consider preparing for a wildfire due to their daily struggles outweighing the "what-if" scenarios wildfire preparation entails. Many participants shared

that wildfire preparation would be the last thing on their to-do list, with feeding their families and navigating life with a disability being all-consuming.

Additionally, many members of these populations lack the motivation to prepare and justify their decision to not prepare by telling themselves that wildfires will not occur at Lake Tahoe, largely because they are mentally unable to prepare for the realities of a wildfire. Several older adults and individuals with disabilities shared that after experiencing close calls with wildfires and the related stress of evacuations, they would rather die in a wildfire than put themselves through the anxiety related to evacuating again. The long-term stress due to the traumatic experiences vulnerable populations have previously encountered and anticipate encountering creates obstacles that are often unique to an individual and may result in these populations making poor decisions when a wildfire occurs.

7.4 Recommendations

As a result of this study, several recommendations to adapt existing programs were offered by participants and emerged through data analysis. Some recommendations are straightforward, and their long-term impact will be easy to track, while others will require time and additional research to truly understand if they are resulting in prepared populations. The list below is not exhaustive or prioritized, and instead provides recommendations to add depth to existing programs to ensure agencies and organizations are serving Lake Tahoe's vulnerable populations.

- All wildfire preparation and forest management resources must be available in Spanish. Resources should be distributed through social service organizations currently working with this population, such as the Boys & Girls Club, Sierra Community House, Family Resource Center, and religious organizations. Workshops in Spanish should be held in conjunction with existing events at these organizations and not as wildfire-specific events hosted by wildfire agencies and organizations.

- Financial assistance for preparation activities (i.e., defensible space) is critical and should be expanded to ensure vulnerable populations are prioritized. Additionally, emergency assistance funds for evacuations must be considered and advertised to vulnerable populations before a wildfire to ensure these populations make evacuation decisions accordingly.

- Emergency alert systems (i.e., CodeRED) should be used to provide an opportunity for individuals to confirm they are signed up for alerts and to share critical information as the wildfire season progresses. An example of what the message could communicate includes, "This is a test of the emergency alert system. Thank you for signing up. Please share this alert with your friends and family and encourage them to sign up. A wildfire could occur at any time, please prepare now and visit tahoelivingwithfire.org or call XXX-XXXX for more information."

- Wildfire-specific workshops and events should continue to occur to reach the general population; however, vulnerable populations typically do not attend these types of events and prefer to be reached at events they are already attending and through organizations they are

already receiving information through, such as farmers markets, senior center activities, HOA meetings, social service fairs, work events, Meals on Wheels, Bread and Broth, religious organizations, and schools. Mass mailings and an online presence should occur regularly, and information should be distributed to the regional news stations outside of Lake Tahoe (i.e., Sacramento and Reno) that many residents rely on for "local" information and news.

- While there are many ways to distribute information, there is no one-size-fits-all outreach tactic, so all tactics must be used in tandem with the understanding that there is no way to over-communicate this life-saving information. Members of vulnerable populations learn about wildfire preparation through many avenues, making it critically important that all public-facing positions (e.g., defensible space inspectors and forestry aides) have adequate training in interfacing with vulnerable populations and can direct them to the appropriate assistance programs.

- Vulnerable populations require personalized support, and the one-size-fits-all approach will not support these populations. Future programs should include flexibility in funding to work with individuals on their unique preparation needs. Examples of support include funding for hotel rooms and gas during evacuations, defensible space maintenance, landlord or property management assistance programs, and home hardening initiatives.

Chapter Eight: Community Evacuation Preparedness

This document is not an evacuation plan. This CWPP identifies areas needing fuel reduction treatments, supports funding requirements for project implementation, and offers educational opportunities to help the public understand wildfire prevention. It also outlines actions homeowners and communities can take to reduce wildfire risk. This chapter specifically provides guidance on preparedness steps homeowners can take to be ready for evacuation.

Evacuation systems used in the Tahoe Basin

Preplanning for evacuation is crucial to the safety of the public and is a vital component of emergency planning in the Tahoe Basin. The Basin has unique challenges when it comes to emergency planning due to the high volume of visitors, language barriers, topography, and limited evacuation capacity. Lake Tahoe is a popular tourist destination and has visitors from other areas who may be unfamiliar with the risks of wildland fires and disaster evacuation routes. Also, not all visitors and residents speak English, so effective messaging must be in multiple languages. Consistency in communications and messaging is vital to the prompt notification and evacuation of communities at risk.

Emergency notification systems are used by county emergency managers to send prepared messages via text, email, or telephone to people in the affected area. Media releases with evacuation information are also broadcasted to local media outlets. To receive emergency notifications, individuals must sign up with the corresponding county's emergency alert database. Placer County created a centralized platform to streamline the process of signing up for emergency notifications for the entire Tahoe Basin. To register, visit Tahoe Regional Emergency Notification System (ENS) Finder (arcgis.com).

Distribution of wildfire preparation resources in Spanish can be coordinated by several organizations including Tahoe Truckee COAD (Community Organizations Active in Disaster) and Connecting Point. Tahoe Truckee COAD develops and enhances partnerships to create a resilient Tahoe Truckee region that is prepared to respond and recover from wildfires. The COAD can be a centralized hub to provide messaging, reporting, and ensure underserved and vulnerable populations are involved in developing programs and strategies.

Evacuation Preparedness Key Terms

Red Flag Warning: a forecast issued by the National Weather Service to warn the public and fire personnel of conditions that could lead to extreme fire behavior within the next 24 hours. During Red Flag Warnings, residents must exercise extreme caution. All sources of outdoor flame are discouraged during red flag warnings including wood, propane, and charcoal.

Evacuation Warning (or voluntary evacuation): suggests a potential threat to life. Evacuation is not mandatory, but it is advised, and preparation is necessary.

Evacuation Order (or mandatory evacuation): suggests an immediate threat to life. It is critical to follow all directions from law enforcement to ensure safe evacuation.

Individuals should familiarize themselves with the exit points out of Lake Tahoe. However, during an evacuation, officials will give updated information regarding the safest evacuation route.

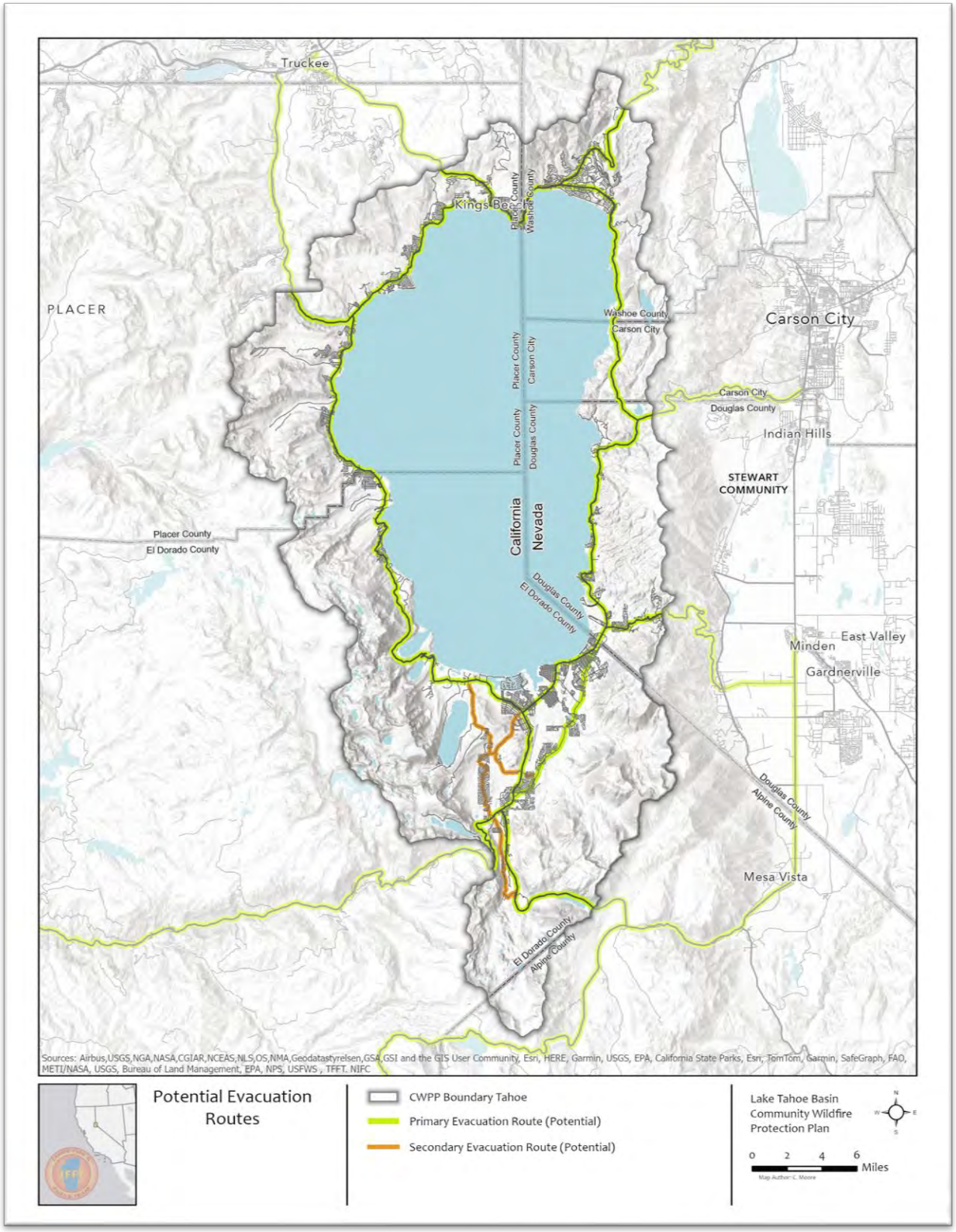
Evacuation Preparation

Individuals should familiarize themselves with their neighborhood, identify potential escape routes and build relationships with neighbors to coordinate evacuation plans. To prepare for a safe evacuation, individuals should sign up for their county's emergency alert database, prepare a Go Bag with essentials, and prepare pets (visit tahoepaws.org or call 775-721-DOGS (3647) for more information). Long-term renters in the Basin are encouraged to sign up for renter's insurance. This coverage can ensure the protection of personal items left on premises during evacuation events.

Also, individuals should prepare to address the special needs of vulnerable populations, including the elderly and people with medical problems or disabilities.

More information and a full checklist are available at tahoelivingwithfire.com.

Map 4: Potential Evacuation Routes



Chapter Nine: Planning Summary

This chapter discusses the collaborative development of the CWPP, which brought together local stakeholders to create a comprehensive wildfire mitigation strategy. Input from the CWPP Steering Committee, community meetings, and the survey shaped the plan to reflect community priorities. A StoryMap and district-specific StoryMaps are hosted on a Hub page, providing accessible resources for both the public and professionals.

Steering Committee

The Lake Tahoe Basin CWPP Steering Committee was vital for the plan's success and effectiveness, ensuring coordination among diverse stakeholders, leveraging expertise in wildfire management, guiding decision-making, and ensuring adaptability in the plan's implementation. The Steering Committee met several times through 2022-2024 to ensure accuracy of the plan and that it reflected the needs of all stakeholders.

The Lake Tahoe Basin CWPP Steering Committee is made of representatives from the Tahoe Fire and Fuels Team including: North Lake Tahoe Fire Protection District, Tahoe Douglas Fire Protection District, South Lake Tahoe Fire Rescue, Lake Valley Fire Protection District, North Tahoe Fire Protection District, CAL FIRE Amador – Eldorado Unit, US Forest Service LTBMU, Living With Fire - University of Nevada Cooperative Extension, University of California Cooperative Extension, Nevada Division of Forestry, Washoe Tribe of Nevada and California, California Tahoe Conservancy, Tahoe Resource Conservation District, Tahoe Regional Planning Agency, Lahontan Regional Water Quality Control Board, and El Dorado County.

9.1 Community Engagement

The initial step in updating the Lake Tahoe Basin CWPP was the development of a comprehensive public outreach strategy to involve the community and relevant stakeholders in the planning process. Outreach initiatives were strategically deployed throughout the Basin to engage the community. Special attention and efforts were dedicated to engaging underserved and vulnerable populations within the Basin. As further detailed in Underserved and Vulnerable Communities.

Outreach efforts included:

- The Tahoe Living with Fire website featured a dedicated page that provided regular updates, deadlines, and information on the CWPP update process. It also included contact details for community members interested in participating.
- Throughout the CWPP update process, multiple social media platforms were leveraged for updates and information dissemination. Tahoe Living with Fire actively shared updates on Instagram, Facebook, and Twitter. Additionally, partners of the Tahoe Fire Fuels Team shared and reposted CWPP updates on their platforms, extending the reach to a wider audience.
- Engagement with the statewide virtual workspace managed by the Watershed Research and Training Center to connect those who work on forest and fire issues in California, Podio

California Fire Resilience: California Forest and Fire Peer Connect Workspace was another tool for sharing information during the process.

- To encourage public and stakeholder engagement, several press releases advertised the Lake Tahoe Basin Survey, public meetings, and other opportunities for involvement. The CWPP update process was also featured in multiple TFFT press releases.
- The Fire Adapted Communities newsletter served as a valuable channel to reach out to community leaders and broader audiences within the Tahoe Basin.
- The Lake Tahoe Basin CWPP Coordinator presented at Truckee Tahoe Community Foundation's Forest Futures Salons, "Preparing for the 2023 Wildfire Season" and "What is a CWPP?" in collaboration with Truckee Fire and Nevada County, both of which were concurrently updating their CWPP.
- The CWPP coordinator actively participated in various local community events across the Basin alongside the Tahoe Network of Fire Adapted Communities Program. These events served as platforms to provide information, gauge familiarity with CWPPs, and involve the community with the update process. Basin-wide Survey QR codes were distributed at events such as South Lake Tahoe's Earth Day Celebration, South Lake Tahoe Wildfire Expo, North Tahoe Community Wildfire Preparedness Workshop, Lake Tahoe Annual Environmental Summit, Firefest, 2024 Sierra Nevada California Wildfire & Forest Resilience Task Force Resource Fair, and numerous Fire Adapted Communities Neighborhood Workdays held throughout the summer.
- The CWPP coordinator presented the CWPP at the Tahoe Family Resource Center with a Spanish translator for a Spanish-speaking audience. The presentation also guided the audience to complete the CWPP Survey, which was available in Spanish.

Community Meetings

During the CWPP update process, three initial public meetings were hosted around the Basin, fostering transparency and community education. These meetings facilitated community input, allowing residents to voice concerns and suggestions, enhancing the plan's effectiveness.

These meetings encompassed all aspects of CWPP development, defining the update's scope, educating the public and stakeholders about the process, and gathering direct input on wildfire concerns. Each meeting featured a panel of Tahoe RCD staff, fire professionals from the respective fire district along with other key stakeholders. Meeting announcements were disseminated through multiple channels, including email, newspapers, radio, flyers (in both English and Spanish), and social media. Recordings of all meetings are available upon request.

North Lake Tahoe Meeting (June 1, 2023):
Format: Hybrid, North Lake Tahoe Fire Protection Districts' Training Room
Panel: North Lake Tahoe Fire Protection District Chief Ryan Sommers and Division Chief Isaac Powning

South Shore Public Stakeholder Meeting (July 12, 2023):
Format: Virtually via Zoom
Panel: Tahoe Douglas Fire Protection District Division Chief Keegan Schafer, South Lake Tahoe Fire Rescue Chief Jim Drennan, Lake Valley Fire Protection District Fire Captain Martin Goldberg, US Forest Service LTBMU Chief Carrie Thaler, CAL FIRE Amador El Dorado Unit Battalion Chief Mike Boyce

North Tahoe Meeting (October 17, 2023):
Format: Hybrid, North Tahoe Fire Protection District's Emergency Operation Center
Panel: North Tahoe Fire's Division Chief Brent Armstrong, North Tahoe's Forest Fuels Manager April Shackleford, California Tahoe Conservancy's Forest Management Planning Specialist Jason Pollard, and CAL FIRE Nevada-Yuba-Placer Battalion Chief Thomas Smith

9.2 Lake Tahoe Basin CWPP Survey

The Lake Tahoe Basin CWPP Survey engaged the community in assessing wildfire risks. It collected valuable data, identified community-specific vulnerabilities, raised awareness, and fostered inclusivity, ensuring that the CWPP was well-informed and tailored to the Basin's needs. The CWPP survey helped guide project planning by highlighting community priorities to the fire districts. For instance, evacuation safety was frequently emphasized in the survey, though the CWPP isn't an evacuation document, the fire districts prioritized evacuation routes as high priority treat.

The survey was specifically designed for those living within the Lake Tahoe Basin CWPP boundary and was open from April 18 to August 31, 2023. It was widely publicized at community events, through local media outlets, social media, websites, flyers, newsletters, and presentations. The survey was available in both English and Spanish. The survey included 21 required questions and 6 optional demographic questions.

Respondents had the opportunity to provide specific recommendations or highlight critical areas of concern through a write-in option, allowing residents to share essential information with their fire districts. The survey garnered 635 participants, reflecting a high level of community engagement and commitment to wildfire preparedness in the region. For those without internet access or preferring a paper survey, print copies were available. Full survey questions can be viewed here. Survey results in Appendix A. CWPP Survey Results.

9.3 CWPP 2.0 Esri ArcGIS Hub & StoryMaps

As CWPPs move to a higher level of planning, the Lake Tahoe Basin utilized Esri ArcGIS Hub as the platform to host the Lake Tahoe Basin CWPP and corresponding StoryMap(s) to ensure the plan stays relevant, accessible and useful to the public and professionals. Click each link below to view the CWPP Hub, Lake Tahoe Basin or Division StoryMaps.

Note: City of South Lake Tahoe, Lake Valley and Fallen Leaf Lake are all included in the South Shore Fire Agencies.

Chapter Ten: Risk Assessment, Prioritization, Implementation and Monitoring

This chapter details the process of the risk assessment, prioritization of fuel reduction areas, and collaborative efforts of agencies targeting the wildland-urban interface (WUI). It emphasizes the role of Vibrant Planet's Land Tender software as an essential tool for evaluating wildfire mitigation. The chapter also addresses the tracking and reporting of fuel reduction projects around the Basin.

10.1 Vibrant Planet's Land Tender Software

Land Tender serves as a comprehensive decision-support platform leveraging top-tier data and scientific algorithms to aid land managers in strategizing landscape treatments and formulating wildfire mitigation plans. By pinpointing both natural and built assets susceptible to wildfire, the software facilitates the quantification of restoration actions' benefits. Through sophisticated modeling techniques, Land Tender enables the comparison of various scenarios over time, enabling the evaluation of tradeoffs inherent in different plans. This empowers land managers to prioritize restoration efforts in areas projected to yield the greatest benefits from specific actions, while also factoring in the financial implications of proposed plans. With its adaptable framework, Land Tender allows for ongoing adjustments to evolving conditions and objectives, with the overarching aim of mitigating fire severity and optimizing ecological outcomes. Land Tender offers an interactive, collaborative interface conducive to multi-jurisdictional planning.

To learn more about Land Tender, view this StoryMap.

10.2 Wildfire Risk Assessment

Wildfire Hazard

To calculate wildfire hazard, Vibrant Planet evaluates burn probability and fire intensity together. These calculations are powered by Pyrologix, a Vibrant Planet company. Areas with the highest hazard generally contain the greatest combination of burn probability along with fire intensity.

Burn probability (FSim): The probability that a geographic location (30-m pixel) will experience a wildland fire. Modeled using FSim, which simulates the growth and behavior of hundreds of thousands of fire events, based on historical fire occurrences, weather, terrain, and fuel.

Fire intensity (wildEST): The flame length that the pixel is likely to experience when it burns. This calculation uses a model developed by Pyrologix that performs 200+ simulations and uses local fuel, weather, and topography to generate estimates of contemporary flame lengths within a given pixel.

This information feeds into the future risk reduction strategy, helping predict how resources and assets will respond to hazard.

Wildfire Risk

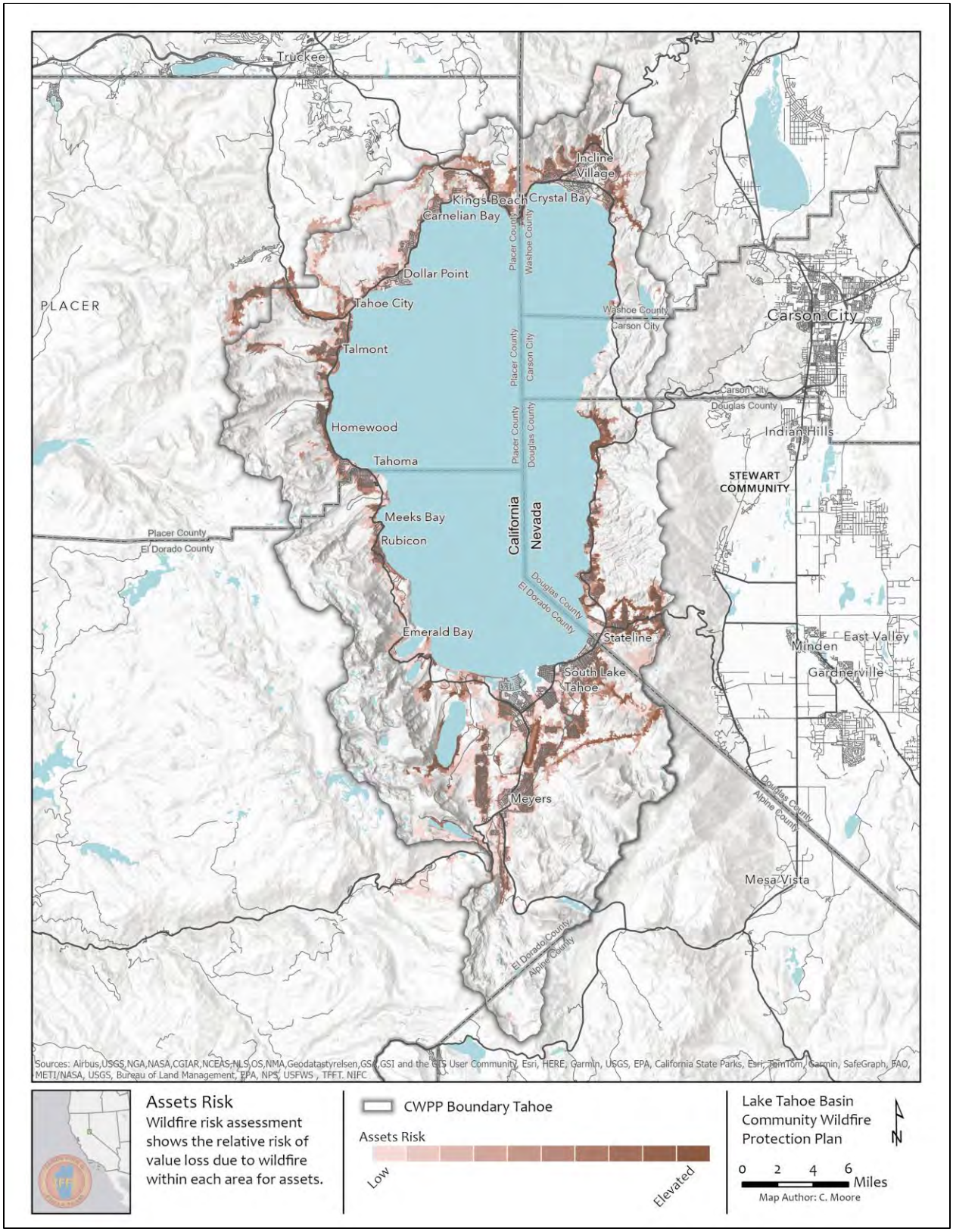
Vibrant Planet helped consider how the wildfire hazard interacts with identified *strategic areas, resources, and assets (*SARAs) to determine wildfire risk. Vibrant Planet calculates wildfire hazard,

which is the probability that a fire will occur in a specific geographic location and the predicted intensity of that potential wildfire. Next, the platform considers the interaction of that hazard with all SARAs on the landscape. Each SARA has a unique set of response functions to every class of wildfire hazard. Wildfire risk to those SARAs is then calculated.

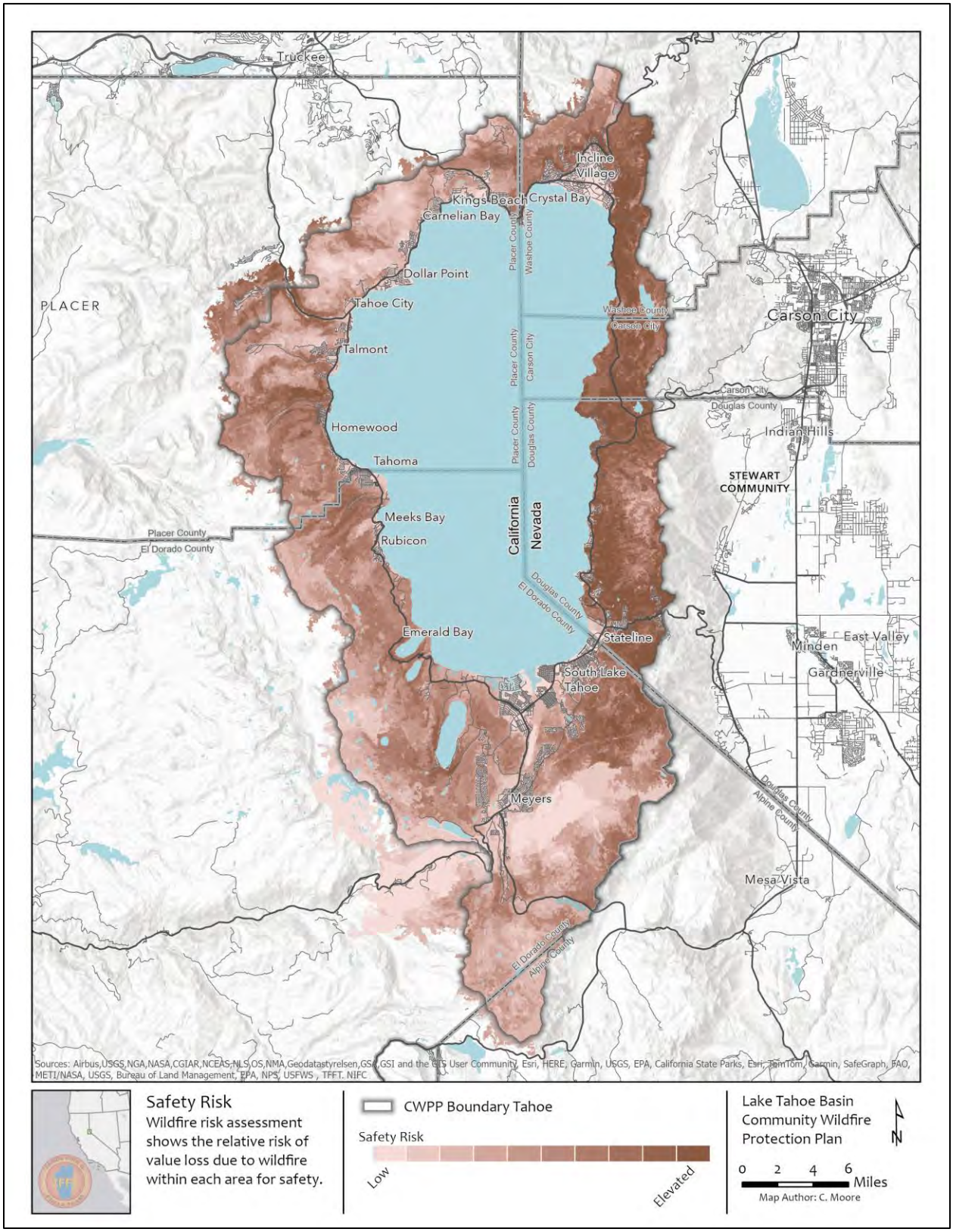
Risk is the likelihood of the wildfire hazard to decrease the value of a single, or multiple SARAs. The result is a detailed and specific quantified wildfire risk analysis, conducted by exposing each SARA to the wildfire hazard, and determining the risk if no management were to occur.

Additionally, each fire agency evaluated its region by examining community assets, residential structures, preparedness levels, stakeholder engagement, resources, and wildfire mitigation programs. They also considered funding opportunities, community outreach efforts, and specific recommendations to continue to align with the goals of the National Cohesive Wildland Fire Management Strategy. For more details on each fire agency's assessment, refer to Chapter Eleven: Tahoe Basin Fire Agencies.

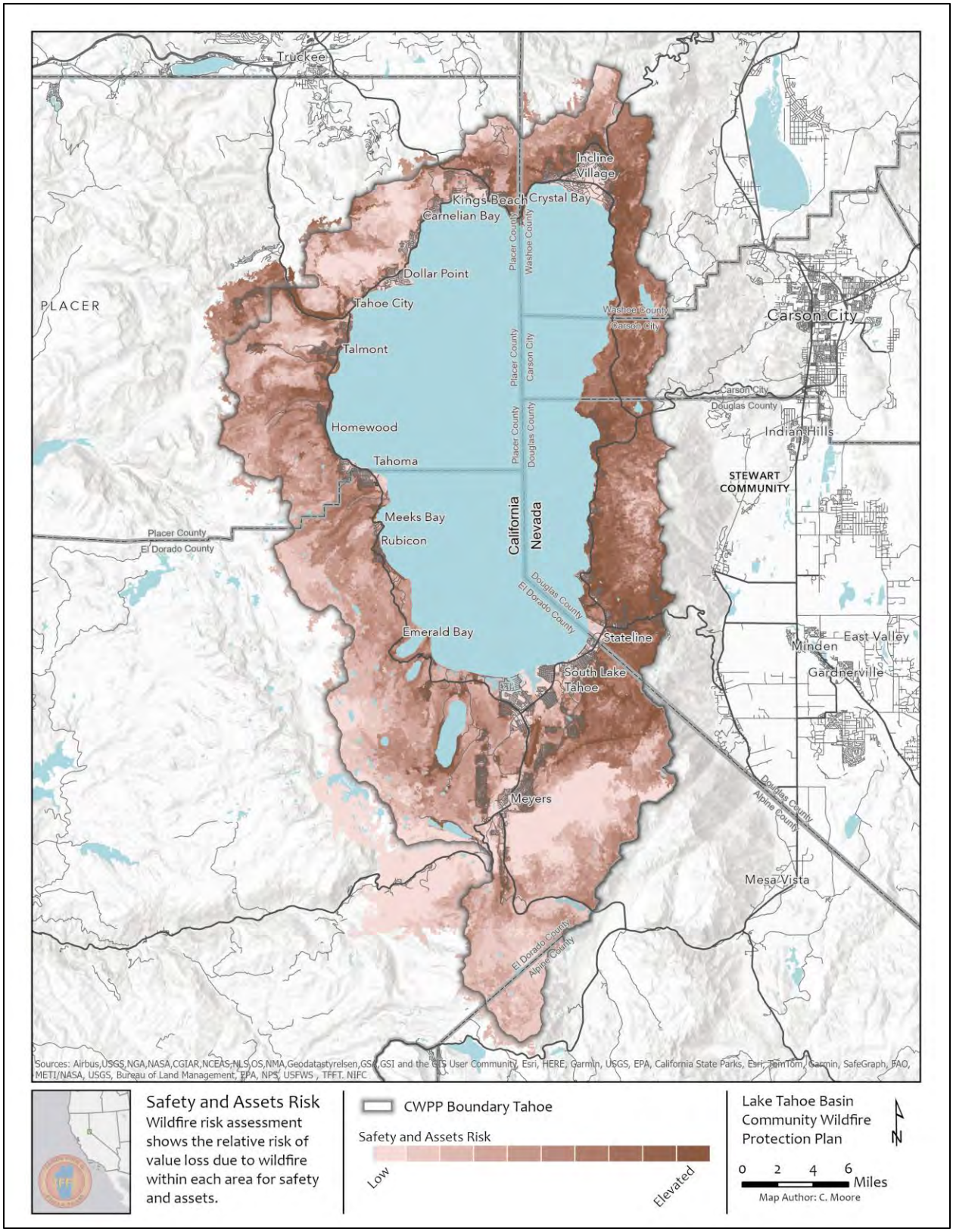
Map 5: Wildfire Risk Assessment (Assets)



Map 6: Wildfire Risk Assessment (Safety)



Map 7: Wildfire Risk Assessment (Assets & Safety)



10.3 Methodology for Prioritizing Fuels Reduction & Forest Health Treatment Areas

The Community Wildfire Protection Plan (CWPP) Project Team collaborated to identify the most strategic fuels reduction and forest health treatments within the CWPP planning area. These prioritized treatment areas span multiple jurisdictions and address various high fire risk areas throughout the region.

Fire agency representatives ran models on their regions using Land Tender software. These model runs presented recommended treatment areas around the Basin, effectively identifying the highest-priority areas for treatment within the Lake Tahoe Basin Wildland-Urban Interface (WUI), considering resource availability constraints such as total area, budget, size, and number of projects, while also balancing restorative return on investment components of avoided loss in case of disturbance and identified ecological benefits of treatment.

Treatment Area Zones

Within the WUI, treatment areas were categorized into zones with the Defense Zone being a generally ¼ mile buffer from the Community WUI Intermix and the Threat Zone which is generally a 1¼ mile buffer from the Defense Zone. The updated CWPP includes a Community WUI Intermix designation which specifically refers to the built environment where structures are closely intermingled with wildland vegetation, increasing the risk of fire spreading between human-built structures. While treatment areas within the Community WUI Intermix were identified, all neighborhoods are categorized as high priority due to the values at risk.

To enhance community protection and safety, Evacuation Routes (500 feet buffer from the centerline of essential evacuation corridors) were prioritized separately for fuels reduction treatments. Community input consistently emphasized concerns about evacuation at CWPP community meetings and the survey. In response to these concerns, Evacuation Routes, identified by Land Tender and local fire districts, highlight areas requiring work to ensure safe and effective evacuation in case of an emergency.

The 2024 CWPP forest fuels treatment prioritization process includes U.S. Forest Service (USFS) Lake Tahoe Basin Management Unit (LTBMU) priority areas. Inclusion of USFS land identifies shared stewardship opportunities and demonstrates the collaborative efforts of fire agencies in the Tahoe Basin.

Land Tender Scenarios – Fuels Treatments

Land Tender (decision support software) streamlined collaboration, ensuring that CWPP priorities accurately reflect a comprehensive wildfire protection plan. Utilizing a specialized data curation process and fire modeling from Pyrologix, the CWPP prioritizes fuels reduction treatment areas by evaluating outcome-based metrics of safety and asset protection with the highest impact. Prioritization focused on safeguarding assets such as homes, businesses, utility infrastructure, and other elements of the built environment, as well as health and safety-related areas, including ingress

and egress routes, cellular communication towers, emergency services, air quality, and community fire transmission zones.

While safety and asset protection are the primary factors for prioritization, identified treatment areas may offer co-benefits for other critical objectives, such as recreation, biodiversity, carbon sequestration, water quality, and cultural and scientific values throughout the Basin. The landscape fire behavior analysis utilized curated data from Vibrant Planet, specifically tailored to the Lake Tahoe project region. Detailed methodology is available in Land Tender's Product Guide here.

Prioritization

Following initial models for fuels treatment areas were created using Land Tender, fire experts refined those outputs to ensure they aligned with the priorities of their respective agencies and the community. Treatment areas were then ranked using a tiered system, with Tier 1 representing the highest priority for fuels reduction. As the tier numbers increase (e.g., up to Tier 5 or 10), the urgency for treatment decreases accordingly. Prioritized treatment areas can be viewed in the Landscape Prioritization Dashboard.

All priority treatment areas encompass federal, state, local, and private lands, promoting cross-boundary and shared stewardship opportunities for increasing pace and scale of fuels reduction treatments.

It is important to note that each tier ranks the priority of treatment areas, but not every acre within a treatment area will require treatment. Thus, it is not necessary to treat all Tier 1 areas before implementing projects in Tier 2, and in some cases, it may be more important to treat an area in Tier 2 with a higher restorative return on investment over a project in Tier 1. Additionally, due to the region's geography and vegetation, areas will need retreatment for effective maintenance – so it may be necessary to retreat areas in Tier 1 before moving onto areas in Tier 2. However, these types of considerations will be addressed with the annual TFFT Incident Action Plan that identifies the projects being implemented in the coming year.

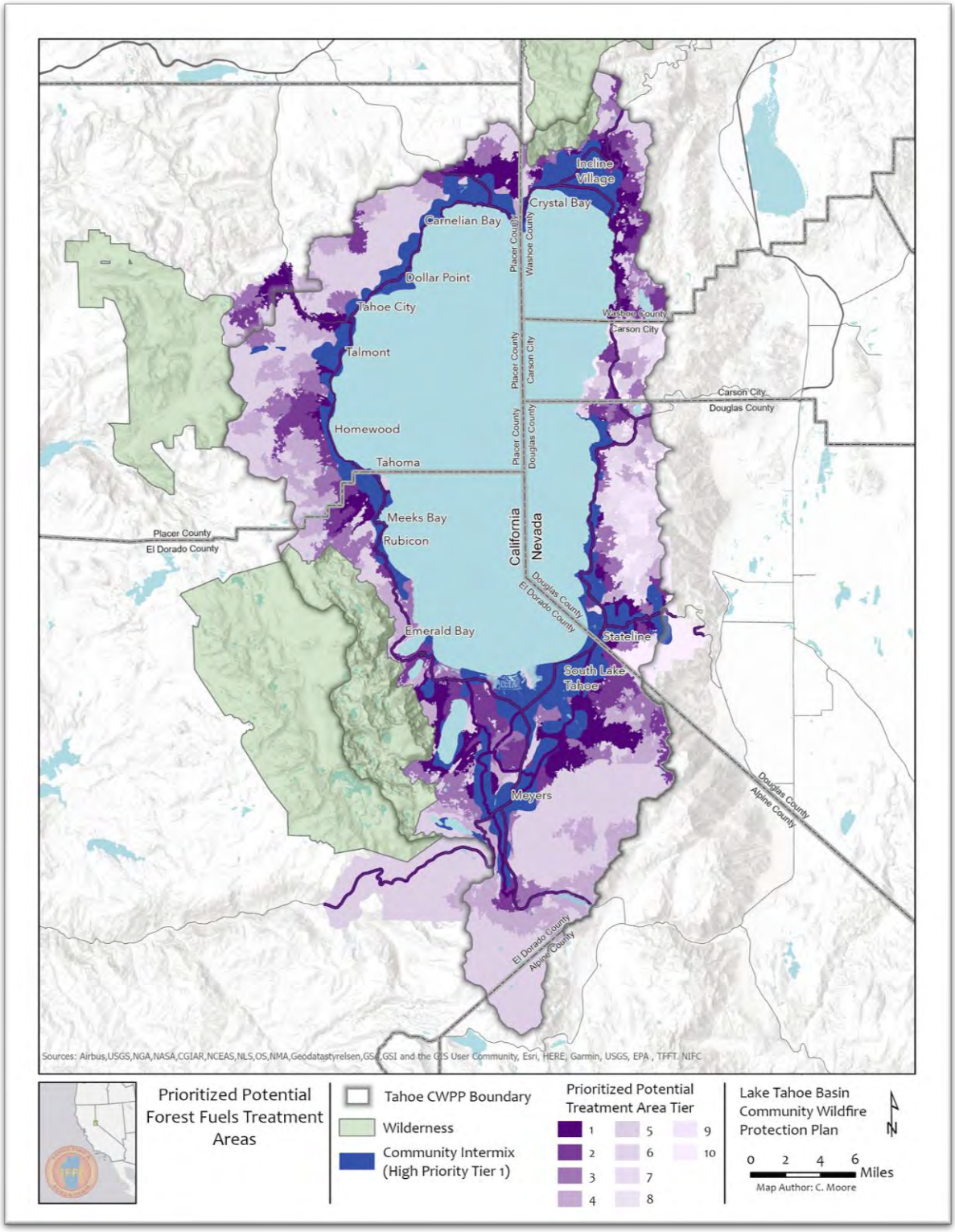
Implementation

Implementation of hazardous fuels reduction projects will follow a flexible and adaptive approach. Projects will be sequenced during planning, considering permitting, budget, and workforce constraints on an annual basis.

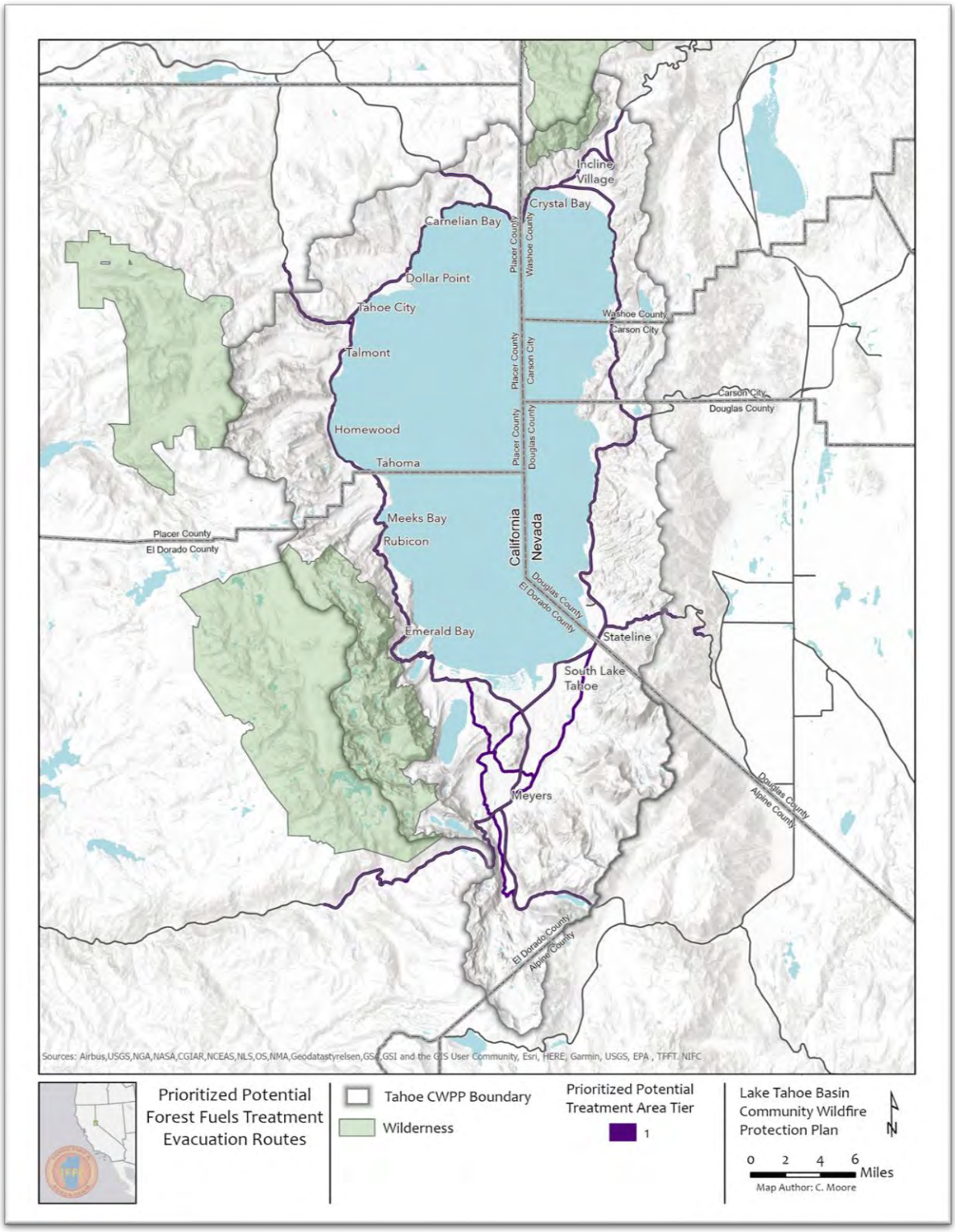
As projects advance to implementation, flexibility will be a key component. Districts and land managers will have the ability to adjust project scopes and schedules in response to real-time conditions and resource availability. This dynamic approach allows for an increased pace and scale of hazardous fuels reduction, enabling a more proactive and responsive management strategy.

Methodologies will be tailored to the specific needs of each treatment area, ensuring that safety, environmental considerations, and logistics are addressed. Ongoing monitoring and adaptive management will evaluate effectiveness and inform necessary adjustments. This strategy ensures efficient project execution while adapting to changing conditions. For more information on how projects are implemented, see Appendix B. Project Implementation Flow Chart.

Map 8: Prioritized Potential Forest Fuels Treatment Areas: Tahoe Basin



Map 9: Prioritized Potential Forest Fuels Treatment Areas: Evacuation Routes



10.4 Monitoring, Tracking and Reporting Fuel Reduction Projects

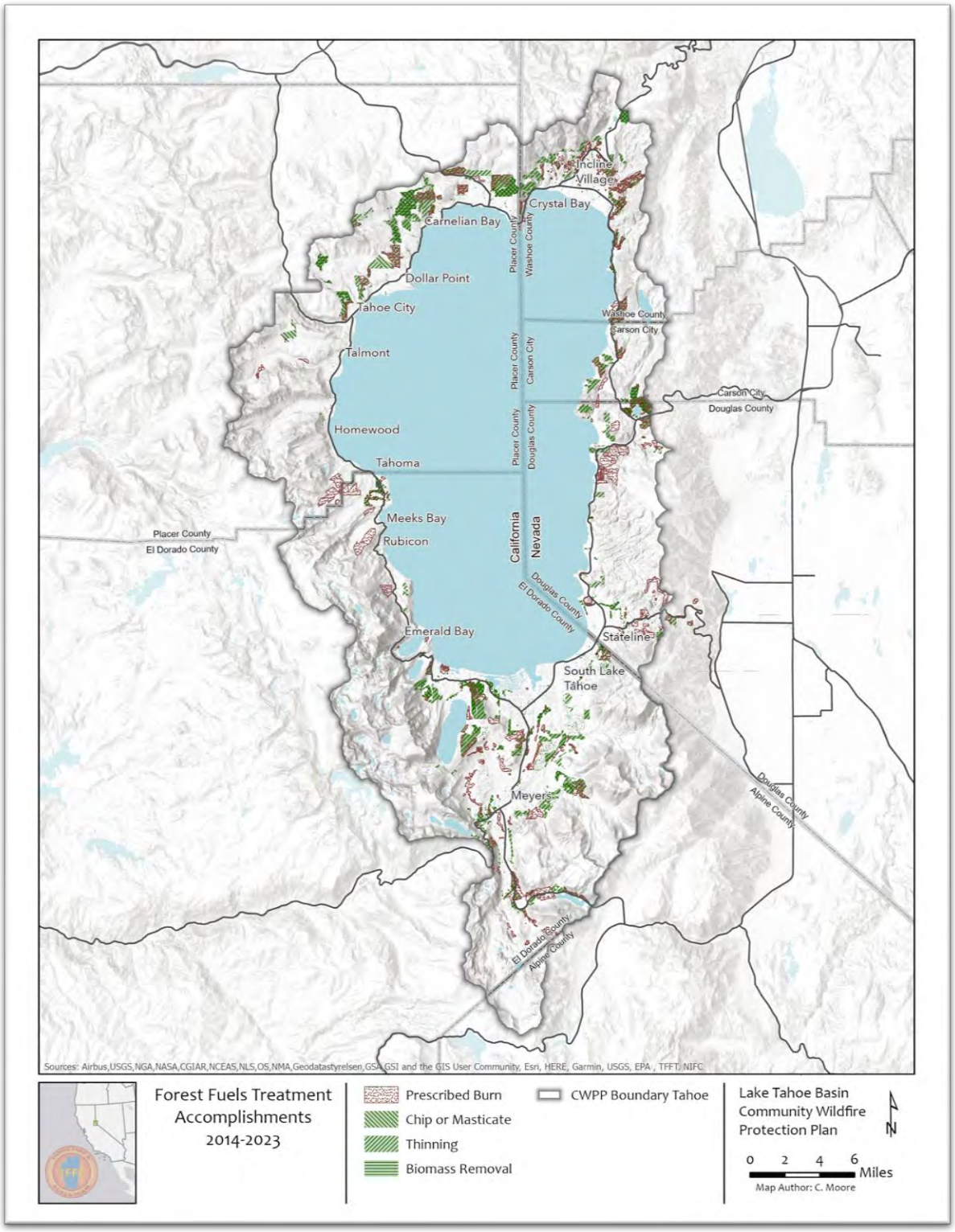
The Tahoe Fire and Fuels Team provides a coordinated, comprehensive, and consistent process to report fuel reduction project planning, accomplishments, and funding sources across all jurisdictions through management of geospatial data and participation in the Lake Tahoe Environmental Improvement Program (Lake Tahoe EIP).

The Lake Tahoe EIP is a partnership of federal, state, and local agencies, private interests, and the Washoe Tribe, created to achieve and maintain the thresholds and meet the intent of the regional plan. Forest management is one component of the hundreds of projects implemented each year, which also include projects designed to improve air quality, water quality, watersheds, habitat, transportation, recreation and scenic resources, and to deliver applied science.

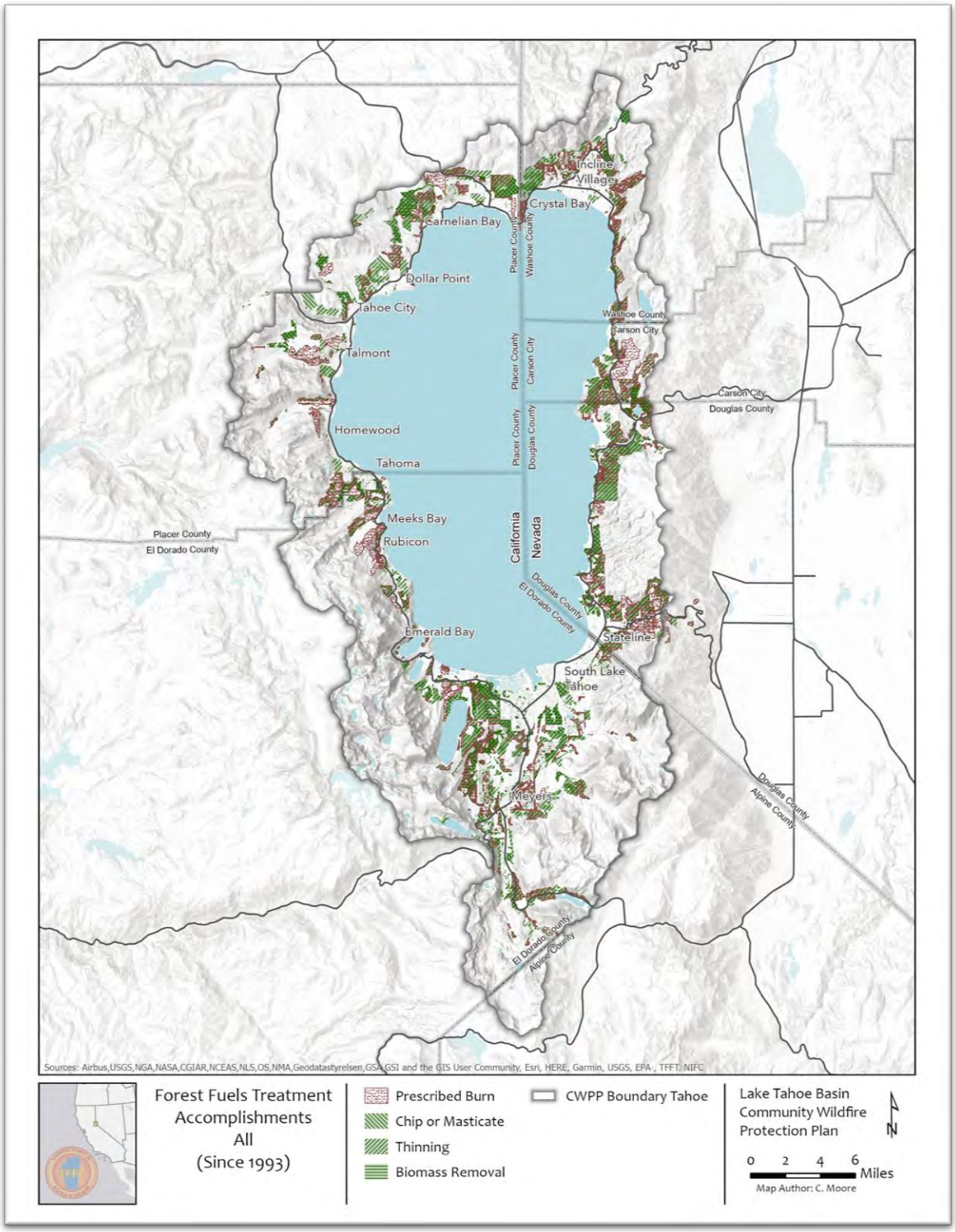
The Lake Tahoe EIP Project Tracker reporting tool is the primary method for tracking, monitoring and reporting fuel reduction projects in the Lake Tahoe Basin. It captures established performance measures for fuel reduction treatments, homeowner defensible space, and the multiple benefits achieved by fuel reduction projects. The tool also provides a basis for sharing information on future desired treatments and developing multi-disciplinary projects that achieve many benefits.

The Tahoe Fire and Fuels Team manages geospatial data (i.e. data for mapping and spatial analysis), and annually creates spatial records of private, state, and local government fuel reduction treatments completed in the previous season. The records are used to update the Lake Tahoe CWPP treatments database, which is available to the public via a link on the Tahoe Living with Fire Website. A spatial record of treatments on federal lands are kept within the Forest Service Activity Tracking Support database, which is similarly structured to the team-managed database and therefore suitable for compilation and comparison with treatments across all lands. Current forest fuels reductions projects and prescribed fire data are collected and displayed to the public on the Tahoe Living with Fire Website. Together, these spatial records form a complementary and substantiating record of accomplishments reported to the Lake Tahoe EIP and are suitable for various reports to multiple groups.

Map 10: Forest Fuels Treatment Accomplishments 2014-2023



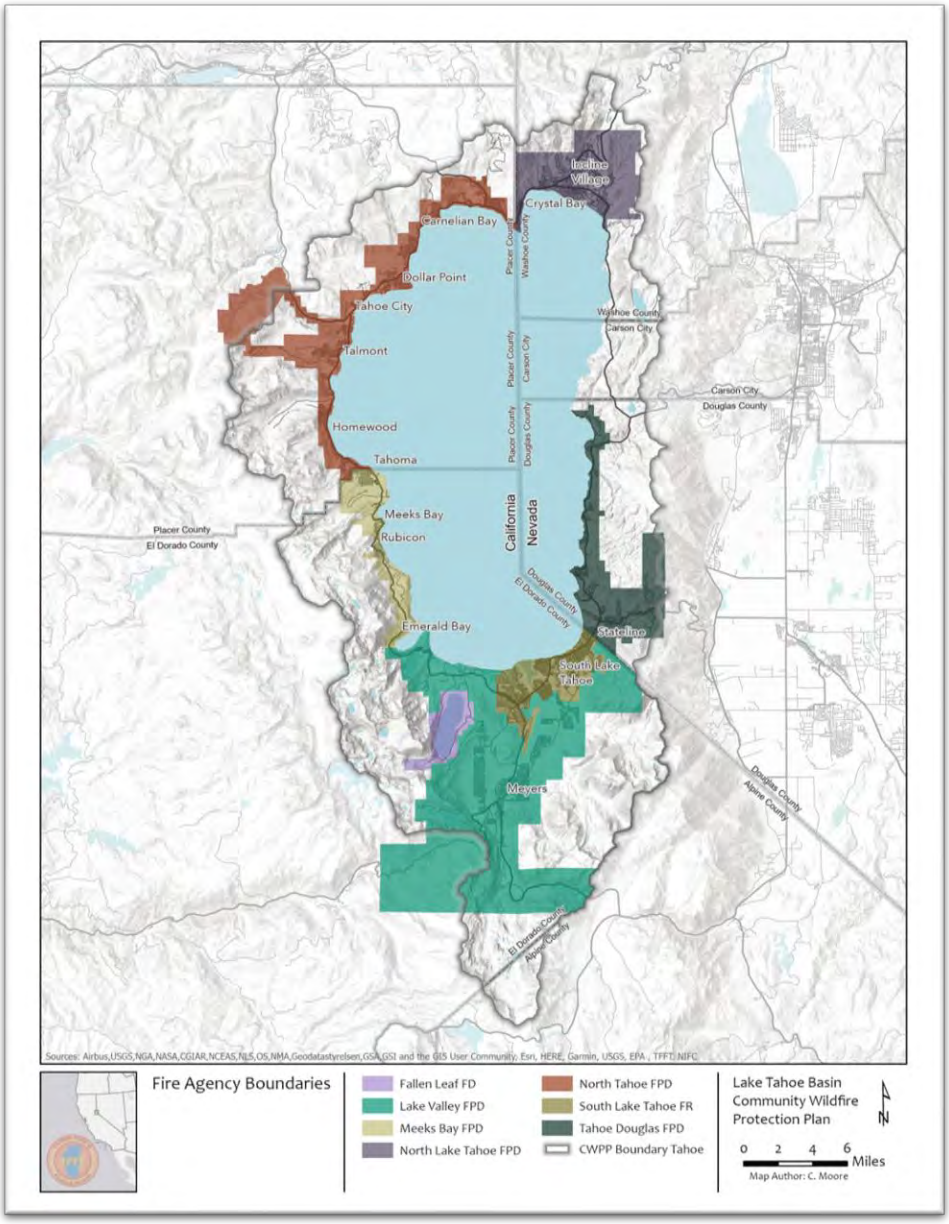
Map 11: Forest Fuels Treatment Accomplishments (Since 1993)



Chapter Eleven: Tahoe Basin Fire Agencies

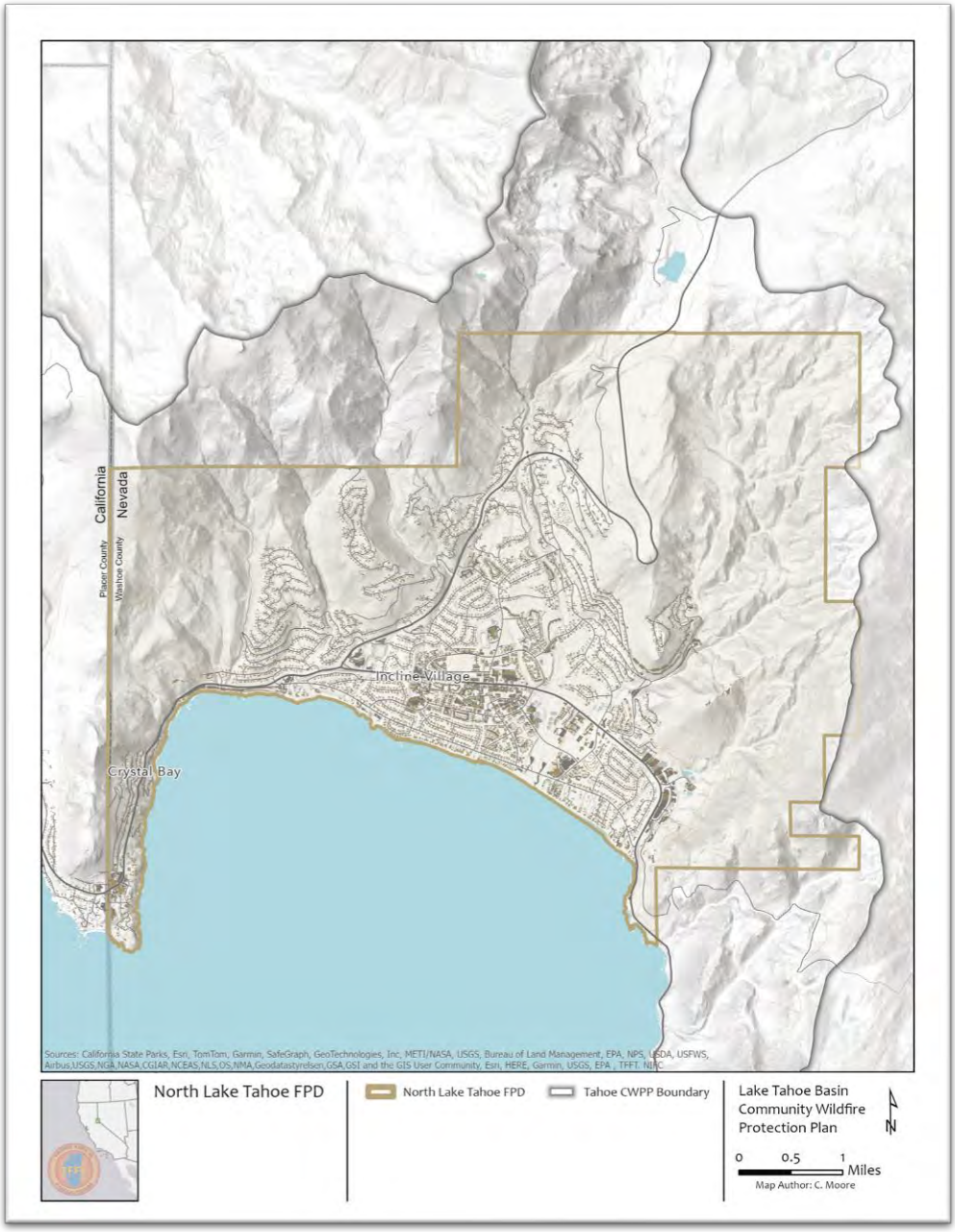
In this chapter, each fire agency conducted a thorough evaluation of its region, assessing community assets, residential structures, preparedness levels, stakeholder engagement, resources, and wildfire mitigation programs. Each agency also conducted a self-assessment, rating factors as low, medium, or high, with these ratings indicated in italicized font under certain headings. The chapter also explores funding opportunities, community outreach initiatives, and specific recommendations.

Map 12: Tahoe Basin Agency Boundaries



NORTH LAKE TAHOE FIRE PROTECTION DISTRICT

Map 13: North Lake Tahoe Fire Protection District Boundary



11.1.1 Community Description

The North Lake Tahoe Fire Protection District (NLTFPD) is a special district in Washoe County, NV, covering 16.4 square miles along the northeast shore of Lake Tahoe. It includes the communities of Crystal Bay (population 179) and Incline Village (population 9,160). Both are listed as communities-

at-risk in the 2001 Federal Register. The district is surrounded on three sides by United States Forest Service (USFS) land (covering 4,660 acres) managed by the Lake Tahoe Basin Management Unit (LTBMU). The USFS also manages 372 acres across over 680 urban lots. These lots were acquired by the USFS through the Santini Burton purchase program.

The State of Nevada manages 136 acres within the district. Thirty-six acres are managed by the Nevada Division of Forestry (NDF) and are within Spooner Lake and Backcountry State Park. The remaining 100 acres are managed by the Nevada Division of State Lands (NDSL) across 347 urban lots, also acquired through the Santini Burton purchase program.

The Incline Village General Improvement District (IVGID) owns and manages 1,500 acres within the fire district. Their land holdings include two golf courses, recreational facilities, and Diamond Peak Ski Resort. There are 780 acres of IVGID property within the Incline Village “green belt”. These forested areas are typically within drainages below neighborhoods and have been the focus for previous fuels management and prescribed fire projects. Ponderosa Ranch LLC (PRLLC) owns and manages 500 acres of forested land east of Incline Village. Lower elevation areas within this ownership have been treated for hazardous fuels. The remaining 2,500 acres are mainly residential/commercial and are private or local government owned. Neighborhoods consist of a mix of single-family homes and multi-family units. These neighborhoods are within the wildland-urban interface (WUI), and many have limited access and egress routes.

11.1.2 Wildfire threat

North Lake Tahoe Fire Protection District is on the north shore of Lake Tahoe with elevations ranging from lake level of 6,230 feet up to over 8,000 feet along the northern neighborhoods near Apollo Way and Jennifer Street. Typical to mountain communities around the west, the district has steep slopes, heavy forest fuels and periodically extreme fire weather. The combination of steep slopes, fuels and fire weather creates a potentially volatile mix that poses a significant hazard to local communities.

11.1.3 Wildfire Response Capabilities

District Rating: Response capabilities

High - Response capability for our community is in excellent shape. We understand our community’s fire history and unique features. Our fire departments are highly trained and prepared specifically for WUI fires, we have addressed any gaps in our response coverage and equipment needs, we are knowledgeable about Incident Command System (ICS), mutual aid agreements are effective, and local crews can perform other forest management activities.

Fire Departments

Incline Village and Crystal Bay are served by North Lake Tahoe Fire Protection District. The USFS Lake Tahoe Basin Management Unit (LTBMU) is responsible for suppressing federal lands on the district's periphery. Nevada Division of Forestry is responsible for suppression on state-owned lands

southeast of the district. The fire district is also served by mutual aid agreements with federal, state, and local agency partners in the region.

NLTFPD is a career agency consisting of 62 year-round responder personnel. Volunteers contribute to district operations through the Community Emergency Response Team (CERT). The district has 61 total employees in the Fuels Division during the summer field season (May-November). All but 16 personnel (Crew/Engine Overhead) from two Type 2IA hand crews and three Type VI engines are seasonal staff (May-November). The Crew Overhead includes two Crew Supervisors, four Crew Fire Captains, and two Squad Bosses, and the Engine Overhead includes three Crew Fire Captains and three Squad Bosses staffed on the district year-round. When not assigned to an incident, these personnel are performing fuels management projects within the district.

All line personnel receive wildland firefighting training, in accordance with, and in most cases exceeding National Wildfire Coordinating Group (NWCG) 310-1 standards. NLTFPD has a training/qualifications database system to ensure maintenance of minimum wildland firefighting qualifications for its personnel. A significant percentage of current department personnel have previous experience working for other wildland firefighting agencies.

Challenges

The drainages below the upper subdivisions in Incline Village are challenging to access quickly because of steep slopes, and the presence of few well-maintained fire roads. The gap has been addressed by implementing extensive and frequent fuels treatments in drainages. Many of the communities within the district are surrounded by wildland fuels on multiple sides and often have a single road for ingress and egress. These isolated communities with poor access present challenges to fire suppression personnel. Evacuating the community during an event can be difficult. The district has addressed this problem by completing fuels reduction projects around most of the at-risk communities and by assisting with defensible space.

The Mount Rose Wilderness area is north of Incline Village and there are limitations on certain suppression tactics, and limited options for fuel reduction. Frequent fuels reduction between the wilderness area and neighborhoods has taken place.

Incident Command System (ICS)

All line personnel, fire crew personnel, and CERT volunteers receive training in the Incident Command System. In addition, other cooperating agencies (Washoe County Sheriff's Department, Nevada State Police Highway Patrol, Nevada Division of Forestry, USFS LTBMU, and other local agencies within the Basin and Northern Nevada) have been trained within the Incident Command System. All department personnel must receive ICS training up to the 200 level and complete FEMA's IS-700 NIMS (National Incident Management System) training.

11.1.4 Community Assets and Resources

Water supply: The drainage surrounding Incline Village communities are owned by Incline Village General Improvement District (IVGID) and contain crucial infrastructure for delivering water to the community, including storage tanks and pump stations. The drainages feed First, Second, Wood,

Third, Incline and Mill Creeks, which all drain directly into Lake Tahoe. To mitigate the risk to watersheds, IVGID devotes $200,000 annually to forest management and wildfire risk reduction projects.

Utilities: There are several high voltage lines that provide power to the district that enters the Basin through the WUI. Power is also distributed throughout the district through above ground power lines. All above ground infrastructure is at risk from catastrophic fire. In 2020, the district contracted NV Energy for resources to reduce hazardous fuels near and around utility infrastructure.

Public Facilities: The district is in the unincorporated area of Washoe County and most government services such as general services, law enforcement, and schools are in the central commercial area of Incline Village. This area is the least exposed to wildfire threat in the district, however areas of unmodified wildland vegetation and properties lacking defensible space remain vulnerable to ember ignition.

Recreation Areas: Spooner Lake and Backcountry State Park, Diamond Peak Ski Resort, golf courses, the Tahoe Rim Trail, Flume Trail and other hiking and biking trails are in the district. The State Park has received extensive fuels reduction treatments and Diamond Peak Ski Resort has received some. The trail areas closest to homes have received treatments.

Cultural Sites: Incline Village and Crystal Bay contain rich cultural resources from the logging era, including remnants of the Incline Tramway. Resources are protected during project implementation, but otherwise they have not been directly considered for mitigation activities.

11.1.5 Residential Structures and Assets

District Rating: Residential preparedness

High - About 50-75% of our at-risk residences have and maintain effective mitigation practices, meaning that more than half of our residential WUI areas are or are very prepared for the next wildfire.

Residential organizations

There are approximately 100 HOAs in Incline Village and Crystal Bay that jointly manage common area properties. The largest include: Stillwater Cove, Crystal Shores East and West, Crystal Shores Villas, Red Cedar, Toepa, Village Ct, Royal Pines, Mt Brook Station, Southwood Pines, Creekside, High Sierra, Forest Flower, Alta Village, Forest Pines, Village Highlands, McCloud, Incline Pinnate, 999 Lakeshore, 1000 Lakeshore, Country Club Villas, Deer Creek, The Glen, Tahoe Racquet Club, Pinecone Circle, Mountain Shadows, Ski Way, Alpine Terrace, Tyrolia, Tyrolian Village, Bitterbrush I and II, Tahoe Chapparal, Third Creek, The Pointe, Golf Course Villas, Montclair, Woodmere, Fairway Park, Woodminster, Incline Pines, Tahoe Palisades, Peepsight Manors, Incline Creek Estates, Incline Crest I, II and III, Northwood Estates, Incline Manor, Woodstock, and All Seasons.

- 50-74% of homes have defensible space.
- 25-49% of homes have hardened structural features that address home vulnerabilities such as decks and attachments, sidings, vents, and foundations.

11.1.6 Stakeholder Engagement

District Rating: Engagement from landowners, land managers and stakeholders

High - Most landowners are engaged, they understand their risk, and mitigation occurs through hazardous fuels removal, defensible space, and home hardening efforts. Additional stakeholders are identified, and their concerns are being addressed in the planning process. The district has goals to increase landowners, land managers, and stakeholder engagement. Efforts are on-going utilizing numerous different platforms and programs.

Public and private landowners and/or land managers that are actively engaged in wildfire mitigation activities include Incline Village General Improvement District, Nevada Division of State Lands, Nevada State Parks, Nevada Division of Forestry, USFS LTBMU, Washoe County, NV Energy, Washoe Tribe of Nevada and California, and Ponderosa Ranch LLC.

11.1.7 Resources and Strategies

Zoning ordinances, building codes, regulations, or rules for fire mitigation

The district has adopted the 2018 International Wildland-Urban Interface Code along with NLTFPD Resolutions 18-1, 18-2, and SOG #700.01. The codes are enforced on all permitted building projects. It is currently enforced when remodels or other activities such as change of occupancy or use require compliance with the current code.

The surrounding community has useful and strategic discussions within their land use, zoning, building, fire, and other relevant public agency departments to determine wildfire risk when approving new development.

Wildfire Mitigation Risk Reduction Programs

NLTFPD has had a program conducting wildfire risk reduction since the mid 1990's.

Defensible Space Evaluations

Inspections are solicited, complaints, curbside, or required as part of the building permit process. The program provides education to property owners on how to create defensible space on their property. Tree removal permits are also offered. The target goal is to inspect all properties with active building permits and respond to all requests and complaints. A future goal is to expand enforcement inspections to increase compliance. Since 2018, NLTFPD has inspected over 3100 properties. Currently activities are funded through the Tahoe Resource Conservation District's (Tahoe RCD) Fire Adapted Communities Program (FAC). The FAC program is funded due to the Southern Nevada Public Land Management Act (SNPLMA).

Residential Curbside Chipping

Upon request, local crews provide chipping service at the curbside to help dispose of branches, shrubs, and small trees removed when creating defensible space. The service is free to the property owner (paid for through SNPLMA grant). Due to the lack of biomass outlets, NLTFPD is currently

unable to remove wood chips from the property but hopes to reintroduce wood chip removal in the future. Since 2018 NLTFPD has serviced over 1500 properties with curbside chipping. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

Curbside Yard Waste Recycling

Waste collection customers receive 72 stickers that can be placed on bags of pine needles or other green waste and are picked up at the curb in May through July. The program encourages annual pine needle cleanup by providing an easy way to remove the material. The program is managed by Waste Management and sponsored by Incline Village GID's Waste Not program.

Community Workdays

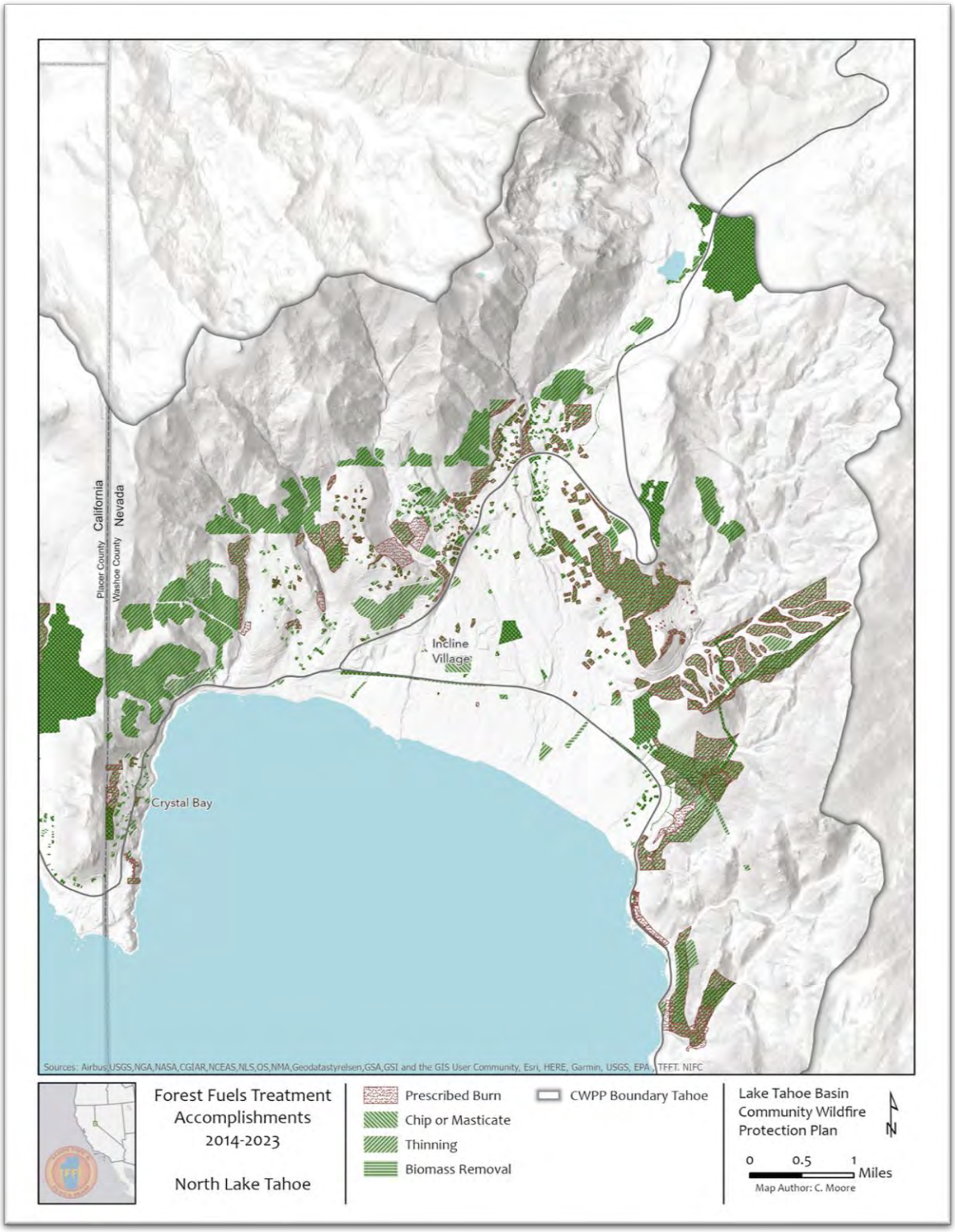
NLTFPD aids neighborhoods that are organizing to address their wildfire risk by providing supplies and presentations to local neighborhood events. The program encourages communities to make connections and take action. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

Fuels Reduction Projects

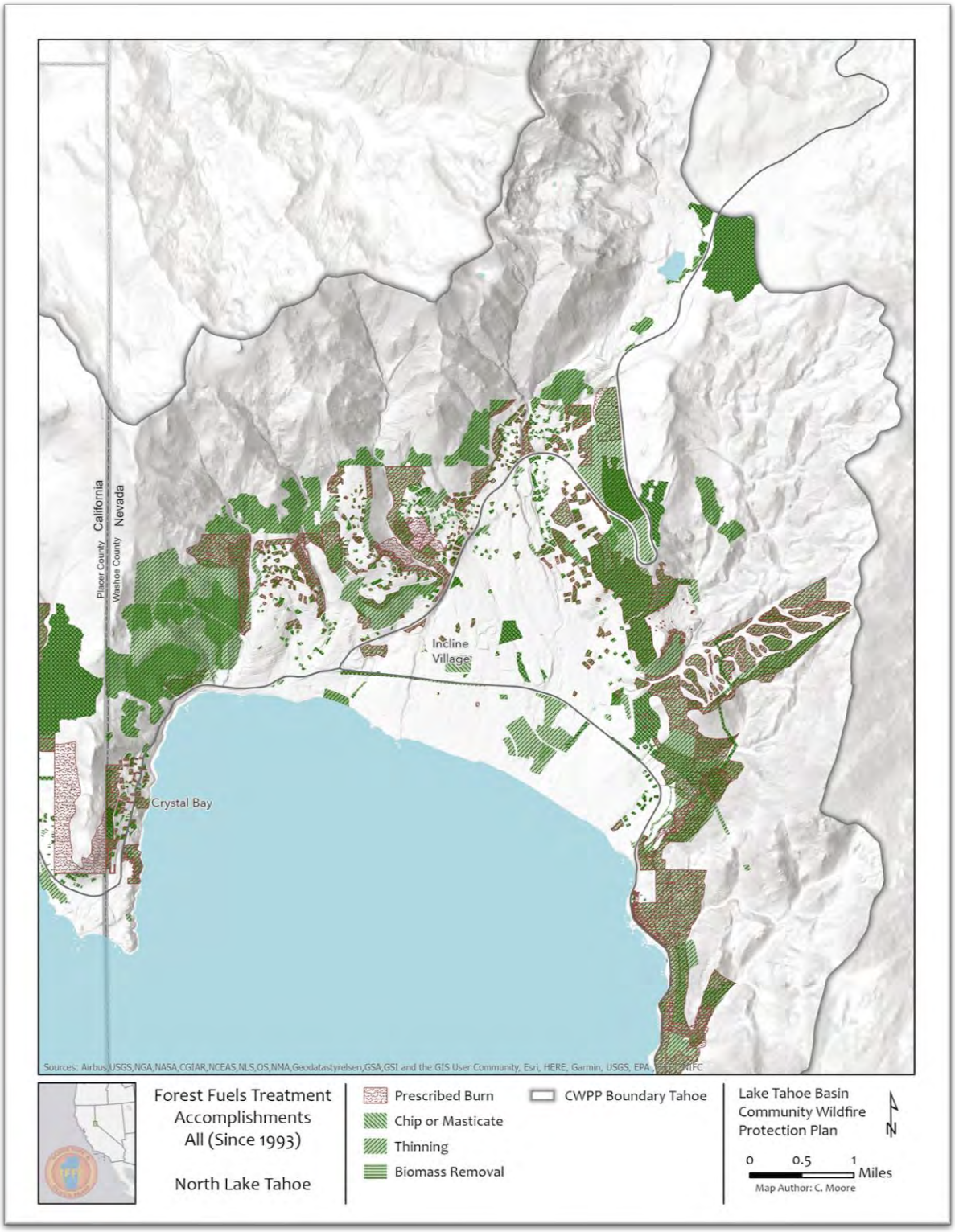
NLTFPD fuels personnel implement hazardous fuels reduction projects on surrounding land and within the communities of Incline Village and Crystal Bay, NV. The goal is to have all land within the WUI to meet fire behavior objectives. The target is to transition to complete reliance on prescribed fire to maintain fire behavior modifications in treatment areas. Over 2,000 acres have received initial treatment to date, including over 800 acres of understory burning. The work is funded through a combination of grants, landowner contributions and fire district match.

The district has partnered with and contracted fuels reduction efforts with NV Energy to implement project work within the utility companies' powerline corridor and other utility infrastructure locally in the Basin and throughout Nevada.

Map 14: NLTFPD Forest Fuels Treatment Accomplishments (2014 - 2023)



Map 15: NLTFPD's Forest Fuels Treatment Accomplishments (Since 1993)



Personnel dedicated to implementation

The district has a robust wildland fire mitigation program that employs a full-time Division Chief, Forester, Fuels Management Officer, Fuels/Prevention Specialist, two Hand Crew Supervisors, seven Crew Fire Captains and seven Squad Bosses, who develop and complete the planning and implementation of defensible space and fuels reduction projects in the district. Seasonally the district employs 45 crew members, depending on funding and work availability. Typically, two Type 2IA hand crews and three Type VI engines are fully staffed during the wildland fire season (May-November). In addition to wildland-dedicated staff, the district employs a Public Education/Information Officer, a Fire Marshal, and a Fire Inspector.

Funding Sources

Currently the fuels reduction program derives funding from ad valorem tax revenue, grant funding, wildland firefighting contracts, and fee for service for fuels reduction assistance by hire. The total of these funding sources totals approximately $4.8 million per year. Annually, $450,000 is committed from ad valorem tax revenue to support full-time positions. IVGID commits $200,000 annually to support fuel reduction projects on district greenbelt lands.

Approximately $500,000 is derived annually from grant funds, including Wildfire and Forest Stewardship through the Nevada Division of Forestry, Southern Nevada Public Lands Management Act and Lake Tahoe Restoration Act funding through the Bureau of Land Management and US Forest Service. Approximately $2.5 million is derived annually from contracts with regional partners, including the US Forest Service, Tahoe RCD, NDSL, NV Energy, North Tahoe Fire Protection District, and private landowners/managers. The remainder of the funding is derived from wildland firefighting contracts. All these sources support hazardous fuels reduction, public education/outreach, and defensible space efforts.

Funding for the fuels reduction program is stable in the short term with good prospects for long-term stability. Ad valorem tax funding and IVGID funding are stable and predictable. Currently, grant funding for fuels reduction in the Basin is stable, however that can change at any time.

Long-term funding for fire mitigation

In the past, the fuels reduction program has been heavily reliant on grant funding and is now trending to be more reliant on contracts and cooperative agreements with partnering agencies and land managers, and revenue from fire responses to provide a full season workload annually.

11.1.8 Outreach

District Rating: Public Engagement

Medium - We could be doing more to engage with the public including all population demographics. The public was engaged in the CWPP planning process and its ongoing implementation. Our communications are not used to the highest degree they could be during disaster phases. Second homeownership and vacation rental properties make engagement with some groups difficult.

District Rating: Communities understanding of the area's fire risk

High - We have done frequent surveys or other information gathering and are confident that most community members understand the local fire history and risk (even if they are not engaged in mitigation).

Outreach Tactics

Wildfire preparedness is frequently advertised in the local paper's "Chief's Corner" column, local news networks, multiple social media platforms, PA videos, and direct public interaction. All residential utility customers receive mailers annually advertising assistance programs and events. The district's Public Information/Education Officer frequently applies for and receives funding for regional public service announcements. Washoe County Regional Notification System is also utilized. NLTFPD is also an active member in the Fire Public Information Team (FirePIT) which is a committee of the Tahoe Fire and Fuels Team consisting of public information officers from stakeholder agencies around the Lake Tahoe Basin. The team organizes Lake Tahoe Wildfire Awareness Month and consistent outreach and awareness messaging to visitors and residents.

Vulnerable Populations

The district has many second homeowners and vacation rentals comprising of over 50% of home ownership in the district. Visitors using vacation homes may not be familiar with local evacuation procedures. In many cases, non-residents can be difficult to reach, as typically they do not have local home phones with reverse 911. About 15% of the resident population is over 65 years of age, and some may require special assistance during evacuation or implementing defensible space on their property. The district engages the areas vulnerable populations through social media, utility bill inserts, and through large email distribution lists the short-term rental and HOA property owners.

11.1.9 Recommendations

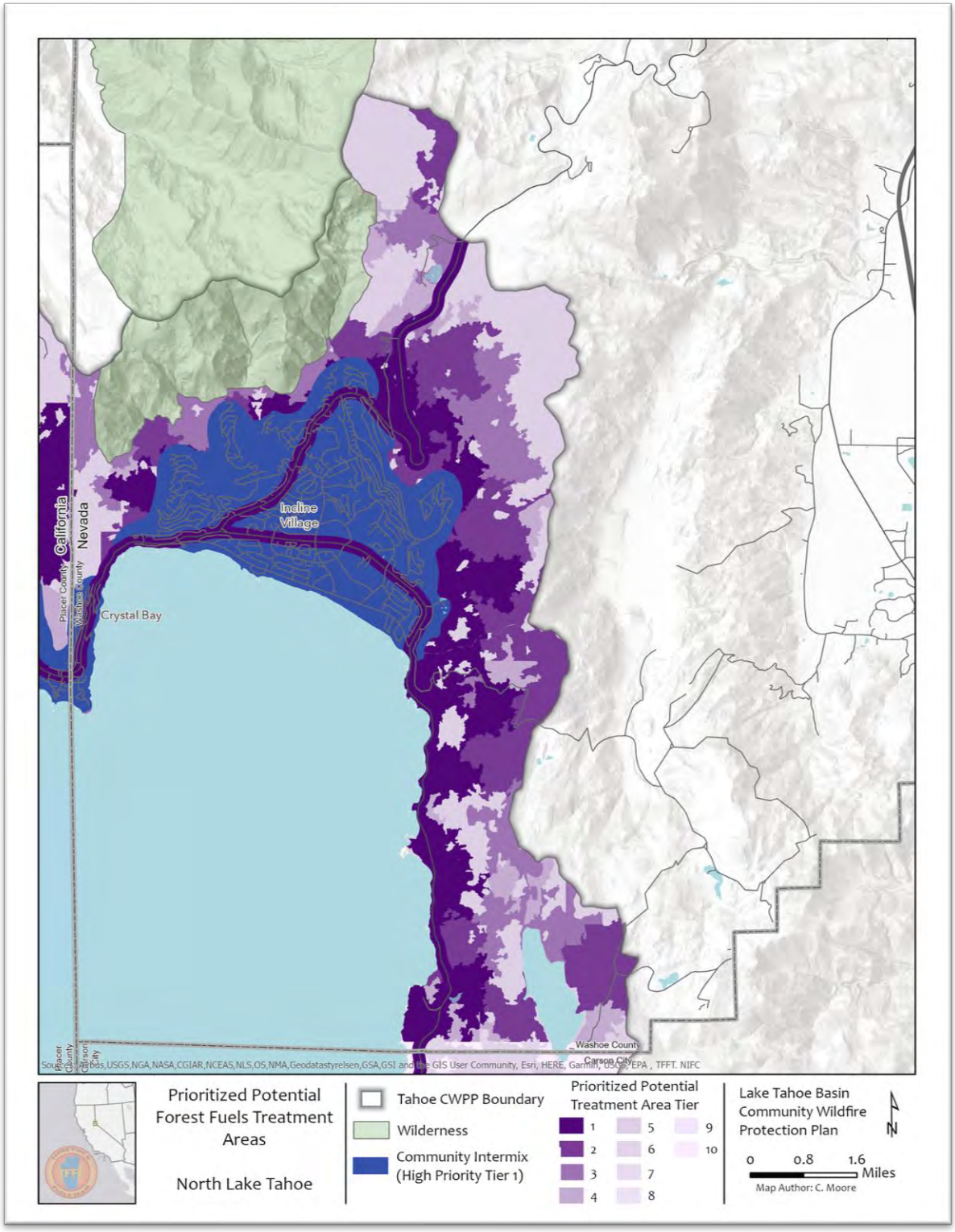
Districts utilized their own district ratings and public feedback from the Basin-wide survey to formulate strategic recommendations tailored to their respective areas, aimed at aligning with the goals outlined in the National Cohesive Wildland Fire Management Strategy:

NORTH LAKE TAHOE FIRE PROTECTION DISTRICT	FIRE ADAPTED COMMUNITIES	SAFE, EFFECTIVE, RISK-BASED WILDFIRE RESPONSE	RESILIENT LANDSCAPES
NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY	**Human populations and infrastructure are as prepared as possible to receive, respond to, and recover from wildland fire**	**All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions**	**Landscapes, regardless of jurisdictional boundaries, are resilient to fire, insect, disease, invasive species, and climate change disturbances, in accordance with management objectives**
RECOMMENDATIONS	• Continue to work with the Tahoe Fire Public Information Team (Fire PIT) to develop educational campaigns and events to engage both residents and visitors. • Create additional Spanish outreach materials to broaden community engagement and inclusivity. • Support development of ignition-resistant construction inspection programs and other identified programs including opportunities to assist property owners with home hardening efforts. • Seek funding to invest in advancing software such as Fire Aside (defensible space inspection software) and others. • Continue to improve defensible space inspections and enforcement protocols. • Develop methods to reach renters and absentee homeowners with key messages.	• Pursue funding to support existing wildland fire hand crews, equipment, and resources. • Pursue emerging technology for fire detection and patrolling. This includes software for early detection of wildfires such as Alert West Cameras. • Continue or improve mutual aid efforts within the Basin amongst all resource agencies	• Develop and support educational opportunities regarding vegetation management. • Develop educational campaigns and outreach on prescribed fire. • Support agencies partnering and working together to address all jurisdictional areas in a holistic approach to address the larger landscape.

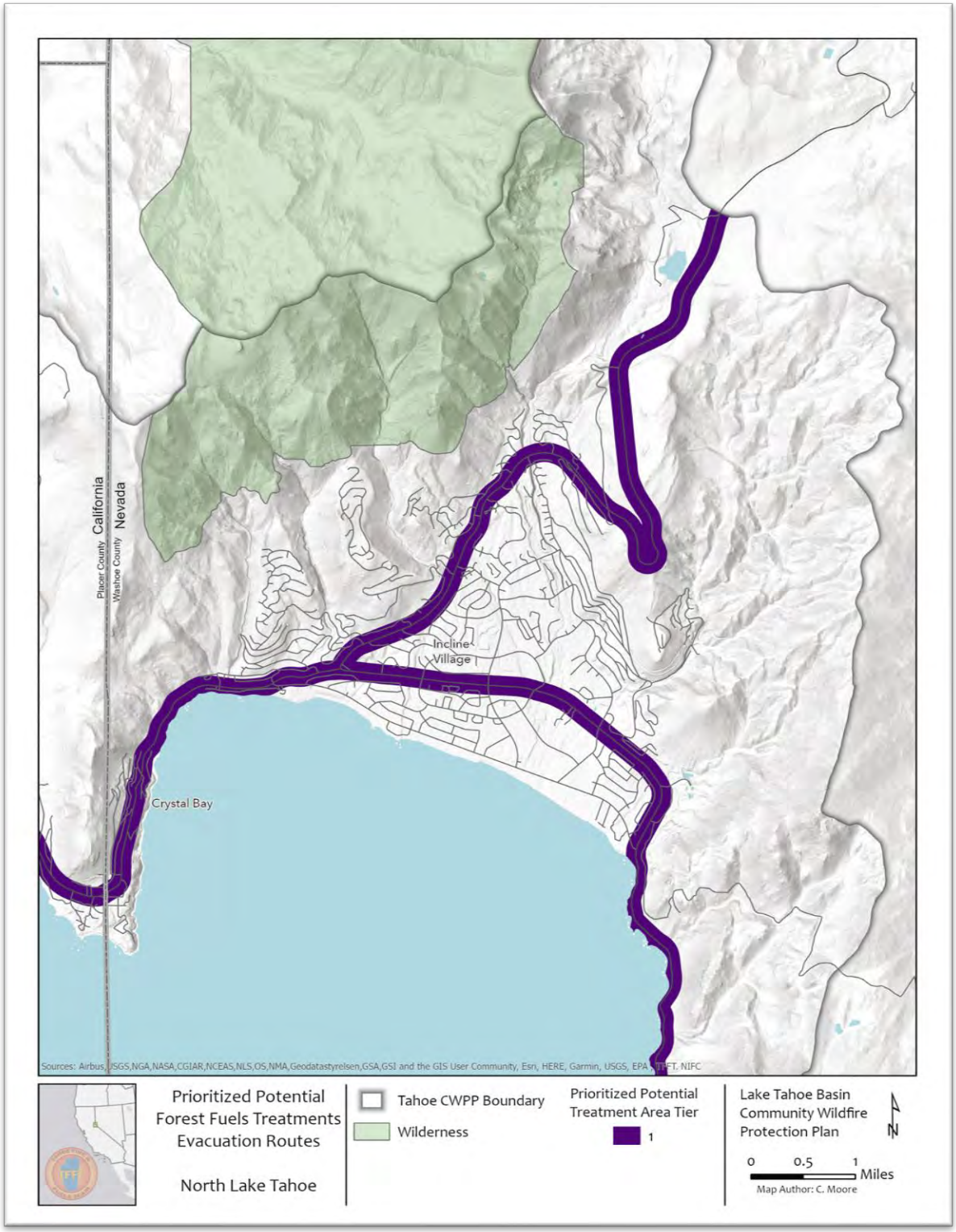
Table 5: NLTFPD's recommendations to align with "Strategy" goals

11.1.10 Prioritized Potential Forest Fuels Treatment Areas

Map 16: NLTFPD Prioritized Potential Forest Fuels Treatment Areas

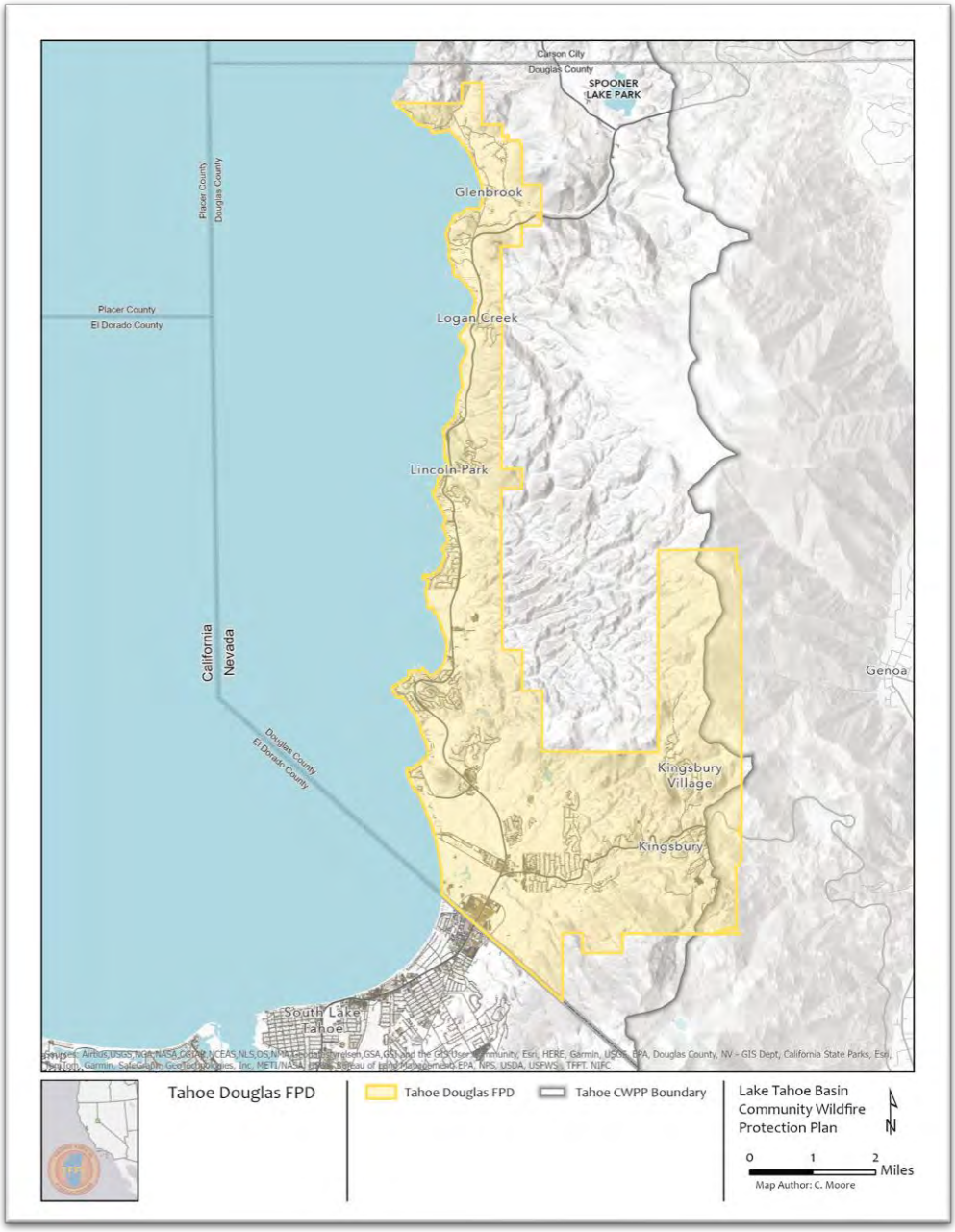


Map 17: Prioritized Potential Forest Fuels Treatments: Evacuation Routes (North Lake Tahoe)



TAHOE DOUGLAS FIRE PROTECTION DISTRICT

Map 18: Tahoe Douglas Fire Protection District Boundary



11.2.1 Community Description

Tahoe Douglas Fire Protection District (TDFPD) is a special district in the Tahoe Township portion of Douglas County, Nevada. The district covers about 17.7 square miles on the southeast shore of Lake Tahoe. The district extends from the top of Kingsbury Grade to the west to Stateline, then north to

Glenbrook. The district is bounded on its western side by Lake Tahoe and is surrounded by U.S. Forest Service or Nevada State Parks property on the north, east and south. The district shares the tourist resort area with the City of South Lake Tahoe. Within the district, the U.S. Forest Service owns 5,527 acres and the State of Nevada 642 acres. Local government and agencies and private property ownership accounts for the balance of 5,031 acres.

The district includes Glenbrook, Zephyr Cove, Kingsbury, and Stateline, all listed as "at-risk" in the 2001 Federal Register. Communities are mainly composed of dense single-family homes with a mix of multi-family units in some neighborhoods. Most communities were developed within the wildland-urban interface (WUI) and by terrain, location, and/or limited road access are relatively isolated. Many of the communities only have a single road for ingress and evacuation, many of which are built to existing non-conformant standards. The population of permanent residents is around 5,500 people to 6,700 people, however, in the summer months the district can serve over 25,000 on an average day.

11.1.2 Wildfire threat

The district is on the east shore of Lake Tahoe with elevations ranging from lake level of 6,230 feet up to over 8,000 feet along the eastern slopes of Sierra Nevada Mountains. Typical to mountain communities around the west, the district has steep slopes, heavy forest fuels and periodically, extreme fire weather. The combination creates a potentially volatile mix that poses a significant hazard to local communities.

The district is on the west slope of the high ridge separating the Lake Tahoe Basin from Carson Valley and the Great Basin to the east. The steep ridge is frequently exposed to strong southwesterly prevailing winds that typically drive extreme fire behavior in the region. The district is between the cool Pacific summer air mass and the warmer Great Basin air mass. The ridges are regularly exposed to diurnal winds that can be strong and can drive significant fire behavior without frontal wind influences. The district's location on the east shore of Lake Tahoe creates near perfect wind alignment for the typical southwest winds that drive extreme fire weather in the region.

11.2.3 Wildfire Response Capabilities

The district is an all-risk fire protection district with structure fire, wildland fire, EMS, hazardous materials response, explosive ordinance disposal, water rescue and high angle rescue capabilities. The district employs a seasonal Type 2-IA hand crew that completes fuels reduction projects and responds to wildland fires throughout the region. During a typical year, TDFPD responds to approximately 2,000 calls from four fully staffed fire stations.

District Rating: Response capabilities

High - Response capability for our community is in good shape but there are a few areas that require specific improvements to maximize our response before the next wildfire event. These could include one or two of the following: increasing our level of WUI response training, meeting additional equipment needs, improving knowledge of ICS, implementing additional mutual aid agreements, increasing our support for cross-training of local crews, and/or improving relationships between fire

departments and local cooperators.

Fire Departments

Tahoe Douglas Fire Protection District operates four fire stations across Lake Tahoe's southern and eastern Nevada shores:

- Station 21 covers the upper half of Kingsbury Grade and the Nevada side of Heavenly Valley Ski Resort. It houses three personnel with access to a Type I engine, Type III brush truck, paramedic ambulance, and patrol vehicle.
- Station 22 is home to the Zephyr Crew, a wildland fire and fuel reduction team of 35-50 seasonal firefighters.
- Station 23, the main station with the highest call volume, houses five personnel, a battalion chief, assistant chief, fire chief, and administrative staff. Resources include Type I engines, Type III brush trucks, paramedic ambulances, and a ladder truck.
- Station 24 serves Zephyr Cove, housing four personnel with a reserve Type I engine, paramedic ambulance, fireboat, Type 5 brush truck, light rescue squad, and rescue jet skis.
- Station 25 covers Glenbrook and its surrounding areas, with up to seven personnel and resources including a Type I engine, Type 5 brush truck, water tender, and an Explosive Ordinance Disposal heavy responder truck.

Challenges

Mountain roads and frequent periods of tourist-related traffic congestion can make rapid response more challenging for the district.

11.2.4 Community Assets and Resources

Water supply: There are currently nine independent water systems within the district, most of which take surface water from Lake Tahoe. Several of the districts also have wells with lake water backup. These water systems use pumps to lift water to tanks and this infrastructure can be at risk from catastrophic fire.

Utilities: There are several high voltage lines that provide power to the district that enter the Basin through the WUI. Power is also distributed through above ground power lines which are also at risk of catastrophic fire.

Public Facilities: The district is in the unincorporated area of Douglas County and most government services such as general services, law enforcement, jail and courts are in the commercial core area of Stateline. This area is the least exposed to wildfire threat in the district. However, the offices and infrastructure of nine water systems, Douglas County Library, three schools, the offices and infrastructure of three sewer collection and/or treatment districts and Zephyr Cove County Park facilities are all at significant risk.

Recreation Areas: Van Sickle Bi-State Park, Heavenly Ski Resort, the Tahoe Rim Trail, and a network of hiking and biking trails are all in the district. It is also home to Edgewood Golf Course and the

Casino Resort area of Stateline. Extensive fuels reduction treatments have been conducted on the public recreation lands particularly within the WUI. These areas typically see several fires start annually from human causes and are high-risk areas for fires that could jeopardize communities.

Cultural Sites: Glenbrook and Zephyr Cove contain cultural resources from the logging era, including remnants of the Glenbrook Mill site and several flumes. Resources are protected during project implementation, but otherwise have not been directly considered for mitigation activities unless the resource is also near a community.

11.2.5 Residential Structures and Assets

District Rating: Residential preparedness

Medium - While there have been great strides in preparing our communities for wildfire events, there are many factors that would keep the district from succeeding in effective wildfire suppression. Factors include the lack of awareness and education about wildfire suppression techniques among the residents. Many may not be aware of the proper methods to prevent or suppress wildfires, which can hinder effective response efforts, especially if the residents are transient occupants. Also, the district may face challenges in terms of limited resources and wildfire suppression funding. Without sufficient financial support, it may be difficult to acquire necessary equipment, implement preventive measures, and effectively coordinate response efforts. Some residents do not have the funds to treat their properties for effective wildfire suppression tactics to be effective.

Residential organizations

There are over 20 established HOA's in the district. The district has good working relationships with most of the HOA's and works together to organize events and educational opportunities regarding fire prevention.

- 50-74% of homes have defensible space currently; however, with frequent buying and selling of homes, this can change year by year.
- 50-74% of homes have hardened structural features, however, with frequent buying and selling of homes, this can change year by year.

11.2.6 Stakeholder Engagement

District Rating: Engagement from landowners, land managers and stakeholders

Medium - With the transient nature of the homeowners in the district, it is difficult to reach all homeowners.

Public and private landowners and/or land managers actively engaged in wildfire mitigation activities include USFS LTBMU, State of Nevada, Douglas County, and private landowners, making up most of the district's ownership. The USFS owns and manages most of the land in TDFPD.

11.2.7 Resources and Strategies

Zoning ordinances, building codes, regulations, or rules for fire mitigation

Douglas County and Tahoe Douglas Fire have adopted the 2018 International Wildland-Urban Interface Code and the 2018 International Fire Code. Local codes are enforced through Douglas County Title 20 Appendix B and an interlocal agreement with the Nevada State Fire Marshal. Wildfire risk is addressed in future community growth through local building and fire codes.

Wildfire Mitigation Risk Reduction Programs

Defensible Space Evaluations

The district conducts curbside (more than 600 per year) and solicited inspections. The district has 50-74% compliant inspections every year. Currently activities are funded through the Tahoe Resource Conservation District's (Tahoe RCD) Fire Adapted Communities Program (FAC). The FAC program is funded due to the Southern Nevada Public Land Management Act (SNPLMA).

Residential Curbside Chipping

The Zephyr Crew runs a community chipping program from approximately June through October. Crews will visit homeowners' property free of charge (paid for through SNPLMA grant) to dispose of cut vegetation that reduces fuel loads and wildfire hazards. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

Community Workdays

Several weekends in the summer are dedicated to completing defensible space on private lots with TDFPD's Wildland Fire & Fuels Division, the Zephyr Fire Crew. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

Compost Your Combustibles - Green Waste Site

Two months during the summer season, a site to dump free green waste is supplied by TDFPD and available to residents. The district is also working with NV Energy and the USFS LTBMU to create fuel breaks around developments throughout the district. When the work is completed, they will move into neighboring jurisdictions with the same goal.

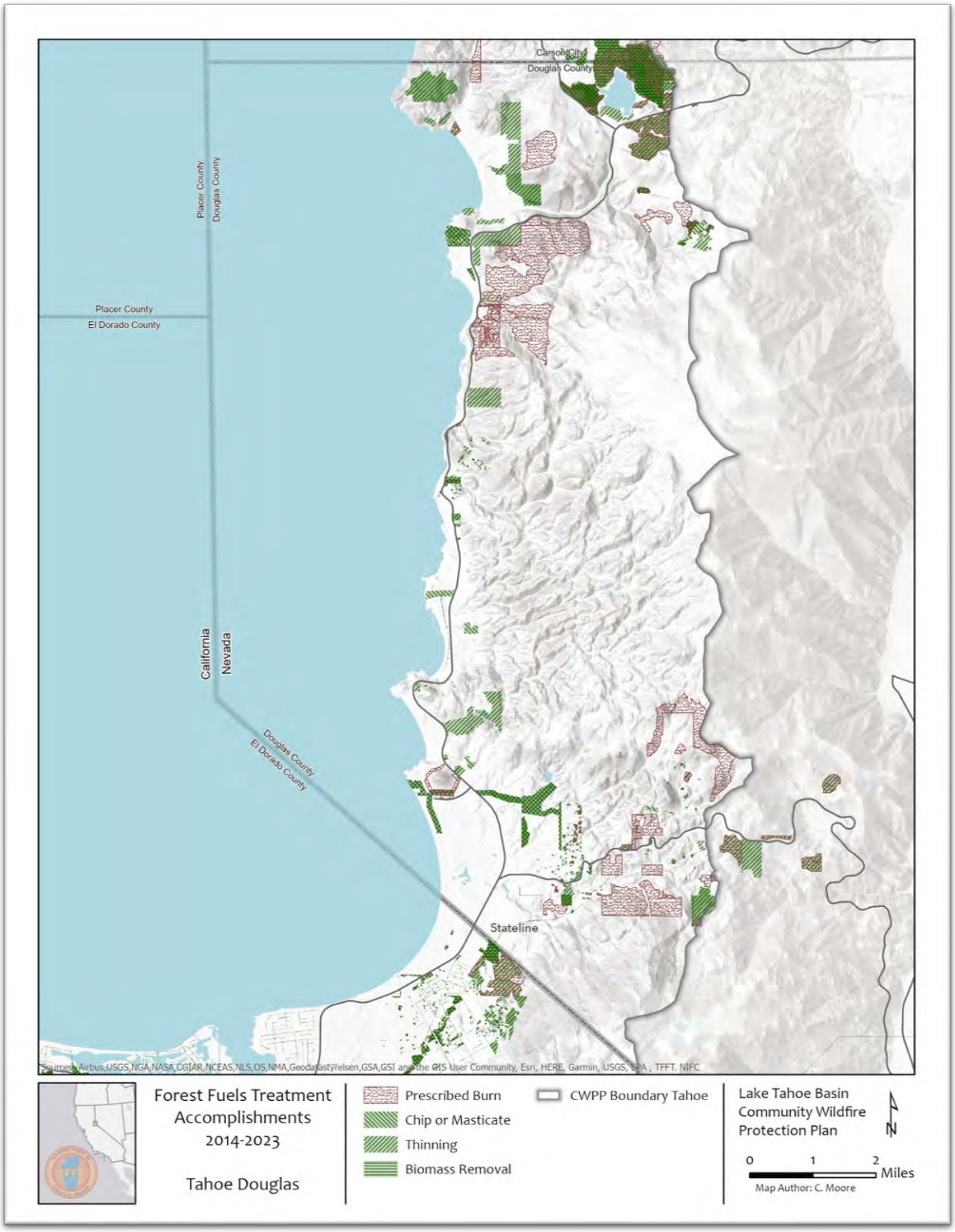
Personnel dedicated to implementing plans and programs

Over 60 personnel are dedicated to implementing wildfire related plans and programs for the district. All local fire departments, the USFS LTBMU and stakeholders are part of the TFFT, which ensures all projects are being maintained.

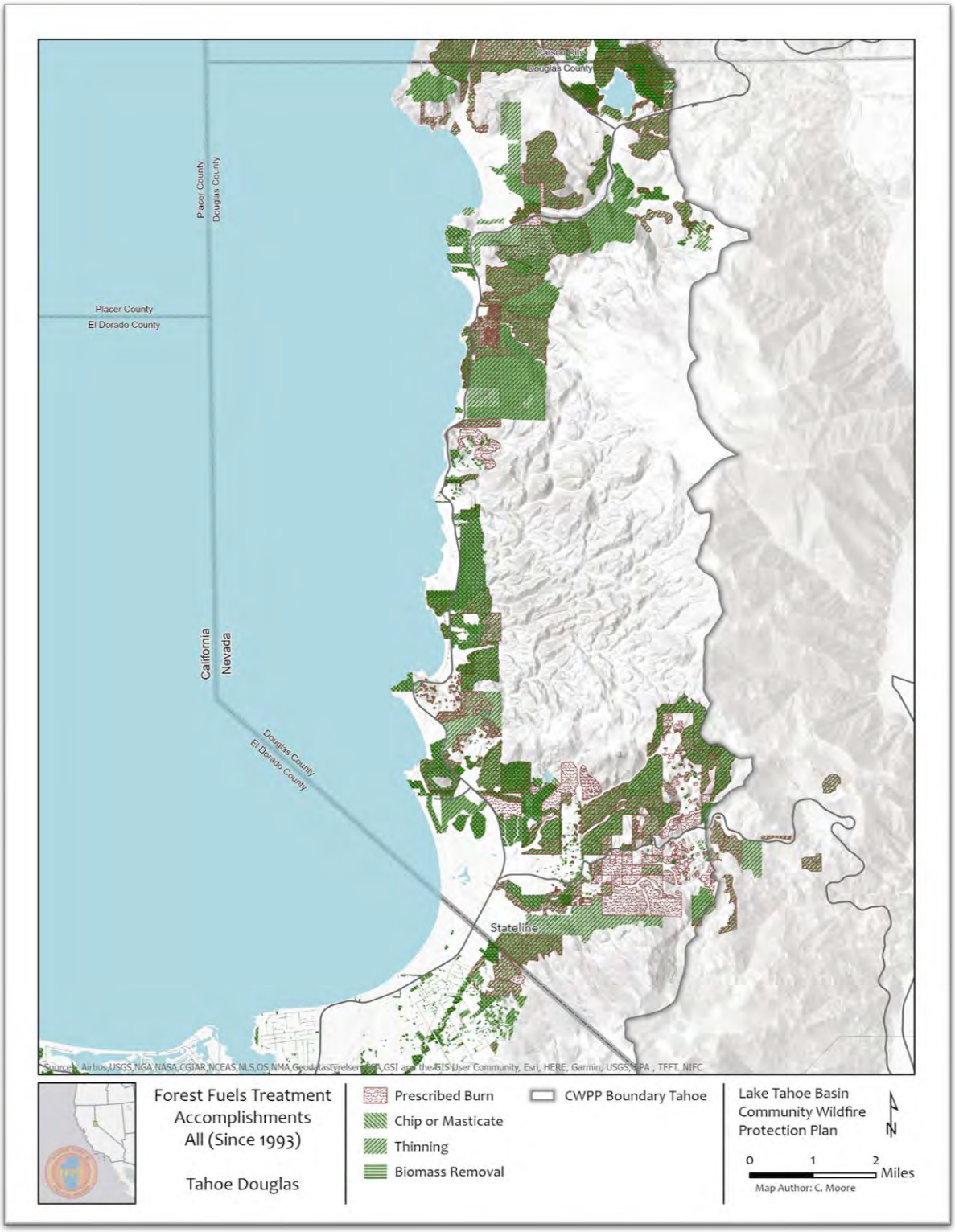
Funding Sources

The district receives funding through several sources. A five-year contract with NV Energy allows the district to employ more firefighters and treat lands around critical infrastructure. The district also receives various state and federal grants for treatments in and around communities.

Map 19: TDFPD's Forest Fuels Treatment Accomplishments (2014 - 2023)



Map 20: TDFPD's Forest Fuels Treatment Accomplishments (Since 1993)



11.2.8 Outreach

District Rating: Public Engagement

Medium - Due to the transient population, engagement with the public can be difficult.

District Rating: Communities understanding of the area's fire risk

High - Due to recent fires, the community understands and is aware of the area's fire risk.

Outreach tactics

The district uses social media, mailers, events, local television, radio, and text alerts for public outreach. TDFPD is also an active member in the Fire Public Information Team (FirePIT) which is a committee of the TFFT consisting of public information officers from stakeholder agencies around the Basin. The team organizes Lake Tahoe Wildfire Awareness Month annually and consistent outreach and awareness messaging to visitors and residents.

Vulnerable populations

The district identifies the vulnerable populations as those that are particularly hard to reach in the community, such as the elderly and tourism dependent. TDFPD uses mailers, social media, events, local television, and local radio to reach vulnerable populations in their community.

11.2.9 Recommendations

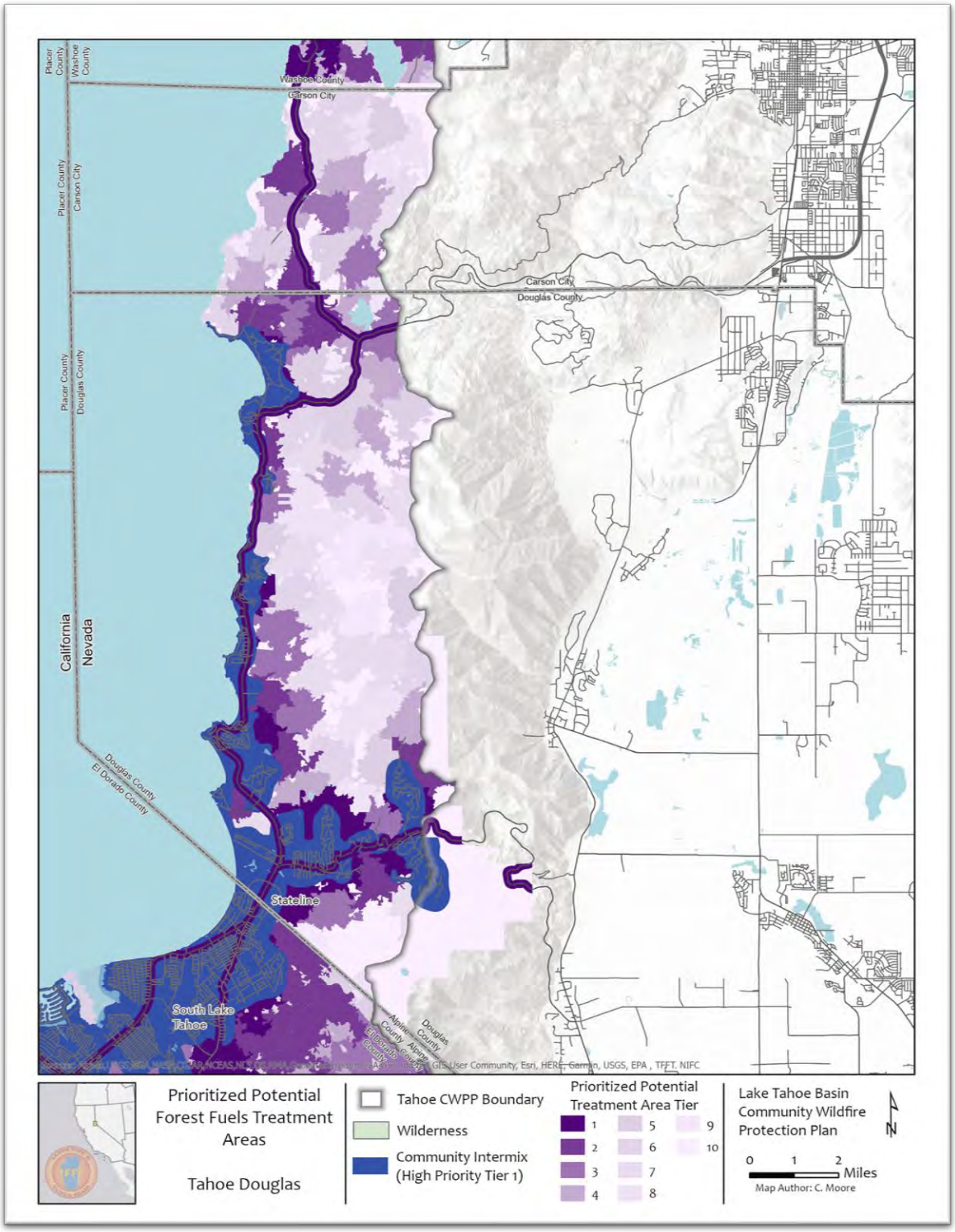
Districts utilized their own district ratings and public feedback from the Basin-wide survey to formulate strategic recommendations tailored to their respective areas, aimed at aligning with the goals outlined in the National Cohesive Wildland Fire Management Strategy:

TAHOE DOUGLAS FIRE PROTECTION DISTRICT	FIRE ADAPTED COMMUNITIES	SAFE, EFFECTIVE, RISK-BASED WILDFIRE RESPONSE	RESILIENT LANDSCAPES
NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY	**Human populations and infrastructure are as prepared as possible to receive, respond to, and recover from wildland fire**	**All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions**	**Landscapes, regardless of jurisdictional boundaries, are resilient to fire, insect, disease, invasive species, and climate change disturbances, in accordance with management objectives**
RECOMMENDATIONS	• Continue to work with the Tahoe Fire Public Information Team (Fire PIT) to develop educational campaigns and events to engage both residents and visitors. • Create additional Spanish outreach materials to broaden community engagement and inclusivity. • Support development of ignition-resistant construction inspection programs and other identified programs including opportunities to assist property owners with home hardening efforts. • Seek funding to invest in advancing software such as Fire Aside (defensible space inspection software) and others. • Continue to improve defensible space inspections and enforcement protocols. • Develop methods to reach renters and absentee homeowners with key messages. • Allow communities easy access to guidelines and requirements to becoming recognized as FAC and Firewise. • Facilitate information sharing between insurance and fire district on properties needing mitigation.	• Pursue funding to support existing and additional wildland fire hand crews, equipment, and resources. • Pursue emerging technology for fire detection and patrolling. This includes software for early detection of wildfires such as Alert West Cameras. • Continue or improve mutual aid efforts within the Basin amongst all resource agencies. • Add Type-5 Engine/Patrol.	• Create "interpretable trails" that show the processes in fuels management. • Develop and support educational opportunities regarding vegetation management. • Develop educational campaigns, public events, and outreach on prescribed fire burning projects. • Support agencies partnering and working together to address all jurisdictional areas in a holistic approach to address the larger landscape. • Evaluate opportunities to increase fuelwood collection in the wildland-urban interface, ensure that regulations and access support these opportunities.

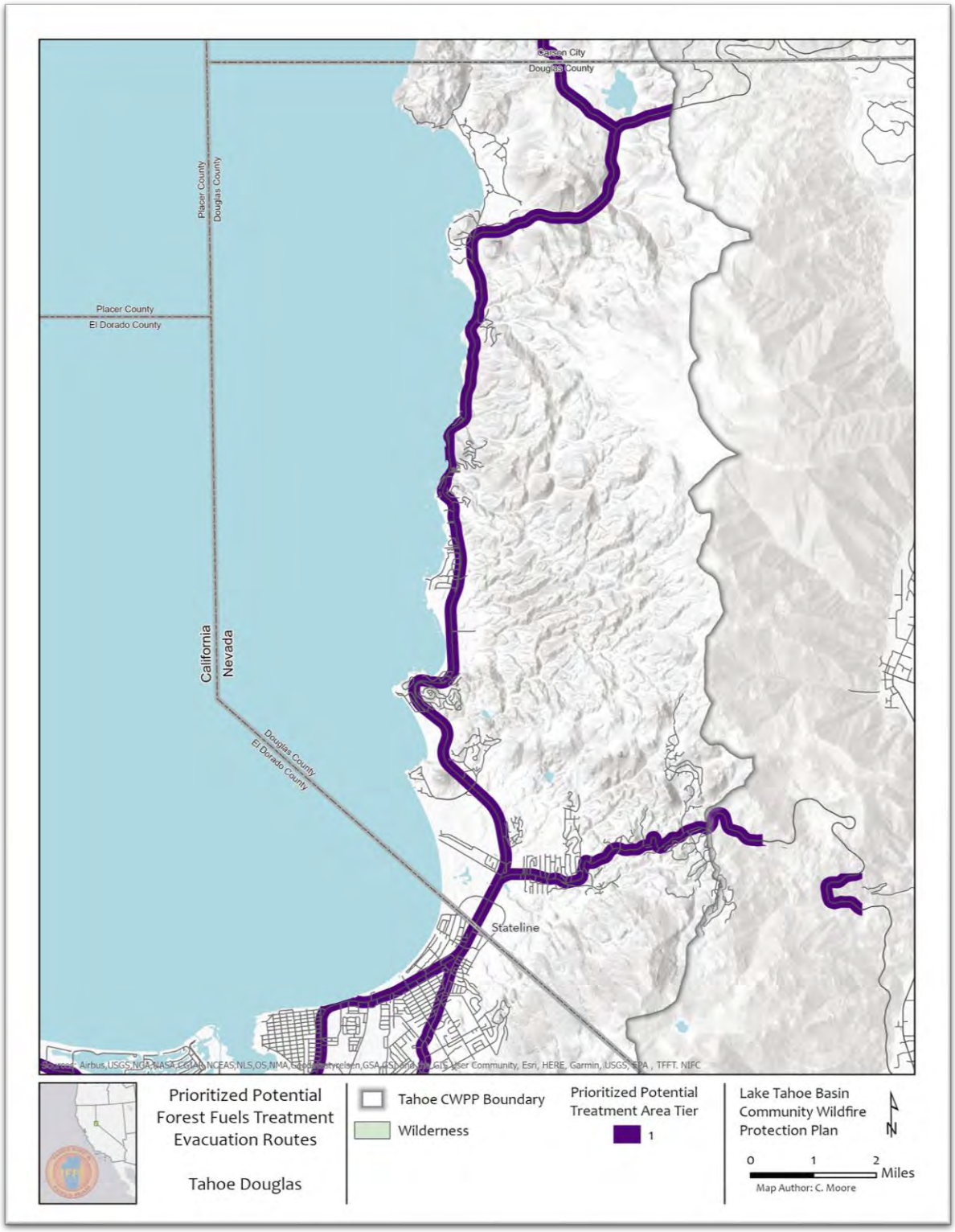
Table 6: TDFPD's recommendations to align with "Strategy" goals

11.2.10 Prioritized Potential Forest Fuels Treatment Areas

Map 21: TDFPD's Prioritized Potential Forest Fuels Treatment Areas



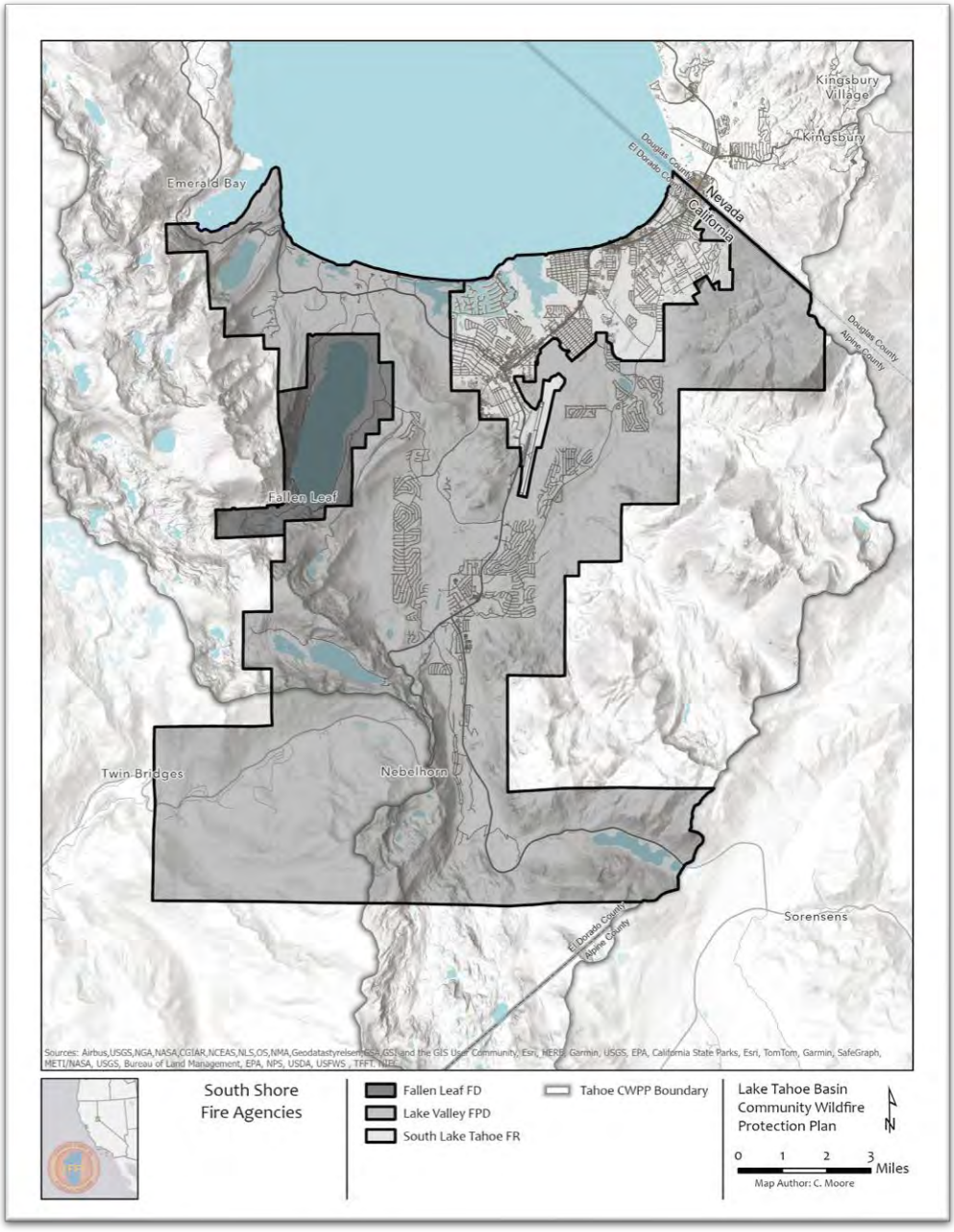
Map 22: Prioritized Potential Forest Fuels Treatment: Evacuation Routes (Tahoe Douglas)



SOUTH SHORE FIRE AGENCIES

South Lake Tahoe Fire Rescue (SLTFR), Lake Valley Fire Protection District (LVFPD), Fallen Leaf Lake Fire Department (FD)

Map 23: South Shore Fire Agencies Boundaries



11.3.1 Community Description

Lake Valley Fire Protection District (LVFPD) provides fire protection along the southern shore of Lake Tahoe, California. The district serves the communities of Christmas Valley, Meyers, Pioneer, Montgomery Estates, Sawmill/Highway 50, North Upper Truckee, Heavenly Valley, and Highway 89N/Emerald Bay, comprising an area of approximately 83 square miles, with a current permanent population of approximately 12,000 residents.

South Lake Tahoe Fire Rescue (SLTFR) provides fire protection on the southern shore of Lake Tahoe, California. The city is 16.6 square miles, with 10.12 miles of land and 6.44 miles of water. The city serves 22,000 full-time residents and has a huge influx of tourists both in winter and summer and those numbers swell to over 75,000. The communities within the city that SLTFR serves are Al Tahoe neighborhood, Sierra Tract, Ski Run neighborhood, Barton/Tahoe Island neighborhoods, State Streets/Tahoe Keys Blvd neighborhoods, Tahoe Keys, Bijou Pines neighborhood, Glenwood/Bijou Area, South Y area/Tata Ln, Heavenly Valley Area, Stateline/Pioneer Trail area, Gardner Mountain and the Stateline/hotel corridor area.

Fallen Leaf Fire Department (FD) is in the southwestern portion of the Lake Tahoe Basin. Fallen Leaf FD serves the communities adjacent to Fallen Leaf Lake on the east and west sides and the homes in the Glen Alpine Canyon, an area of about six square miles. Fallen Leaf FD has the fewest number of individual and commercial buildings, with approximately 270 units.

Fire Agency	Federal (ac)	State (ac)	Local (ac)	Private (ac)	Other (ac)	Total
LVFPD	27,205	2,648	788	4,867	10,320	45,827
SLTFR	520	792	633	3,868	777	6,589
Fallen Leaf FD	1,352	32	0.5	678	83	2,146
Total	29,077	3,472	1,421.5	9,413	11,180	54,562

Table 7: Agency acres on the South Shore of the Basin.

11.3.2 Wildfire threat

The terrain on the south shore of Lake Tahoe consists of a variety of slopes from flat to very steep. Fire exclusion has resulted in the continuous build–up of surface fuels, which can be many feet deep. The district's location creates wind alignment for the typical southwest winds that drive extreme fire weather in the region. Area ridges are regularly exposed to diurnal winds that can be strong and can drive significant fire behavior without frontal wind influences.

11.3.3 Wildfire Response Capabilities

District Rating: Response capabilities

High - Response times are rapid, usually within minutes, because there are many stations located throughout the area.

LVFPD, SLTFR and Fallen Leaf FD respond to all wildland fires within South Lake Tahoe through formal contracts or automatic aid agreements with USFS LTBMU or CAL FIRE. South shore fire agencies also receive and provide formal mutual aid to neighboring fire departments, most commonly during fire season.

Fire Departments

The south shore has several different types of fire departments. They include career, volunteer, and combination:

- Lake Tahoe Basin Management Unit: Meyers Work Center, Administrative Center, Meyers Fire Station
- CAL FIRE: Station 5 and Tahoe Work Center
- Lake Valley Fire Protection District: Station 7 Administrative Headquarters, Station 6
- Fallen Leaf Lake Fire Department: Fallen Leaf Fire Station
- South Lake Tahoe Fire Rescue: Fire Station 1, Fire Station 2, Fire Station 3, Fire Station 4 - Unstaffed

All personnel receive wildland firefighting training in accordance with National Wildfire Coordinating Group and California Incident Command Certification System standards. All agencies have a system to maintain minimum wildland firefighting qualifications in the leadership and are provided opportunities through training positions.

Fire agencies within the South Lake Tahoe community have a variety of wildfire resources available. Other resources are available from outside the Basin including air tankers and helicopters.

- US Forest Service LTBMU: 2 ICS Type 3 fire engines, 1 ICS Type 1 or Type 2 IA fire crew
- CAL FIRE: 1 ICS Type 3 fire engine, 2 ICS Type 1 fire crews
- Lake Valley Fire Protection District: 3 ICS Type 3 fire engines, 1 ICS Type 1 tactical water tender Fallen Leaf Lake Fire Department, 2 ICS Type 3 fire engines (one west side and one backup)
- South Lake Tahoe Fire Rescue: 3 ICS Type 1 fire engines, 2 ICS Type 3 fire engines, 1 aerial ladder.

Challenges

Many of the communities on the south shore are surrounded by wildland fuels and have steep, winding and narrow roads; typically, with a single road for ingress and evacuation. These isolated communities with poor access present challenges to fire suppression personnel. Fire agencies are addressing this by conducting fuels reduction projects around at-risk communities.

A limiting factor for the communities' wildland fire response capability is the antiquated water and fragmented water systems that serve the area. South Lake Tahoe Public Utility District (STPUD) is continuously upgrading their systems. Read more about Chapter Five: Lake Tahoe Basin Water Systems.

Incident Command System (ICS)

All fire personnel have received extensive training in the Incident Command System. In addition, personnel employed by other cooperating agencies (South Lake Tahoe Police Department, Eldorado County Sheriff's Department, California Highway Patrol, and other local agencies within the Tahoe Basin and Northern Nevada) have also been trained within the Incident Command System. All department personnel must receive ICS training up to the 200 level and complete FEMA's IS-700 and IS 800 NIMS (National Incident Management System) training.

The City of South Lake Tahoe staffs an Emergency Operation Center (EOC) during major disasters in coordination with El Dorado County and The State of California OES. All EOC members are trained in NIMS ICS standards. The city has an updated Emergency Operations Plan adopted in 2014 that outlines roles and responsibilities specific to ICS.

11.3.4 Community Assets and Resources

Water supply: Over the past 15 years, significant resources have been dedicated to upgrading water infrastructure, a vital component of firefighting efforts. Ensuring an adequate water supply is essential, along with creating defensible space through hazardous fuel removal and the hardening of water towers and pump stations.

Utilities: Local utility companies are required to clear vegetation from around high-voltage power lines, as many fires are caused by arcing or fallen lines igniting nearby fuels. Liberty Utilities is actively reducing hazardous vegetation along several transmission routes and has identified additional projects for future fuels reduction.

Communication/cell towers: USA Mobility Wireless, Inc. operates a tower in South Lake Tahoe and another in Meyers, CA. Loss of communication during wildfires poses a serious risk to fire response and evacuation efforts, making it critical to maintain defensible space around cell towers to ensure uninterrupted service.

City Hall: South Lake Tahoe City Hall is generally the location for an Emergency Operations Center when large incidents occur. It's imperative that reduced vegetation around the structure is implemented and maintained.

Community Center: The community center is the primary location to establish an emergency shelter if needed. To mitigate risk, there are plans to implement and maintain reduced vegetation around the structure.

Schools: There have been fuels reduction projects implemented around local schools and future projects are being planned.

Lake Tahoe Airport: Fuels reduction efforts are conducted around the runways and structures to reduce fire risk.

Barton Memorial Hospital: Barton Hospital is the only inpatient facility on the south shore. To mitigate risk, there are plans to reduce fuels around the hospital.

11.3.5 Residential Structures and Assets

District Rating: Residential preparedness

Medium - Around 50% of south shore's at-risk residences have some level of mitigation in place, meaning that nearly half of residential areas are prepared for the next wildfire.

Homeowners are responsible for creating and maintaining defensible space on their property and implementing home-hardening measures. South Lake Tahoe homeowners have been actively involved in Fire Adapted Communities and achieving Firewise recognition. South Lake Tahoe fire agencies and land managers are actively engaged in the development of a division that will oversee fuel reduction, defensible space and education, and the creation of fire adapted communities.

Residential organizations

South Lake Tahoe has several different homeowner's associations (HOAs) including:

City of South Lake Tahoe: Al Tahoe Lakeview Townhouses, Bavarian Villages (Keller), Cote D'Azur, Heavenly Pines, Heavenly Valley Townhouses #1 and #2, Heavenly Valley Village, Highland Woods, Lakeland Village, Lakeview Condo, Needle Peak Villas, Ski Run Village Townhouses, American Legion Tract, Tahoe Meadows, Sky Meadows, St. Francis of the Woods, St. Montz Isle Townhouses #2 and #3, St. Montz Isle, Tahoe Keys POA, Tahoe Keys, Unit #4, Tahoe Marina, Tahoe Marina Shores #2

Lake Valley: Christmas Valley Acres

Forest Service: Rainbow Track, Spring Creek Track, Echo Track, Philips Track

- 50-74% of homes have defensible space.
- 25-49% of homes have hardened structural features that address home vulnerabilities.

11.3.6 Stakeholder Engagement

District Rating: Engagement from landowners, land managers and stakeholders

Medium - Public and private landowners and/or land managers that are actively engaged in wildfire mitigation activities include USFS LTBMU, CAL FIRE, California Tahoe Conservancy, California Conservation Corps, California State Parks, El Dorado County, South Tahoe Public Utility District, City of South Lake Tahoe, Caltrans, HOAs, Liberty Utilities, and Lake Tahoe Unified School District.

11.3.7 Resources and Strategies

Zoning ordinances, building codes, regulations, or rules for fire mitigation

The City of South Lake Tahoe and El Dorado County have established ordinances that are enforced. However, the effectiveness of these ordinances is hindered primarily by insufficient staffing. New homes must meet current WUI standards and retrofitting older homes and communities so that they meet current standards can be more challenging.

Fire agencies continue studying, monitoring and mitigating fire risk to existing communities. The City of South Lake Tahoe adopted an ordinance similar the county's vegetation and defensible space ordinance containing a Good Neighbor Policy. Properties with hazardous vegetation within 100' of a

neighboring property are in violation of the ordinance. The ordinance list can be accessed at South Lake Tahoe City Code (codepublishing.com). Agencies continue to work with the county and state to adopt science based and consistent regulations for fire hazard abatement for new and existing communities.

Wildfire Mitigation Risk Reduction Programs

Defensible Space Evaluations

Inspections are solicited, complaints, curbside, or required as part of the building permit process. The program provides education to property owners on how to create defensible space on their property. Tree removal permits are also offered. The goal of the program is 85-90% compliance with local and county ordinance. Since 2006, nearly all properties in the county and a quarter of the city properties have been inspected through either solicitation or as part of target areas. Currently activities are funded through the Tahoe Resource Conservation District's (Tahoe RCD) Fire Adapted Communities Program (FAC). The FAC program is funded due to the Southern Nevada Public Land Management Act (SNPLMA).

Residential Curbside Chipping

Upon request, LVFPD and SLTFR provide chipping services to help dispose of branches, shrubs, and small trees removed when creating defensible space. The service is free to the property owner (paid for through SNPLMA grant). The program offers chipping services to all city and county properties. The lack of biomass outlets makes disposal of wood chip difficult. Currently South Tahoe Refuse accepts wood chips, but other options are limited. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

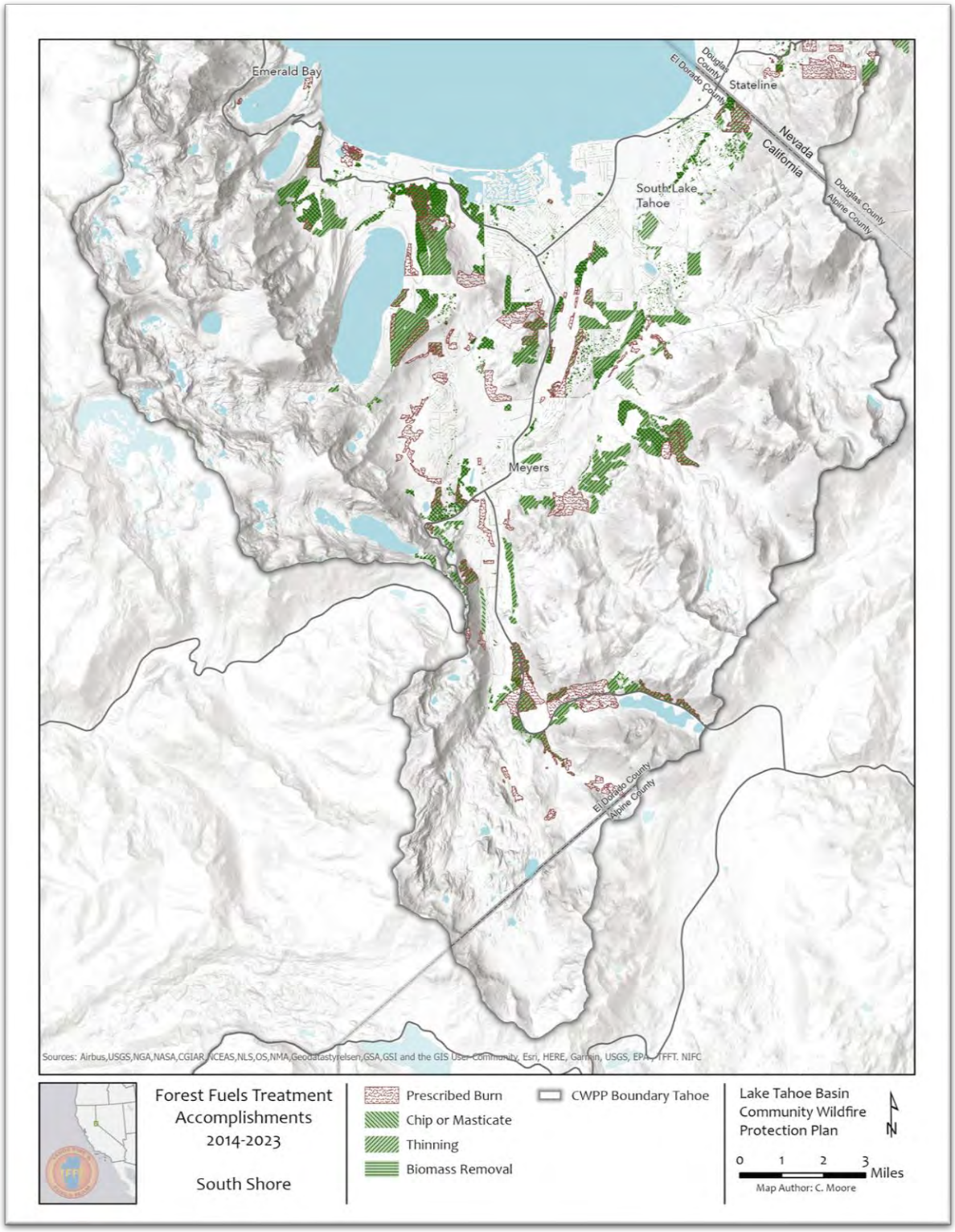
Community Workdays

The corresponding district will spend a day with each Fire Adapted Community based on request and offer free residential chipping or assistance to homeowners who are attempting to create defensible space. The district continues to seek funding for such programs or partnerships. The program encourages people to do their defensible space work and provides the assistance they need while they do the work. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

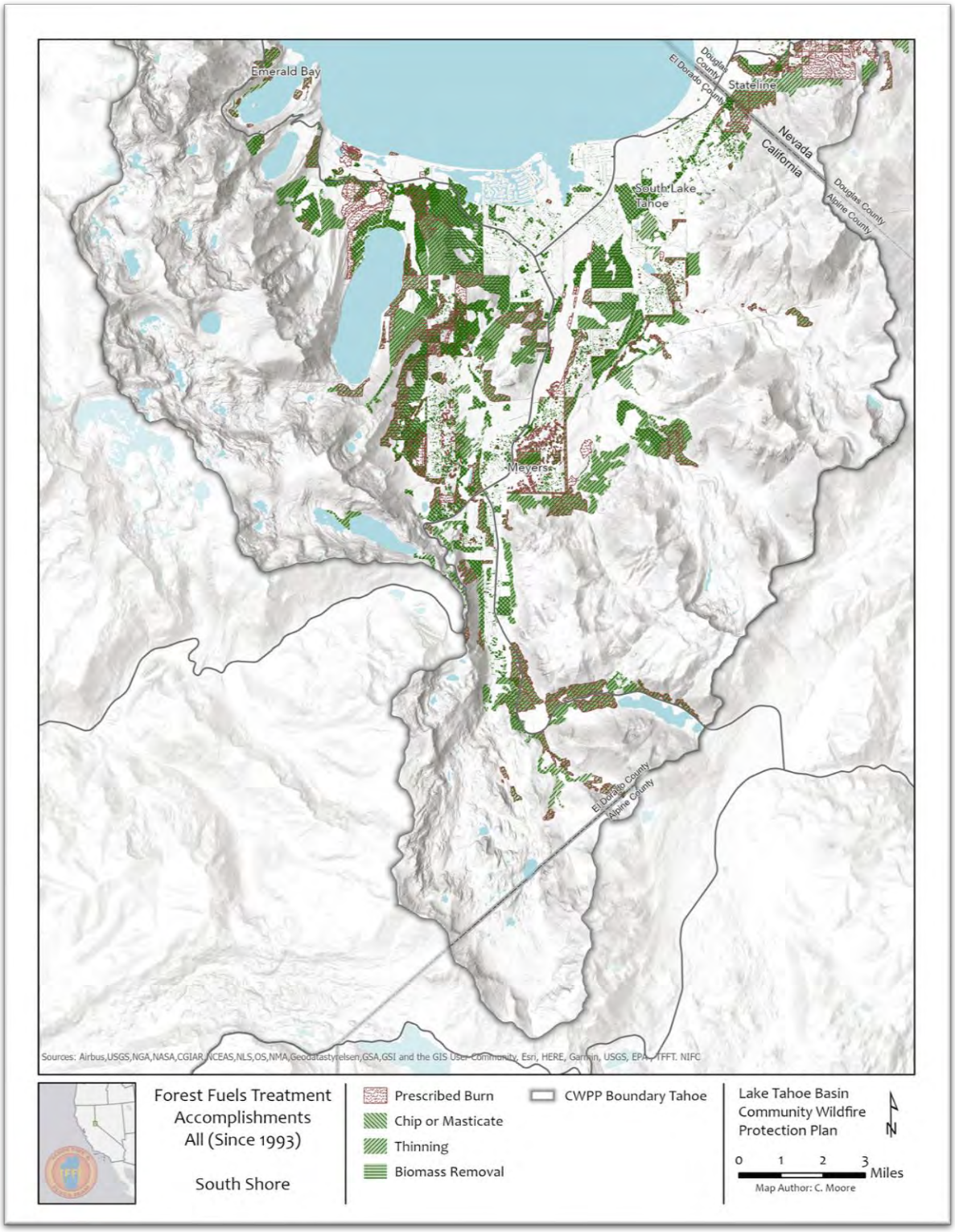
Forest Fuels Reduction Projects

Fire crews implement hand thinning and prescribed fire projects on private and local government land in the WUI. The goal is to have all private and local land within the WUI meet fire behavior objectives within 10 years and transition to a greater reliance on prescribed fire to maintain fire behavior modifications in treatment areas. Hundreds of acres have received initial treatment to date. The work is funded through a combination of state and federal grants.

Map 24: South Shore Forest Fuels Treatment Accomplishments (2014 – 2023)



Map 25: South Shore Forest Fuels Treatment Accomplishments (Since 1993)



Forest Service Fuels Reduction and Homeowner Agreements

USFS LTBMU manages both urban lots and general forest within the community. Work on the urban lots has been ongoing since the late 1990's. Agreements can be issued to homeowners to allow them to extend their defensible space onto USFS land. The goal is to have all USFS land within the WUI meet fire behavior objectives. Nearly all urban lots have received initial treatment. Long environmental review periods and limited funding inhibit frequent maintenance, but homeowner agreements help address this. The work is funded by a combination of USFS LTBMU and BLM SNPLMA grant funds.

California Tahoe Conservancy (CTC)

CTC manages urban lots in the community and work on the lots has been ongoing since the late 1990's. The goal is to have all state lands within the WUI meet fire behavior objectives. All state lots have received initial treatments and receive frequent maintenance. The work is funded by a combination of State funds and BLM SNPLMA grant funds.

California State Parks – Washoe Meadows

Fuels reduction work has been ongoing since the early 2000s and has been utilizing a combination of hand thinning and understory burning. The goal of the projects is to modify fuels so that catastrophic fires will not endanger visitors or damage the sensitive ecosystem. State Parks have completed many projects on their land within the community. The work is funded by a combination of state funds and SNPLMA grant funds.

Personnel dedicated to implementing plans and programs

SLTFR and LVFPD are active members of the South Lake Tahoe Wildfire Prevention Division, a division of the TFFT, consisting of officers from stakeholder agencies in South Lake Tahoe. The Wildfire Division organizes projects and communication for the South Lake Tahoe area throughout the year. The group includes members from the USFS LTBMU, CAL FIRE, California Tahoe Conservancy (CTC) and Liberty Utilities. Funding for the Wildfire Division is the burden of each member of the organization. Agency representation may change as funding changes.

11.3.8 Outreach

District Rating: Public Engagement

Medium - There are noticeable improvements in the fire agencies overall capacity to connect with the public on the south shore. The primary hurdle lies in engaging with tourists and second homeowners who spend limited time in town.

District Rating: Communities understanding of the area's fire risk

Medium – Since the Caldor Fire, there's been a positive shift towards a better understanding of the risk of wildfire. Residents gained firsthand experience dealing with evacuations, receiving notifications, managing air quality concerns, and some have actively engaged in prevention efforts, driven by a shared determination to prevent recurrence.

Outreach tactics

South Lake Tahoe Fire Rescue (SLTFR) and Lake Valley Fire Protection District (LVFPD) are active members of the Fire Public Information Team (FirePIT). South shore fire agencies also host two major annual community events, the Wildfire Safety Expo and Firefest—which serve as key platforms for sharing wildfire preparedness information.

Both SLTFR and LVFPD maintain strong social media presences, with a combined following of 10,000 on Instagram and 15,000 on Facebook. These platforms are used to deliver safety messages, updates on red flag warnings and burn restrictions, and event highlights. They also share public safety alerts via Nextdoor and Neighbors (Ring) and distribute SLTFR's newsletter.

In collaboration with the California Tahoe Conservancy (CTC), SLTFR partners with Outside Lake Tahoe, a local news station, conducting around five monthly interviews on wildfire safety. The agencies also work closely with local media outlets, including the Tahoe Daily Tribune and South Tahoe Now, to share essential information, such as burn ban notices.

Vulnerable populations

According to 2022 U.S. Census data, South Lake Tahoe has a population of 21,330, with 13.3% living in poverty and 16% aged 65 or older. The Hispanic or Latino community makes up 28.5% of the population. These vulnerable groups are a key focus for south shore agencies, along with efforts to reach the tourist population. LVFPD, SLTFR, and Tahoe RCD collaborate with organizations like the Family Resource Center, Live Violence Free, and Tahoe Youth and Family Services to provide wildfire prevention education and host community events. Securing funding to help vulnerable residents complete defensible space work is also a priority.

11.3.9 Recommendations

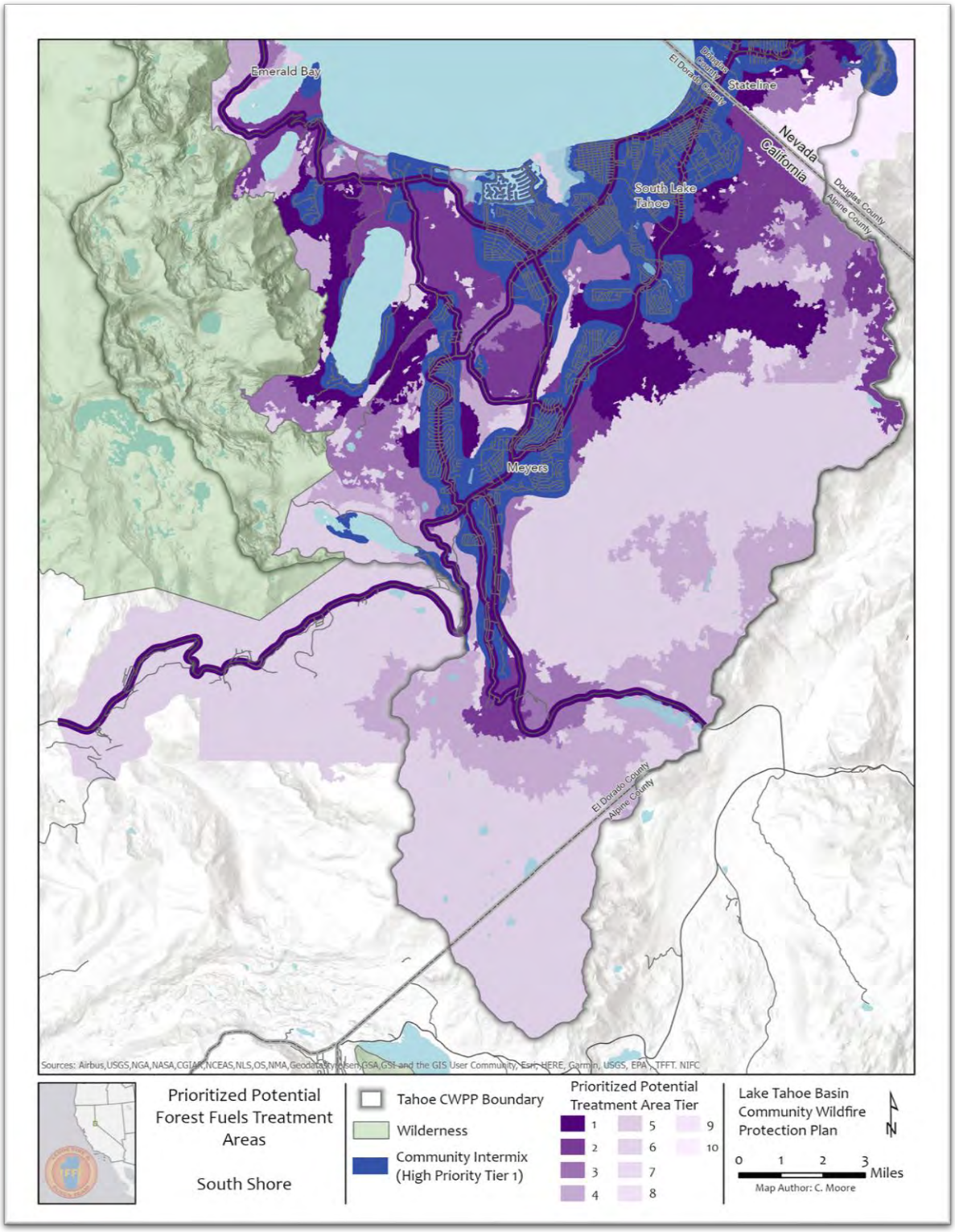
Districts utilized their own district ratings and public feedback from the Basin-wide survey to formulate strategic recommendations tailored to their respective areas, aimed at aligning with the goals outlined in the National Cohesive Wildland Fire Management Strategy:

SOUTH SHORE FIRE AGENCIES	FIRE ADAPTED COMMUNITIES	SAFE, EFFECTIVE, RISK-BASED WILDFIRE RESPONSE	RESILIENT LANDSCAPES
NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY	**Human populations and infrastructure are as prepared as possible to receive, respond to, and recover from wildland fire**	**All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions**	**Landscapes, regardless of jurisdictional boundaries, are resilient to fire, insect, disease, invasive species, and climate change disturbances, in accordance with management objectives**
RECOMMENDATIONS	• Continue to work with the Tahoe Fire Public Information Team (Fire PIT) to develop educational campaigns and events to engage both residents and visitors. • Create additional Spanish outreach materials to broaden community engagement and inclusivity. • Support development of ignition-resistant construction inspection programs and other identified programs including opportunities to assist property owners with home hardening efforts. • Seek funding to invest in advancing software such as Fire Aside (defensible space inspection software) and others. • Continue to improve defensible space inspections and enforcement through partnerships with CAL FIRE and El Dorado County. • Develop methods to reach renters and absentee homeowners with key messages. • Support communities through the Tahoe Network of Fire Adapted Communities and provide easy access to guidelines and requirements to become recognized as a Firewise Community. • Develop an accurate assessment of the community based on best available data and latest scientific modeling so that we can accurately inform insurance companies of the risk. • Seek funding to assist local residents with tree removal costs, home hardening costs and defensible space costs for those in need (primarily for elderly, disabled or veterans). • Seek funding for a program to assist with roof replacement.	• Pursue funding for the development of a wildfire resiliency program that includes wildland fire hand crews, equipment, and resources. This may include the addition of a Type-5 Engine/Patrol, tracked chipper and masticator. • Pursue emerging technology for fire detection and patrolling. This includes software for early detection of wildfires such as Alert West Cameras. • Continue or improve mutual aid efforts within the Basin amongst all resource agencies. • Continue to provide basic wildland firefighter training and encourage personnel to seek incident command level positions.	• Continue to partner with federal, state and local government landowners to develop and implement fuel reduction projects in the wildland urban interface (WUI). • Develop a cultural burning program with Washoe Tribe. • Create “interpretable trails” that show the processes in fuels management. • Develop and support educational opportunities regarding vegetation management. • Develop educational campaigns, public events, and outreach on prescribed fire burning projects. • Support agencies partnering and working together to address all jurisdictional areas in a holistic approach to address the larger landscape. • Evaluate opportunities to increase fuelwood collection in the wildland-urban interface, ensure that regulations and access support these opportunities.

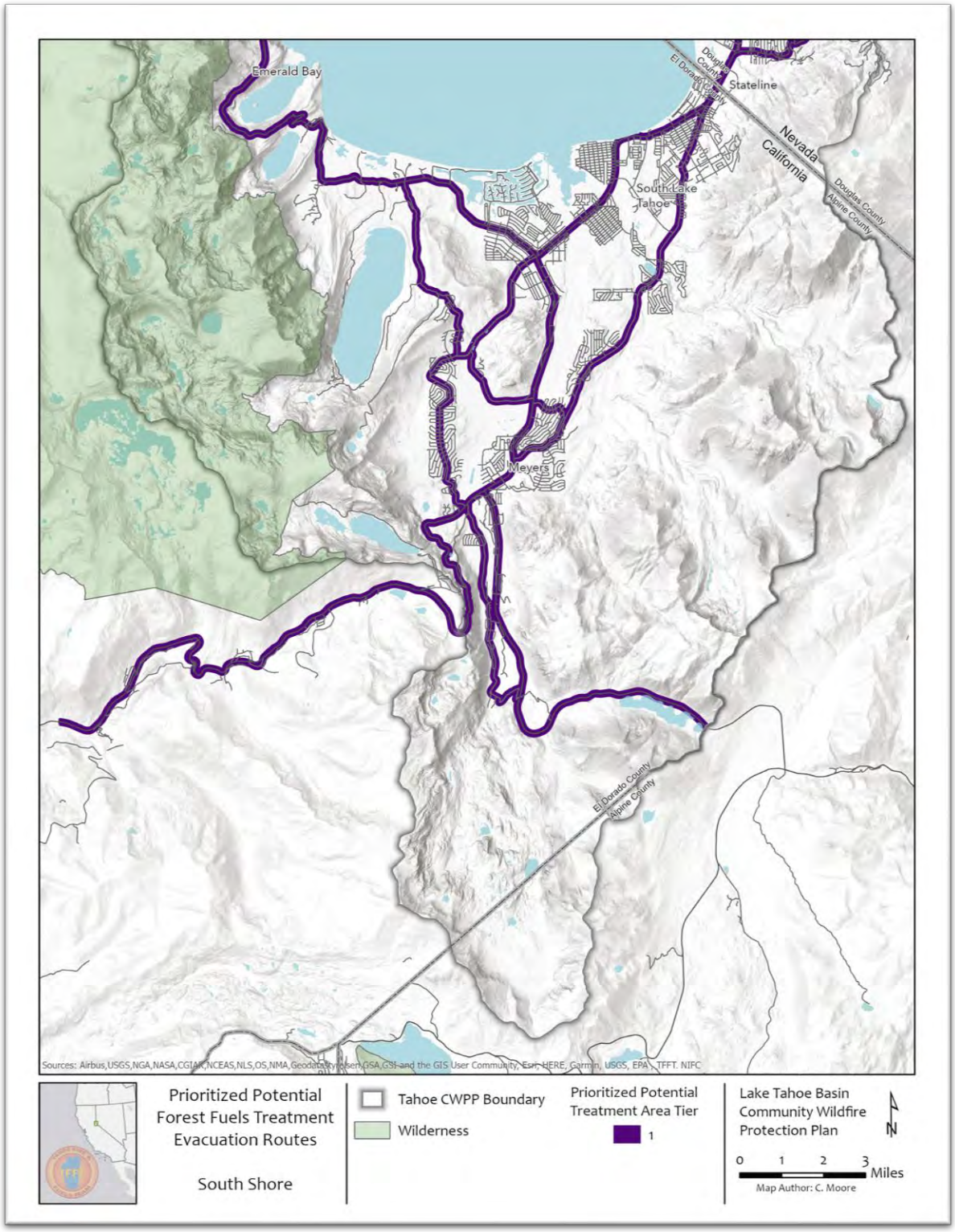
Table 8: South Shore agencies’ recommendations to align with "Strategy" goals

11.3.10 Prioritized Potential Forest Fuels Treatment Areas

Map 26: South Shore's Prioritized Potential Forest Fuels Treatment Areas

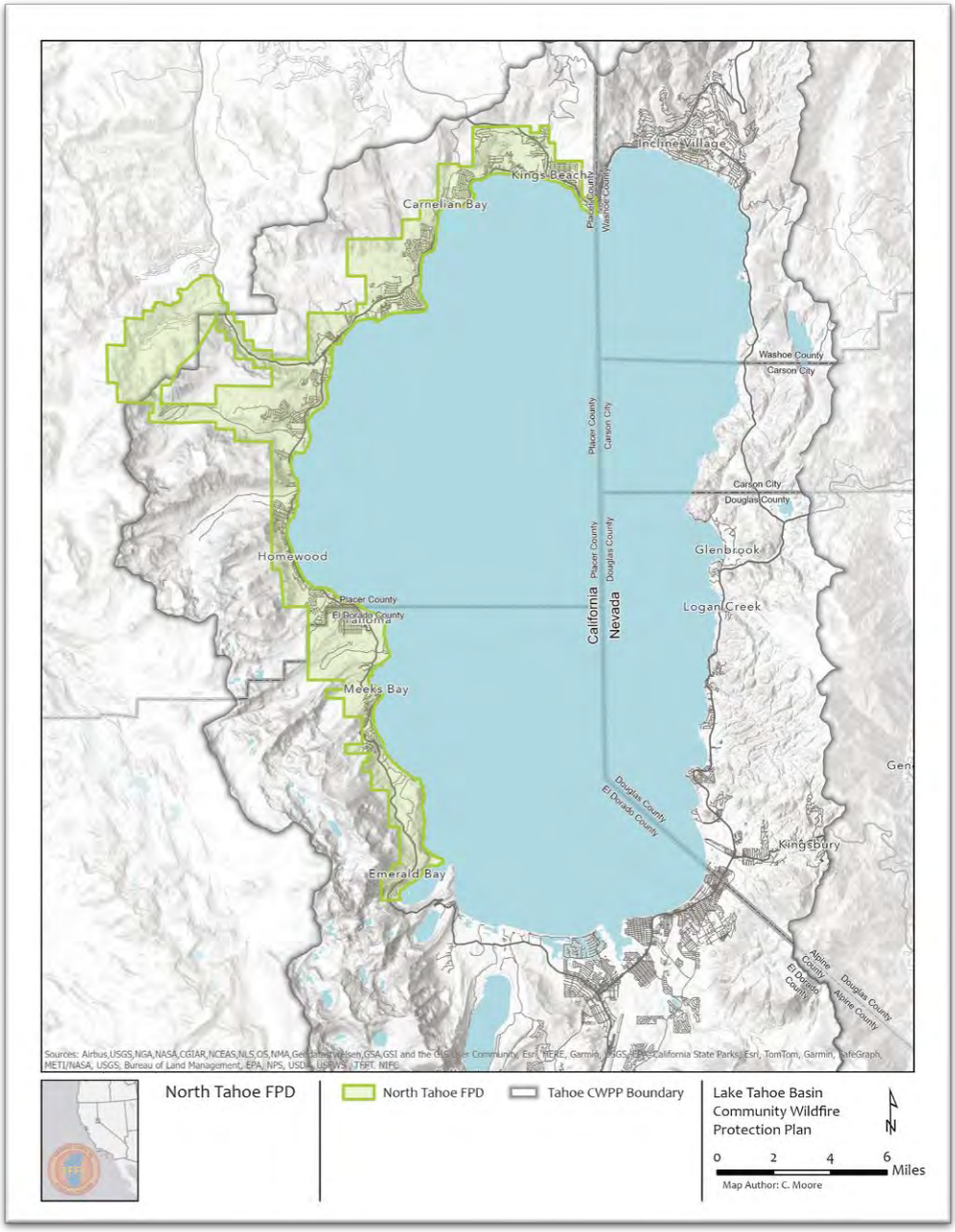


Map 27: Prioritized Potential Forest Fuels Treatment: Evacuation Routes (South Shore)



NORTH TAHOE FIRE PROTECTION DISTRICT

Map 28: North Tahoe Fire Protection District Boundary



11.4.1 Community Description

North Tahoe Fire Protection District (NTFPD) is an all-risk career fire district that protects various communities within two counties on the north and west shores of Lake Tahoe. The district's mission is to provide the highest possible level of fire, rescue, and pre-hospital emergency medical services

and ambulance transport, as well as prevention and education to the residents and visitors of the communities served. The district's service area covers over 40 square miles and over 20 miles of shoreline. It is surrounded by US Forest Service land managed by LTBMU. It includes the communities of Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Tahoe City, Sunnyside, Homewood, Tahoma, and Meeks Bay. The district also provides fire prevention and suppression services to the community of Alpine Meadows, covering two square miles just outside of the Basin. The district serves a full-time population of over 11,000. The district is entirely within the unincorporated areas of Placer and El Dorado Counties.

The State of California manages 6,000 acres within and surrounding the fire district with California State Parks managing 2,100 acres primarily within Burton Creek and Ward Creek State Parks and the California Tahoe Conservancy managing 3,900 acres across 1,500 urban lots. Additionally, the USFS manages 66 acres across 75 urban lots within the district. These lots were acquired by the USFS through the Santini Burton purchase program in 1980. Homewood Mountain Resort is the largest private landowner in NTFPD with over 1,250 acres. Other large landowners include North Tahoe PUD (200 ac), Tahoe City PUD (190 ac), the Vedanta Society (175 ac), the Rutter-Schafer corporation (110 ac) and Placer County (90 ac) in the Tahoe Basin and Caldwell LLC, Alpine Springs Water District, Alpine Meadows Estates, and Vole Hollow Limited Partnership in Alpine Meadows. The remaining 5,000 acres are mainly residential/commercial and are private or local government owned.

The district's service area is geographically isolated and vulnerable to natural disasters such as severe winter storms, avalanches, high mountain passes, flooding, landslides, and wildland fires, which leave the region dependent upon local agencies for emergency incident response on two-lane roads that are frequently gridlocked with seasonal traffic.

11.4.2 Wildfire threat

Parts of the district are exposed to southerly aspects which receive direct solar radiation during the hottest parts of the day, leading to dry fine fuels receptive to ignition. Slopes are steep through most of the district, especially near drainages and within neighborhoods that extend into higher elevations. Prevailing winds often align slope direction creating conditions conducive to the rapid spread of fire. Tree mortality remains a threat to the district, with challenges in locating funding sources to assist homeowners and businesses to mitigate this expensive risk.

High winds are common occurrences in the district throughout the entire year. Straight line winds are primarily a public safety and economic concern. Windstorms can damage structures and power lines, creating hazardous conditions for people. High winds can impact critical facilities and infrastructure and can lead to power outages. Wind can also drive wildfire flames and ember storms that spread wildfires quickly.

11.4.3 Wildfire Response Capabilities

District Rating: Response capabilities

High - NTFPD personnel are trained to respond to events such as structure and wildland fires, technical rescue operations, confined space operations, ice/swift water/back country rescues, and mitigation of hazardous materials incidents. The district has partnered with the neighboring North Lake Tahoe Fire Protection District to provide seasonal coverage with two Type-2 IA hand crews, and three additional Type 6 engine crews to respond to wildfires and conduct fuel reduction work. While there is much capability in the area, mountain roads and frequent periods of tourist-related traffic congestion can frustrate rapid response.

Fire Departments

The community is served by one fire protection district. The USFS LTBMU is the largest landowner in the Lake Tahoe Basin and is the primary responder to wildland fires on federal land or that threaten federal land. CAL FIRE responds to all wildland fires on lands in a State Responsibility Area (SRA) or that threaten SRA lands. All private and state-owned lands within the district are SRA lands.

NTFPD responds to all wildland fires within the district through formal contracts or automatic aid agreements with the LTBMU or CAL FIRE, and all local Basin agencies operate under mutual/automatic aid via a "boundary drop", where the closest unit respond, regardless of jurisdiction. Response times are rapid, usually within minutes, because of the many stations located throughout the area.

NTFPD's service area consists of eight fire stations, five of which are staffed full-time. NTFPD is a career fire department with 52 uniformed Fire/EMS personnel and operates a daily minimum staffing of 14 firefighters. Volunteers contribute to district operations through the Community Emergency Response Team (CERT). The district has two Type III Wildland-Urban Interface engines, one type 6 in addition to five Type I Structural engines.

In addition to the district's formal service area, consisting of over 17,000 housing units and over 1,000 businesses spanning 27.5 square miles, the district provides service via long-term contract to the Alpine Meadows community, consisting of 750 housing units in Placer County. Where the service area extends into El Dorado County, there are 2,800 housing units spanning 14 square miles. The area of the district also includes over 2,000 acres of state park and federal forest land. According to an audit-certified tax base valuation for 2023/24, district personnel protect an assessed valuation of $11.5 billion dollars in the combined service area, $10 billion of which is in Placer County.

Challenges

Most residences in the district are within four miles of a staffed fire station. The exceptions are Talmont, Pineland, King's Way, and the west side of Ward Creek Boulevard. Many of the communities within the fire district are surrounded by wildland fuels and often have a single road for ingress and egress. Communities with limited access present challenges for fire suppression personnel and law enforcement in an evacuation.

The district cannot directly resolve ongoing challenges with narrow roads and limited egress, but works with multiple agency partners to improve access, when possible. The fire district also supports this effort by working to complete strategic fuels reduction projects as access to funding allows. Agency personnel are working to increase the pace and scale of fuels reduction projects along roads

and highway corridors. Funding and access to qualified crews are limiting factors in completing fuels reduction treatments along roadside easements.

A primary limiting factor for the fire districts wildland fire response capability is the fragmented water systems that serve communities within the district. Multiple water purveyors provide service within the district, many of whom have inadequate infrastructure to reliably deliver required flows for firefighting. Lack of funding to improve water infrastructure for fire suppression remains a challenge, resulting in unmitigated risk.

The district's tax rate is outdated, being set for a combination department servicing a part-time population and has not evolved to meet the demands of modern-day firefighting and the associated costs. Further, development in the district is extremely limited, and redevelopment projects do not carry the same types of fees that would provide the district with adequate funding to purchase new equipment and build new fire stations which would be more easily attained with new development.

Incident Command System (ICS)

All line personnel receive wildland firefighting training, in accordance with, and in most cases exceeding National Wildfire Coordinating Group (NWCG) standards. The district has a training qualifications system that meets the California Incident Command Certification System (CICCS) and NWCG standards to ensure maintenance of minimum wildland firefighting qualifications for its personnel. A significant percentage of current department personnel have previous experience working for wildland firefighting agencies. The district operates two Type 3 brush engines, and one type 6 brush engine equipped to meet or exceed national standards for wildland equipment. The district also owns two water tenders, one with a 3000-gallon capacity and the other with a 2500-gallon capacity. These assets are strategically stationed in the district during periods of high or extreme fire hazard.

All line personnel and CERT volunteers have received training in the Incident Command System. In addition, other cooperating agencies (Placer County Sheriff's Department, CAL FIRE, USFS, and other local agencies within the Tahoe Basin) have been trained within the Incident Command System. All safety personnel must receive ICS training up to the 300 level and complete FEMA's IS-700 NIMS (National Incident Management System) training. Line personnel and chief officers frequently serve on out-of-district assignments with strike teams and leading Incident Management Teams, which puts that training into action more frequently than would occur in-district.

11.4.4 Community Assets and Resources

NTFPD has enough housing density to contain wildland-urban intermix and WUI zones therefore forest health and vigor play a tremendous role in the protection of community assets and resources.

Water supply: Water utilities are the primary community asset at risk since NTFPD relies heavily on municipal water supply for fire suppression operations. The districts largest water municipalities are North Tahoe Public Utilities District (NTPUD) and Tahoe City Public Utilities District (TCPUD). They are working to improve their water delivery systems, and they maintain active vegetation management programs to address defensible space around maintenance buildings and conduct hazardous fuels

reduction treatments on the lands they manage. Agate Bay Water, Fulton Water, Tamarack water and others are also engaged in vegetation management as they are able, however as with other agencies and municipalities they are challenged to meet the financial need required to both improve their infrastructure for fire suppression while keeping up with hazardous fuel reduction activities.

Utilities: There are several high voltage lines that provide power to the district that enters the Basin through the WUI. Power is also distributed through above ground power lines. All above ground infrastructure is at risk from catastrophic fire.

Public Facilities: The district is in an unincorporated area of Placer County and most government services such as general services, law enforcement, and schools are located within the central commercial area of Tahoe City. This area is the least exposed to wildfire threat in the district, however areas of unmodified wildland vegetation and properties lacking defensible space remain vulnerable to ember ignition. Many of these public facilities serve as shelter locations. Loss of tax base also impacts the delivery of public services.

Recreation Areas: Recreation areas include California State Parks, Homewood Mountain Ski Resort, Alpine Meadows Ski Resort and the smaller hiking and biking trails throughout the north and west shore of Lake Tahoe. State Parks have received extensive fuels reduction treatments. Homewood Mountain Ski Resort has received some. Some of the trail areas closest to homes have received treatments.

Cultural Sites: The Meeks Bay Resort will be operated by the Washoe Tribe of Nevada and California until at least 2043 based on a new special use permit. Meeks Bay is an ancestral Washoe gathering place and while operating the resort and campground, the tribe is also participating in the reintroduction of native plant and fish species. The location of cultural artifacts is largely unshared; however, Lake Tahoe (Da ow aga) was at the heart of the Washoe Ancestral area. Additionally, several historic remnants from the logging area are found throughout the district, and past project permitting has identified multiple cultural sites. Resources are protected during project implementation, but otherwise they have not been directly considered for mitigation activities.

11.4.5 Residential Structures and Assets

District Rating: Residential preparedness

Medium - The district was rated with a 'Very High Fire Severity' designation by CAL FIRE. The region is facing an insurance crisis, which in recent years has incentivized residents to become educated and take a more progressive approach to prepare homes and communities for wildfire. However, supply chain disruptions, a lack of affordable housing for a consistent work force, a short season to manage vegetation, along with the high price tag associated with hardening homes, removing dead and dying trees remains a challenge that will prevent the district from having the high level of preparedness.

Residential organizations

There are approximately 28 established and larger HOAs. Additional smaller associations also work together to manage common areas and maintenance needs. The district works collaboratively with

the Tahoe RCD, and their funding to support Fire Adapted Communities (FAC) and participate with the National Fire Protection Association (NFPA) Firewise Program. Since 2018, the district has onboarded several neighborhood leaders and is now home to 16 FAC/Firewise communities, with more leaders onboarding every year.

- 25-49% of homes have defensible space.
- 25-49% of houses have hardened structural features that address home vulnerabilities.

12.4.6 Stakeholder Engagement

District Rating: Engagement from landowners, land managers and stakeholders

High - Most landowners are engaged, they understand their risk, and mitigation is occurring. Many are continuing to improve their workforce capacity and are seeking solutions to improve the pace and scale of fuels reduction treatments. Additional stakeholders are often identified, and their concerns are addressed in the planning process. The district continually engages with landowners, land managers, and other area stakeholders. NTFPD highly values these partnerships as they are the key to community safety and stability. Grant funding is fundamental to supporting meaningful engagement and relationship-building with stakeholders in the region and allows the district to accomplish more than they could do with our own limited funding.

Public and private landowners and/or land managers actively engaged in wildfire mitigation activities in the district include US Forest Service LTBMU, California State Parks, California Tahoe Conservancy (CTC), Alpine Springs Water District, Homewood Mountain Resorts, North Tahoe PUD, Tahoe City PUD, Truckee Tahoe Unified School District, Vedanta Society, Placer County, Caltrans, Liberty Utilities, El Dorado County, Tamarack Water Company, Agate Bay Water Company, Fulton Water Company, and multiple landowners with 3-20 acres of land.

11.4.7 Resources and Strategies

Zoning ordinances, building codes, regulations, or rules for fire mitigation

The district and Placer County are tasked with enforcing the California Building Code and WUI Code. The California Wildland-Urban Interface code requires special construction requirements for buildings in the WUI. Defensible space is routinely enforced on all permitted building projects. CAL FIRE enforces Public Resources Code 4291 on existing structures. Educational inspections are targeted at engaging residents in strategic high-risk areas each season. In El Dorado County, Ordinance 5101 for vegetation management and defensible space can be implemented on undeveloped lots in extreme cases of hazardous vegetation. For similar cases in Placer County, Ordinance 6015-B can also be implemented. In 2019, the district adopted an elevated fire code to prevent the burning of solid fuels during fire season, and to prevent all sources of open flame during red flag weather events to mitigate fire risk. Additional statutes and ordinances have been adopted in recent years that aid in the ability to enforce defensible space compliance and mitigate other fire risks. Extreme cases of noncompliance may result in the implementation of El Dorado and Placer County Hazardous Vegetation Ordinances to maintain defensible space on undeveloped lots.

Other local rules/regulations that support vegetation management to reduce wildfire risk include CA-PRC 4291, El Dorado County Ordinance 5101, Placer County Ordinance 6015-B, Short Term Rental Ordinances and AB-38: Defensible Space Inspections and Compliance Reports for Real Estate Transactions. El Dorado County Ordinance 5101, and Placer County Ordinance 6015-B can be enforced in extreme cases where life or property are threatened. Typically, education results in mitigation efforts before enforcement actions are necessary. The community has a short season to gain compliance, and so long as good faith efforts in mitigation are occurring, punitive enforcement efforts are not pursued

The community has strategic discussions within land use, zoning, building, fire, and other relevant public agency departments to determine wildfire risk when approving permitted development. Improvements are typically included as a requirement in the permitting process when needed. There is little new development opportunity in the district, but mitigating wildfire risk will always be included in any plans for development or redevelopment.

Wildfire Mitigation Risk Reduction Programs

Defensible Space Inspections

The district provides a curbside review or meets with homeowners to discuss the importance of defensible space and how to achieve or maintain compliance. The target goal is completing 1,000-1,500 inspections per year. The district has achieved improved defensible space compliance across the district. Currently activities are funded through the Tahoe Resource Conservation District's (Tahoe RCD) Fire Adapted Communities Program (FAC). The FAC program is funded due to the Southern Nevada Public Land Management Act (SNPLMA).

Residential Curbside Chipping

By submitting a request at the fire district's website, residents receive grant-funded curbside chipping for materials of a reasonable size. The target goal is to maintain 600 to 1500 requests per year. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program and work force partnership with NLTFPD. Tahoe Truckee Community Foundation (TTCF) to fund purchase price of new chipper.

Community Workdays

Fire Adapted Community sites are provided with green waste dumpsters. The district provides green waste dumpsters and chipping services to organized neighborhood events. The target goal is to support at least 12 workday events each year. The program has achieved long-term incentives to support neighborhood leaders. The program is funded through the Tahoe RCD's Fire Adapted Communities via BLM's SNPLMA program.

Firewise

The district encourages Fire Adapted Community neighborhood leaders to participate in this National Fire Prevention Association program to provide a long-term framework to improve home hardening and defensible space throughout communities. The target goal is to maintain existing Firewise sites,

adding 1-2 more each year. There are currently 18 active and long-term Firewise sites along with three pending.

Improved Water Infrastructure

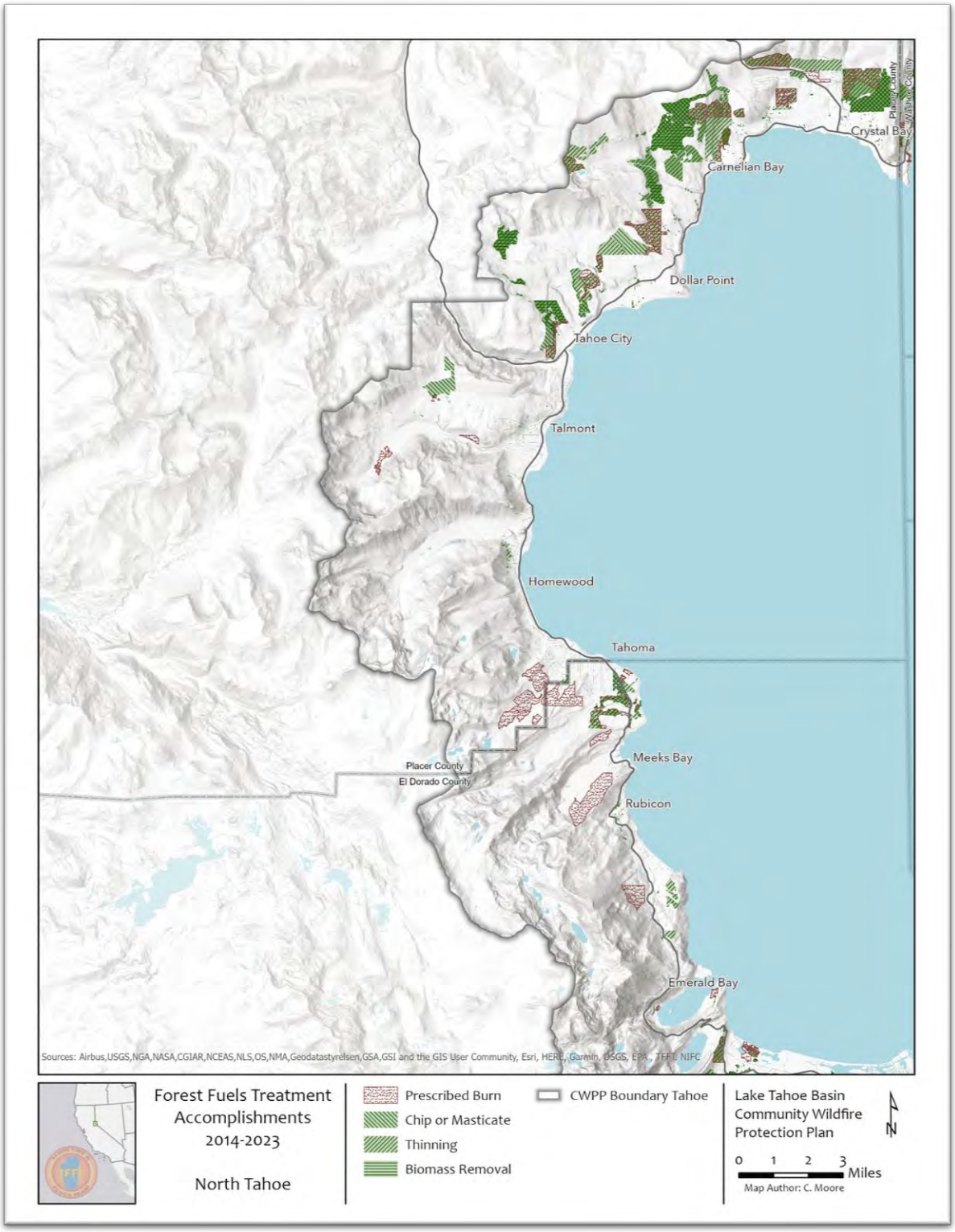
The district supports the efforts of water purveyors to invest in water infrastructure for fire suppression as these investments complement forest management, defensible space, and structure hardening. These water system improvements are essential to ensure firefighters have access to hydrants, with a reliable supply, duration, and flow rate to extinguish spot fires and protect structures and lives from wildfire.

Fuels Reduction Treatments

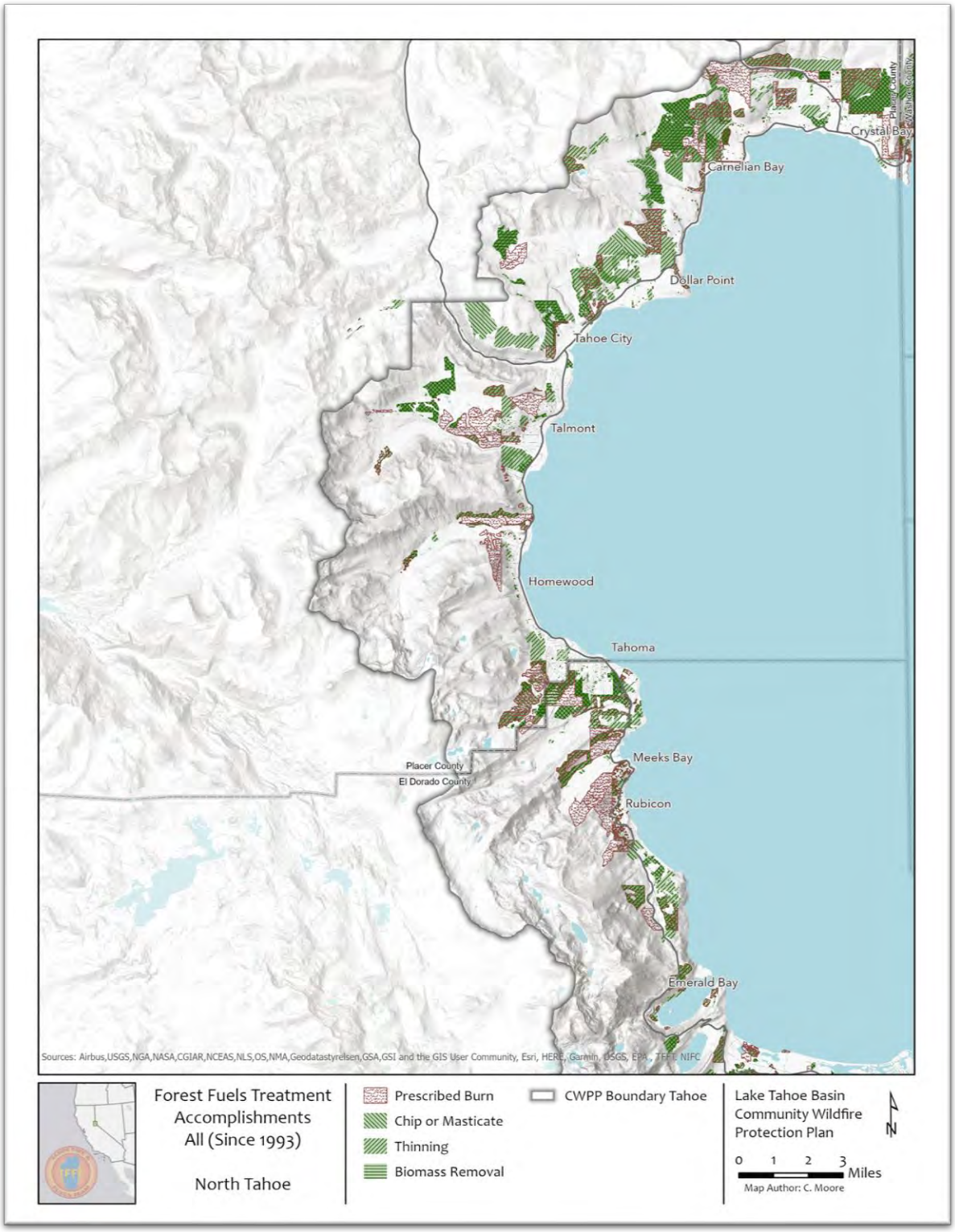
The district works with private landowners and others to reduce hazardous fuels and restore forest health in areas near communities within the NTFPD service area. The target goal is to improve pace and scale of treatments across ownership types. The program is funded by the Tahoe RCD via Bureau of Land Management SNPLMA grant along with CTC, FEMA, North Tahoe PUD, Tahoe City PUD, TTCF and USFS LTBMU.

The district is also engaged with fuels reduction treatments happening within district boundaries. The fire district will engage landowners and land management partners to facilitate access, funding agreements, and contractors to implement forest fuels reduction treatments to include shaded fuel breaks.

Map 29: NTFPD's Forest Fuels Treatment Accomplishments (2014 - 2023)



Map 30: NTFPD's Forest Fuels Treatment Accomplishments (Since 1993)



Personnel dedicated to implementing plans and programs

The district's wildfire mitigation program is a function of the Prevention Department, under the direction of the Fire Marshal, and under the general guidance of the Fire Chief. A Forest Fuels Manager is primarily charged with implementing wildfire-related plans and programs. An administrative assistant provides part-time support to the programs for financial assistance and compliance and public outreach. The Forest Fuels Manager oversees one full-time inspector, and two seasonal part-time Defensible Space Inspectors. The district is also supported by neighboring NLTFPD for program guidance and assistance to include the implementation of forest fuels reduction projects. Community Emergency Response Team (CERT) volunteers frequently provide support at public outreach events. TTCF is a nonprofit partner in outreach, education, workforce development, and in support of fuels treatments for landowners of three acres or more.

Funding Sources

The most stable long-term funding comes from the Bureau of Land Management SNPLMA. This funding is being used directly by the fire district to implement fuels reduction treatments. This includes hand thinning and mechanical fuels reduction work, as well as prescribed fire. SNPLMA funding is also utilized by the Tahoe RCD to support the Fire Adapted Communities program at Lake Tahoe.

The CTC also supports fire district fuels reduction planning and implementation projects through the state of California and sometimes SNPLMA funding. NTFPD has partnered on projects that reduce hazardous fuels on state property and neighboring private property where treatments directly serve to protect neighborhoods.

In 2022, NTFPD secured funding from the Truckee Tahoe Community Foundation (TTCF) Forest Futures Program. Using philanthropy dollars, this funding was established to develop the skills of seasonal defensible space inspectors over the winter months so they can be more instrumental in producing FAC deliverables over the summer months and eliminating the lay-off and re-hire pattern typical for seasonal employees.

The district received funding from FEMA for fuels reduction on federally owned parcels within neighborhoods. FEMA also provided funding for NTFPD to engage consultants to prepare the districts Community Risk Assessment in 2023.

The Truckee Tahoe Airport District is helping to fund shovel ready wildfire mitigation projects. Regional fire mitigation work aligns with the TTAD mission to protect the environment, increase community safety, and provide sustained benefit to the entire Truckee Tahoe region. TTAD joined forces with four regional fire districts and CAL FIRE to provide substantial funding for their planned wildfire mitigation projects.

Long-term funding available for fire mitigation

North Tahoe Fire is continually engaged with wildfire mitigation through risk-reduction programs. In 2023, the district engaged in a new round of grant funding for Fire Adapted Communities to provide

for defensible space inspections, community curbside chipping, and assistance with community workdays through 2028. Additional funding allows NTFPD to directly implement fuels reduction treatments where they best serve to protect communities. Partnerships with CTC and the USFS are helping to implement fuels reduction treatments on state and federally owned land and on adjacent private parcels. NTFPD has a goal of assisting the community with the removal of dead and dying trees, an endeavor that few residents can afford without assistance. The district has not yet been able to identify a funding source to support the much-needed mitigation efforts to address tree mortality in the region.

Dedicated and reliable long-term funding sources are designed to meet the basic needs of the district's safety operations. The Prevention Division is funded through cost-recovery, and wildfire mitigation programs are entirely grant funded. Applying for grant funding and assistance agreements is time consuming, with limited periods of performance and other restrictions, and does not support a nimble long-term program to implement defensible space and community-based fuels reduction projects on the landscape.

11.4.8 Outreach

District Rating: Public Engagement

Medium - North Tahoe Fire Protection District utilizes every opportunity to engage with the public. Efforts with Fire Adapted Communities and the Firewise program call for ongoing engagements with all participating sites and neighborhoods. The district is challenged because most of our community has primary residency elsewhere, and many homes in our district are occupied infrequently or utilized as investment property. However, with the adoption of the short-term rental ordinances that require defensible space as a component of obtaining the necessary permit, our engagement has increased considerably. The adoption of hazardous fuels ordinances to address undeveloped properties is an additional resource for engagement.

District Rating: Communities understanding of the area's fire risk

High - The area's fire risk is well understood by most residents. The catastrophic wildfires in recent years, paired with the insurance crisis, have incentivized our community members to become educated about defensible space and home hardening. The community assistance available through FAC has also provided a vehicle for communities to work together at the community level to improve their homes' resilience to wildfire.

Outreach tactics

North Tahoe Fire Protection District sends out a quarterly newsletter and maintains their website at www.ntfire.net to provide timely and updated information to the public and its more than 1,300 subscribers. The district also utilizes Twitter, Facebook, Instagram, and NextDoor social media platforms to reach 21,000 followers with timely, relevant information, to address public concerns, share in district successes, and to announce events and trainings.

The district has four mobile sign trailers that can be programmed remotely to promote fire restrictions and to promote defensible space and chipping programs. The signs are also used to

communicate relevant emergency information. The district advertises fire restriction information in the North Tahoe Visitor's Guide with a reach of over 60k print copies, as well as advertises in and provides content in support of the annual Wildfire Preparedness Guide produced by Tahoe Weekly. NTFPD is an active member in the TFFT Fire Public Information Team (PIT). The district also participates with the TTCF Forest Futures program by participating in Forest Futures Salons, a periodic virtual educational platform hosted by TTCF.

NTFPD maintains its outreach plan and continually works to reach more of their residents regarding the fire risk and taking individual actions to prepare. The district also participates in the monthly Chief's Corner article focused on seasonally relevant safety information in the regional newspaper.

Neighborhood leaders and local businesses have been provided with High Fire Danger red flag banners that they set out in high traffic locations during the event, and property managers of short-term rentals are notified to advise visitors of the high fire risk and elevated restrictions. The district also participates in the Resort Triangle All Agency group, which includes North Tahoe and the Truckee regional partners serving on the Joint Information Response Team, as well as helping with the annual update of the Truckee/Tahoe Joint Information Area Coordination Plan.

The district also relies on CERT membership to staff information boards at local businesses, who are readily identifiable in their green vests. In a large-scale emergency, the county Offices of Emergency Services is the entity with resources and responsibility to post true emergency alerts, such as Placer Alert and El Dorado Rave.

Vulnerable populations

The district is home to specific vulnerable populations, with visitors being the most difficult to reach due to the transient nature of recreationists, typically visiting both states and all five counties around the lake at some point during their stay. Many visitors are unaware of the address or community they are staying in due to the unincorporated service area. Second homeowners may also be difficult to reach, but they do have a connection to the community, and likely know a few full-time neighbors who will share important information. NTFPD has a large senior citizen population, however after the challenges of the pandemic, more of them are online and reachable through digital communications than in past years, but are more difficult to reach and many of them experience low vision or auditory challenges. There are several pockets of lower income and non-English speaking residents that may be difficult to reach. The district also has an unhoused population in the community, but due to the weather, they typically have access to a vehicle or are in touch with agencies to support them.

Engagement

North Tahoe Fire Protection District attends events that serve to assist families and elderly populations, and non-English speaking populations. Public outreach information is available at these events, and the district works one on one with anyone to better address their needs, as well as to partner with programs that target underserved populations. The district has a budget each year to invest in translation of district-produced material, and actively seeks material that is already translated so wildfire risk and defensible space messaging, as well as access to the district's forest

fuels programs reaches vulnerable and underserved populations. The district has adopted an Accessibility Policy to support individuals of all abilities in general district operations at all levels.

The fire district is grateful to employ Spanish speaking bi-lingual staff members to discuss defensible space, home hardening, and evacuation planning to Spanish speaking members of the district. The district also seeks to improve its accessibility platform to better provide website and printed content in Spanish, and so that it is more accessible to hearing and visually challenged individuals.

11.4.9 Recommendations

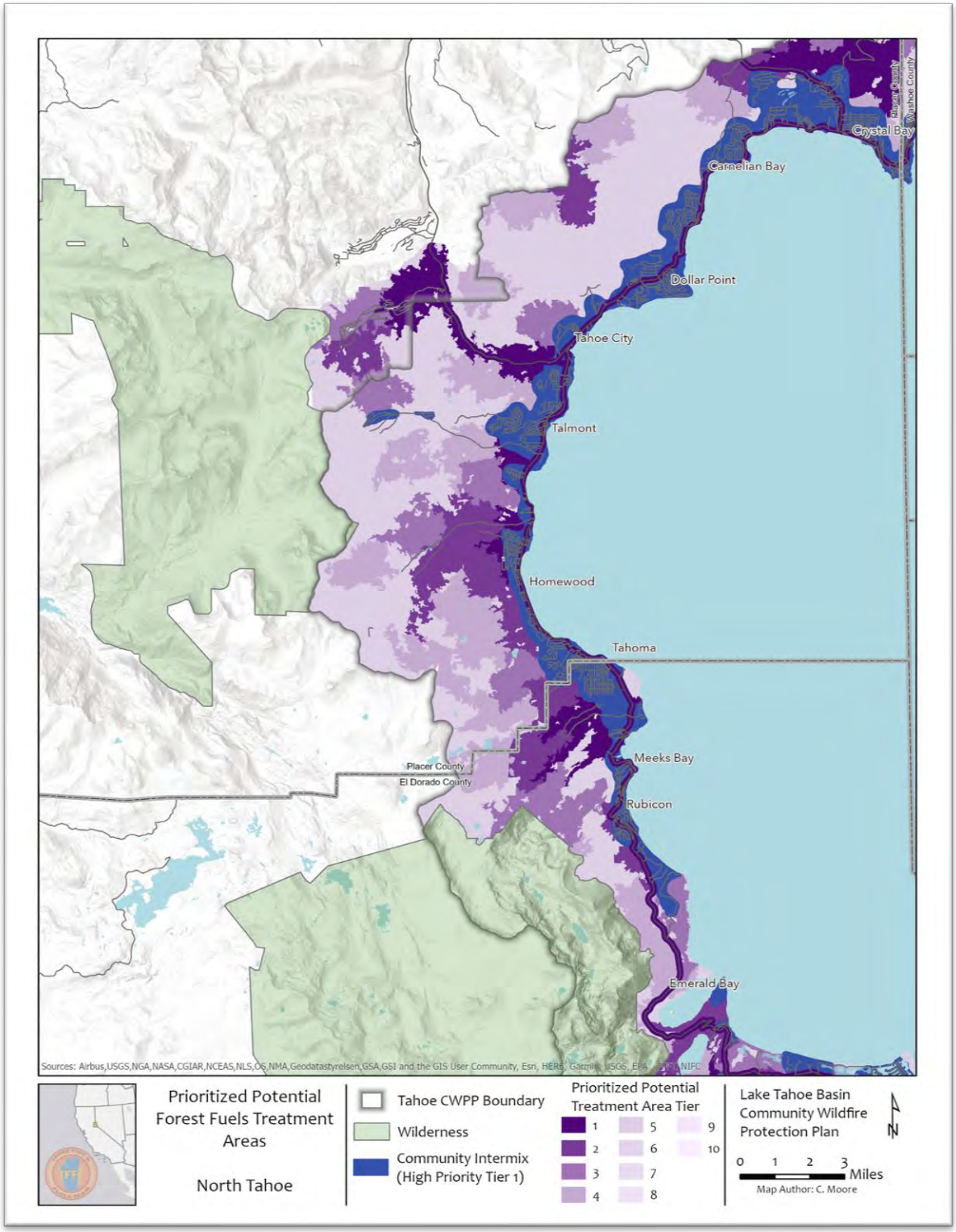
Districts utilized their own district ratings and public feedback from the Basin-wide survey to formulate strategic recommendations tailored to their respective areas, aimed at aligning with the goals outlined in the National Cohesive Wildland Fire Management Strategy:

NORTH TAHOE FIRE PROTECTION DISTRICT	FIRE ADAPTED COMMUNITIES	SAFE, EFFECTIVE, RISK-BASED WILDFIRE RESPONSE	RESILIENT LANDSCAPES
NATIONAL COHESIVE WILDLAND FIRE MANAGEMENT STRATEGY	**Human populations and infrastructure are as prepared as possible to receive, respond to, and recover from wildland fire**	**All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions**	**Landscapes, regardless of jurisdictional boundaries, are resilient to fire, insect, disease, invasive species, and climate change disturbances, in accordance with management objectives**
RECOMMENDATIONS	• Continue to work with the Tahoe Fire Public Information Team (Fire PIT) to develop educational campaigns and events to engage both residents and visitors. • Continue to work with local and regional Offices of Emergency Services and Placer and El Dorado County Sheriff's Offices emergency notification systems and foster their broad use among residents and visitors. • Create additional Spanish outreach materials to broaden community engagement and inclusivity. The district also seeks to improve accessibility on all platforms. • Support development of ignition-resistant construction inspection programs and other identified programs including opportunities to assist property owners with home hardening efforts. • Assisting the community with the removal of dead and dying trees as this expense can be challenging to impossible for most residents. • Continue to utilize advancing software such as Fire Aside (chipping program and defensible space inspection software) as well as similar software applications. • Continue to improve defensible space inspections and support for enforcement protocols. • Develop methods to reach renters and absentee homeowners with key messages. • Allow communities easy access to guidelines and requirements to becoming recognized as Firewise and a fire adapted community. • Facilitate information sharing between insurance and fire district on properties needing mitigation.	• Pursue funding to support existing and additional wildland fire hand crews, equipment, and resources. • Pursue emerging technology for fire detection and patrolling. This includes software for early detection of wildfires such as Alert Wildfire Cameras. • Continue or improve mutual aid efforts within the Basin amongst all resource agencies. • Add Type-5 or Type 6 Engine/Patrol.	• Create "interpretable trails" that show the processes in fuels management. • Develop and support educational opportunities regarding vegetation management. • Continue development and implications of educational campaigns, public events, and outreach on prescribed fire burning projects. • Support agencies partnering and working together to address all jurisdictional areas in a holistic approach to address the larger landscape. • Evaluate opportunities to increase fuelwood collection in the wildland-urban interface, ensure that regulations and access support these opportunities. • Support investments in water infrastructure to improve reliable water supply, duration, and flow rates.

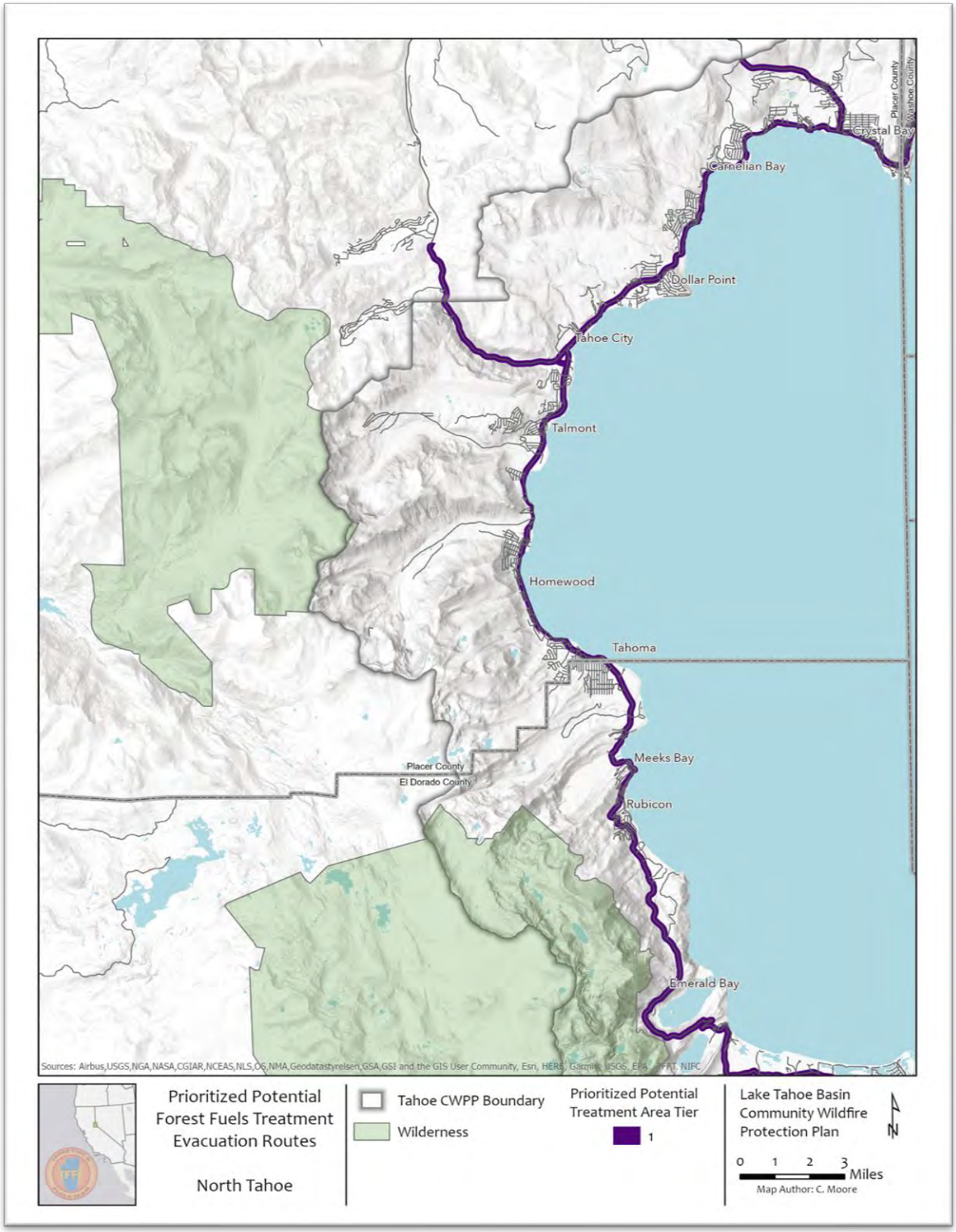
Table 9: NTFPD's recommendations to align with "Strategy" goals

11.4.10 Prioritized Potential Forest Fuels Treatment Areas

Map 31: NTFPD's Prioritized Potential Forest Fuels Treatment Areas



Map 32: Prioritized Potential Forest Fuel Treatment: Evacuation Routes (North Tahoe)



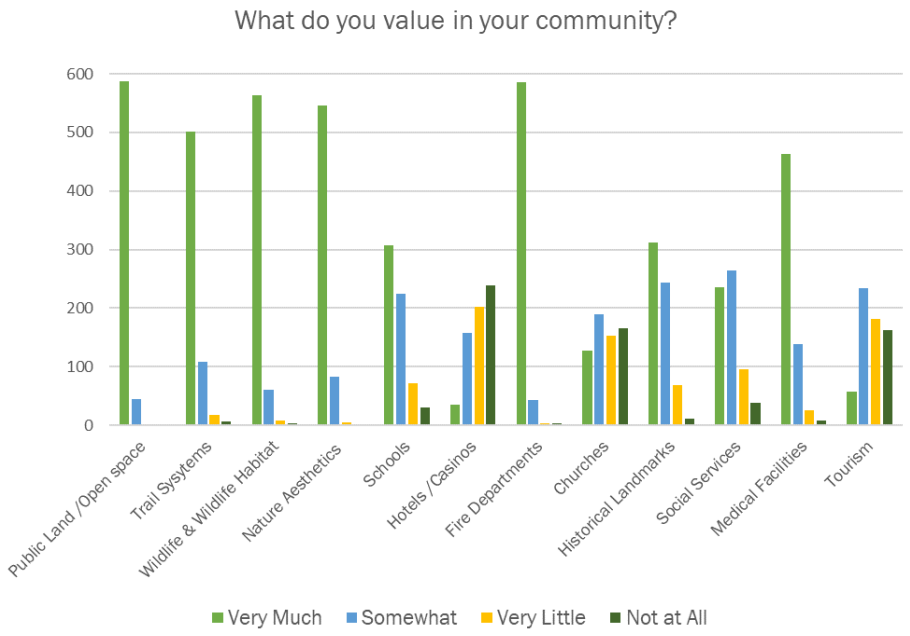
11.4.11 Other

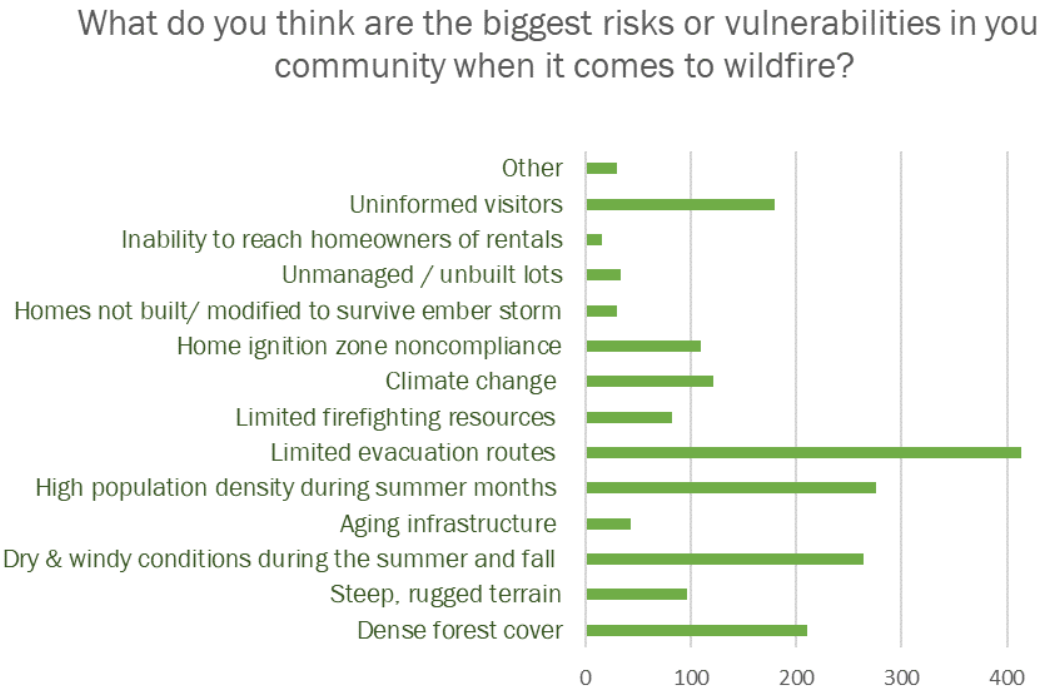
NTFPD's tax rate was developed to fund emergency response. It is limited and targeted and is far below a level to fully support modern day wildland firefighting. The district is not a landowner nor is it a land manager, but we are dedicated to seeking resources to improve our fuels management activities for better community protection from wildfire and to increase the pace and scale of fuels reduction treatments. We are also committed to supporting our water purveyors to seek and identify funding to improve water infrastructure for fire suppression to balance all the elements required to mitigate the risk of wildfire.

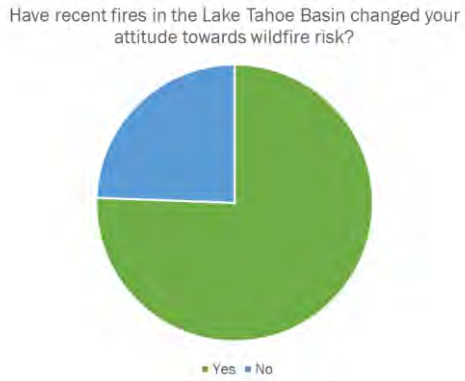
Chapter Twelve: Appendices

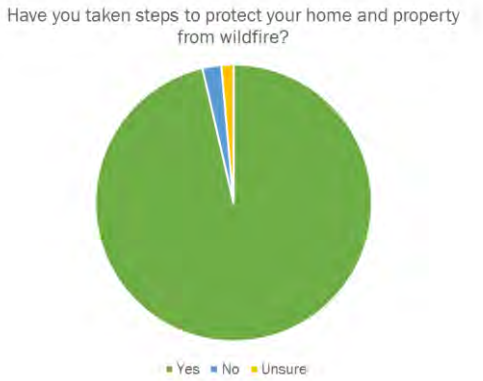
Appendix A. CWPP Survey Results

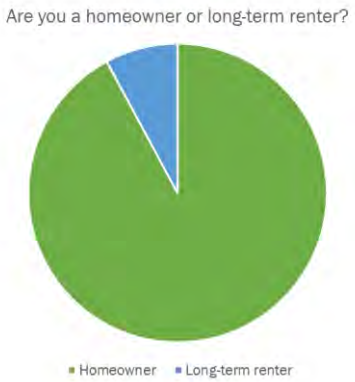
Summarized survey results are included below:

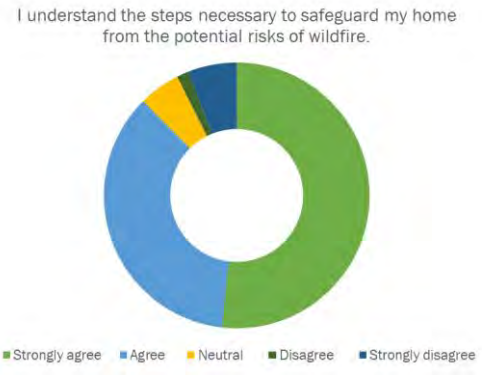



What do you think are the biggest risks or vulnerabilities in your community when it comes to wildfire?
Other
Uninformed visitors
Inability to reach homeowners of rentals
Unmanaged / unbuilt lots
Homes not built/ modified to survive ember storm
Home ignition zone noncompliance
Climate change
Limited firefighting resources
Limited evacuation routes
High population density during summer months
Aging infrastructure
Dry & windy conditions during the summer and fall
Steep, rugged terrain
Dense forest cover
0
100
200
300
400


Have recent fires in the Lake Tahoe Basin changed your attitude towards wildfire risk?
Yes
No


Have you taken steps to protect your home and property from wildfire?
Yes
No
Unsure


Are you a homeowner or long-term renter?
Homeowner
Long-term renter

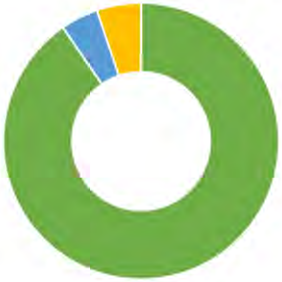

I understand the steps necessary to safeguard my home from the potential risks of wildfire.
Strongly agree
Agree
Neutral
Disagree
Strongly disagree

Are there any areas within the community that you feel are particularly at risk for wildfire, or that need additional mitigation/wildfire preparation efforts?

**Specific details such as addresses collected from this question were sent directly to correspond*

Do you think your community could do better to prepare for and prevent wildfires?

Do you support the use of prescribed fire in the Tahoe Basin for fuels reduction and community protection?

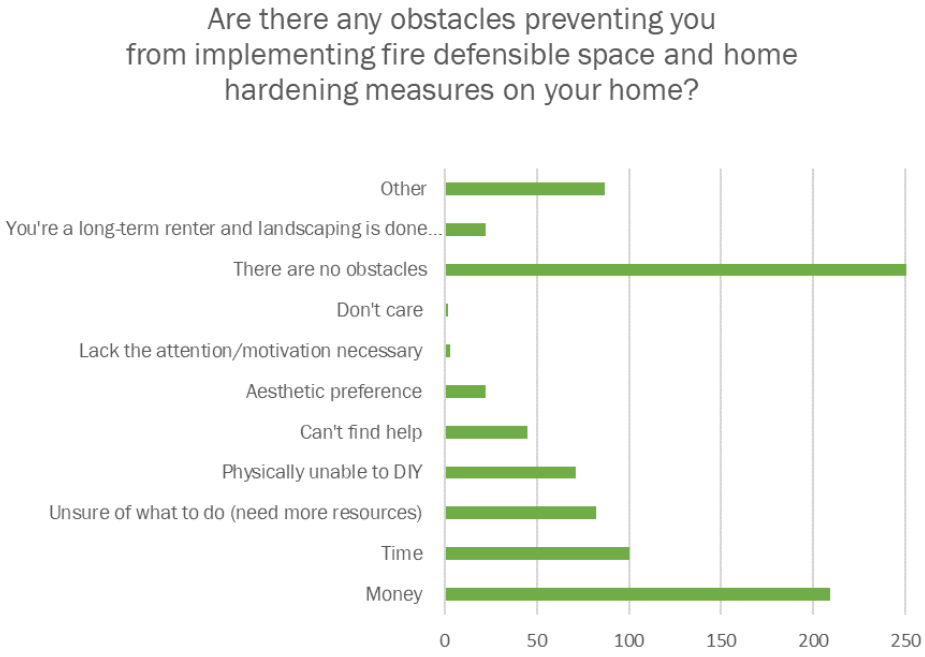


Are you aware of the practice of cultural burning?

The Washoe Tribe has used fire in the Tahoe Basin to protect their homes and maintain productive and healthy forests, meadows, and streams for residents and wildlife for thousands of years.

Do you believe you would know how to safely evacuate in the event of a wildfire?

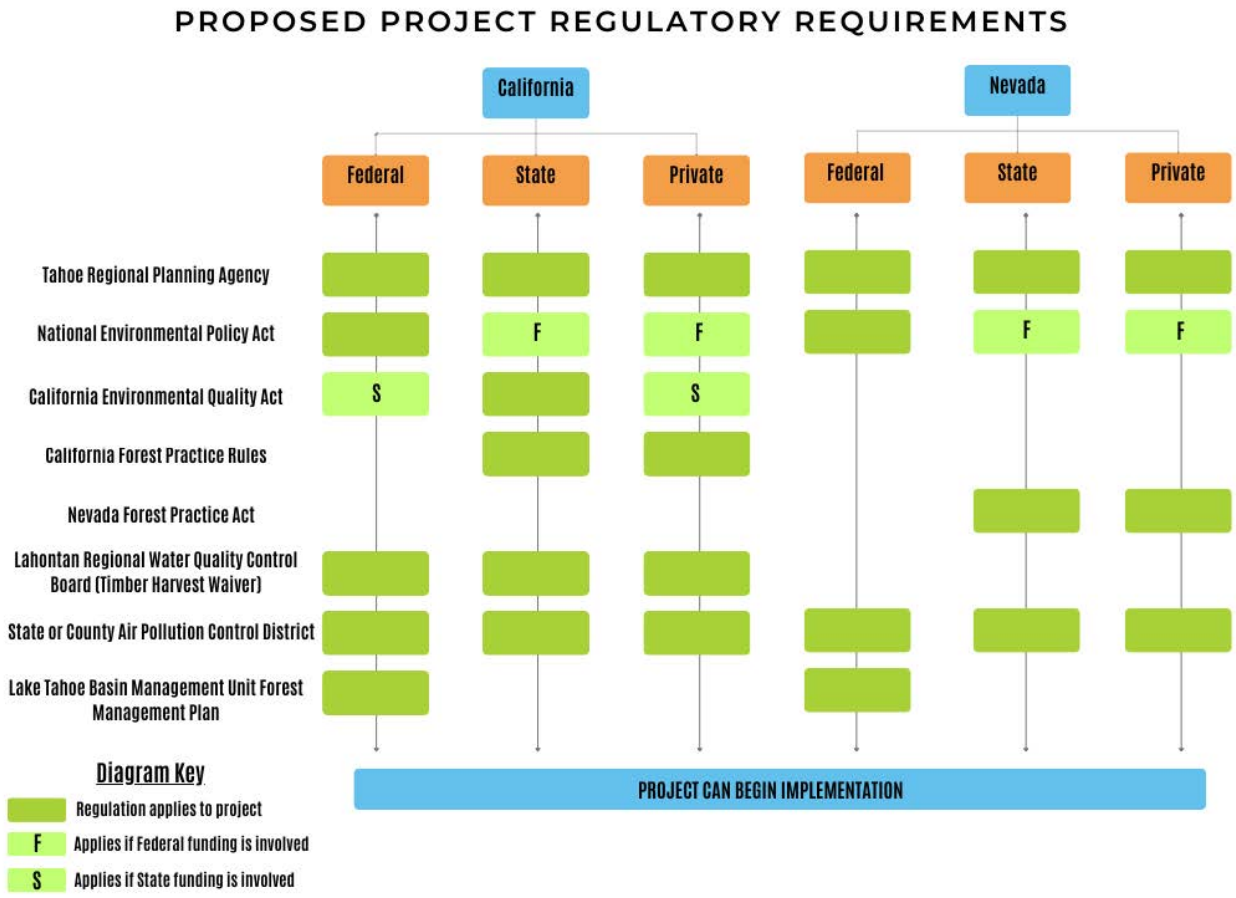
Do you know where to get updates and information regarding evacuations or incidents?


Are there any obstacles preventing you from implementing fire defensible space and home hardening measures on your home?
Other
You're a long-term renter and landscaping is done...
There are no obstacles
Don't care
Lack the attention/motivation necessary
Aesthetic preference
Can't find help
Physically unable to DIY
Unsure of what to do (need more resources)
Time
Money
0
50
100
150
200
250


Rate the most important outcomes of a successful Community Wildfire Protection Plan.
Enhanced collaboration among stakeholders: The development of a CWPP involves collaboration among stakeholders which leads to increased communication, coordination, and understanding of wildfire risks and mitigation strategies.
Increased access to funding and resources: Completion of a CWPP can make a community eligible for funding and resources to implement mitigation measures identified in the plan.
Protection of natural resources: By identifying areas at risk of wildfire and prioritizing mitigation measures, a CWPP can help to protect natural resources and wildlife habitat from the impacts of wildfire.
Improved emergency preparedness and response: A CWPP can help improve emergency preparedness and response in the event of a wildfire.
Increased community safety: A CWPP can help to identify potential wildfire hazards and prioritize mitigation efforts.

Appendix B. Project Implementation Flow Chart

Proposed projects must meet a series of regulatory or guidance requirements depending on location and scope. This chart illustrates the series of regulations or guidance a fuels reduction treatment must comply with before implementation.



CEQA Considerations

The Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) is a planning document that identifies Prioritized Treatment Areas but does not commit any public agency to a specific project or action that would result in physical changes to the environment. California Environmental Quality Act (CEQA) compliance will be addressed at the appropriate stage when specific projects are identified and move toward implementation.

Appendix C: Culturally Significant Plants

For the Washoe people most, if not all, culturally significant plants have developed fire adaptations and strategies for exploiting, avoiding, promoting, or resisting fire including:

Wémši? (Common Yarrow), Achillea millefolium, was and remains an important cultural plant to the Washoe people for its various medicinal properties and applications. Common yarrow's good sprouting ability, low ignitability, high germination percentages, and competitive seedlings result in a remarkable persistence under fire disturbance often appearing in the first stages of succession following fire. Fire results in fragmentation of yarrow's rhizomes stimulating regeneration from rapid rhizomes spread and the wind dispersal of seeds onto burned sites from adjacent unburned areas. Cover and frequency of common yarrow increase 1 to 2 years after fire but not with any consistent pattern. After initially increasing in cover, common yarrow may decrease to unburned levels as early as 3 years after fire.

Megi•geš (Western Bracken Fern) *Pteridium aquilinum,* is used by many indigenous peoples including the Washoe People most commonly for its pigmentation as a design element in *degikup* (fine basketry). Western bracken fern is considered a fire-adapted species throughout the world. It is not only adapted to fire, but it also promotes fire by producing highly flammable layers of dried fronds every fall. Western bracken fern fronds can grow up to 6 feet, resulting in several tons of flashy fuel per acre range as this species favors repeated fires. Western bracken fern is also well known as a post-fire colonizer in western coniferous forests and eastern pine and oak forests. Fire benefits western bracken fern by removing its competition while it sprouts profusely from surviving rhizomes. New sprouts are more vigorous following fire, and western bracken fern becomes more fertile, producing far more spores than it does in the shade.

*Šú'gilá'ʔći' (*Arrowleaf Balsamroot), *Balsamorhiza sagittata,* is another culturally significant plant to the Washoe People that can be found within and around the Tahoe Basin. Arrowleaf Balsamroot has many medicinal applications and is a crucial component to many remedies. Arrowleaf balsamroot regenerates from its caudex following fire. Arrowleaf Balsamroot is very fire-resistant with thick caudexes and is even capable of surviving and resprouting after high severity fire and generally increases in frequency and density after fire. Arrowleaf Balsamroot is considered a secondary colonizer since it sprouts from a caudex and does not spread by rootstocks. Any increase in the number of plants must await seed production, so Arrowleaf Balsamroot increases slowly after burning.

ʔltmahá̱waʔ (Incense cedar) *Calocedrus decurrens*, was used for its insolating bark slabs used in the construction of *gális dáŋal (*Winter house) as well as fuel for smoking food and many other uses. Incense Cedar, like other conifers of the Sierra Nevada, is fire adapted with fire-resistant bark and mature trees benefit from the effects of low-severity fire by reducing competition and enriching soils.

*Šuʔwetɬk (*Saskatoon serviceberry*) Amelanchier alnifolia,* was used as a food source for its berries, and its wood was used to make arrow shafts, spears, and various other tools. Most importantly Saskatoon service berry is a significant browse plant providing food and shelter for both big and small game. Saskatoon serviceberry sprouts from the root crown and rhizomes after fire. Saskatoon

serviceberry in forests is fire-dependent and declines with fire exclusion. It may persist in the understory for decades but eventually dies out with canopy closure.

Appendix D: Glossary & References

The following is a glossary of key words that are relevant to the Lake Tahoe Basin CWPP. This list is not exhaustive.

Aspect –

Cardinal direction toward which a slope faces. (*NWCG Glossary of Wildland Fire)*

Active crown fire –

A fire in which a solid flame develops in the crowns of trees, but the surface and crown phases advance as a linked unit dependent on each other. (*NWCG Glossary of Wildland Fire)*

Backfire –

A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire or change the direction of force of the fire's convection column. (*NWCG Glossary of Wildland Fire)*

Community Wildfire Protection Plan (CWPP) -

A plan developed in the collaborative framework established by the Wildland Fire Leadership Council and agreed to by state, tribal, and local government, local fire department, other stakeholders and federal land management agencies managing land in the vicinity of the planning area. A CWPP identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect one or more at-risk communities and essential infrastructure and recommends measures to reduce structural ignitability throughout the at-risk community. (*NWCG Glossary of Wildland Fire)*

Community WUI Intermix / Urban Core –

Community WUI Intermix is the built environment and is adjacent to Defense Zone. Community WUI Intermix, also defined as “Urban Core” by the US Forest Service, is a subset of the Defense Zone.

Canopy –

The stratum containing the crowns of the tallest vegetation present (living or dead), usually above 20 feet. (*NWCG Glossary of Wildland Fire)*

Control line –

An inclusive term for all constructed or natural barriers and treated fire edges used to control a fire. (*NWCG Glossary of Wildland Fire)*

Controlled –

The completion of control line around a fire, any spot fires therefrom, and any interior islands to be saved; burned out any unburned area adjacent to the fire side of the control lines; and cool down all hotspots that are immediate threats to the control line, until the lines can reasonably be expected to hold under the foreseeable conditions. (*NWCG Glossary of Wildland Fire)*

Contained -

The status of a wildfire suppression action signifying that a control line has been completed around the fire, and any associated spot fires, which can reasonably be expected to stop the fire's spread. (*NWCG Glossary of Wildland Fire)*

Crown fire –

> **Passive Crown Fire** (Intermittent or Persistent Torching) occurs where surface fire intensity is sufficient to ignite tree crowns, individually or in groups, but winds are not sufficient to support propagation from tree to tree.
>
> **Active Crown Fire** occurs where surface and crown fire energy are linked. Surface intensity is sufficient to ignite tree crowns, and fire spread and intensity in the tree crowns encourages surface fire spread and intensity.
>
> **Independent Crown Fire** occurs (rarely) where tree crown loading and flammability is sufficient to carry fire without surface fire contribution under ambient weather and wind conditions.

Defensible space –

Defensible space is the buffer between a structure and the surrounding area. Adequate defensible space acts as a barrier to slow or halt the progress of fire that would otherwise engulf a property. It also helps ensure the safety of firefighters defending a home. Defensible space is the first line of defense for a home against wildfire. *(CAL FIRE Defensible Space)*

Ember-Resistant Zone –

Also known as Zone 0, the Ember-Resistant Zone exists in the area 0-5 feet from the home. The goal in this zone is to reduce the vulnerability of the home to embers by creating a zone of ember-resistant materials around the home. *(University of Nevada, Reno Extension, 2024)*

Emergency response –

Any federal, state, or local emergency public safety, law enforcement, emergency responder, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities. It is any organization responding to an emergency, or providing mutual aid support to such an organization, whether in the field, at the scene of an incident, or operations center. (*NWCG Glossary of Wildland Fire)*

Federal Responsibility Area (FRA):

The primary financial responsibility for preventing and suppressing fires is that of the Federal Government. These lands are generally protected by the Department of Agriculture, Forest Service, the Department of Interior, Bureau of Land Management, National Parks Service, US Fish and Wildlife Service, and Bureau of Indian Affairs. *(CAL FIRE Glossary of Terms)*

Fire behavior –

The manner in which a fire reacts to the influences of fuel, weather, and topography.

*Burning index (fire behavior) - A relative number related to the contribution that fire behavior makes to the amount or effort needed to contain a fire in a specified fuel type. (*NWCG Glossary of Wildland Fire)*

Firebreak –

A natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work. (*NWCG Glossary of Wildland Fire)*

Fire ecology –

The study of the effects of fire on living organisms and their environment. (*NWCG Glossary of Wildland Fire)*

Fire environment –

The surrounding conditions, influences, and modifying forces of topography, fuel, and weather that determine fire behavior. (*NWCG Glossary of Wildland Fire)*

Fire hazard –

A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control. (*NWCG Glossary of Wildland Fire)*

*Fire hazard index - A numerical rating for specific fuel types, indicating the relative probability of fires starting and spreading, and the probable degree of resistance to control; similar to burning index, but without effects of wind speed.

Fire management unit –

A land area definable by specified management objectives, constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regime groups, and other defined elements that set it apart from an adjacent area. (*NWCG Glossary of Wildland Fire)*

Fire regime –

Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects as well, in a given area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. (*NWCG Glossary of Wildland Fire)*

Fire return interval –

Number of years between 2 successive fires in a specified area. *(U.S. Forest Service)*

Fire severity –

Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time. (*NWCG Glossary of Wildland Fire)*

Fire suppression –

All work and activities connected with control and fire-extinguishing operations, beginning with discovery and continuing until the fire is completely extinguished. (*NWCG Glossary of Wildland Fire)*

Fire-Adapted Community –

A community that recognizes its risk and takes action before, during and after a fire in order for their community to be more resilient to wildfire. Fire adapted community members are informed and prepared, collaboratively planning and taking action to better live with wildland fire. (*NWCG Glossary of Wildland Fire)*

Firewise –

A program teaches people how to adapt to living with wildfire and encourages neighbors to work together and take action.

Fire-resistant tree –

A species with compact, resin-free, thick corky bark and less flammable foliage that has a relatively lower probability of being killed or scarred by a fire than a fire sensitive tree. (*NWCG Glossary of Wildland Fire)*

Fuel –

Combustible material.

Fuel break –

A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled. (*NWCG Glossary of Wildland Fire)*

Fuel loading –

The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area. (*NWCG Glossary of Wildland Fire)*

Fuel reduction –

Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control. (*NWCG Glossary of Wildland Fire)*

Fuel treatments –

To reduce flammable material—such as dry grass, fallen trees, dense forests, logs, and shrubs—land management agencies strategically remove and reduce fuels on the landscape. Fuel management practices include burning, thinning, pruning, chipping, and mechanically removing fuels to reduce the amount and continuity of burnable vegetation.

General Forest -

All areas of the basin that are beyond the WUI and are not in wilderness or backcountry management areas.

Healthy Forests Restoration Act (HFRA) of 2003 –

Directs the Secretary of Agriculture, with respect to National Forest System lands, and the Secretary of the Interior, with respect to public lands administered by the Bureau of Land Management, to plan and conduct hazardous fuel reduction projects (fuel projects) on specified types of Federal lands, including on certain lands that contain threatened and endangered species habitat. Directs the Secretary concerned to fully maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining the large trees contributing to old growth structure. *(Healthy Forests Restoration Act of 2003)*

Home hardening –

Vegetation management compliance and building materials used to resist the intrusion of flames or embers projected by a wildland fire. It can be applied to new construction or for retrofitting an older home. Home Hardening considers the relationship between your home and its exposure to nearby combustible features such as vegetation, vehicles, accessory buildings, or even miscellaneous structures like a fence. *(CAL FIRE)*

Home ignition zone –

The area where the factors that principally determine home ignition potential during extreme wildfire behavior (high fire intensities and burning embers) are present. The characteristics of a home and its immediate surroundings within 100 feet comprise the HIZ. (*NWCG Glossary of Wildland Fire)*

Invasive species –

Invasive species are non-native species that cause or are likely to cause harm to the environment, economy, or human health. *(National Invasive Species Information Center)*

Ladder fuels –

Ladder fuels occur where surface and aerial fuels meet. They allow a fire that's burning on the surface to gain intensity and jump into the tops of trees, becoming a crown fire.

Lean, Clean, and Green Zone –

Exists in the area 5-30 feet from the home. The objective of this zone is to reduce the risk of fire spreading from surrounding vegetation to the home. *(University of Nevada, Reno Extension, 2024)*

Local Responsibility Area (LRA) –

Refers to areas where local agencies, such as city or county fire departments, are responsible for fire protection and emergency response services.

Mop-up –

Extinguishing or removing burning material near control lines, felling snags, and trenching logs to prevent rolling after an area has burned, to make a fire safe, or to reduce residual smoke. *(CAL FIRE Glossary of Terms)*

Mutual aid –

Assistance in firefighting or investigation by fire agencies, without regard for jurisdictional boundaries. (*NWCG Glossary of Wildland Fire)*

National Cohesive Wildland Fire Management Strategy –

The National Cohesive Wildland Fire Management Strategy is a collaborative process with active involvement of all levels of government and non-governmental organizations, as well as the public, to seek national, all-lands solutions to wildland fire management issues. *(U.S. Forest Service)*

Prescribed fire –

A wildland fire originating from a planned ignition in accordance with applicable laws, policies, and regulations to meet specific objectives. (*NWCG Glossary of Wildland Fire)*

Rate of spread –

The relative activity of a fire in extending its horizontal dimensions. It is expressed as rate of increase of the total perimeter of the fire, as rate of forward spread of the fire front, or as rate of increase in area, depending on the intended use of the information. (*NWCG Glossary of Wildland Fire)*

Red Flag Warning –

Term used by fire weather forecasters to alert users to an ongoing or imminent critical fire weather pattern. (CAL FIRE Glossary of Terms)

Rehabilitation –

The activities necessary to repair damage or disturbance caused by wildfire or the wildfire suppression activity. (CAL FIRE Glossary of Terms)

Reduced Fuel Zone –

Exists in the area 30-100+ feet from the home. The objective of this zone is to reduce fire spread and restrict fire movement into the crowns of trees or shrubs. (University of Nevada, Reno Extension, 2024)

State Responsibly Area (SRA) –

The California Board of Forestry and Fire Protection classifies areas in which the primary financial responsibility for preventing and suppressing fires is that of the state. (CAL FIRE Glossary of Terms)

Shaded fuel break –

Fuel breaks built in timbered areas where the trees on the break are thinned and pruned to reduce the fire potential yet retain enough crown canopy to make a less favorable microclimate for surface fires. (NWCG Glossary of Wildland Fire)

Unified Command –

In ICS, unified command is a unified team effort which allows all agencies with jurisdictional responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. (CAL FIRE Glossary of Terms)

Wildland-urban interface (WUI) –

The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels. (NWCG Glossary of Wildland Fire)

WUI Defense Zone -

The Defense Zone is generally a ¼ mile buffer from Community WUI Intermix. All areas within the Defense Zone are a priority for fuels reduction; specifically fuels reduction in wildland areas and defensible space within the built areas.

WUI Threat Zone -

The Threat Zone is generally a 1¼ mile buffer from WUI Defense. The Threat Zone is an extension of the Defense Zone with the important distinction being that not every area within the threat zone may be a priority for treatment. Area treatments within the threat zone are designed to reduce fuels in target areas where fires are known to start, where a fire start is likely to grow and threaten communities.

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Appendix E: Abbreviation Glossary

The following abbreviations are relevant to the Lake Tahoe Basin CWPP. This list is not exhaustive.

(BLM) – Bureau of Land Management

(BIA) – Bureau of Indian Affairs

(California DOC) – California Department of Conservation

(CAL FIRE) - California Department of Forestry and Fire Protection

(CAL FIRE NEU) – Nevada Yuba Placer Unit

(CAL FIRE AEU) - Amador-El Dorado Unit

(CEQA) - California Environmental Quality Act

(CERT) - Community Emergency Response Team

(CICCS) - California Incident Command Certification System

(CTC) - California Tahoe Conservancy

(CWPP) - Community Wildfire Protection Plan

(DBH) - Diameter at Breast Height

(DMA) - Disaster Mitigation Act

(EDCFD) - El Dorado County Fire Department

(ENF) - Eldorado National Forest

(FAC) - Fire Adapted Communities

(FD) - Fire Department

(FLLCSD) – Fallen Leaf Lake Community Services District

(FEMA) - Federal Emergency Management Agency

(FLAME) - Federal Land Assistance, Management and Enhancement Act

(GIS) - Geographic Information System

(GBI) – Great Basin Institute

(HFRA) - Healthy Forests Restoration Act

(IAP) - Incident Action Plan

(IC) - Incident Commander

(ICS) - Incident Command System

(IVGID) - Incline Village General Improvement District

(LRA) - Local Responsibility Area

(LRWQCB) - Lahontan Regional Water Quality Control Board

(LTBMU) - Lake Tahoe Basin Management Unit

(LVFPD) - Lake Valley Fire Protection District

(MAC) – Multi-Agency Coordinating Group

(NDEP) - Nevada Division of Environmental Protection

(NDF) - Nevada Division of Forestry

(NDSL) - Nevada Division of State Lands

(NEPA) - National Environmental Policy Act

(NFMA) - National Forest Management Act

(NFPA) - National Fire Protection Association

(NIFC) – National Interagency Fire Center

(NLTFPD) - North Lake Tahoe Fire Protection District

(NMMA) - National Mutual Aid Agreement

(NPS) - National Park Service

(NSP) – Nevada State Parks

(NTFPD) - North Tahoe Fire Protection District

(NTPUD) - North Tahoe Public Utility District

(NVFSC) - Nevada Fire Safe Council

(NWCG) - National Wildfire Coordinating Group

(OES) – Office of Emergency Services

(RFFC) - Regional Forest and Fire Capacity

(SLTFR) - South Lake Tahoe Fire Rescue

(SNPLMA) - Southern Nevada Public Land Management Act

(SRA) - State Responsibility Area

(STPUD) - South Tahoe Public Utility District

(TCPUD) - Tahoe City Public Utility District

(TCSI) – Tahoe Central Sierra Initiative

(TDFPD) - Tahoe Douglas Fire Protection District

(TFFT) - Tahoe Fire and Fuels Team

(TFFT Fire PIT) – Tahoe Fire and Fuels Team Fire Public Information Team

(TFPD) - Truckee Fire Protection District

(TRPA) - Tahoe Regional Planning Agency

(TNFAC) – Tahoe Network of Fire Adapted Communities

(TTCF) - Tahoe Truckee Community Foundation

(UCCE) - University of California Cooperative Extension

(UNCE) - University of Nevada Cooperative Extension

(USFS) - United States Forest Service

(USFWS) – United States Fish and Wildlife Service

(WEPA) – Washoe Environmental Protection Agency

(WFLC) - Wildland Fire Leadership Council

(WUI) - Wildland-Urban Interface

(EIP) - Environmental Improvement Program

(EMS) - Emergency Medical Services

(EOC) - Emergency Operations Center

(HOA) - Homeowners Association

(ICS) - Incident Command System

(MOU) - Memorandum of Understanding

(NIMS) - National Incident Management System

(RCD) - Resource Conservation District

(SOG) - Standard Operating Guidelines

Appendix F: Public Comment Responses

The Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) was posted for a public comment period from November 18th, 2024 - December 20th, 2024. During this time, five comments were submitted. Below is a summary of each comment, along with responses to address the feedback. To respect the privacy and anonymity of commenters, feedback has been generalized.

Concerns About Maintenance of Public Lands Adjacent to Private Property

Several community members have expressed concerns regarding the maintenance of U.S. Forest Service (USFS) lots adjacent to residential properties. Despite diligent defensible space efforts by homeowners, adjacent USFS lots are perceived as untreated and potentially hazardous, with some areas reportedly not maintained for over a decade. Residents have sought clarification on the responsibilities of agencies such as the USFS and local fire protection districts in managing these lands and have inquired whether the CWPP addresses these concerns or if alternative management plans exist.

The 2025 CWPP identifies urban lots as part of the Community WUI Intermix Zone, placing them in the high priority, Tier One level of priority for projects. Urban lots aren't specifically called out within the CWPP. Through a Good Neighbor Authority (GNA) agreement, the LTBMU and the California Tahoe Conservancy collaborate on urban lot hazardous fuels reduction projects, ensuring cohesive treatments across federal and state lands. The Conservancy utilizes contractors, local fire districts, and agencies like the CCC to implement projects such as forest thinning, prescribed burns, and pile burning, with regular inspections of open space lots conducted at least every two years to manage hazardous fuels. While urban lots may seem like a threat, they can benefit properties by serving as natural buffers enhancing the overall aesthetic and environmental value of a neighborhood. If you are concerned about the condition of a California Tahoe Conservancy lot, contact them via their website or call 530-543-5580.

Additionally, the LTBMU has a stewardship agreement that allows homeowners to conduct low-impact defensible space treatments on National Forest System land within 100 feet of their building footprint. These activities include removing pine needles and surface litter, pruning trees, and removing brush (specific guidelines are provided in the agreement). On behalf of the LTBMU, local fire district staff can meet with residents through this agreement, assess their property, and discuss its terms. Local fire district staff may issue a stewardship agreement for interested residents. For information on initiating a stewardship agreement, visit this link or call 530-543-2759.

Accessibility and Prioritization in the CWPP

The updated CWPP has received positive feedback for its improved readability and clearer prioritization of wildfire mitigation areas. Tools such as the CWPP StoryMap and the inclusion of focus groups have been particularly appreciated for their role in making community concerns and priorities more accessible.

Challenges of Home Hardening and Hazardous Fuels Reduction Costs

Concerns were raised about the financial challenges of implementing home hardening and tree removal, particularly in communities with aging populations. Even in higher-income areas, the costs associated with retrofitting homes and removing hazardous vegetation are considered prohibitive by

many residents. These challenges are exacerbated for older homeowners who may not have the physical capacity to conduct mitigation work themselves, underscoring the need for financial assistance programs or community-driven solutions.

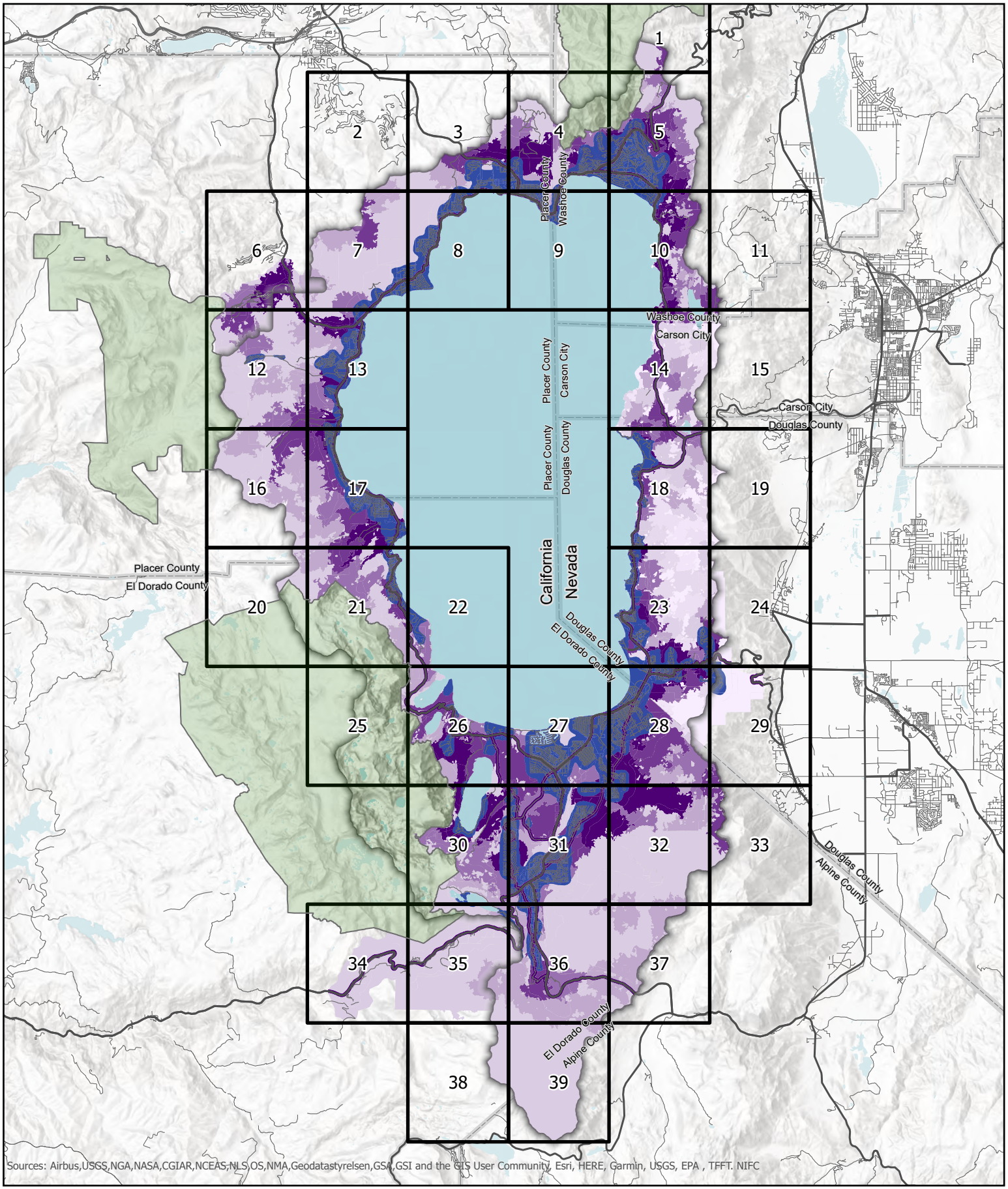
The CWPP Steering Committee understands the financial challenges associated with home hardening and hazardous fuels reduction, particularly for aging populations and those in higher-income areas who still find the costs prohibitive. The 2025 CWPP acknowledges these difficulties and emphasizes the importance of making wildfire mitigation efforts accessible to all community members. A focus group was conducted to explore potential solutions for these issues. The findings from this focus group have informed the CWPP's recommendations and reinforced the need for targeted support.

Fire Threats, Evacuation Planning, and CWPP Scope

A community member expressed general support for the CWPP but felt it did not fully address key issues related to fire threats, public safety, and evacuation preparedness. Concerns were raised about the adequacy of community water systems for fire suppression, despite acknowledgment of efforts like the Tahoe Water for Fire Suppression Partnership. Specific feedback pointed out the need for more comprehensive evacuation planning. The commenter emphasized that while law enforcement is responsible for evacuations, more detailed coordination and planning are necessary, urging the agencies to prioritize evacuation planning in partnership with relevant agencies to ensure public safety in future wildfire events.

It's important to note that these concerns, particularly those related to evacuation planning and infrastructure development, are beyond the scope of the CWPP project. The CWPP's primary focus is on wildfire risk reduction, community preparedness, and fuels management. Evacuation planning is handled by other agencies and outside the CWPP's purview.

Appendix G: Prioritized Potential Forest Fuels Treatment Areas Map Book



Prioritized Potential Forest Fuels Treatment Areas

Tahoe CWPP Boundary

Community Intermix (Highest Priority Tier 1)

Wilderness

Prioritized Potential Treatment Area Tier

1 2 3 4 5 6 7 8 9 10

N

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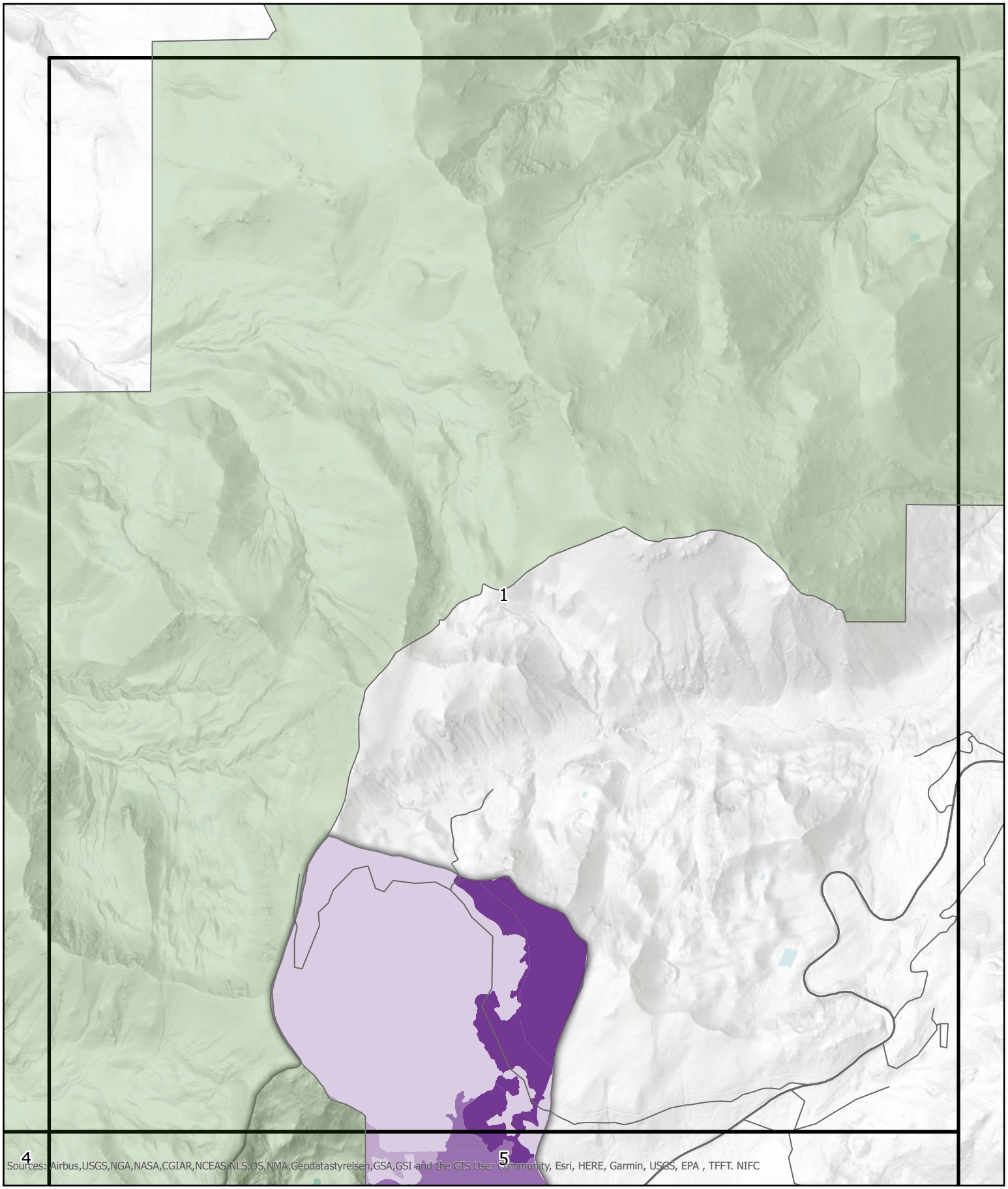
Map Author: C. Moore



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Tahoe CWPP Boundary

Wilderness

Community Intermix (Highest Priority Tier 1)

Prioritized Potential Treatment Area Tier

1 2 3 4 5 6 7 8 9 10

Lake Tahoe Basin Community Wildfire Protection Plan

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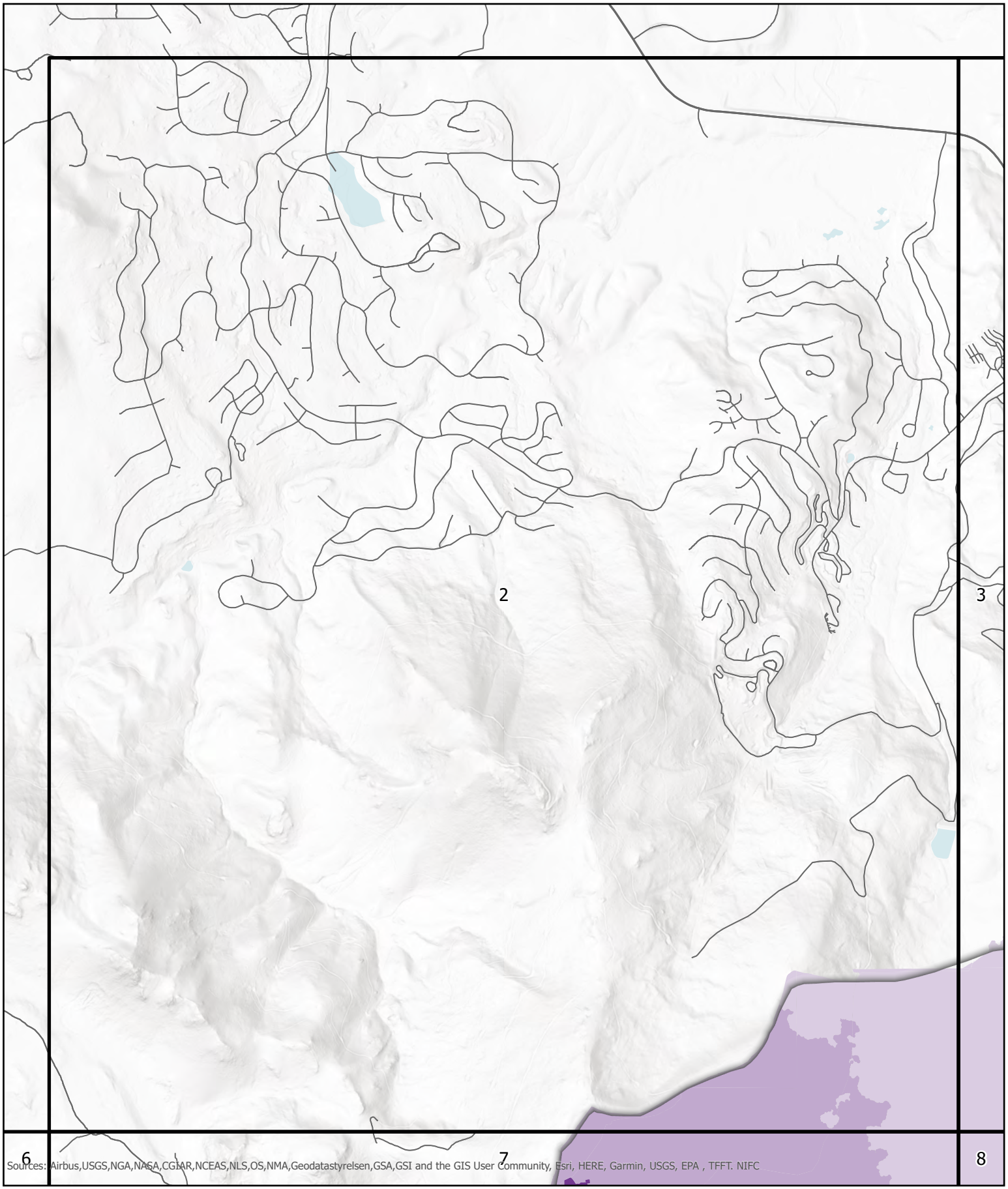
Map Author: C. Moore



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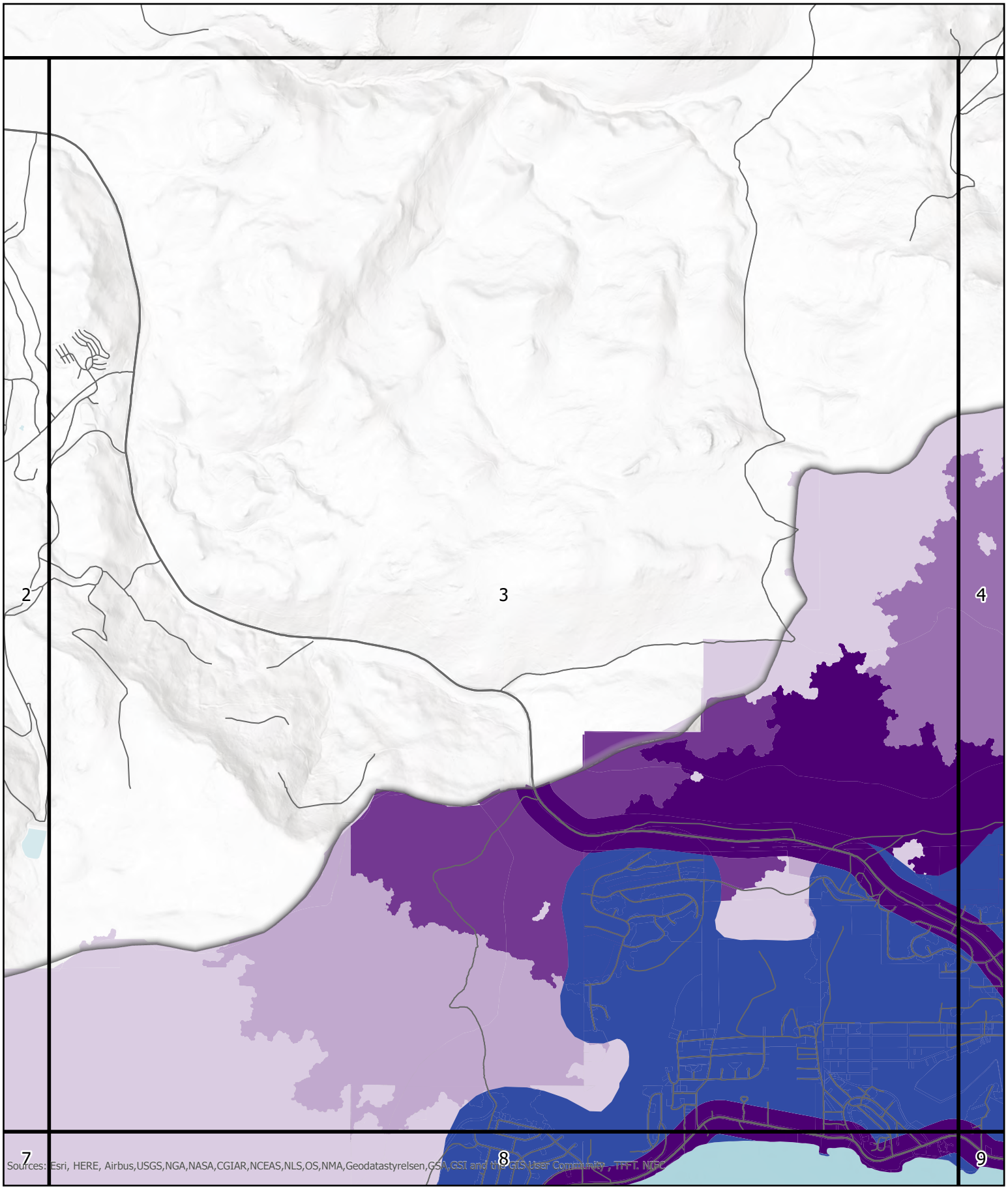

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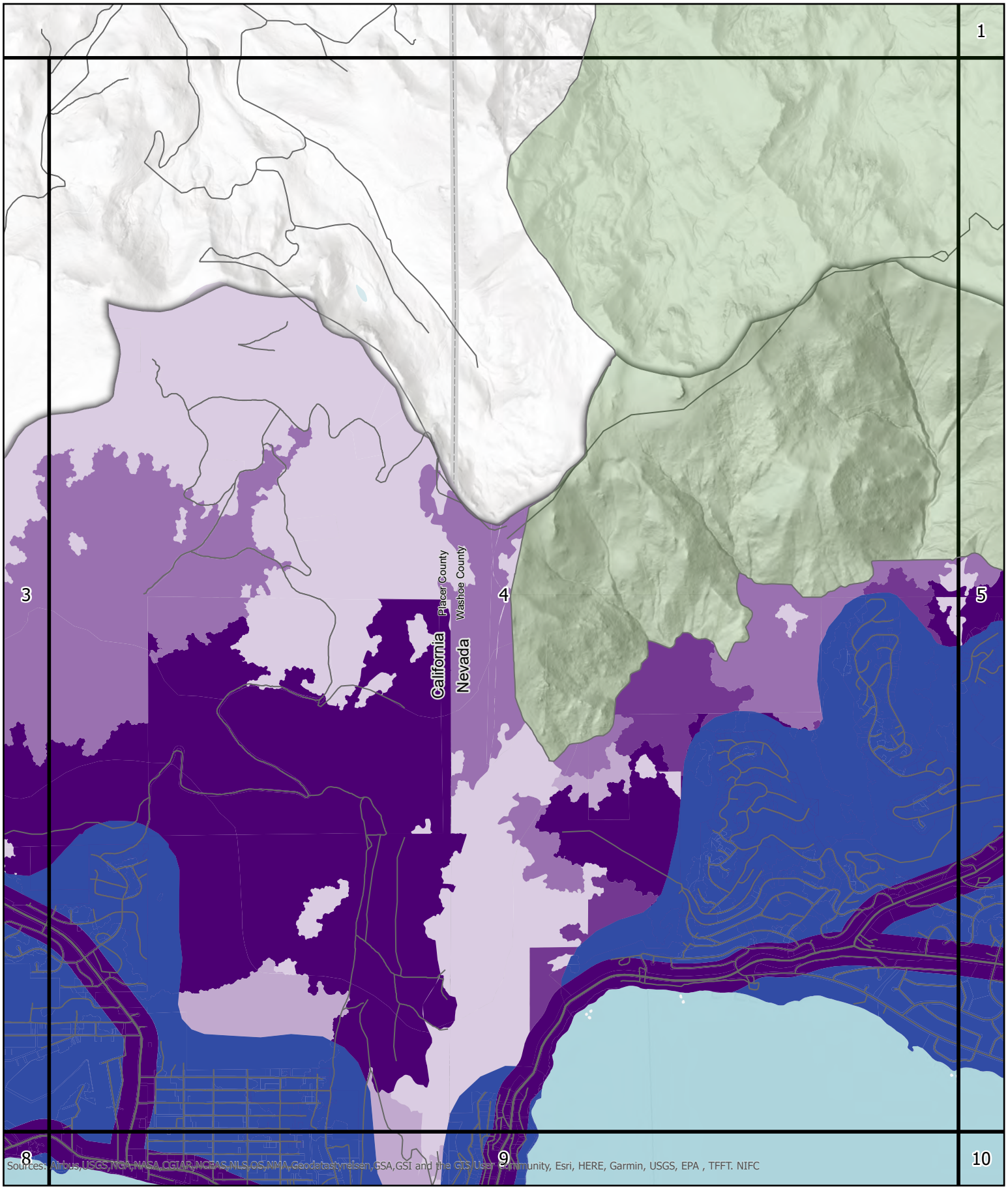

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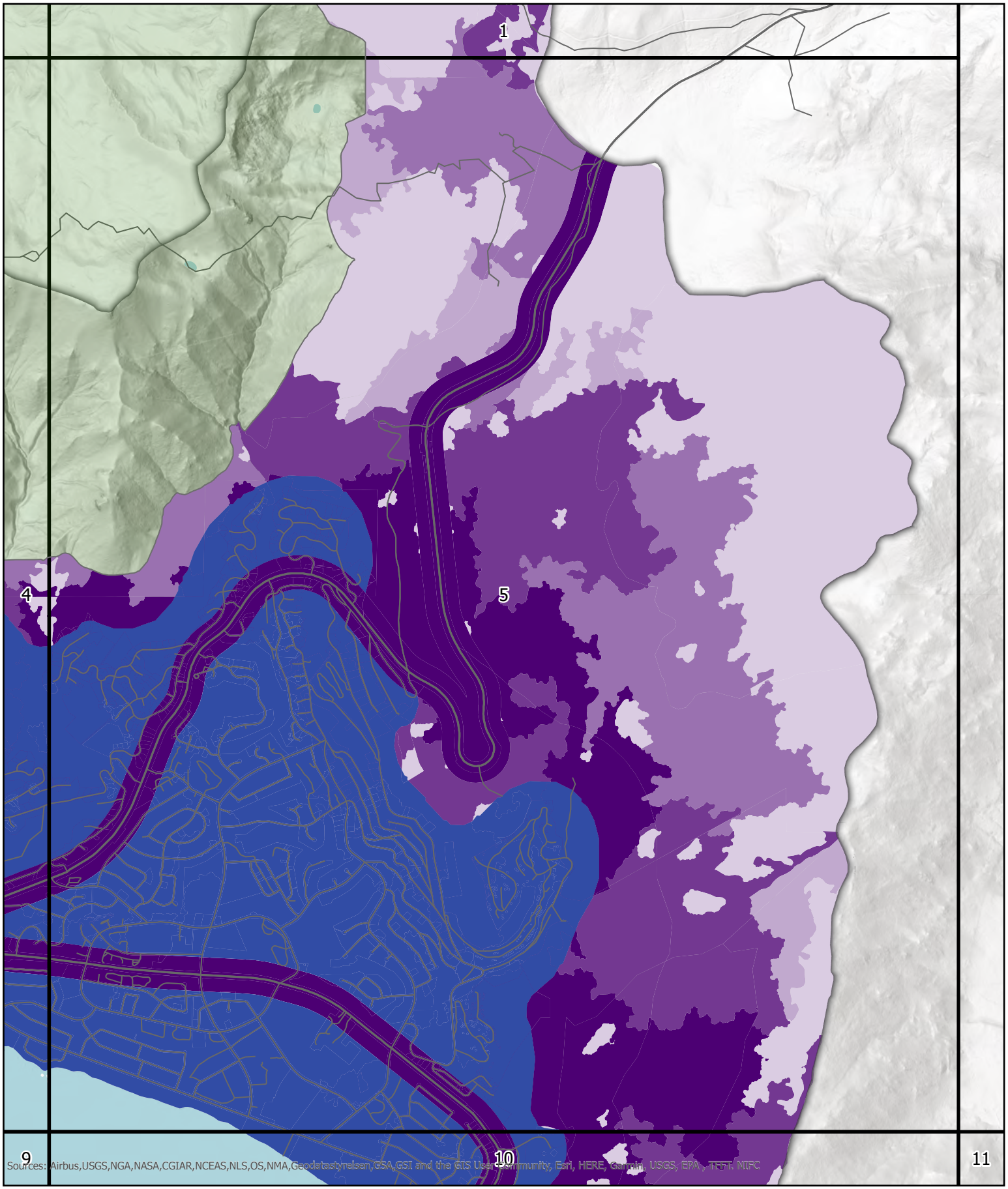

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Prioritized Potential Treatment Area Tier

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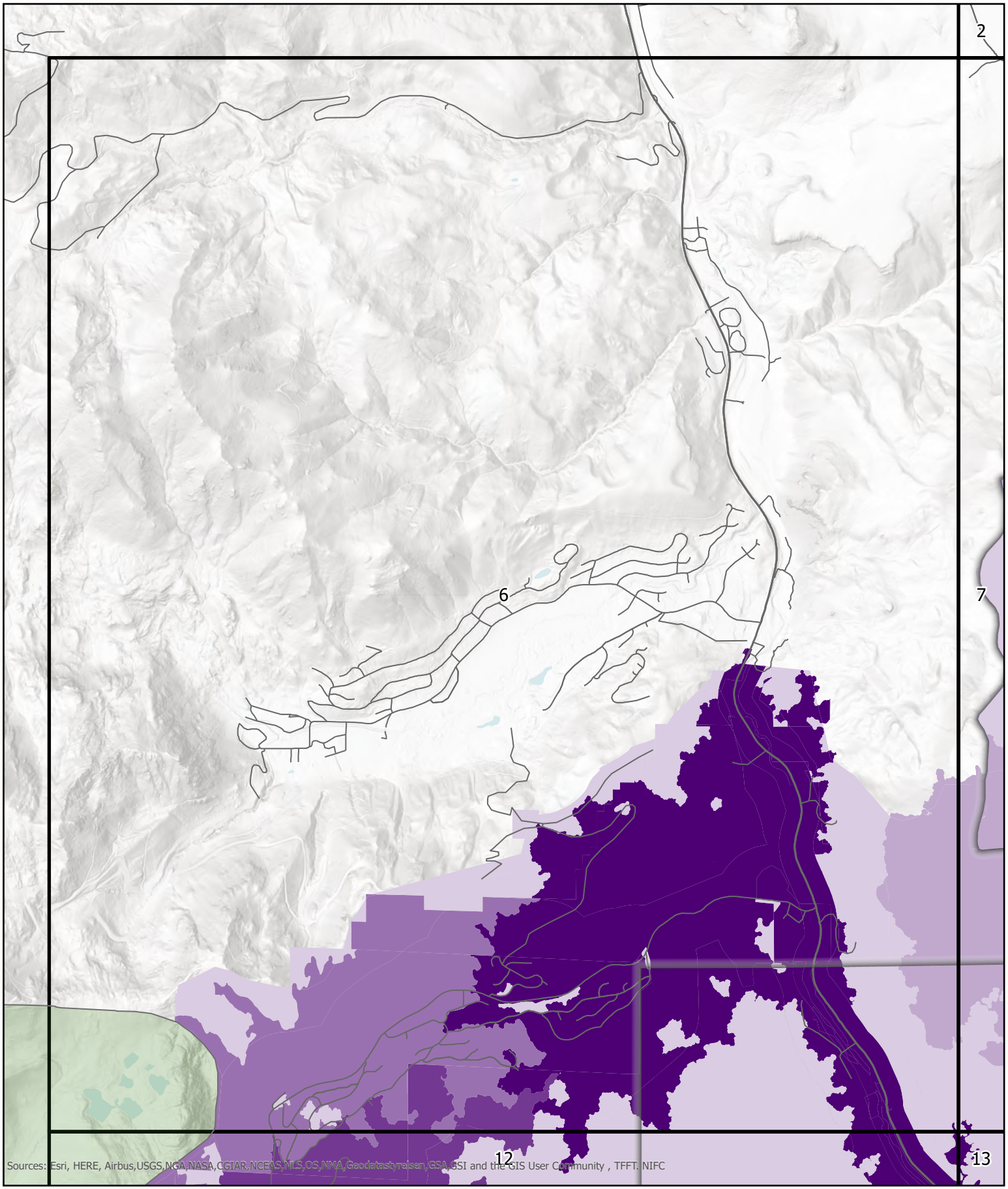

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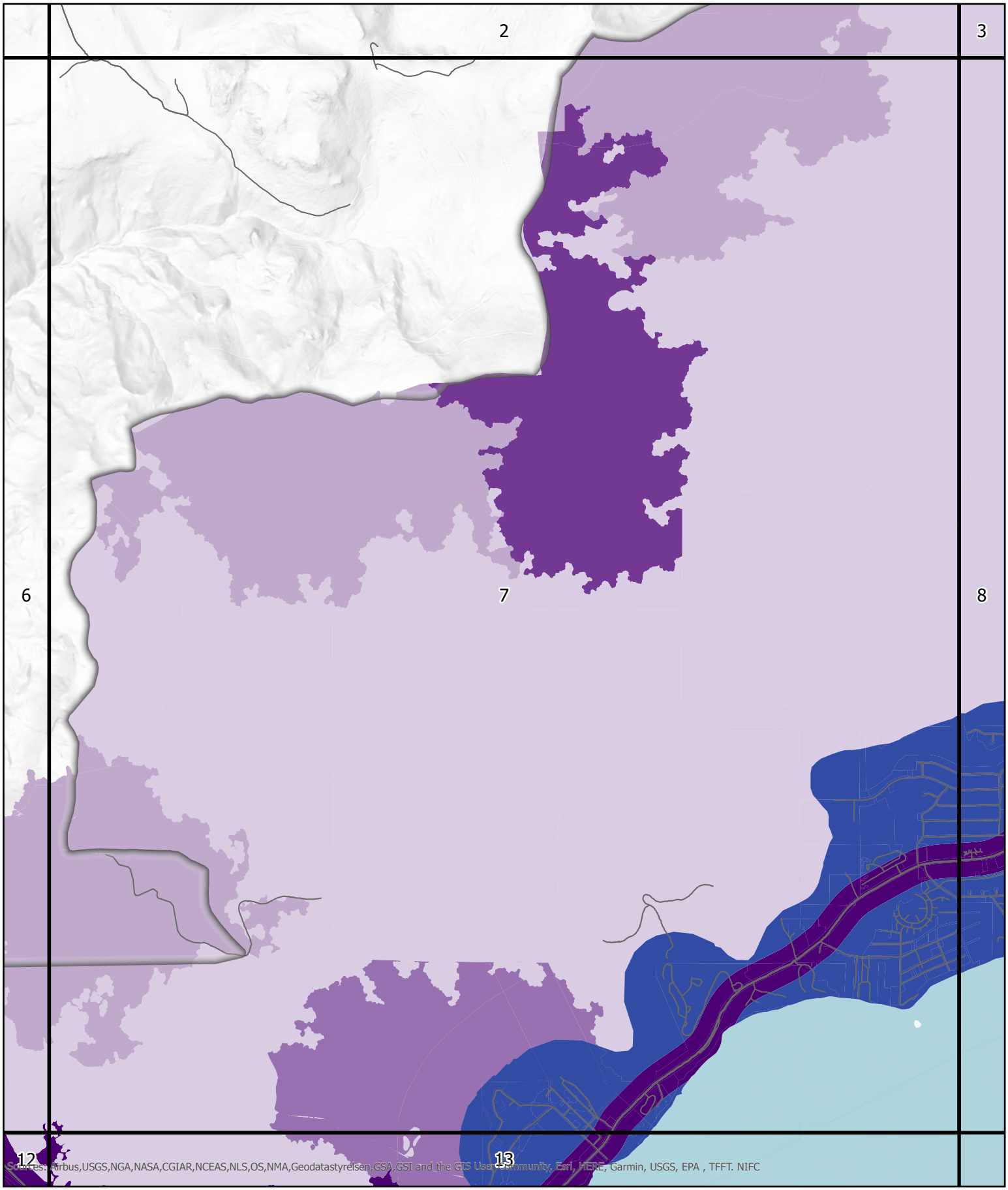

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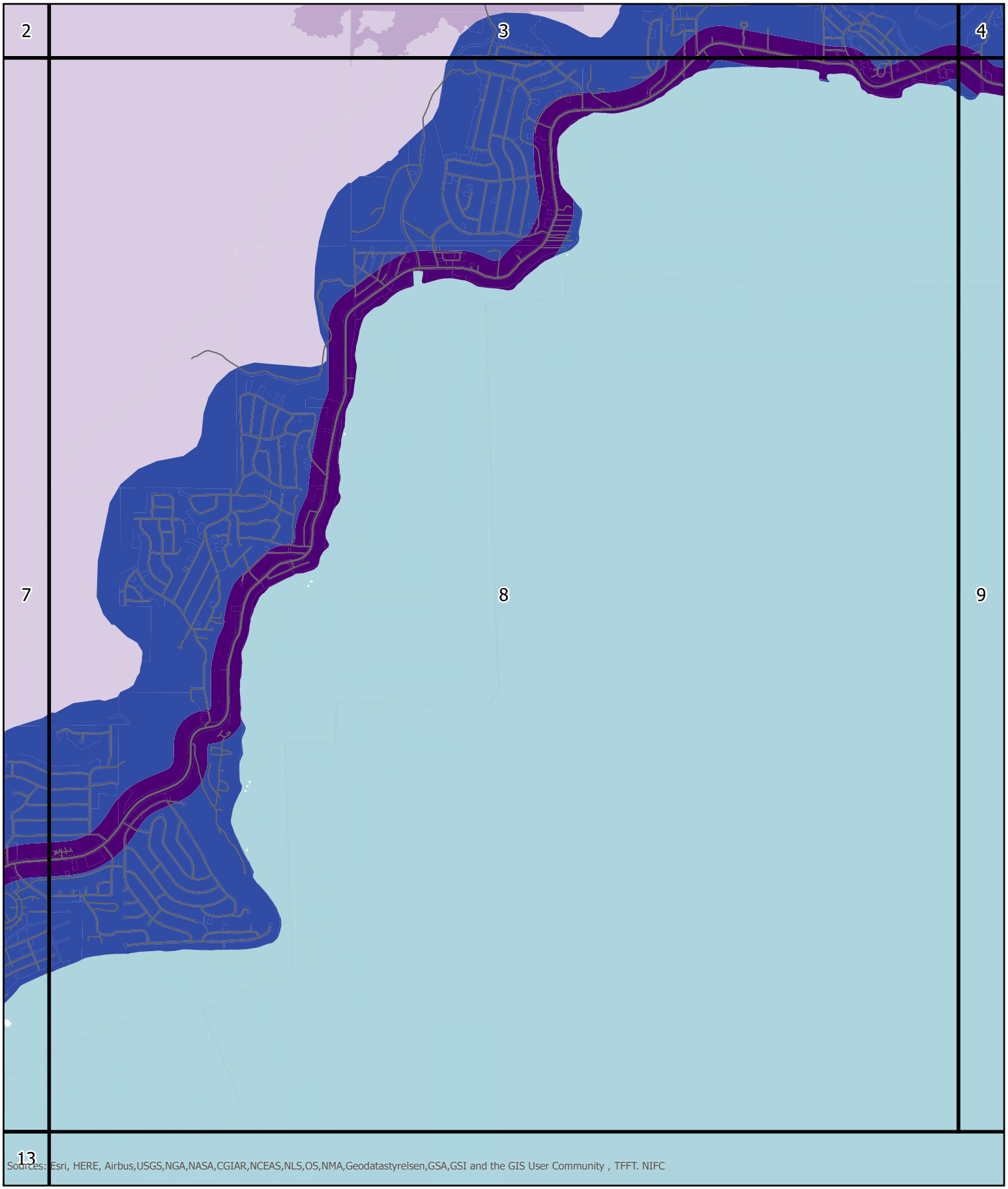

Sources: Esri, HERE, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community , TFFT. NIFC

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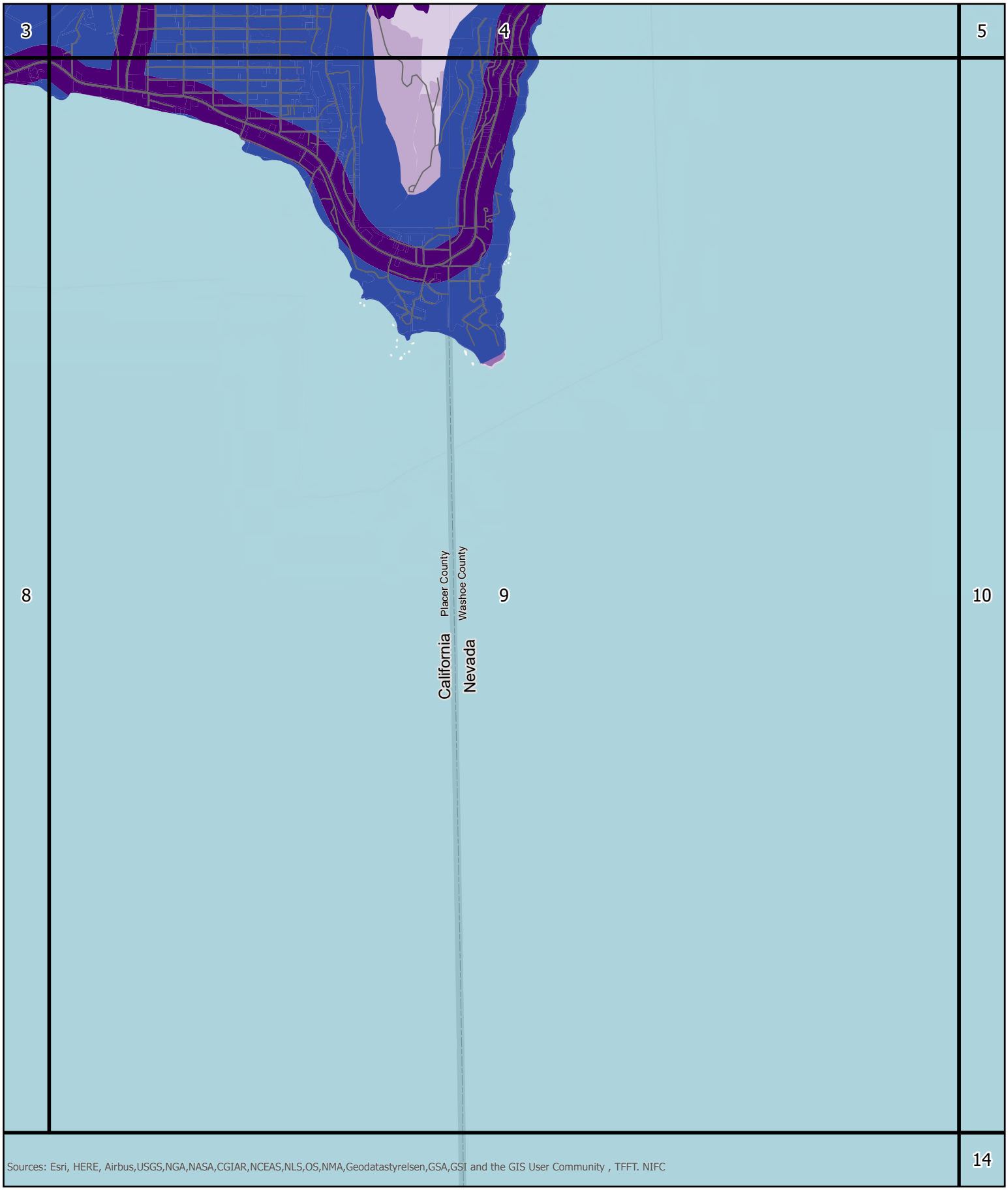

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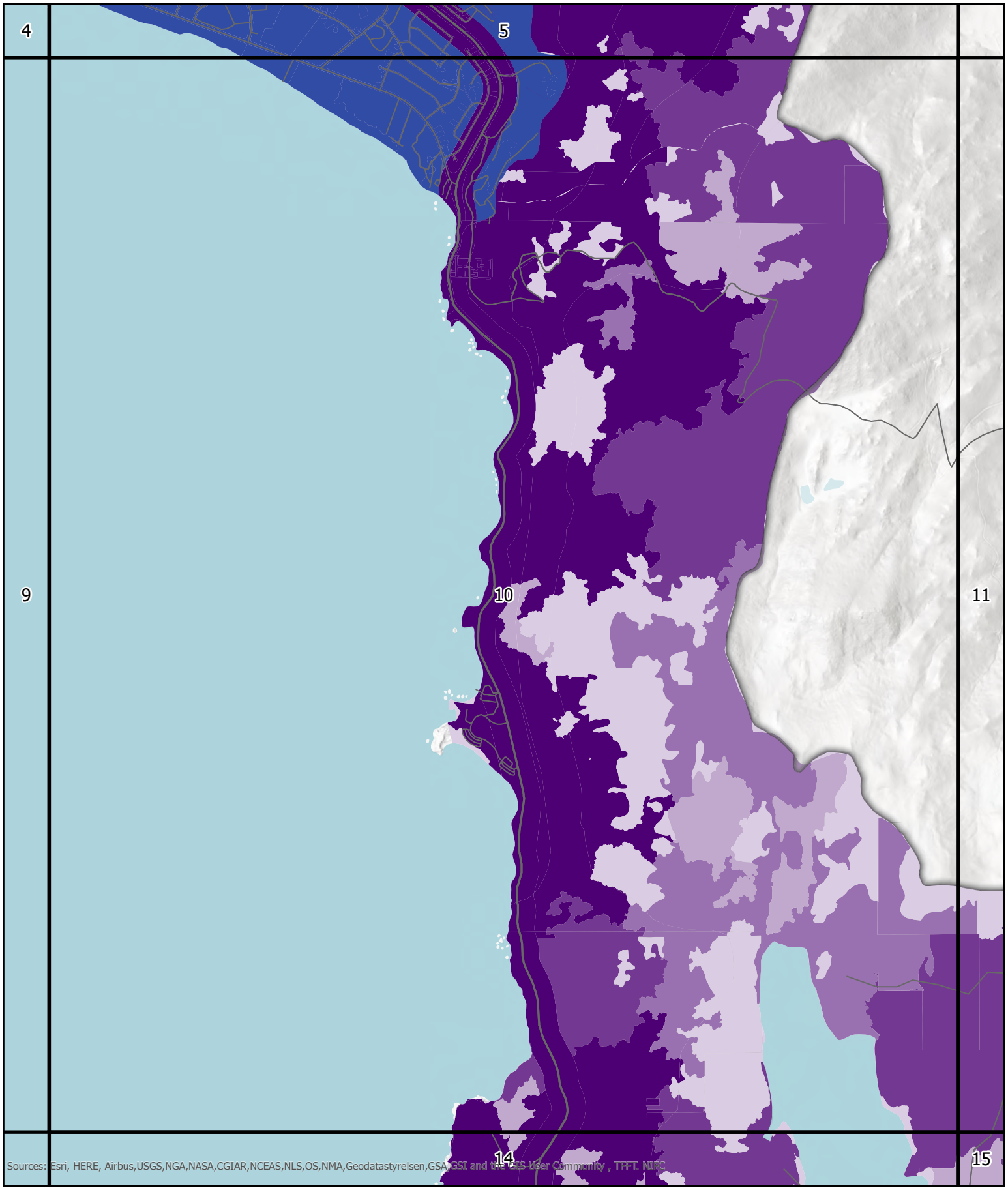

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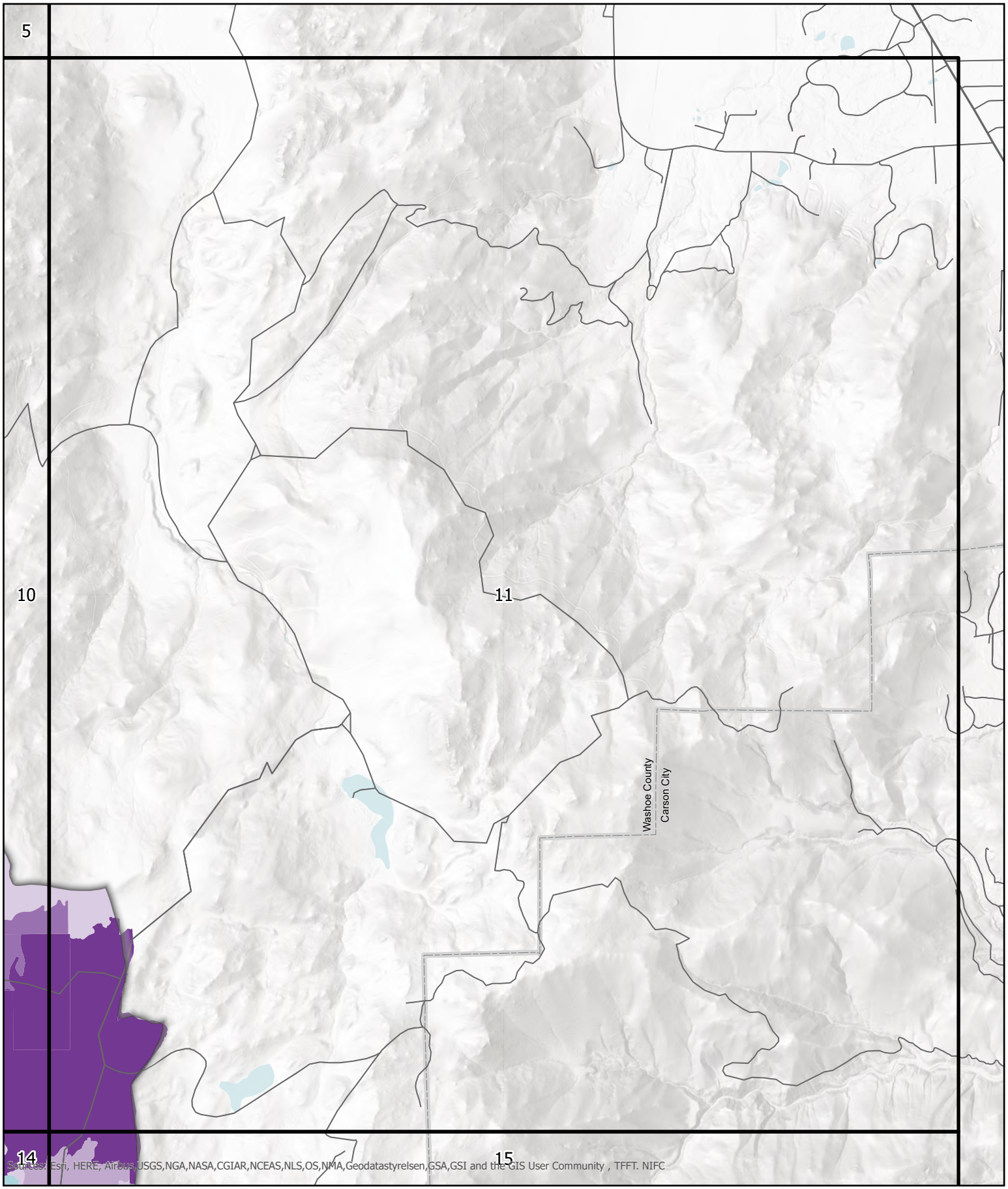

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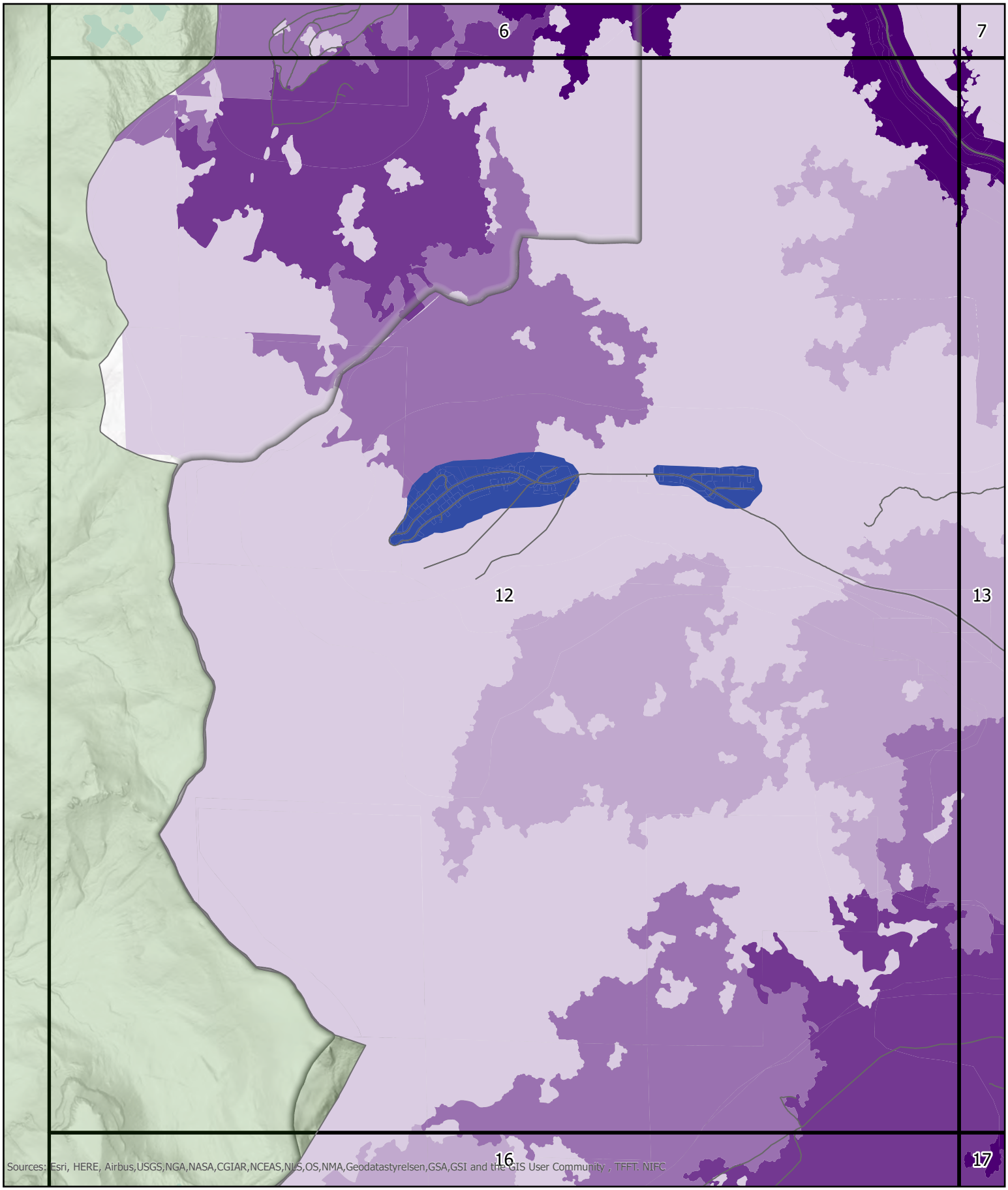

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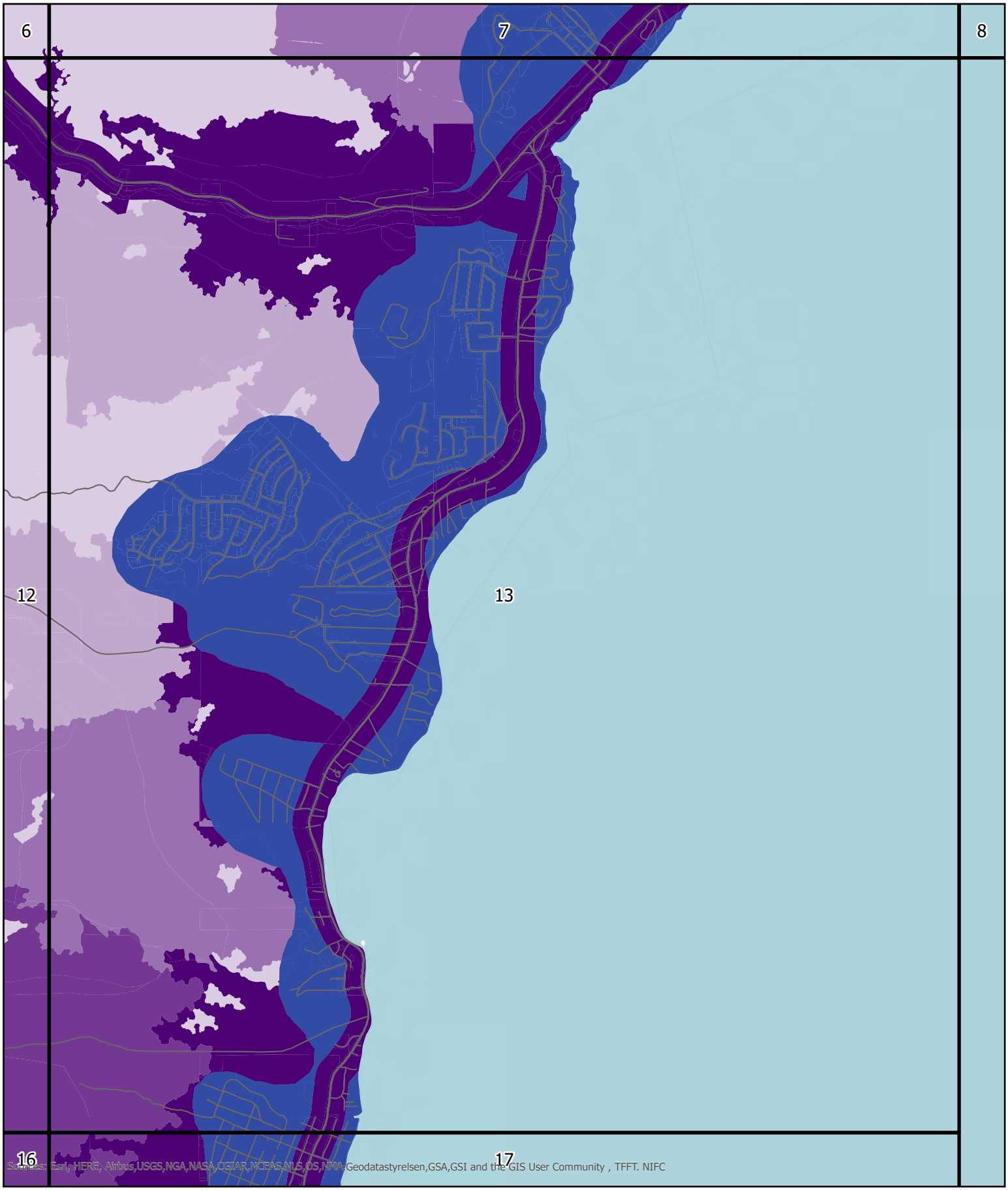

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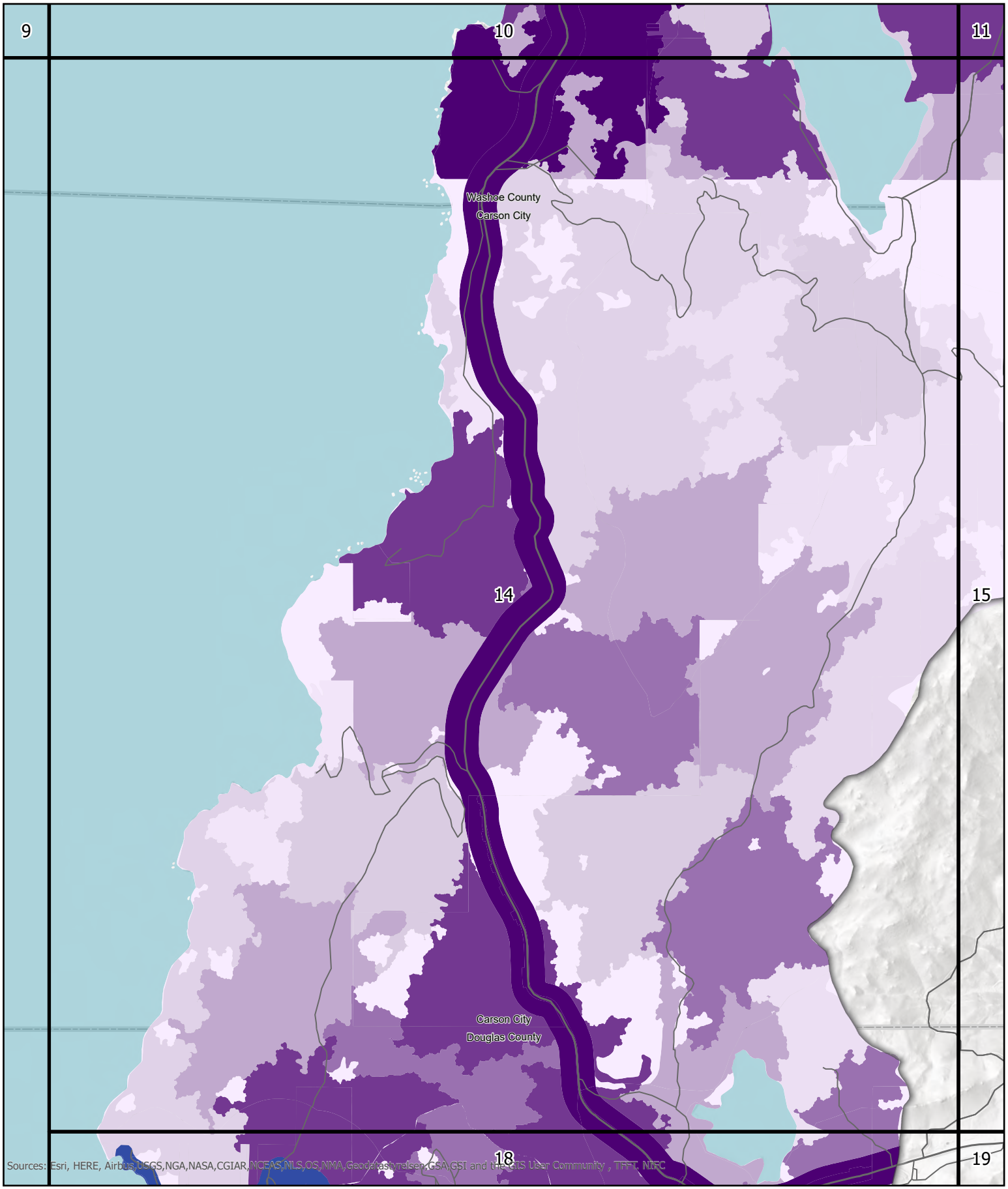

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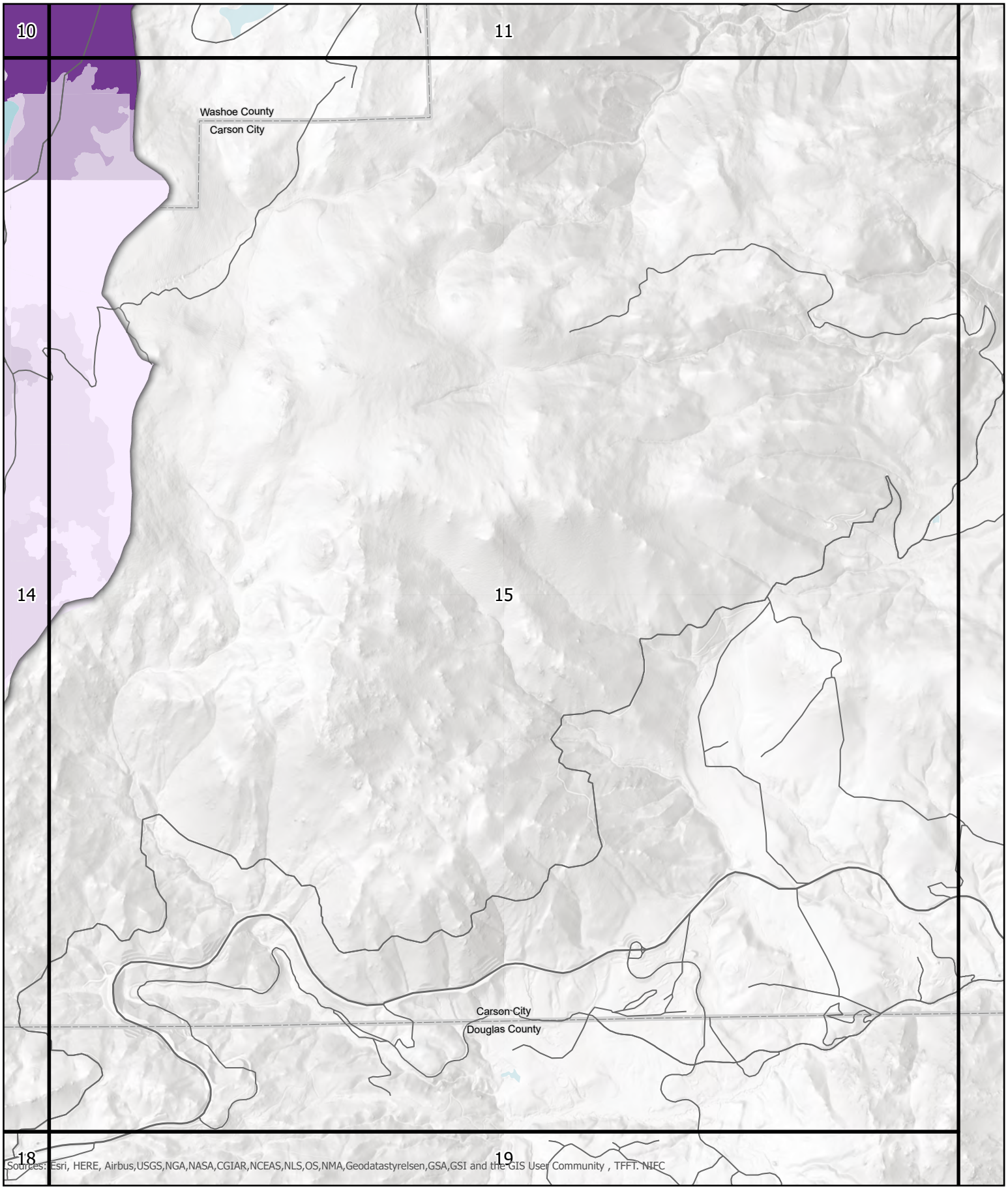

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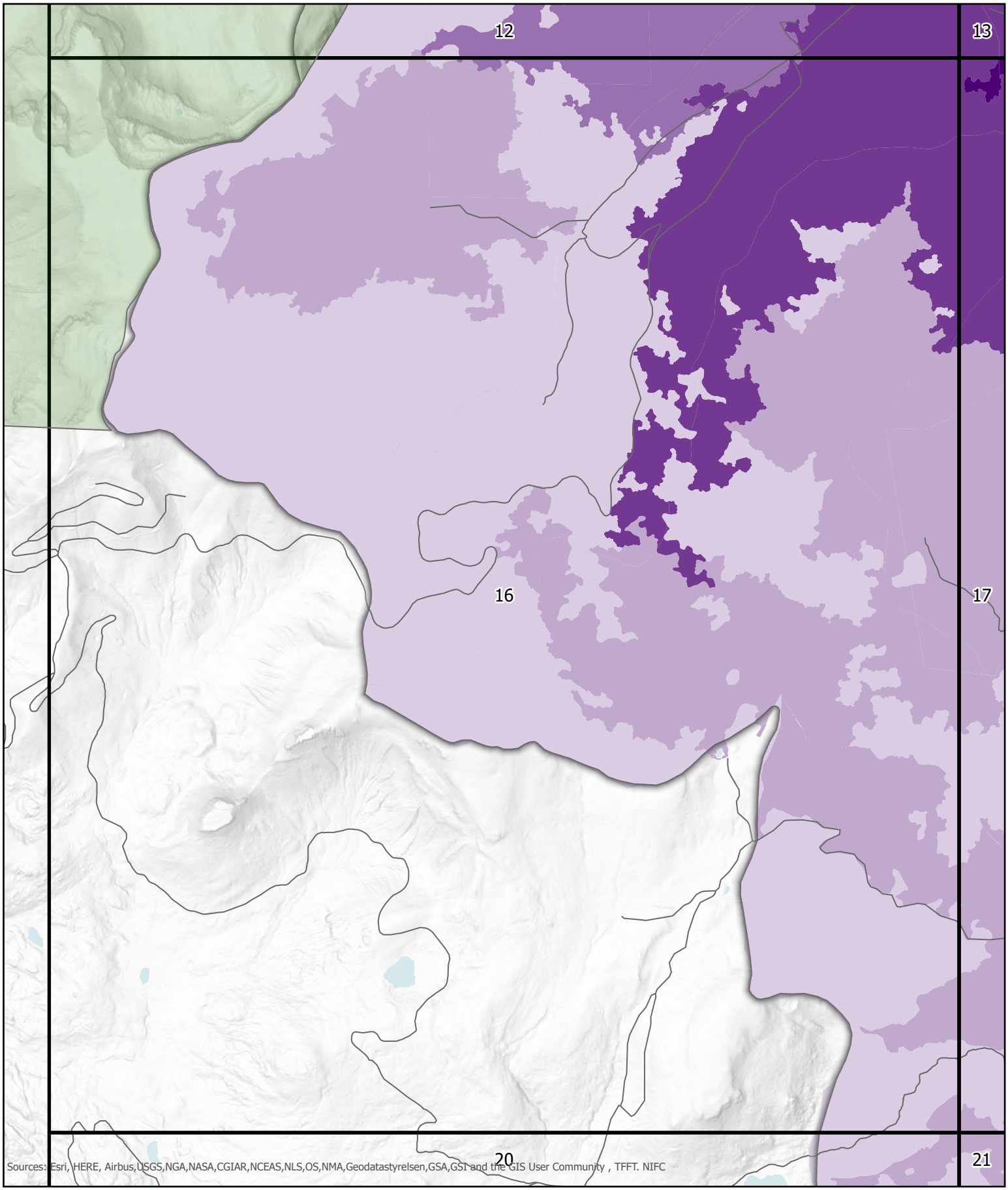

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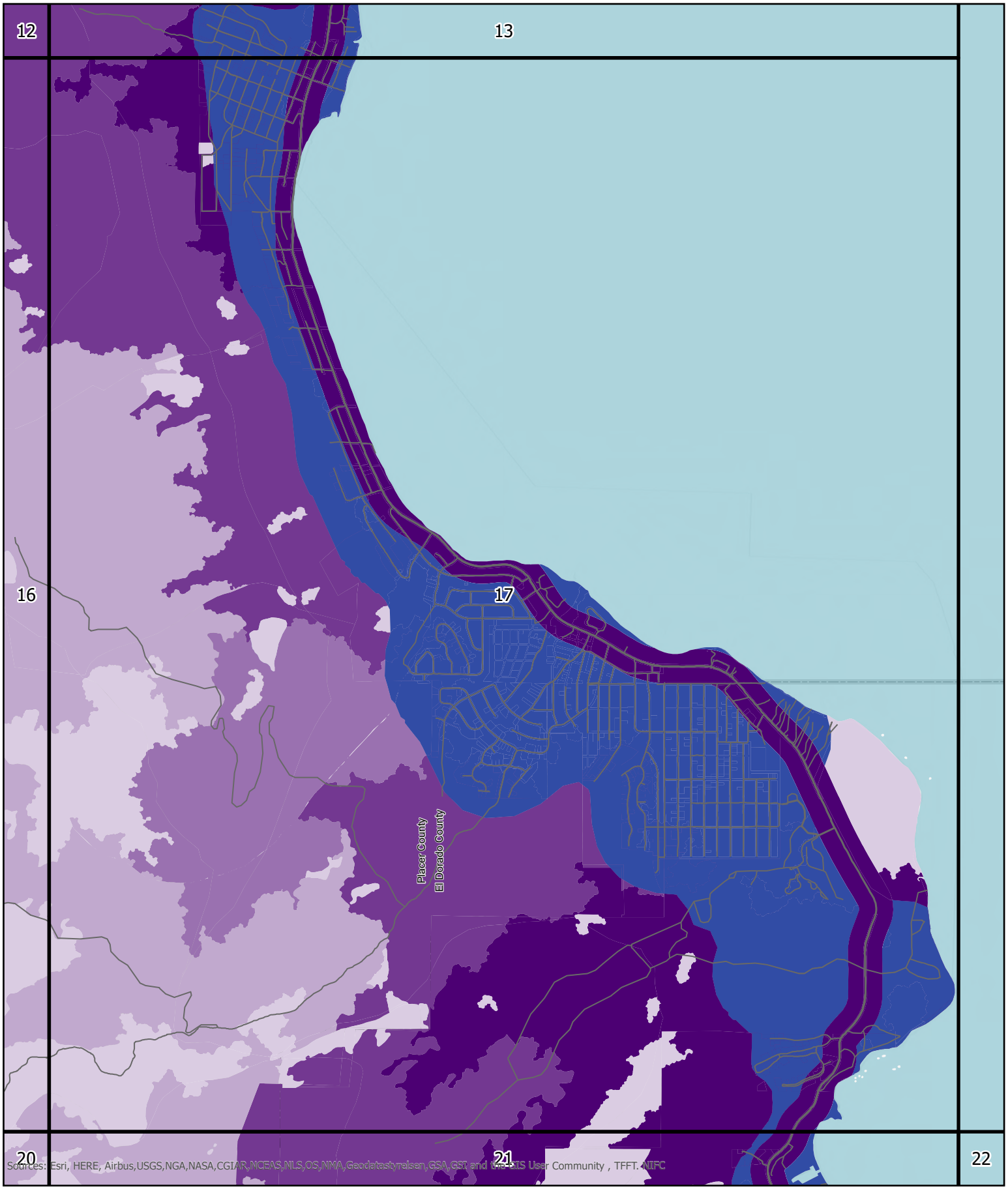

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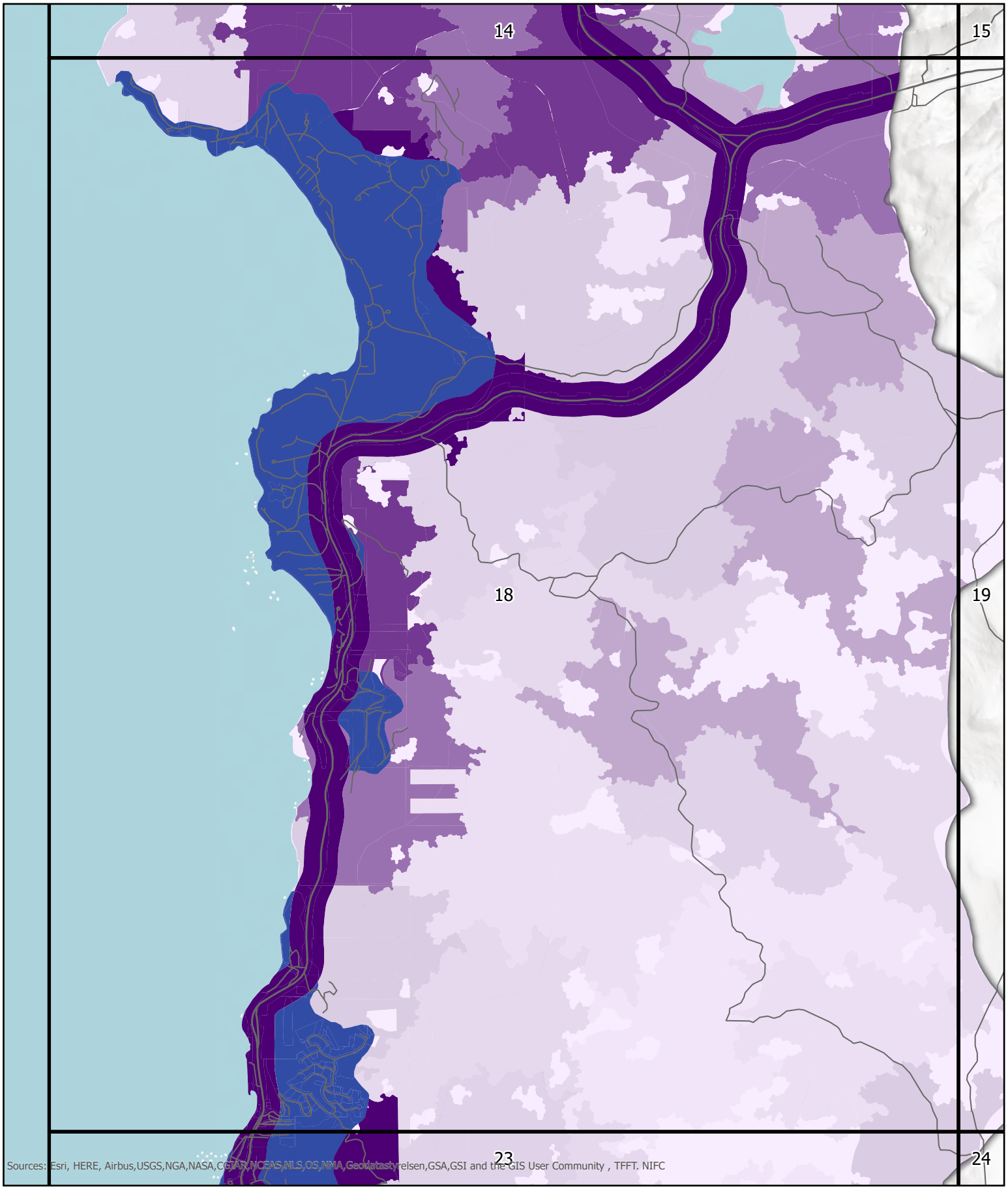

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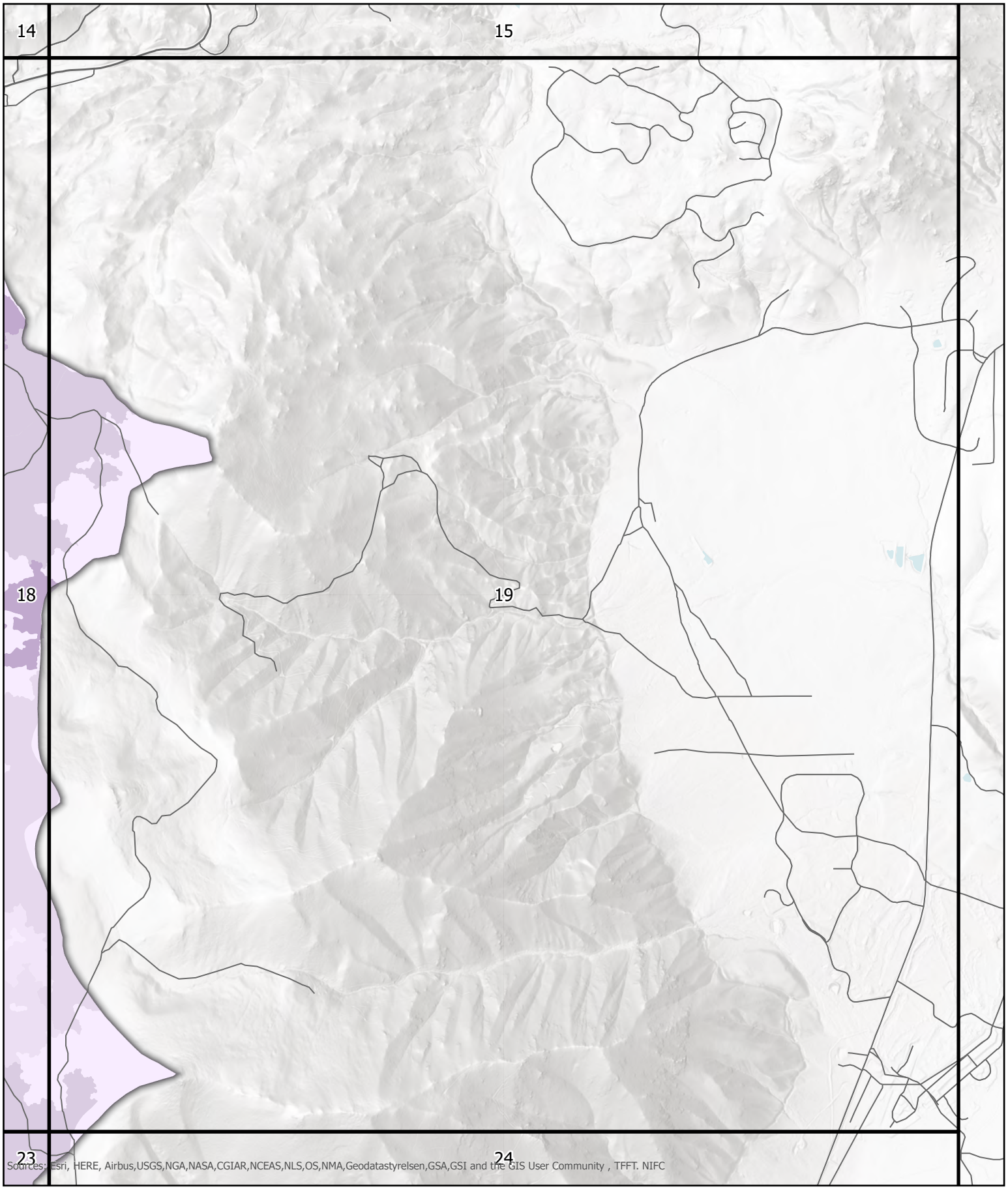

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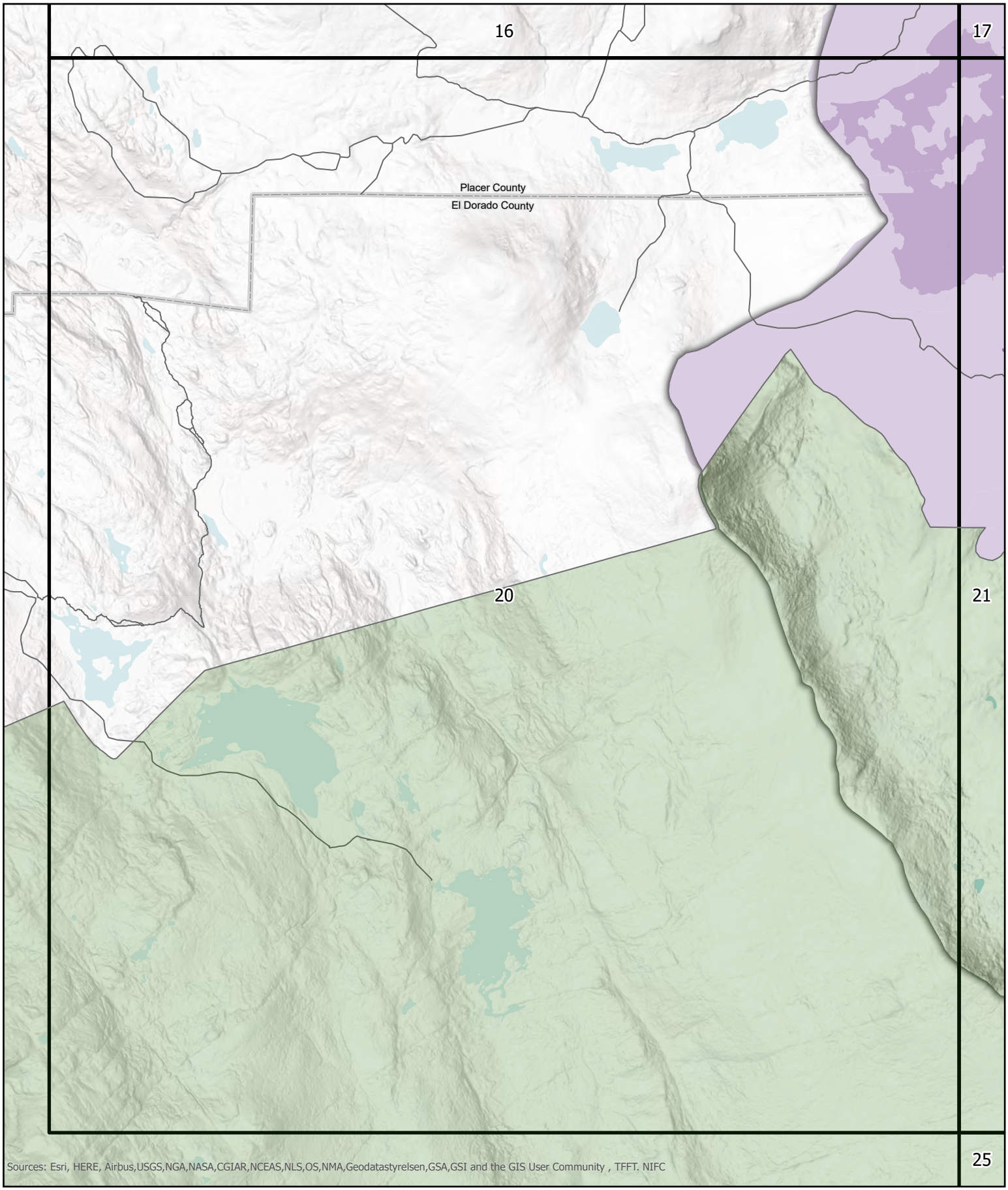

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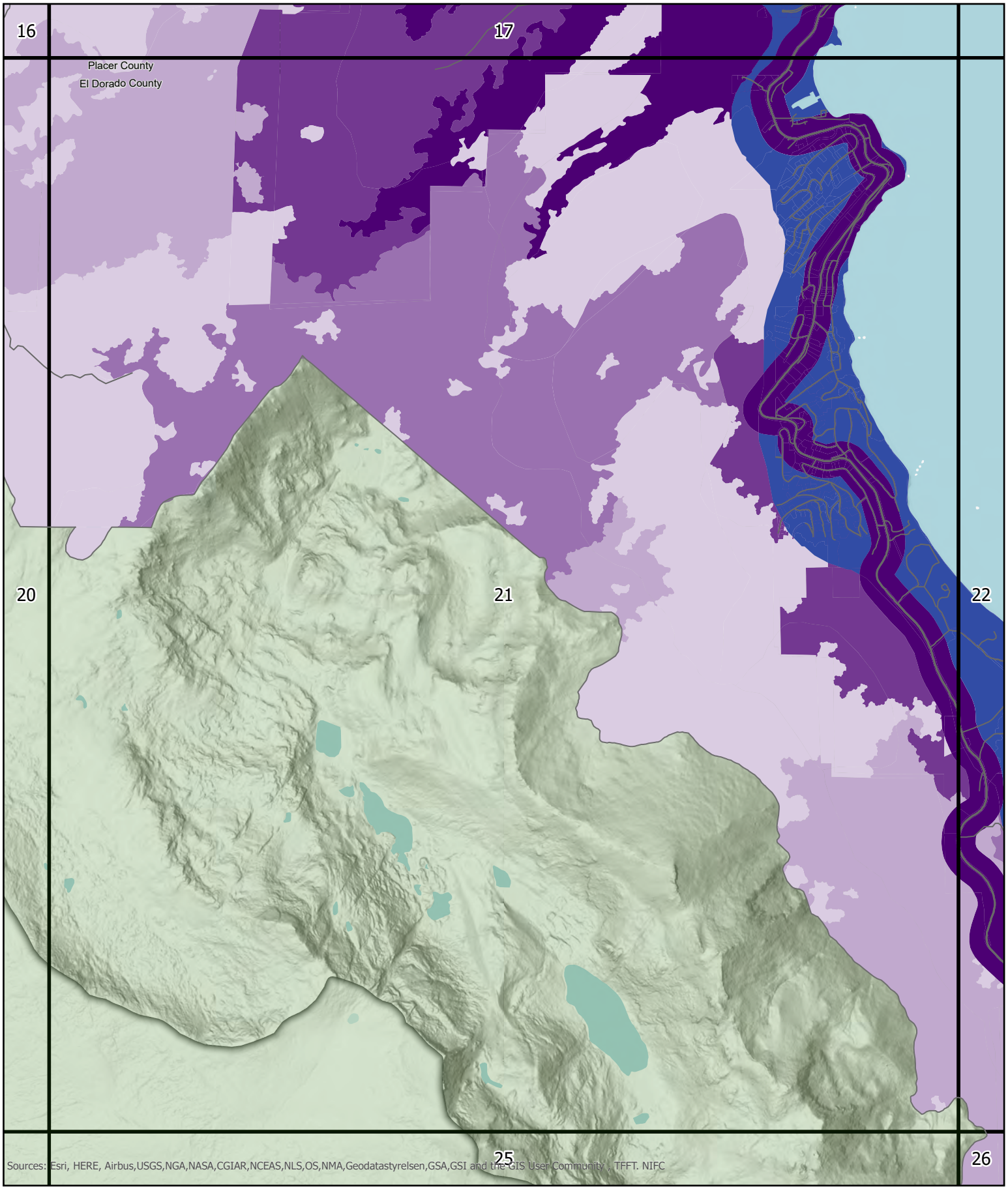

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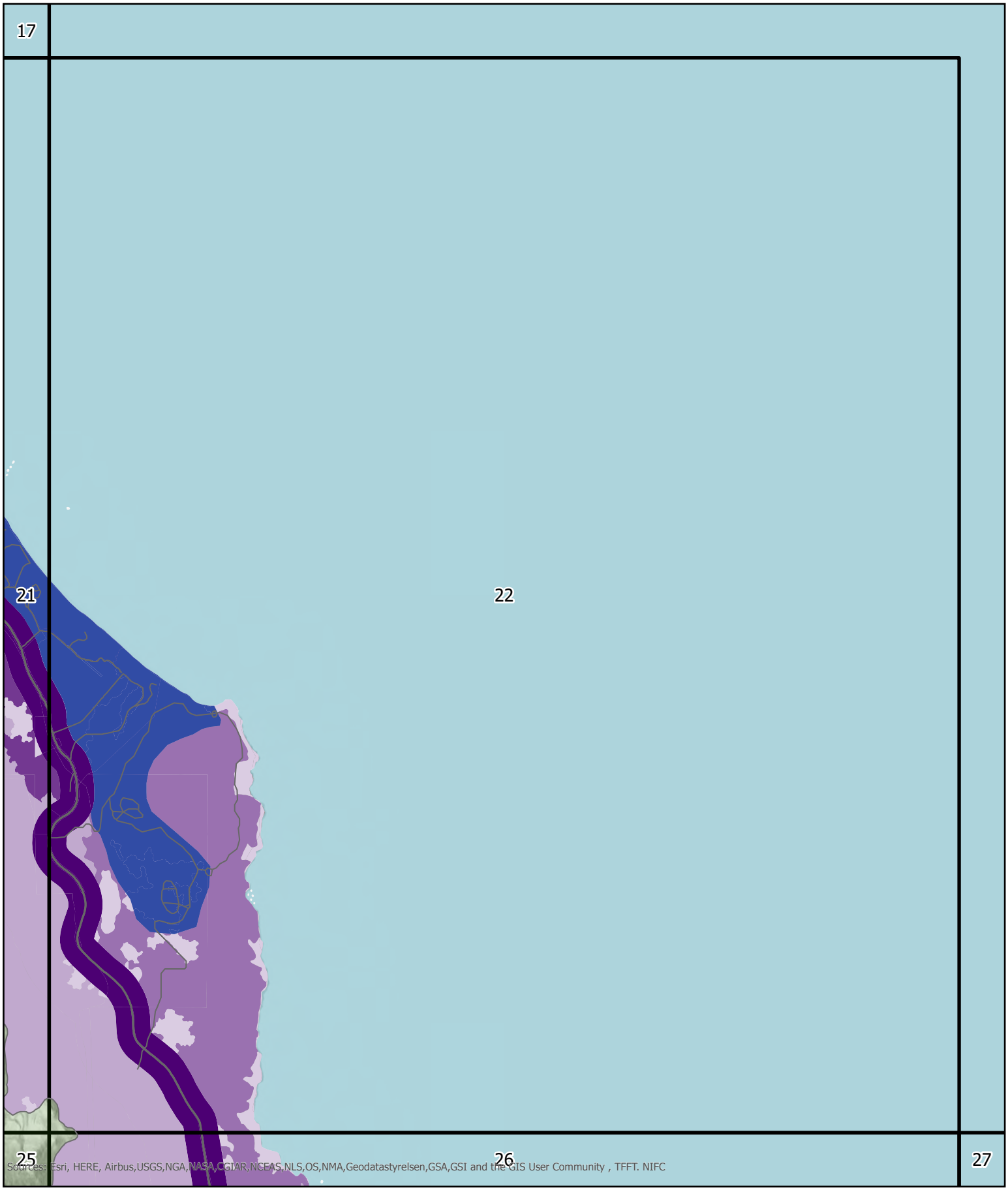

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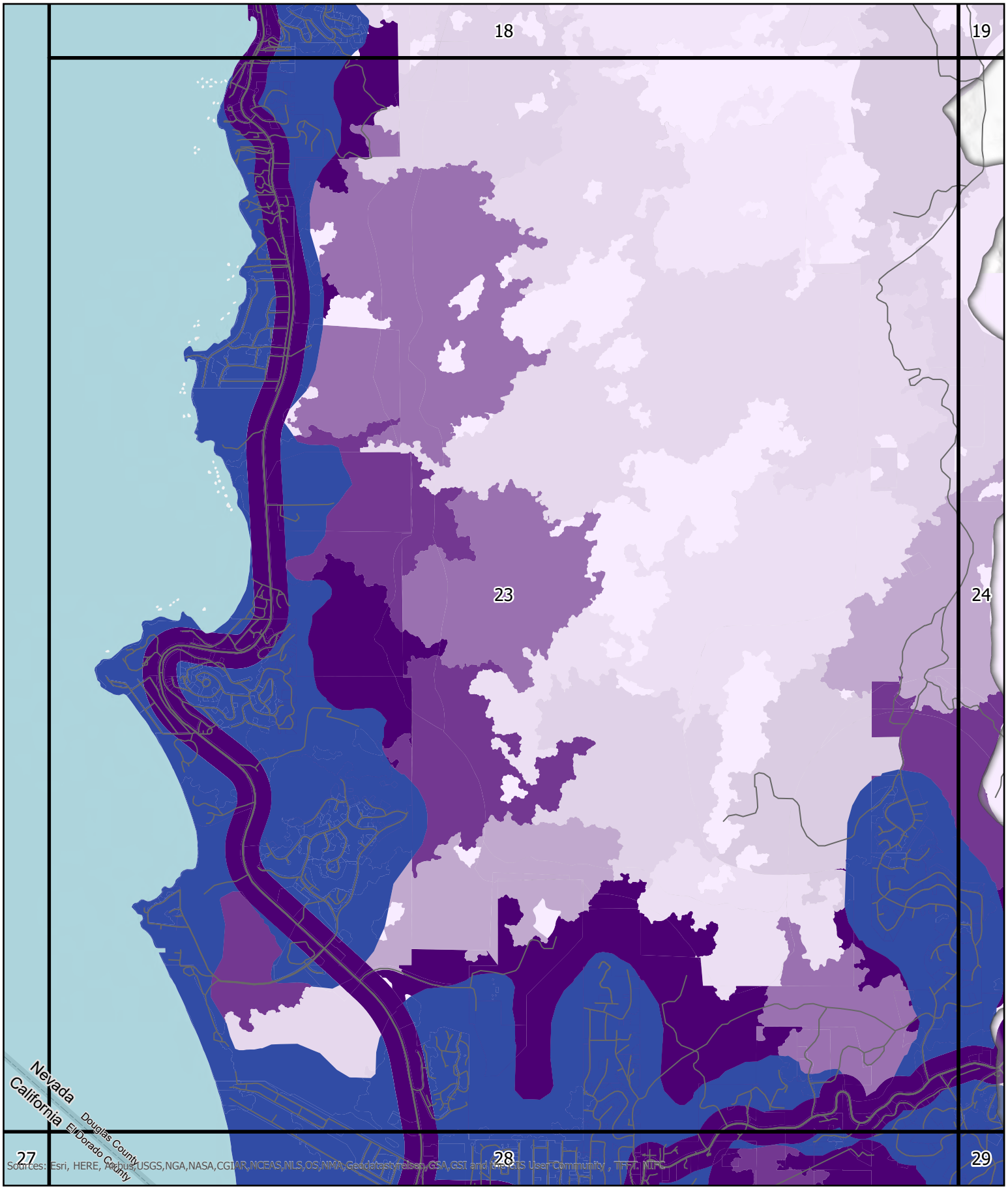

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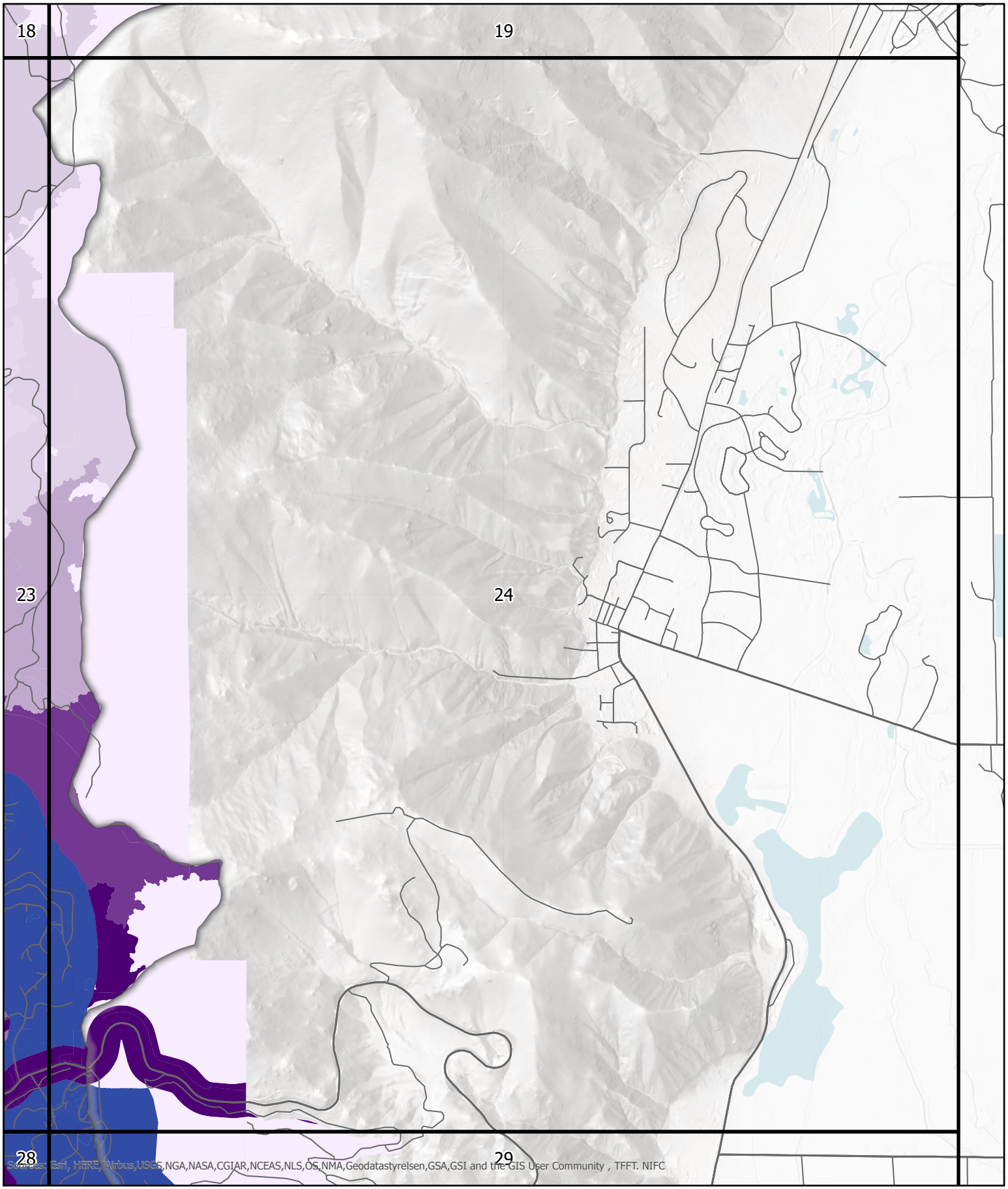

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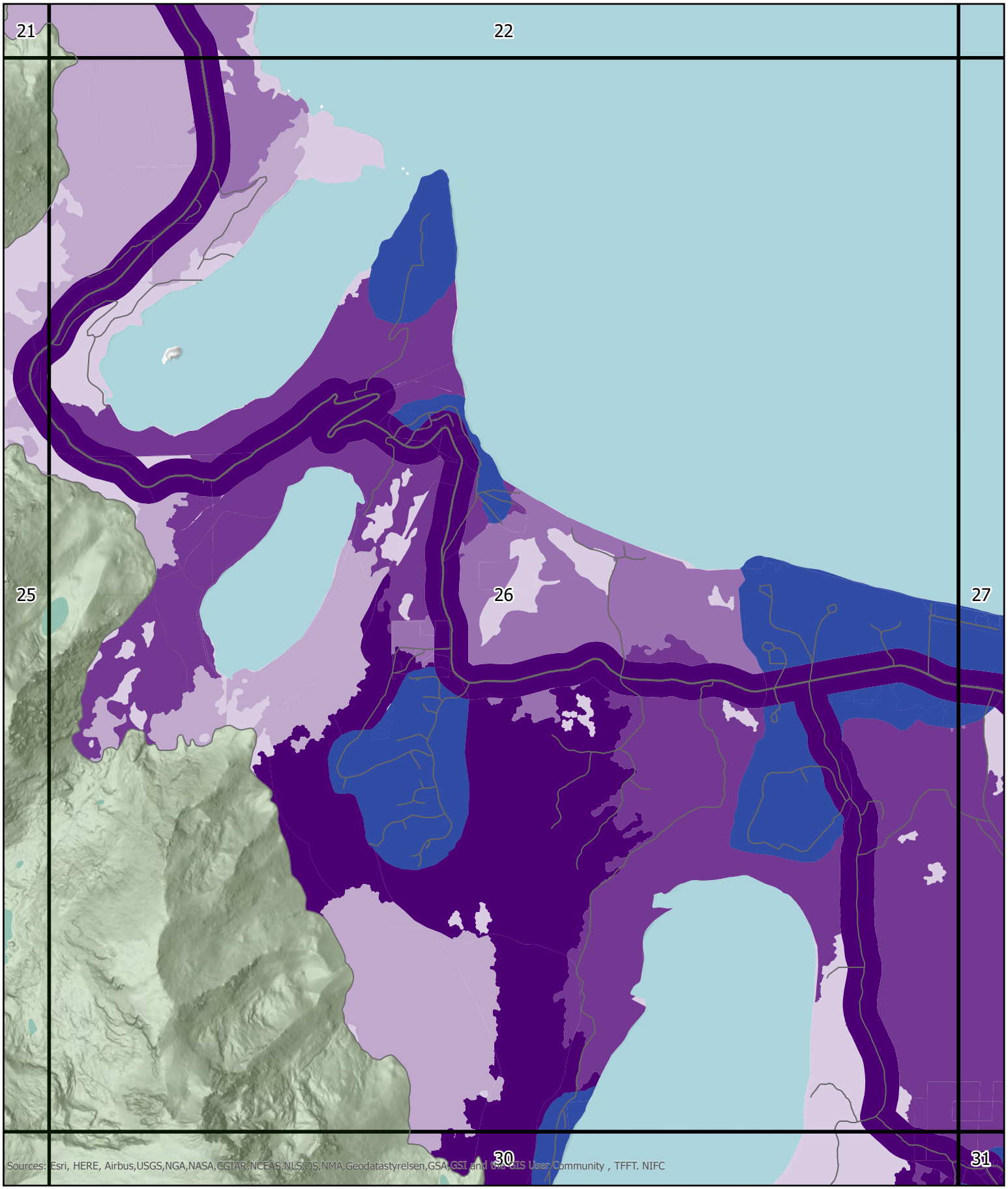

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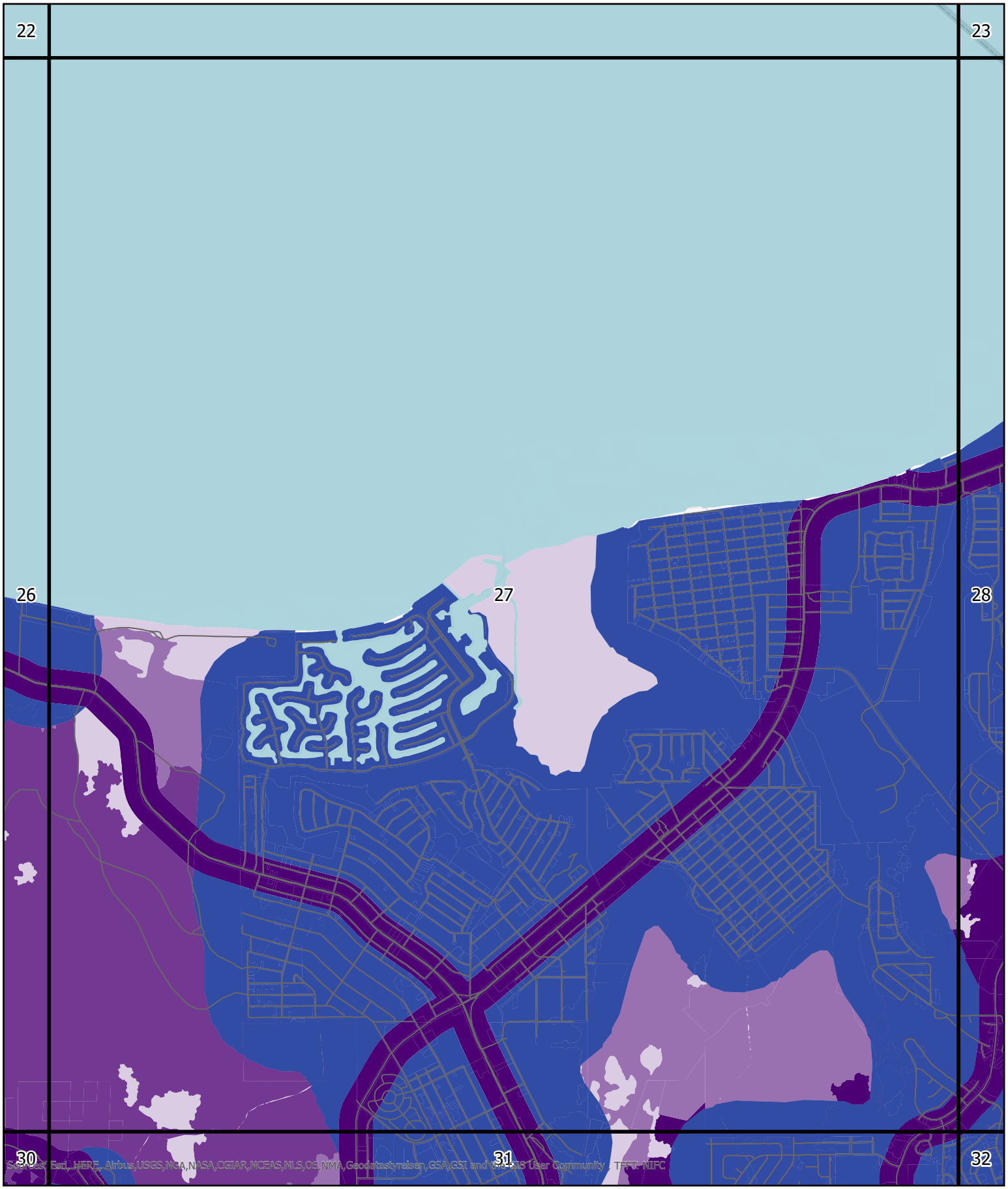

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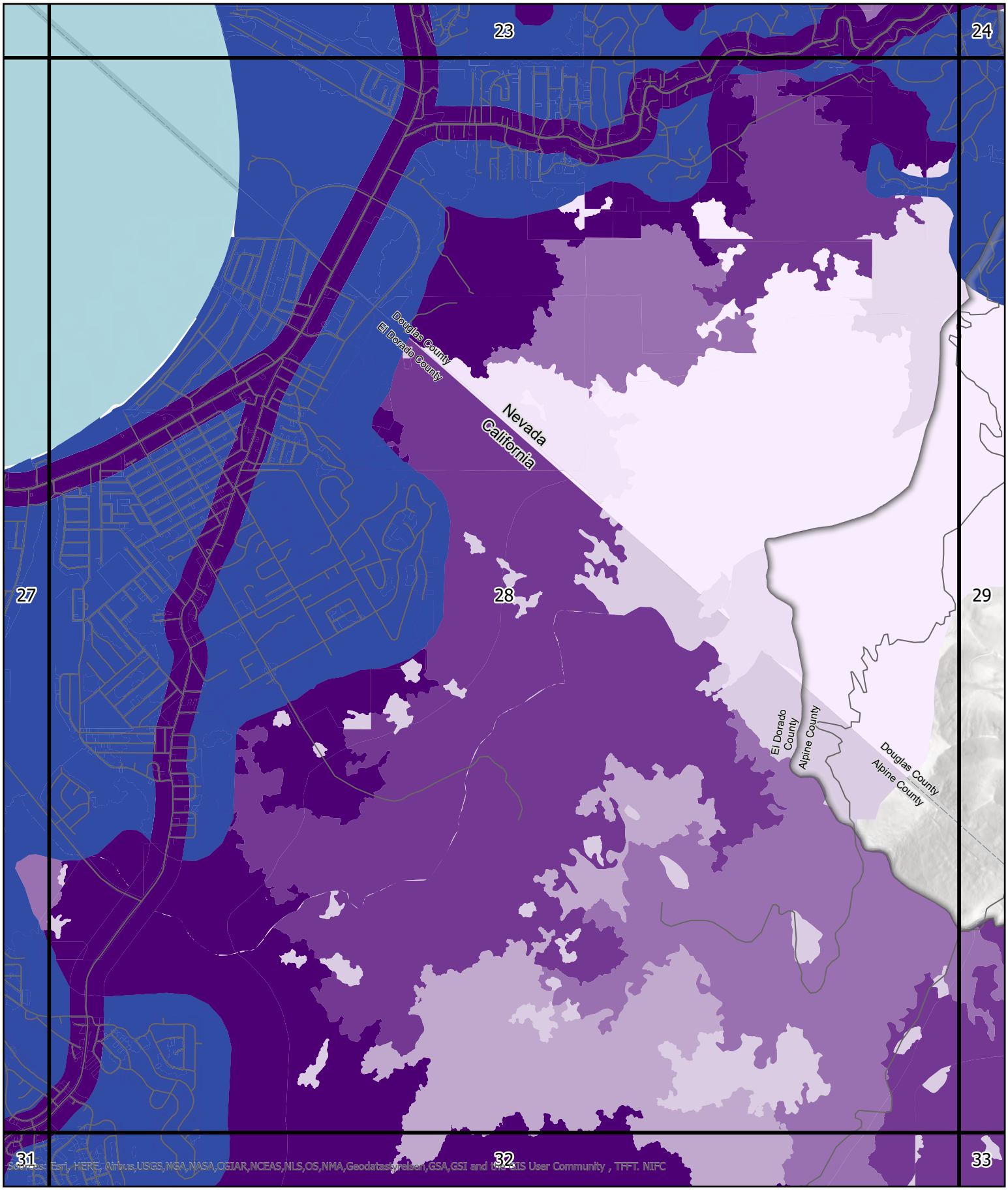

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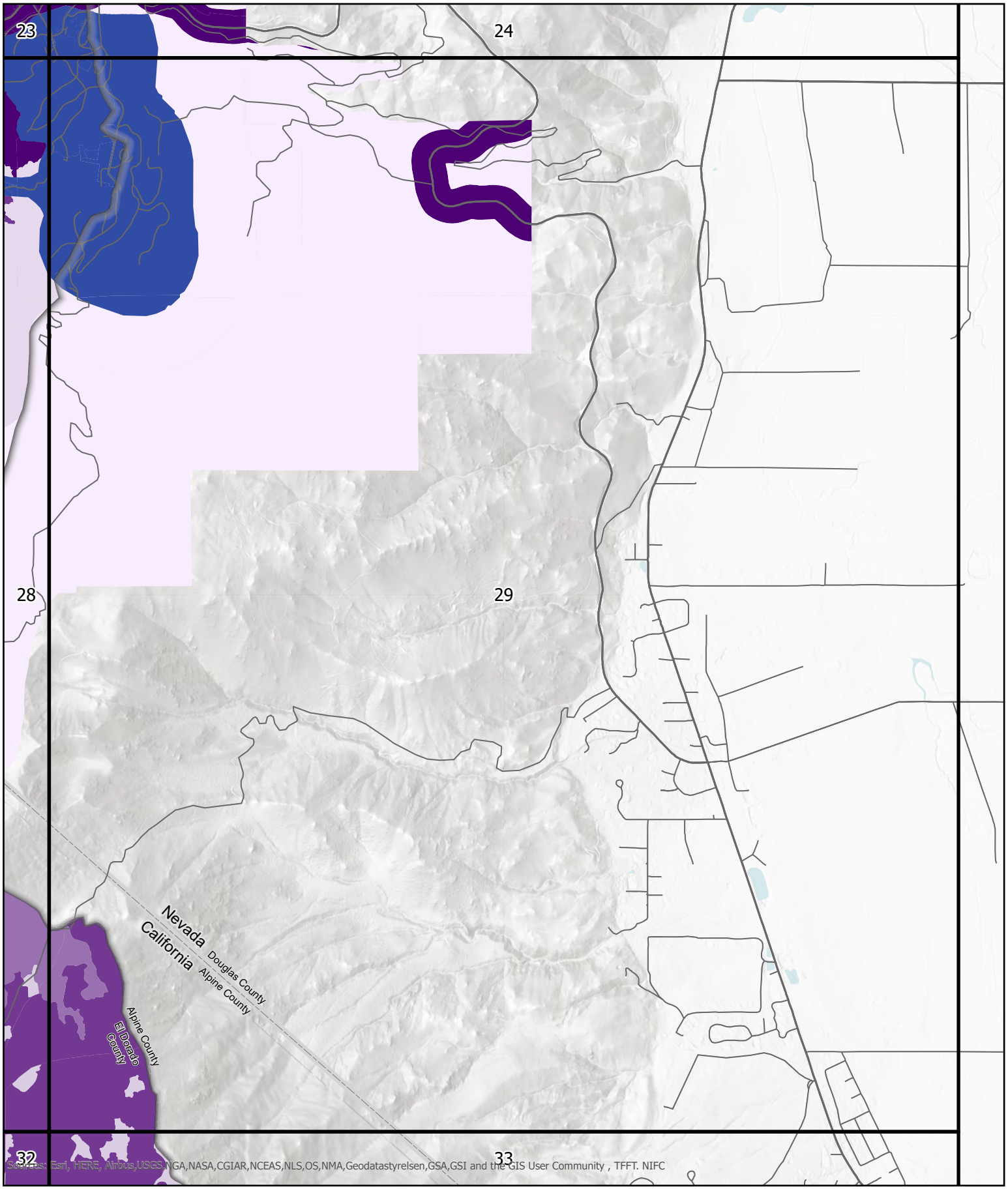

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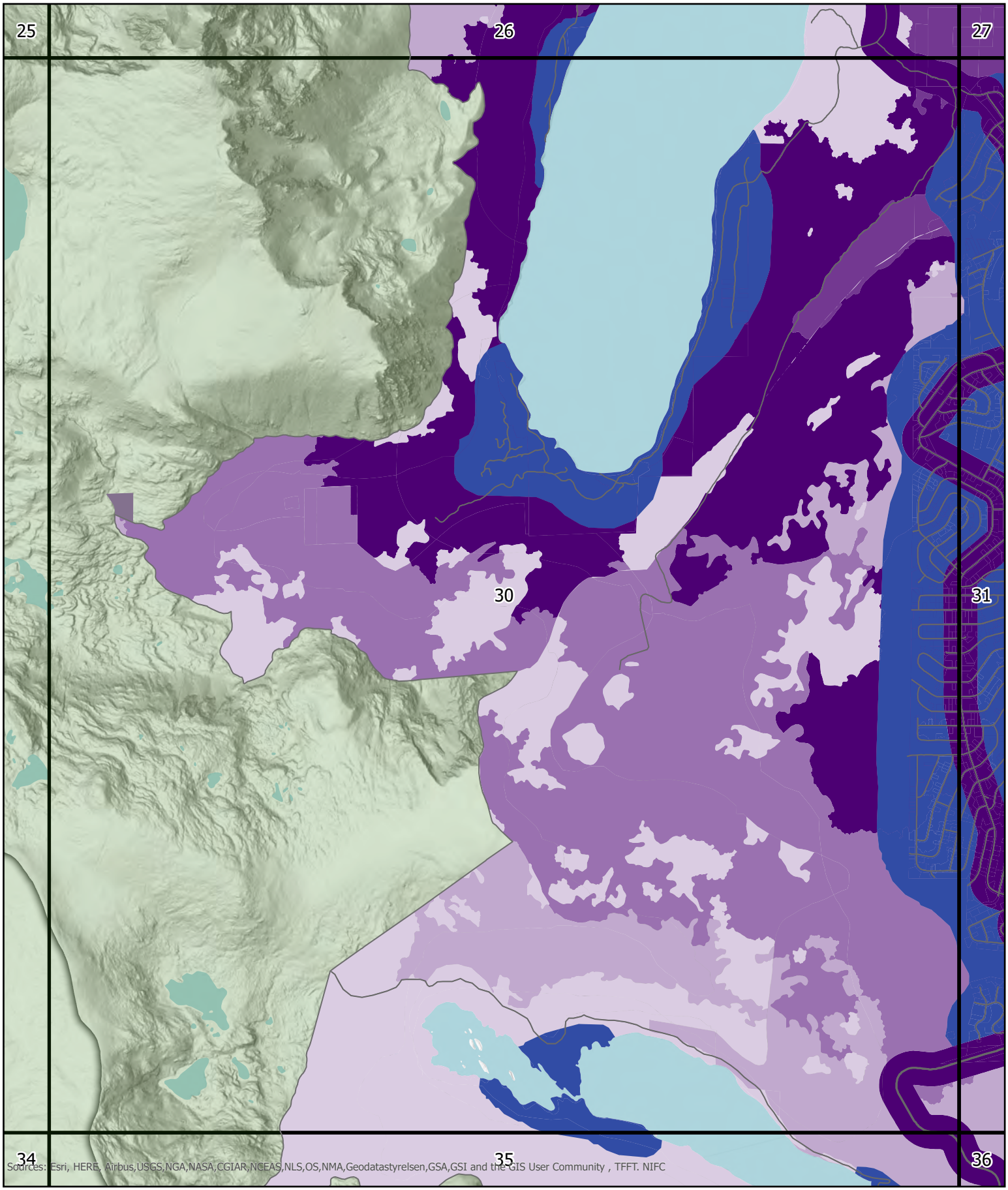

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Prioritized Potential Treatment Area Tier

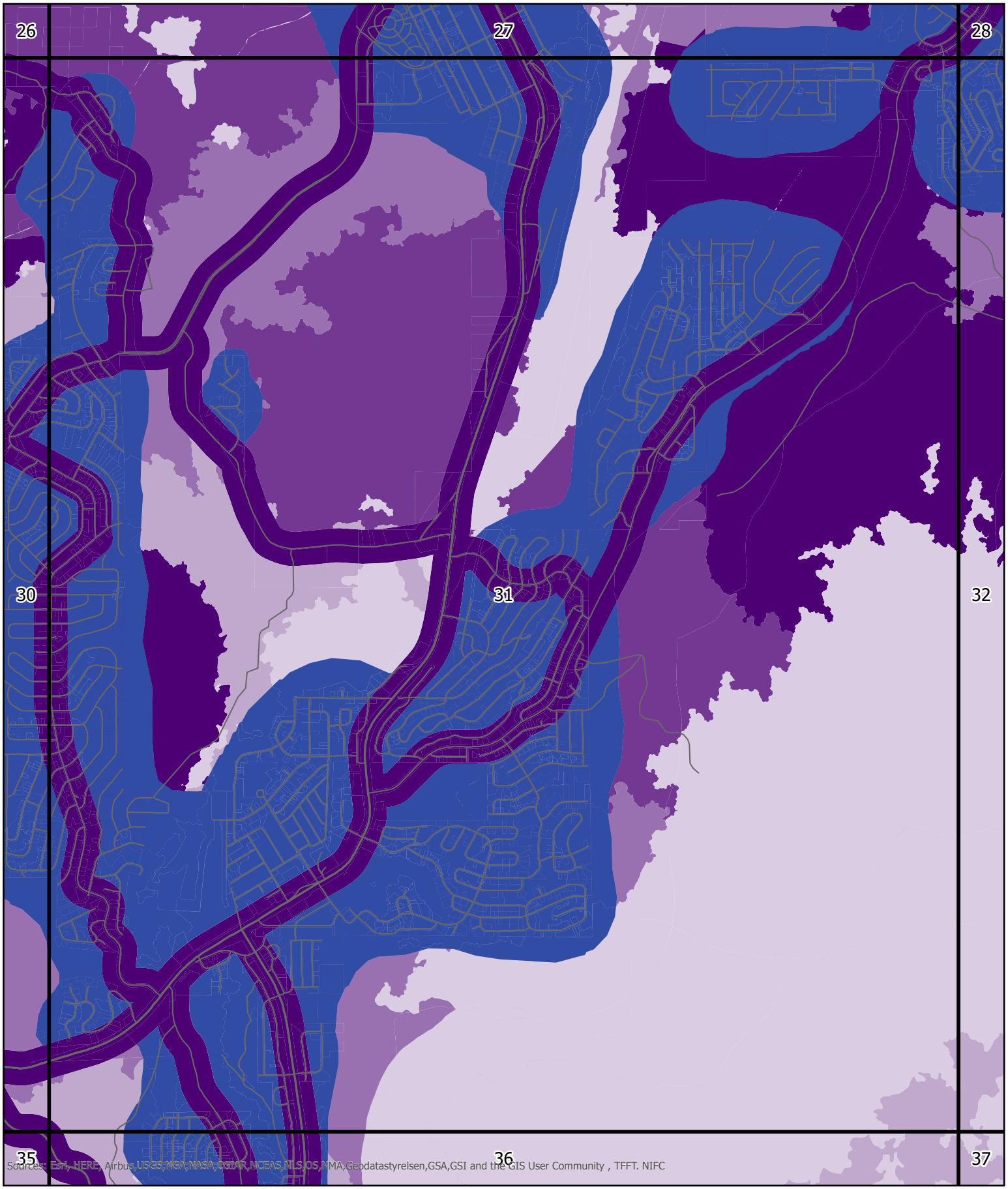
1 2 3 4 5 6 7 8 9 10

Lake Tahoe Basin Community Wildfire Protection Plan

N

0 0.3 0.7 1 Miles

Map Author: C. Moore



Prioritized Potential Forest Fuels Treatment Areas

Tahoe CWPP Boundary

Wilderness

Community Intermix (Highest Priority Tier 1)

Prioritized Potential Treatment Area Tier

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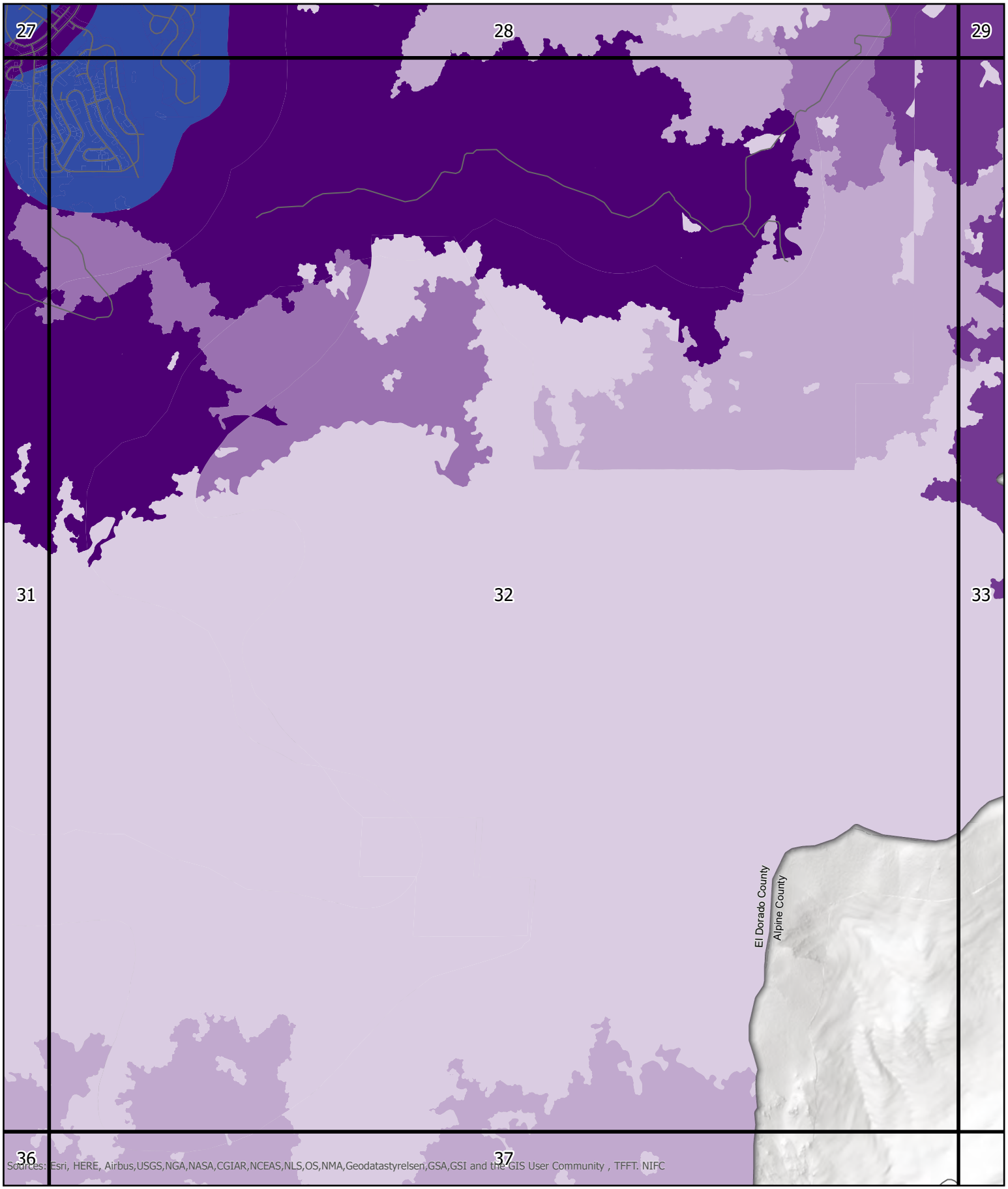

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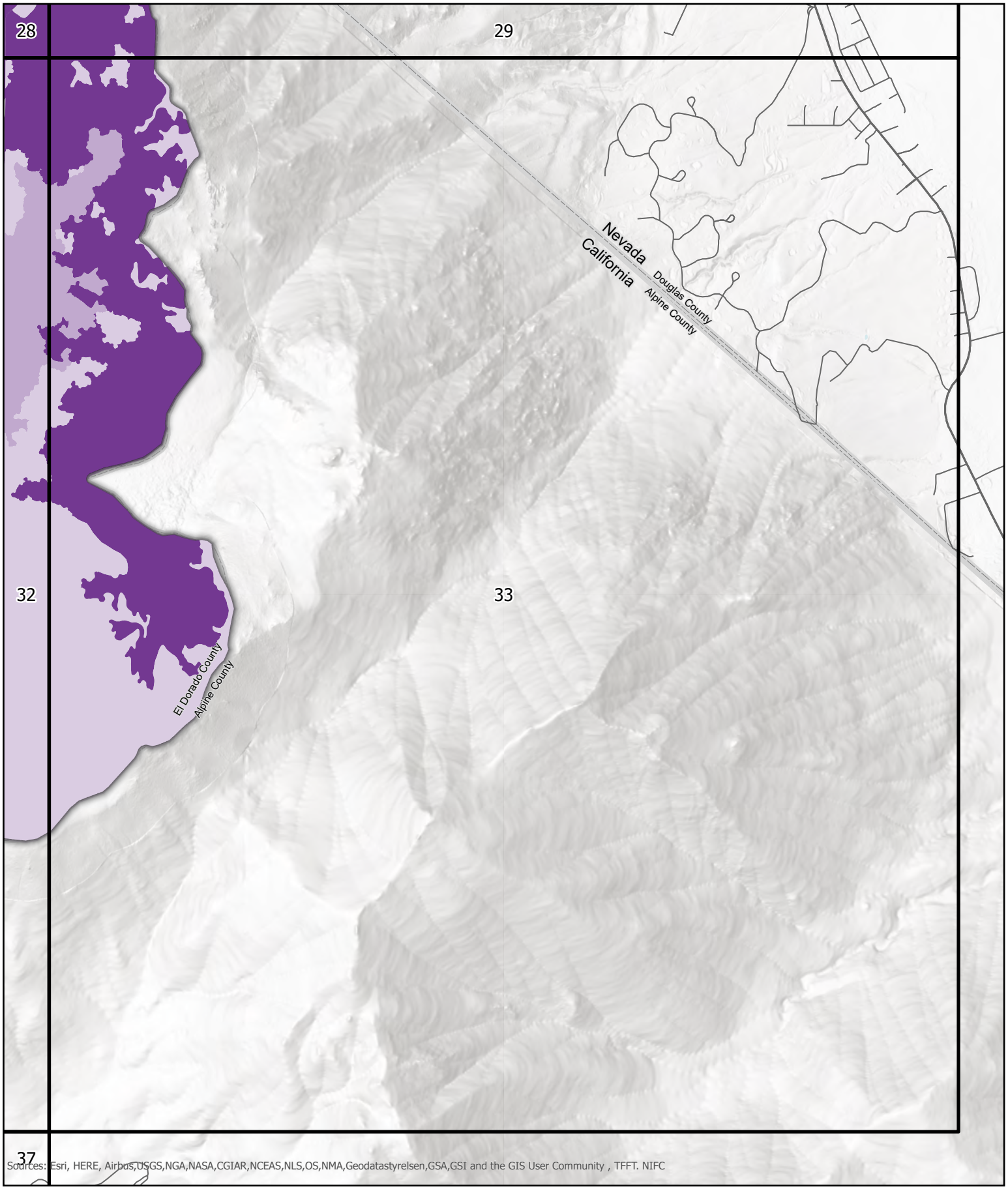

Sources: Esri, HERE, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community , TFFT. NIFC

Prioritized Potential Forest Fuels Treatment Areas

Tahoe CWPP Boundary

Wilderness

Community Intermix (Highest Priority Tier 1)

Prioritized Potential Treatment Area Tier

1	5	9
2	6	10
3	7	
4	8	

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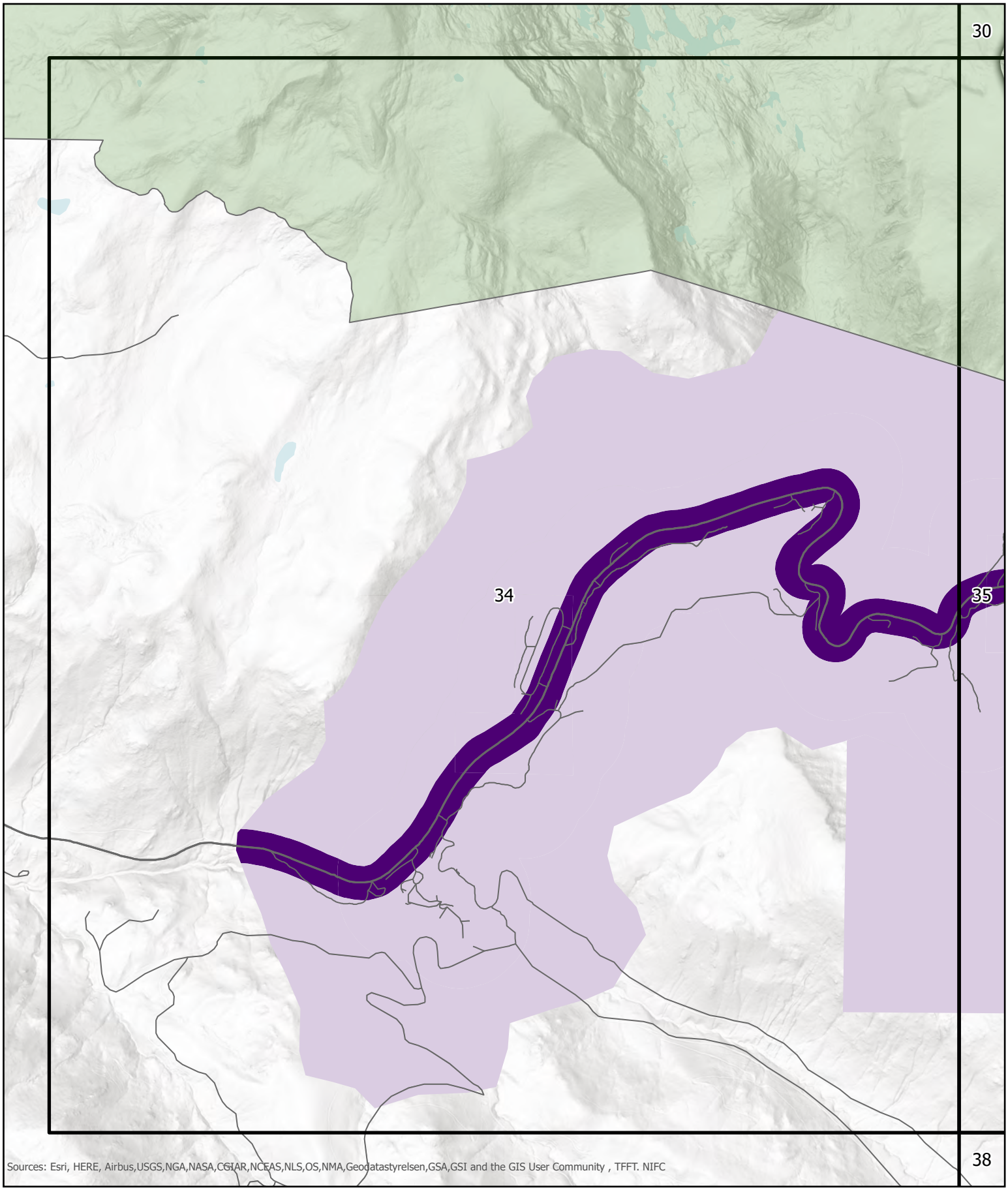

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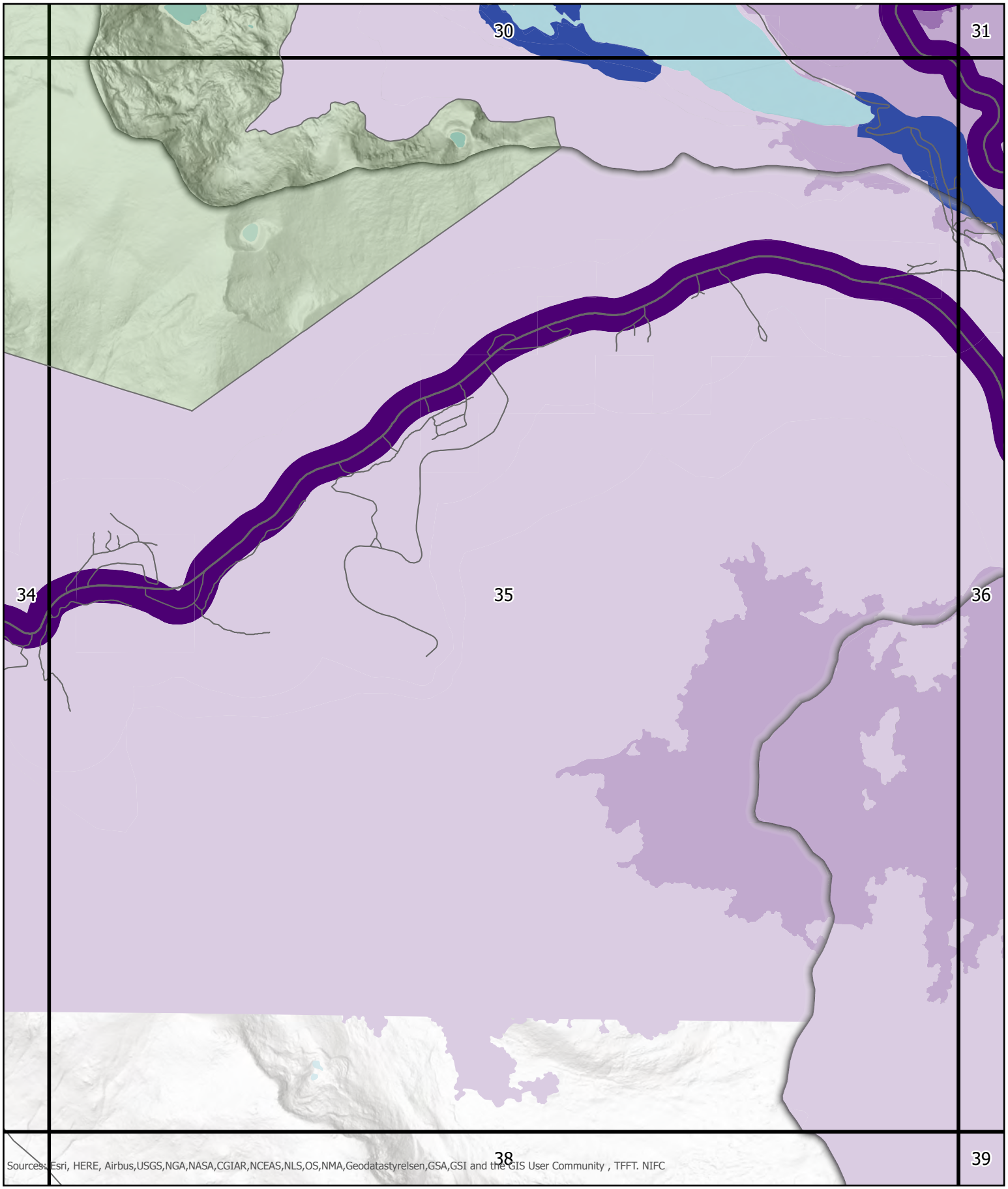

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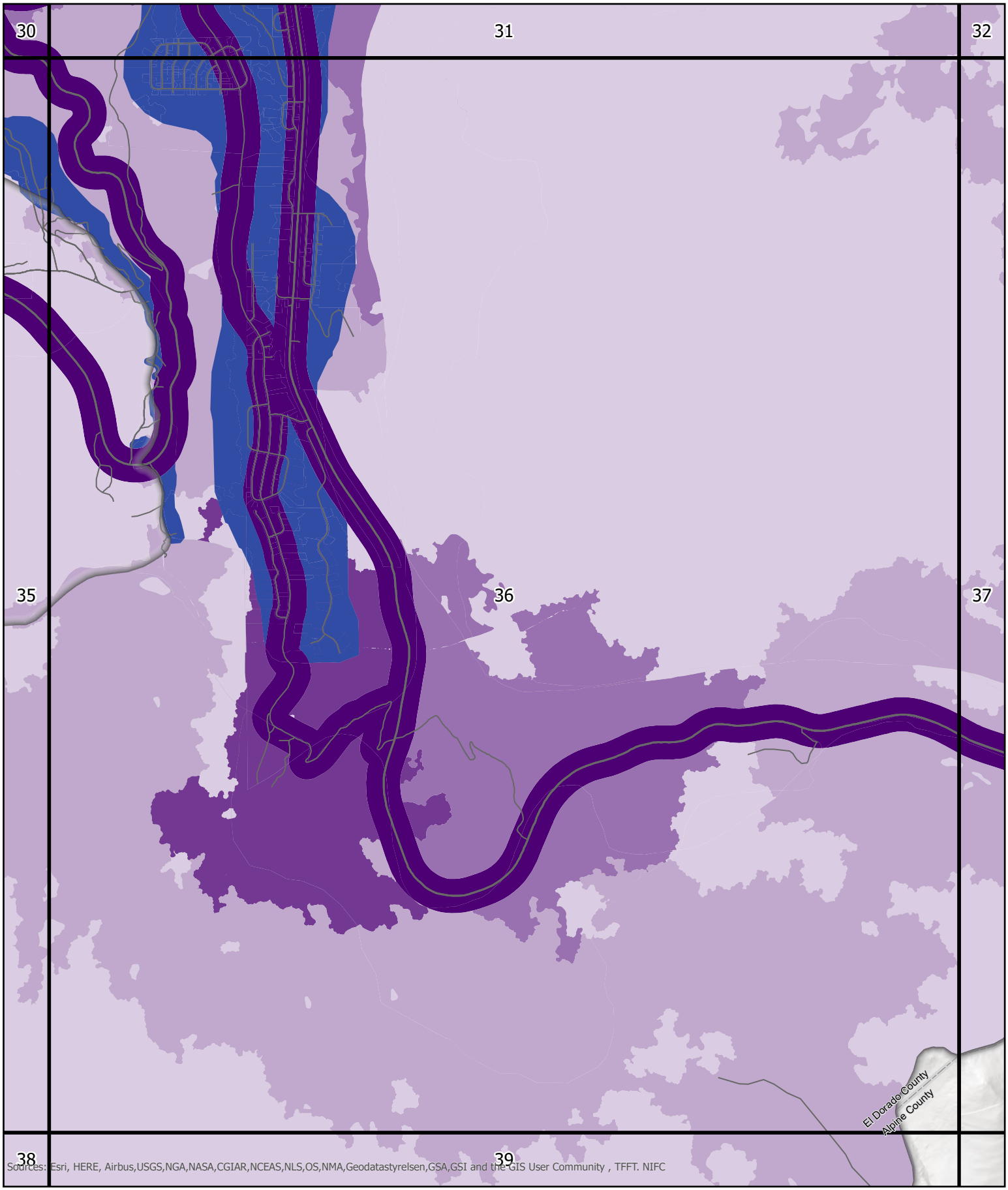

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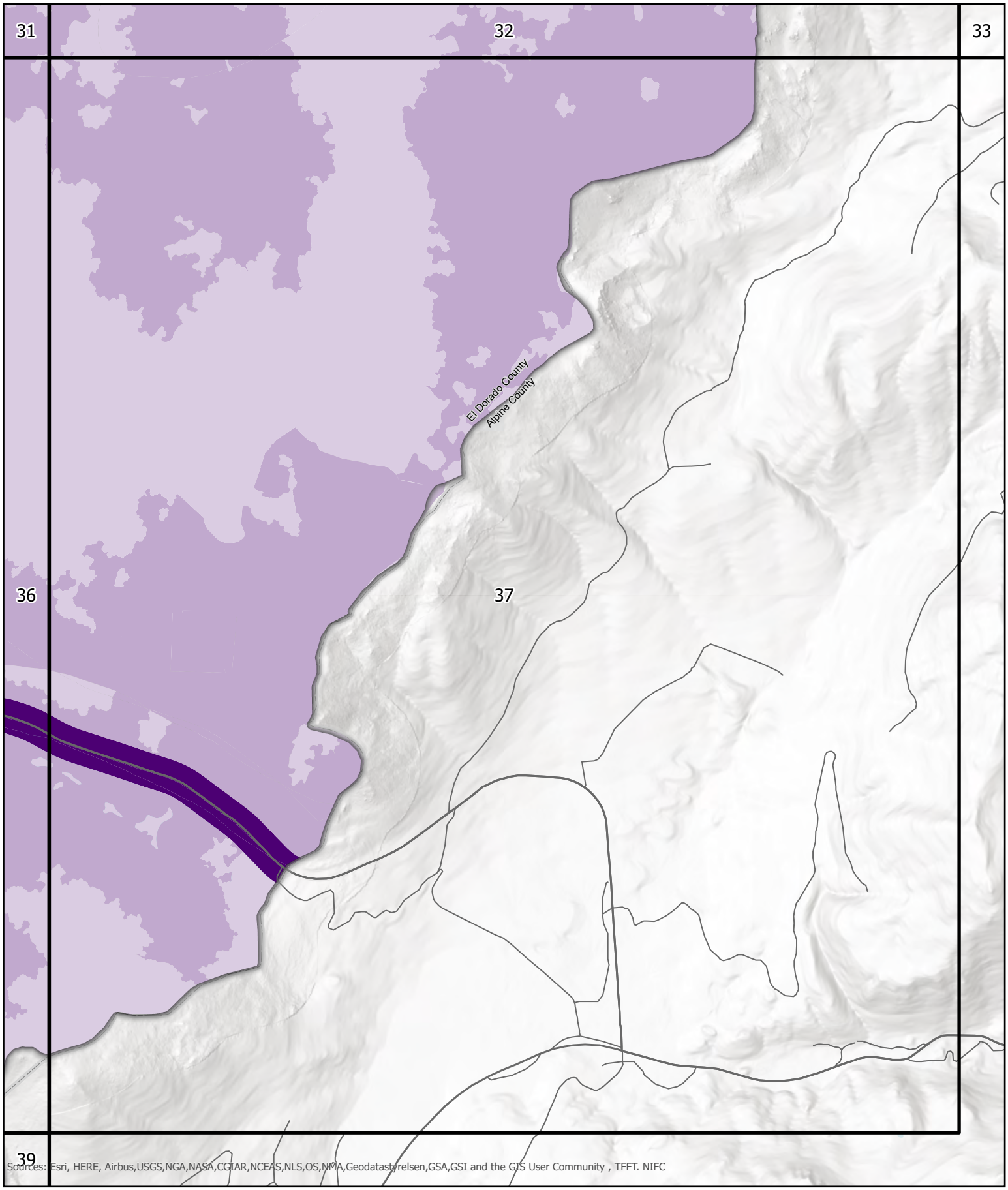

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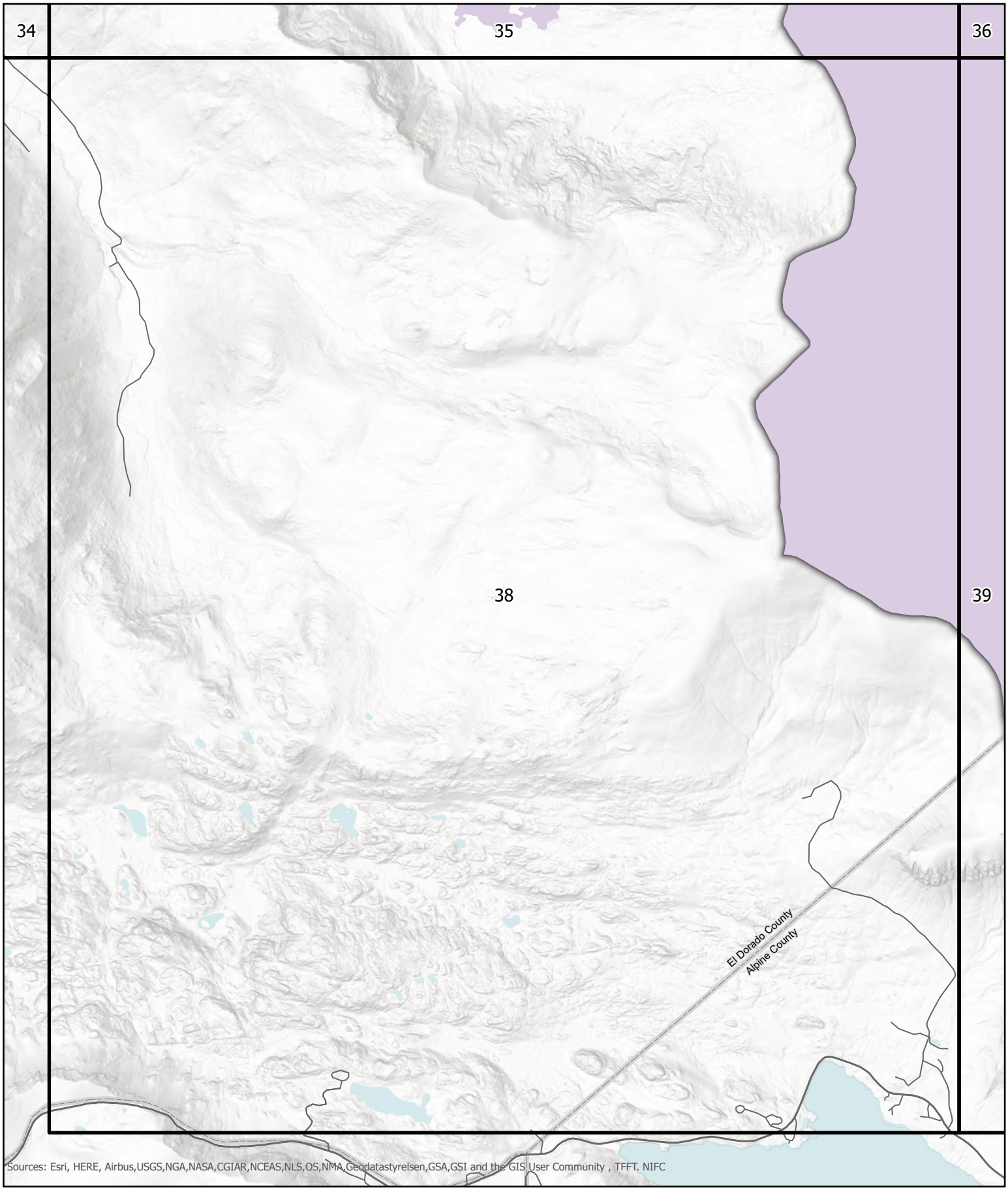

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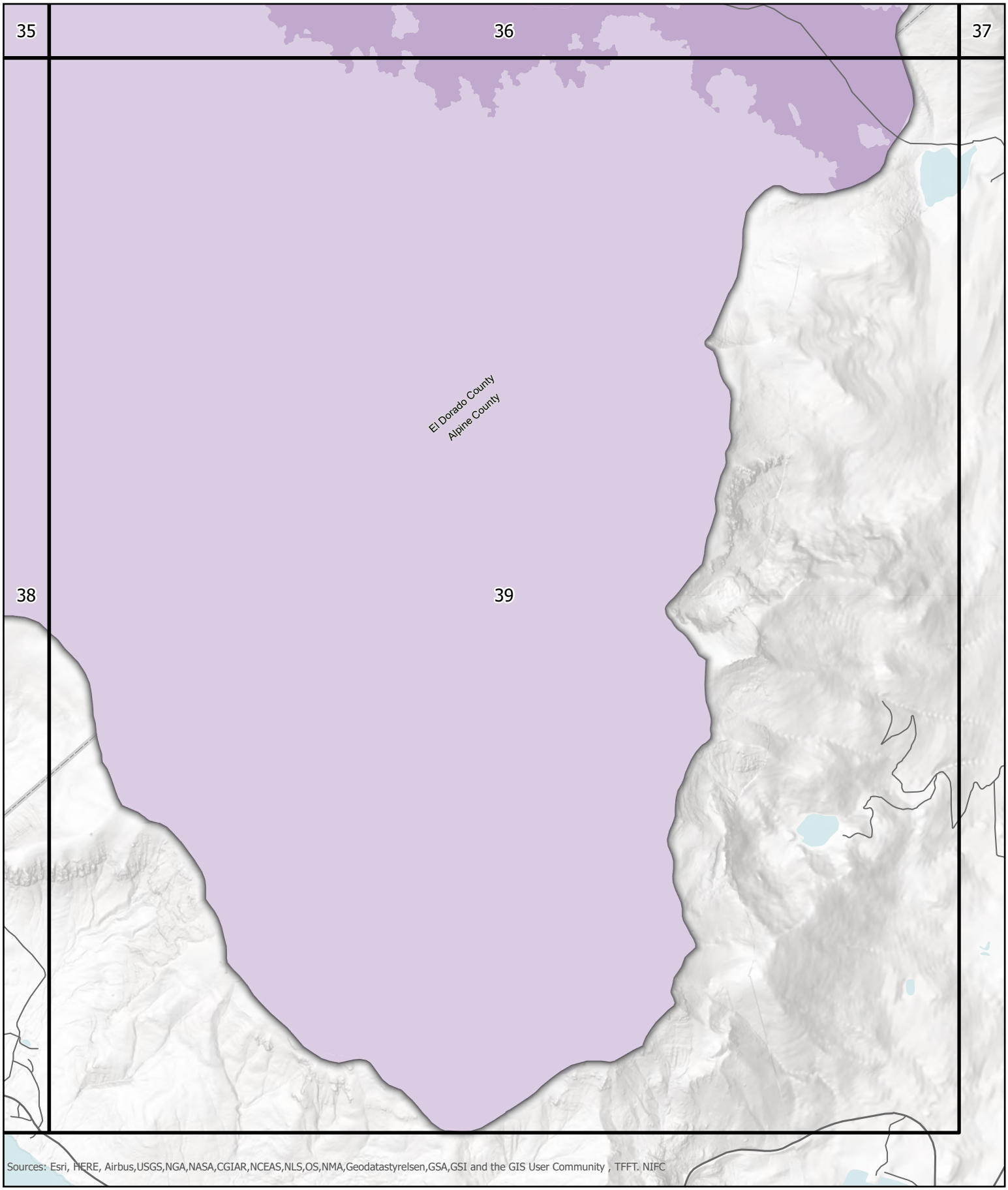

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