Climate Assets and Hazards

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Prepared for:

Stevens County

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Summary

Purpose & Introduction

This document addresses Step 1 (Explore Climate Impacts) of the Climate Planning steps required under the Growth Management Act (GMA) and House Bill 1181. This evaluation addresses community assets and climate hazards and was completed alongside an audit of existing policies in Stevens County that relate to climate resiliency. This analysis of assets and hazards, along with the policy audit, will support the development of a Climate Vulnerability and Risk Assessment and Climate Resiliency policies/elements to be adopted as part of the County's comprehensive plan.

Assets

Assets include important people, places, ecosystems, and infrastructure in Stevens County, including the following.

Exhibit 1: Stevens County Assets

Topic	Sectors	Assets
Community Well-being	Health & Well-being Emergency Management	▪ Population health ▪ Medical facilities ▪ Social services ▪ Emergency response ▪ Evacuation routes
Cultural & Natural Resources	Agriculture & Food Systems Cultural Resources & Practices Ecosystems Water Resources	▪ Food production ▪ Food distribution ▪ Historic and cultural resources ▪ Community resources ▪ Natural areas and resources ▪ Plants and animals ▪ Water resources ▪ Water infrastructure
Buildings & Infrastructure	Buildings & Energy Waste Management Transportation	▪ Residential, commercial, and industrial buildings ▪ Government facilities ▪ Educational facilities ▪ Energy infrastructure and generation ▪ Solid waste services

Topic	Sectors	Assets
		▪ Wastewater infrastructure ▪ Stormwater infrastructure ▪ Major transportation ▪ Local transportation
Land Use & Economic Development	Zoning & Development Economic Development	▪ Resource lands ▪ Residential uses ▪ Agriculture ▪ Forestry ▪ Outdoor workers ▪ Local businesses and industries ▪ Employment

Source: BERK (2026).

Hazards

Climate related hazards in Stevens County include flooding; extreme precipitation and storms; wildfire, smoke, and air pollution; extreme heat and drought; and landslide and other geologic hazards. Modeling from the University of Washington Climate Impacts Group projects an increase in the frequency of each hazard through 2050 (Exhibit 2).

Exhibit 2: Hazards in Stevens County

Hazard	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
Flooding	▪ Peak streamflow increases (Colville River: +7 to +19%, other streams: -1% to +21%) ▪ More frequent peak streamflows (25-year peaks - Colville River: every 7 to 20 years, other streams: every 6 to 29 years)	▪ Peak streamflow increases (Colville River: +9 to +25%, other streams: -3 to +40%) ▪ More frequent peak streamflows (25-year peaks - Colville River: every 7 to 14 years, other streams: every 5 to 22 years)
Extreme Precipitation and Storms	▪ No data**	▪ Magnitude of 2-year and 25-year storms (+9%) ▪ Higher total annual precipitation (+11%)
Wildfire, Smoke, and Air Pollution	▪ More high fire danger days annually (+7 days) ▪ High likelihood of conditions for wildfire in the 30-year period (53% chance on average, as high as 97% in some areas)	▪ More high fire danger days annually (+9 days) ▪ High likelihood of conditions for wildfire in the 30-year period (63% chance on average, as high as 97% in some areas)

Hazard	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
Extreme Heat and Drought	▪ More hot days (+17 days over 90° F Humidex*** annually) ▪ Hotter summer maximum temperature (+3.9° F) ▪ Reduction in April 1 snowpack (-73%) ▪ Reduction in late summer precipitation – No data** ▪ Reduction in summer streamflows (-10 to -18% for Colville River, varies from +5% to -31% for other streams)	▪ More hot days (+19 days over 90° F Humidex annually) ▪ Hotter summer maximum temperature (+5.2° F) ▪ Reduction in April 1 snowpack (-79%) ▪ Reduction in late summer precipitation (-15%) ▪ Reduction in summer streamflows (-21 to 28% for Colville River, varies from -1% to -40% for other streams)
Landslides	No climate model indicators, but landslides are more common with wet weather/flooding	

*Changes generally compare modeling for the 2040s with the 1990s. Change in high fire days compares modeling for the 2050s with the 1980s and likelihood of climate and fuel conditions is for the period between 2030 and 2059. The RCP 4.5 scenario is considered the "middle of the road" scenario in which there are decreases to emissions around mid-century. The RCP 8.5 scenario is considered the "business as usual" scenario in which there are continued increases in greenhouse gas emissions until the end of the 21st century. Differences in RCP models are limited through 2050.
**The UW Climate Impacts Group does not have data for all indicators for all scenarios.
Source: UW Climate Impacts Group (2026), BERK (2026).
***Humidex is a measure of heat that includes both temperature and humidity. Source: UW Climate Impacts Group (2023)

Hazard exposure is found in all parts of the county, as shown in Exhibit 3. Based on the available information, the county is exposed to a variety of climate hazards. Extreme heat and drought hazards are severe and affect the entire county. Extreme precipitation and storms are expected to see some increases in magnitude. Riverine flooding and landslide hazards are severe for some areas.

Exhibit 3: Exposure to Hazards in Stevens County

Hazard	Stevens County
Flooding	2
Extreme precipitation and storms	2
Wildfire/smoke and air pollution	4
Extreme heat and drought, reduced streamflow	4
Geologic hazards – landslides	2

Legend: Exposure area or extent or population– Greater 4, Some 2, Limited 0
Sources: UW Climate Impacts Group (2026), BERK (2026).

Areas of Lower and Higher Adaptive Capacity

Some populations are more sensitive than others to the health impacts of climate hazards, including people with preexisting health conditions, children, and older adults. Other indicators show how different populations have different adaptive capacity, or the ability to adjust to a hazard, take advantage of new opportunities, or cope with change. Disability rates, poverty rates, and rates of education less than a high school degree are all higher in Stevens County than the state average. Census tracts 9505 and 9507, which include Colville and Chewelah, have higher shares of mobile homes, residents with disabilities, and residents over 80 years old (see Exhibit 55 for a map of Census tracts).

Next Steps

The findings from this analysis provide a foundation for the Climate Vulnerability and Risk Assessment, which will consider how hazards could affect local assets and what resources, locations, and people are most vulnerable and at risk.

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Acronyms and Abbreviations

- *AMI:* *Area Median Income*
- *BEAD:* *Broadband Equity, Access, and Deployment Program*
- *BPA:* *Bonneville Power Administration*
- *COPD:* *Chronic obstructive pulmonary disorder*
- *DNR:* *Washington State Department of Natural Resources*
- *EBT:* *Electronic Benefits Transfer*
- *EMS:* *Emergency Medical Services*
- *ESD:* *Washington State Employment Security Department*
- *FbD:* *Floodplains by Design*
- *FCAAP:* *Flood Control Assistance Account Program*
- *FEMA:* *Federal Emergency Management Agency*
- *FQHC:* *Federally Qualified Health Center*
- *GMA:* *Washington State Growth Management Act*
- *LAMIRDs:* *limited areas of more intensive rural development*
- *NEPA:* *National Environmental Policy Act*
- *NETCHD:* *Northeast Tri County Health District*
- *NEWABH:* *Northeast Washington Alliance Behavioral Health*
- *NEW RTPO:* *Northeast Washington Regional Transportation Planning Organization*
- *RCP:* *Representative Concentration Pathway of greenhouse gas concentration trajectories*
- *SNAP:* *Supplemental Nutrition Assistance Program*
- *TEDD:* *Tri-County Economic Development District*
- *SR:* *State Route*
- *UGA:* *Urban Growth Area*
- *USDA:* *United States Department of Agriculture*
- *US EPA:* *United States Environmental Protection Agency*
- *UTC:* *Washington Utilities and Transportation Commission*
- *UWCIG:* *University of Washington Climate Impacts Group*
- *VSP:* *Voluntary Stewardship Program*
- *WDFW:* *Washington Department of Fish and Wildlife*
- *WIC:* *Women, Infant, Children nutrition programming*
- *WRIA:* *Water Resources Inventory Area*
- *WSU:* *Washington State University*

Climate Planning Background

The Pacific Northwest including Stevens County is experiencing extreme heat, extreme precipitation, drought and wildfire hazards, and associated smoke exposure. These climate impacts, which are expected to increase in frequency for the planning period through 2050, affect people, places, and infrastructure in Stevens County.

This document is meant to address Step 1 (Explore Climate Impacts) of the following steps in Climate Planning under the Growth Management Act (GMA) and House Bill 1181 (Exhibit 4). Separately there has been an audit of existing plans and policies to understand potential gaps (BERK Consulting, 2026).

Exhibit 4: Climate Planning Steps



Source: Washington State Department of Commerce (2025).

This evaluation of climate impacts studies community assets – people, places, infrastructure – and climate hazards – such as extreme heat, flooding and extreme precipitation, wildfires and smoke, drought, and others. There has also been an evaluation of the strength of County policies (shown above in Step 2). An understanding of impacts and current policies will lead to Step 3 Assess Vulnerability and Risk (see text box below). These steps will allow the County to adapt and add goals and policies into a new climate element of the Comprehensive Plan in Steps 4 and 5. Key climate planning terms are included in a text box on page 4.

Vulnerability is defined as the sum of exposure to climate shocks and stresses, the sensitivity of people or environment to the shock, and the capacity of the community and place to cope with consequences of the climate event. (UKAID, 2011) (US Climate Resilience Toolkit, 2021)

This is illustrated in the “formula” below:

Vulnerability = Exposure + Sensitivity - Capacity to Adapt

Risk considers the probability of a hazard and the magnitude of the negative consequence or loss.

Other key climate planning terms are included in a text box on page 4.

KEY TERMS

Adaptation: The process of adjusting to (climate) conditions in order to reduce risks to valued assets.

Adaptive Capacity: The ability of a person, asset, or system to adjust to a hazard, take advantage of opportunities, or cope with change.

Asset: People, resources, ecosystems, infrastructure, and the services they provide. Assets are the tangible and intangible things people or communities value.

Climate Resilience: The ongoing process of anticipating, preparing for, and adapting to changes in climate and minimizing negative impacts to our natural systems, infrastructure, and communities.

Exposure: The presence of people, assets, and ecosystems in places where they could be adversely affected by hazards

Hazards: An event or condition that may cause injury, illness, or death to people or damage to assets.

Impacts: The effects on natural and human systems that result from hazards. Evaluating potential impacts is a critical step in assessing vulnerability.

Overburdened Communities: A geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW 19.405.020.

Risk: The potential for negative consequences where something of value is at stake. In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard. Risk can be assessed by multiplying the probability of a hazard by the magnitude of the negative consequence or loss.

Sensitivity: In the context of the assessment of climate impacts, this term means the degree to which a system, population, or resource is or might be affected by hazards.

Vulnerability: The propensity or predisposition of assets to be adversely affected by hazards. Vulnerability encompasses exposure, sensitivity, potential impacts, and adaptive capacity.

Vulnerable Populations: Vulnerable populations are groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to: adverse socioeconomic factors such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and, sensitivity factors, such as low birth weight and higher rates of hospitalization. Vulnerable populations include but are not limited to: racial and ethnic minorities; low- income populations; and, populations disproportionately impacted by environmental harms.

See Glossary in Commerce's Climate Planning Guidance, December 2025.

Assets, Hazards & Local Findings

Assets

Assets include people, natural resources and ecosystems, infrastructure, and services. Climate hazards can adversely or positively affect these valued assets. This section reviews the important assets in the county by theme:

- **Community Well-being:** Health & Well-Being, Emergency Management
- **Cultural & Natural Resources:** Agriculture & Food Systems, Cultural Resources & Practices, Ecosystems, and Water Resources
- **Buildings & Infrastructure:** Buildings & Energy, Waste Management, Transportation
- **Land Use & Economic Development:** Zoning & Development, Economic Development

Community Wellbeing

Health & Well-being

Population Health. Some populations are more sensitive than others to the health impacts of climate hazards. People with preexisting health conditions, such as asthma, hypertension, diabetes, and chronic obstructive pulmonary disorder (COPD) can be more sensitive to hazards like extreme heat and wildfire smoke events (US EPA, 2025). This can include inflammation, thermoregulation issues, and medication impacts for people with diabetes, inflammation, and irritation for people with asthma and COPD, and dehydration and blood pressure spikes for people with high blood pressure. Climate events are also associated with mental health impacts (American Psychiatric Association, 2023). As shown in Exhibit 5, Stevens County has particularly high rates of COPD, diabetes, and high blood pressure compared to Washington state on average. Similar to statewide, almost a quarter of Stevens County adults have experienced depression and a little over one in 10 have asthma.

Children and older adults are also particularly sensitive to climate hazards, as are those who are pregnant. Compared with Washington State, Stevens County has a similar share of youth under age 20 and under age 5, however, there are more adults over age 65 and over 75 (Exhibit 6).

Exhibit 5: Health Statistics (Residents over age 18)

CATEGORY	STEVENS COUNTY	WASHINGTON STATE
Asthma	12.0%	10.9%
Chronic Obstructive Pulmonary Disorder	8.6%	4.7%
Depression	24.3%	24.6%
Diabetes	12.6%	10.0%
Hypertension / High Blood Pressure	37.6%	30.6%

Source: CDC (2025), United Health Foundation (2025).

Exhibit 6: Youth and Older Adults

CATEGORY	STEVENS COUNTY	WASHINGTON STATE
Youth Under Age 20	23.2%	23.1%
Children Under Age 5	4.9%	5.3%
Adults Over Age 65	25.3%	17.3%
Adults Over Age 75	9.2%	7.1%

Source: American Community Survey 5-year Estimates (2024).

The share of older adults in Stevens County has grown over time. In 2010, the share of people over age 65 was 16% and in 2015 it was 20%, compared to 25% in 2024 (American Community Survey 5-year Estimates, 2024).

Medical Facilities. There are a range of health providers in Stevens County, including two hospitals (Providence St. Joseph's Hospital and Providence Mount Carmel Hospital), a Federally Qualified Health Center (FQHC), and various medical clinics and mental health providers, mostly located within cities (Exhibit 9). The Spokane Tribe also provides physical and behavioral health resources through the Department of Health and Human Services. Area hospitals have noted higher emergency room visits during extreme heat and smoke (Washington State Department of Health, 2026).

Social Services. There are several adult and long-term care facilities in Colville, Kettle Falls, and Chewelah. Childcare and afterschool programs are mostly located in and around cities. The NorthEast Washington Alliance Behavioral Health (NEWABH) provides behavioral health services, employment, and housing services for Stevens, Ferry, and Lincoln Counties and has offices in Colville and Chewelah. Rural Resources Community Action has a variety of programs including housing maintenance support, early childhood education, job training, and more (Rural Resources Community Action, 2026). Northeast Tri County Health District (NETCHD) also provides Women, Infant, Children (WIC) nutrition programming and other services for families (Northeast Tri County Health District, 2026).

The Spokane Tribe also provides various social services programs, a Senior/Elder Program, and a WIC Program. The Spokane Tribal Network provides additional programs for youth, families,

and food sovereignty on the Spokane Reservation and across eastern Washington(Spokane Tribal Network, 2026). Colville Tribes Tribal members in Stevens County are eligible for services through the Tribes' social services program.

Emergency Management

Emergency Response. As shown in Exhibit 8, there are 13 fire districts in Stevens County (Stevens County, 2026). Parts of the county are also served by City fire departments or districts in Chewelah, Colville, Kettle Falls, and Northport and Spokane Tribal Emergency Services. With the exception of Fire District 1, all fire districts in the County are are volunteer based. District 1 is a combination district with several career staff and a large number of volunteer personnel. In 2025, Stevens County saw many 911 calls for heat stroke response.

The Sheriff's Office provides policing services throughout Stevens County and an ambulance transport service based in Colville (Stevens County, 2026). Other police departments include the Colville Police Department, Kettle Falls Police Department, Chewelah Police Department, and Spokane Tribal Police. There is currently no morgue in Stevens County.

Exhibit 7: Fire response



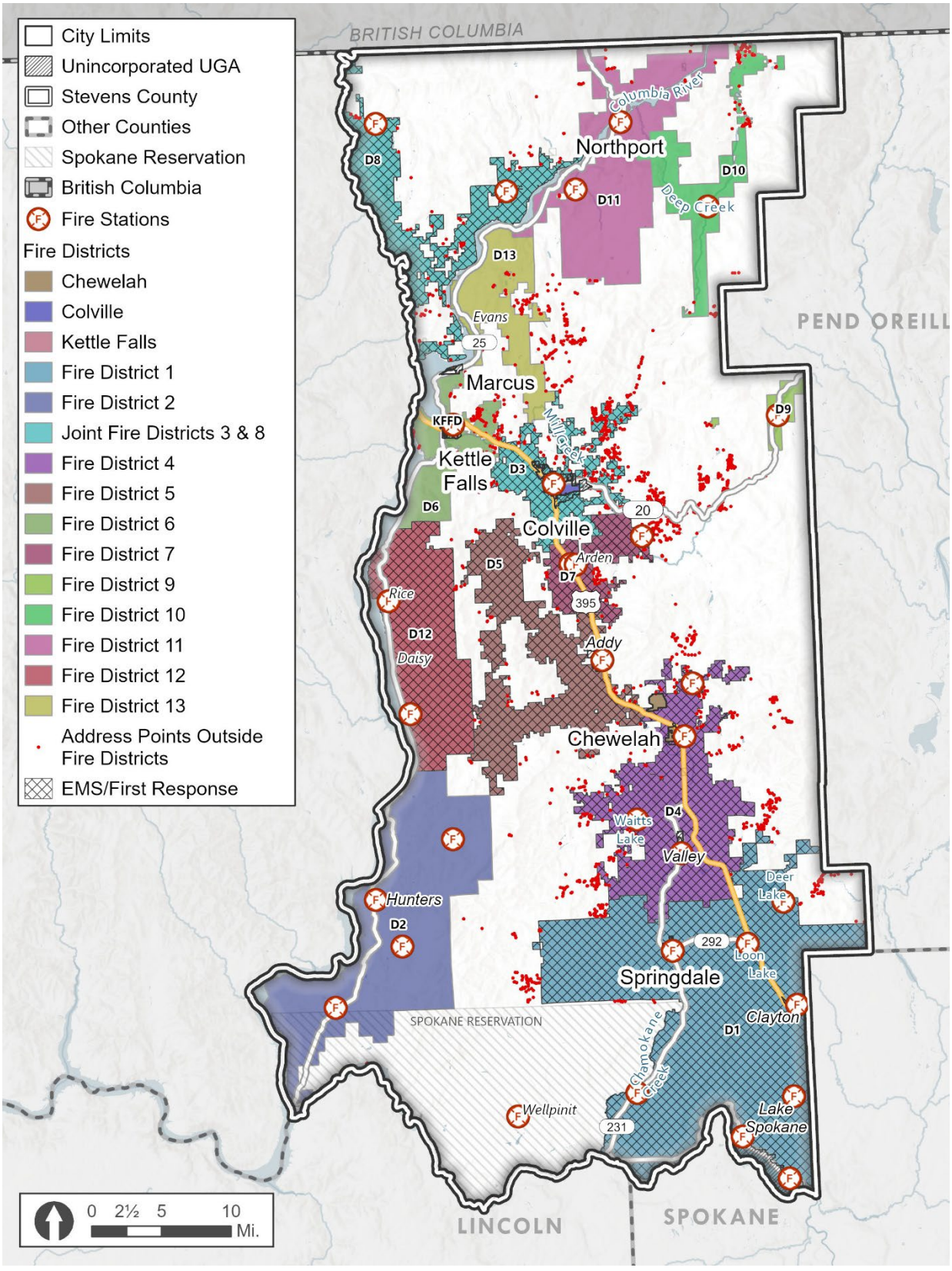
Source: SC Fire District 1 (2026).

Ambulance services in Stevens County are limited to the Sheriff's Office ambulance, Chewelah Ambulance, Deer Park Ambulance, and Arden Ambulance (part of Fire District 7) (see Exhibit 9). In some areas where ambulance wait times are long, air ambulances are relied upon for emergencies.

Stevens County was selected for the Broadband Equity, Access, and Deployment (BEAD) Program, which is an initiative to support reliable, affordable broadband service. This will allow the County to have a remote monitoring system to help provide notice of natural hazard events before they reach critical levels. However, this service may not be affordable for all residents.

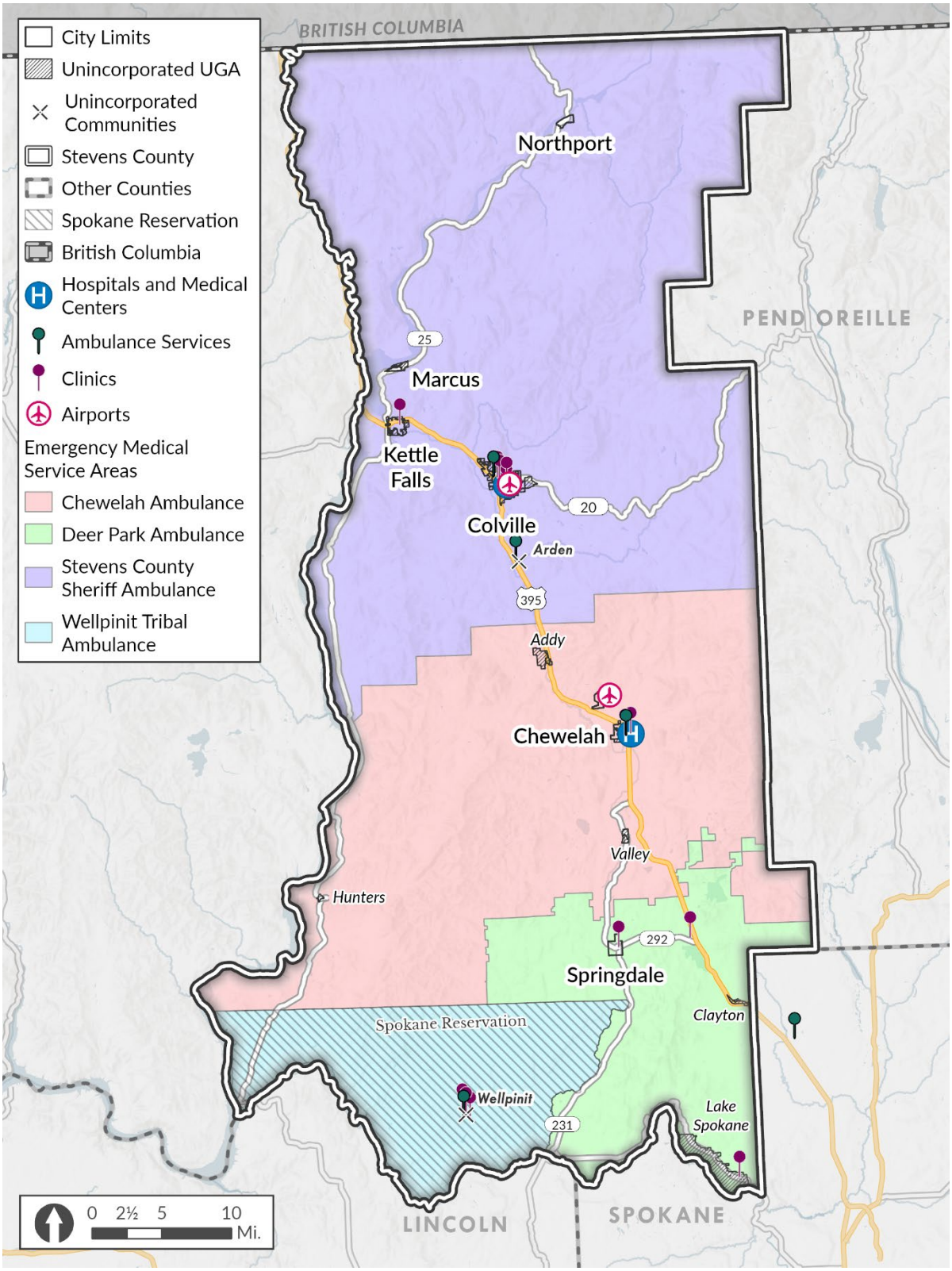
Evacuation Routes. Depending on the location of a fire or other emergency, main roadways for evacuation could include State Route (SR) 25, SR 395, SR 20, and SR 231. The western and northern part of the county have limited east-west connections across the Columbia River, limiting evacuation options in an emergency. East-west connectivity in general is fairly limited in much of Stevens County.

Exhibit 8: Fire Districts



Source: Stevens County (2026), BERK (2026).

Exhibit 9: Emergency Medical Service Areas and Public Health Facilities



Source: Stevens County (2026), BERK (2026).

Community Wellbeing Considerations for Climate Risk and Vulnerability Assessment

Engagement with the Stevens County Climate Policy Advisory Team found several considerations for community wellbeing:

Challenges

- Tick-borne diseases are an increasing problem due to temperature changes.
- There is generally a lack of community hubs for emergency shelter. Existing community hubs are not the most appropriate spaces due to small size and lack of amenities. The County has worked with churches in the past but often these spaces are only available on certain days of the week, even in an emergency event. Hubs are also not always located near the emergency.
- Some residents are uninterested in traveling to hubs in an emergency and transportation can also be a barrier.
- Many residents do not get the information they need to respond in an emergency. The County has tried many channels in the past but people still say they do not get the information.
- Some residents have put their own health and safety at risk in the past to stay with or check on livestock and other animals in a fire evacuation zone. While there are places to take large animals in an emergency, transportation is a challenge. Large numbers of animals, cattle herds for example, are also not possible to move.
- Funding and staffing or volunteer resources are a challenge in general for building resilience.
- There is a lack of Emergency Medical Services (EMS) services and ambulances and a system to support these services. The County relies a lot on Life Flights for medical emergencies. There is also no morgue in Stevens County.
- Washington Department of Natural Resources (DNR) firefighters do not go into structures to put them out, which makes homes in rural areas more vulnerable to damage.
- Some homes are not addressed and are therefore hard to locate in an emergency. Emergency response may not know people are living there if evacuating the area.
- Some private roads and driveways are not passable and therefore cannot be served by fire trucks.

Opportunities

- NETCHD has installed several additional air quality monitors in the County. The Spokane Tribe has also done some of this work.
- NETCHD has a set of large air purifiers and air conditioning units. NETCHD has looked into mobile options to travel into smaller rural communities.
- Residents have been asking for cooling and heating shelters. Currently, the fairgrounds are used for summer fire events. Public libraries and schools could be a resource, but libraries

are not open on the weekend. Grange halls and similar facilities could be an option but can be in poor condition so would need substantial upgrades through grants or other funding.

- Early alert systems could support resilience.
- A public education campaign on key hazards and preparation could be of value.
- Avista has a Community Resource Center in some places for planner power outages, however there is not one in Stevens County. Typically, middle schools are the location for these as they are more available in the summer than high schools. This could be a future opportunity.
- Stevens County was recently funded for broadband communications upgrades through a BEAD grant. This will support a remote monitoring system to provide notice of natural hazards before they reach critical levels. However, this service may not be affordable to some people.
- There is a volunteer Medical Reserve Corps that has received training to respond to public health needs. They have some key equipment already including a ham radio. This and other volunteer groups could be an opportunity for providing information and supporting community members.

Cultural & Natural Resources

Agriculture & Food Systems

Food Production. Stevens County has an active agricultural sector with almost 1,000 farms covering more than 460,000 acres (USDA, 2022). Much of this area is rangeland grazing, with more intensive activities such as hay and grain production concentrated in valley bottoms. Key products include cattle and calves, hay and forage, grains and oilseeds, dairy, and tree fruits and berries. The Washington State University (WSU) Extension of Stevens County supports producers through training and other resources and the Stevens County Conservation District implements agricultural programs to protect environmental resources (WSU Extension, 2026; Stevens County, 2026). There are also community gardens located in Colville and Northport.

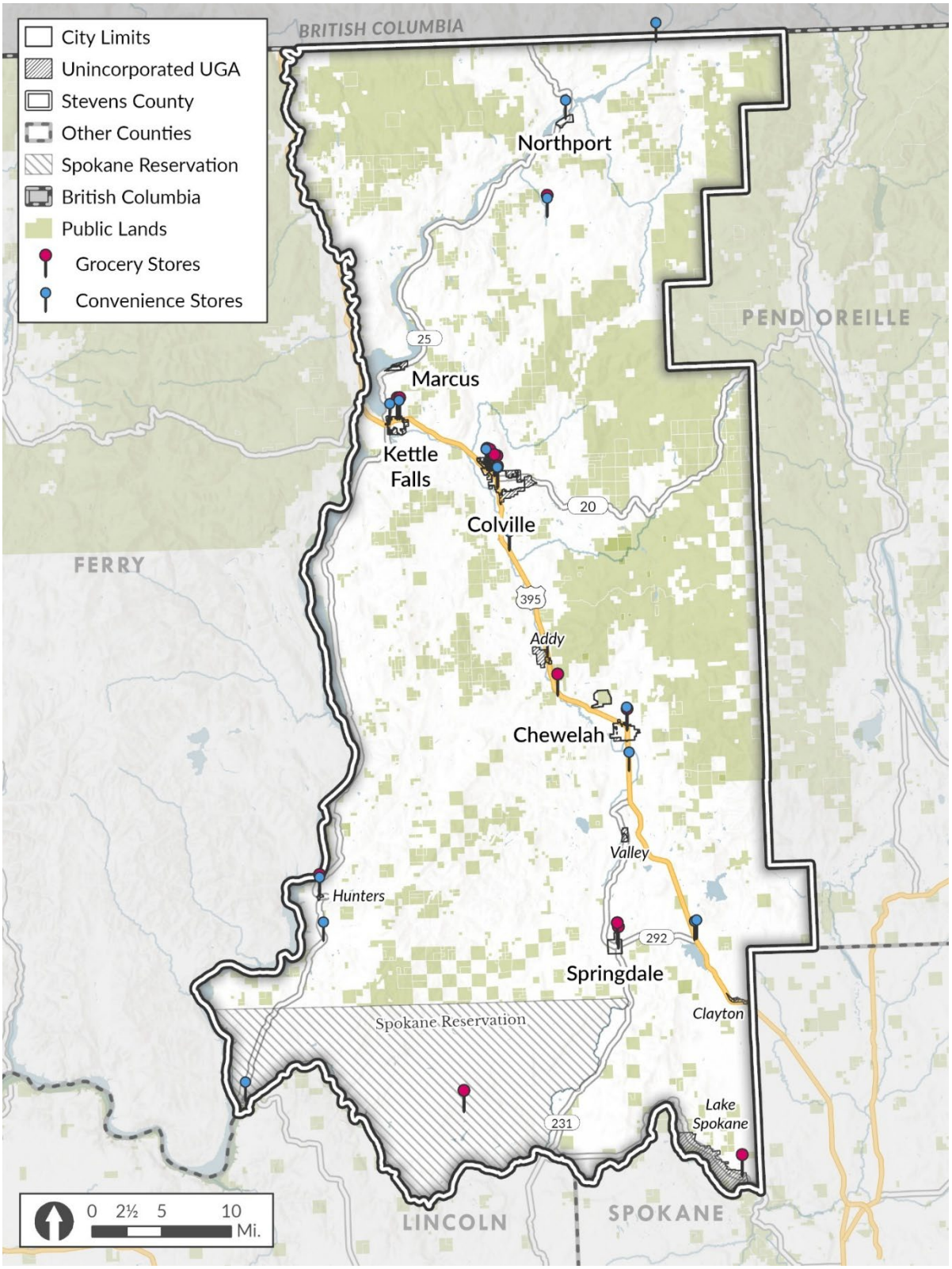
Exhibit 10: Colville Community Garden



Source: Colville Community Garden (2026).

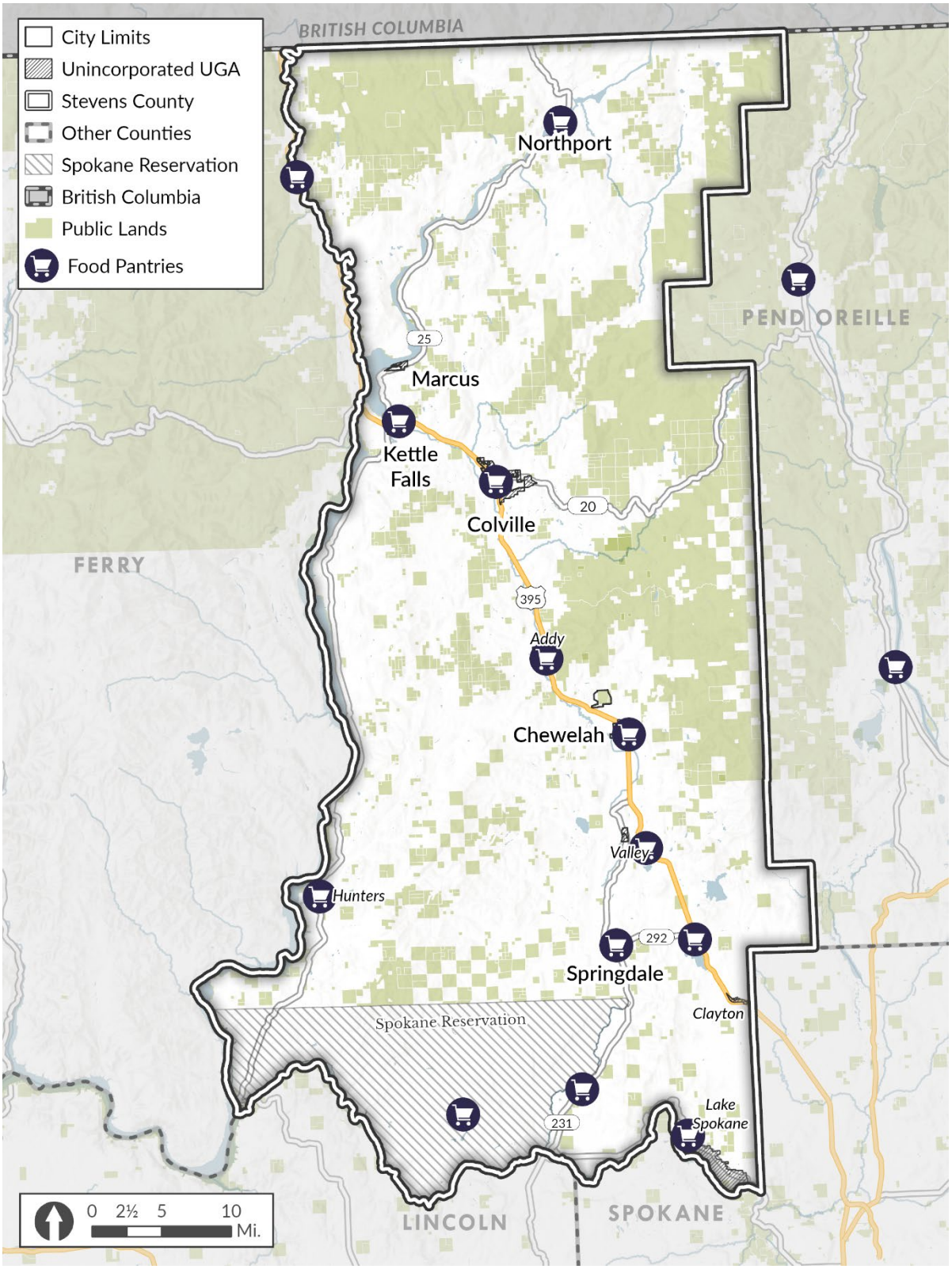
Food Distribution. Grocery stores are mostly located in the incorporated cities as shown in Exhibit 11. Convenience stores also provide some food options along major roads. There are farmers' markets in Chewelah, Colville, and Clayton, and these accept Supplemental Nutrition Assistance Program (SNAP) and Electronic Benefits Transfer (EBT) payment. As shown in Exhibit 12, there are also food pantries in several locations, including Colville, Chewelah, Kettle Falls, Northport Springdale, Addy, Ford, Hunters, Loon Lake, Tum Tum, Valley, and Wellpinit (NEW Hunger Coalition, 2026). NEW Hunger Coalition, a local nonprofit, has a program that contracts with local farms to supply food pantries, supporting the local food economy and residents. The nonprofit also runs a program that teaches and equips food pantry clients to grow their own food (NEW Hunger Coalition, 2026).

Exhibit 11: Grocery and Convenience Stores



Source: Washington Department of Ecology (2025).

Exhibit 12: Food Pantries



Source: NEW Hunger Coalition (2026), BERK (2026).

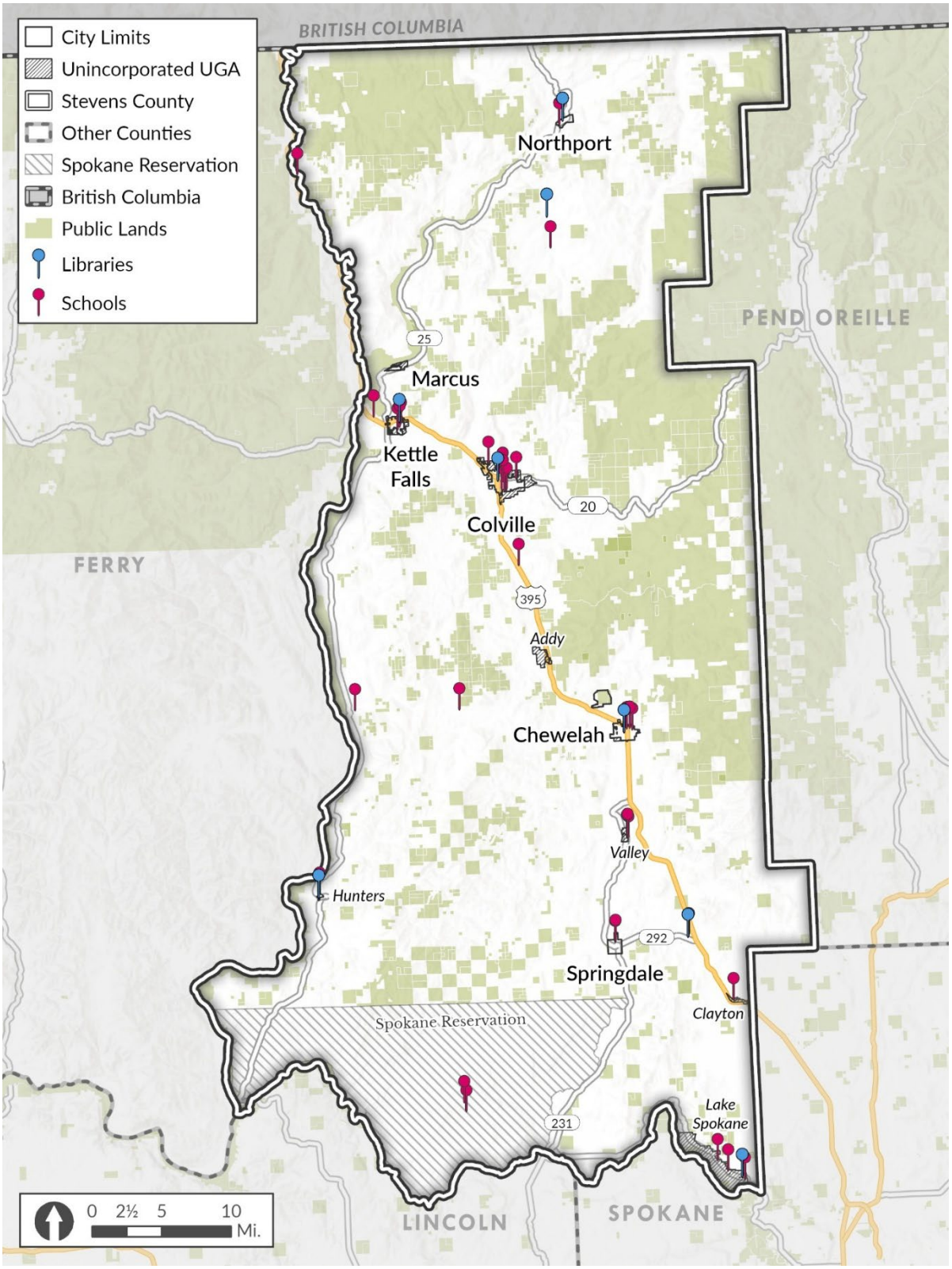
Cultural Resources & Practices

Historic and Cultural Resources. Most properties on the National Historic Register or the Washington Historic Register are in the north half of the county near Colville and Kettle Falls. These include old industrial sites, historic barns and ranches, bridges, a school, and the historic Fort Colville (Washington Department of Archeology Historic Preservation, 2026). The State's modeling shows a high risk for archeological resources generally in the valleys and along the waterways in Stevens County.

As far back as 13,000 B.C.E., Stevens County was occupied by the Native Americans of the Sohweihlp (also called Kettle and Colville), Lake, and the Spokan (Spokane) tribes. The Colvilles and the Lakes occupied the northern part of the county and the Spokanes lived in the south part of the county along the Spokane River. In present day, tribal members live throughout Stevens County, including on the Spokane Indian Reservation, which covers about 240 square miles in the southwest part of the county. Wellpenit is home to the Spokane Tribe's tribal government, health, and education programs. Cultural resources in Stevens County include tribal cultural resources including first foods such as salmon, roots, and berries (American Indian Health and Diet Project, 2011).

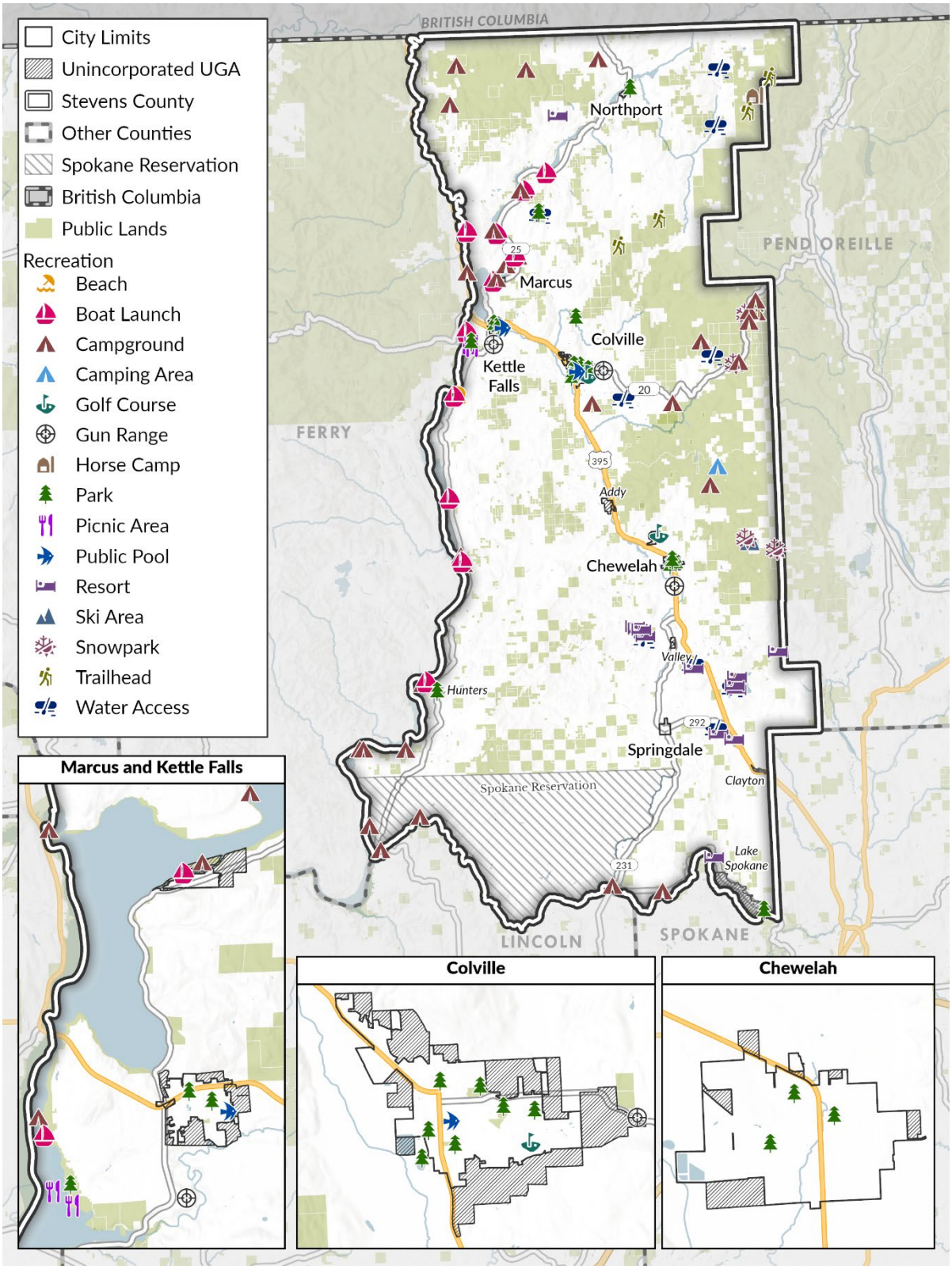
Community Resources. Community resources in Stevens County include parks, open spaces, senior centers, and libraries. There are many public lands in the county, including Colville National Forest, Little Pend Oreille National Wildlife Refuge, Lake Roosevelt National Park, and Washington Department of Natural Resources lands, which have trails and sno-parks. There is also a private ski resort, 49° North Mountain Resort, atop Chewelah Peak. The Northeast Washington Fair Grounds hosts events year-round, along with other fair and rodeo grounds such as in Springdale and Clayton. There are senior centers in Colville, Chewelah, and Kettle Falls, and the Spokane Tribe of Indians Senior Center in Wellpinit. There are seven public library locations and 15 school districts throughout the county (Exhibit 13). These facilities provide community resources and serve as community gathering places beyond their regular educational purposes. Exhibit 14 shows recreation assets and facilities throughout the county. Libraries, schools, and recreation facilities can be expanded and used to increase community resiliency to climate hazards by promoting education, healthy lifestyles, and community connectedness through shared learning and leisure.

Exhibit 13: Libraries and Schools



Source: Stevens County (2026), BERK (2026).

Exhibit 14: Recreation Assets



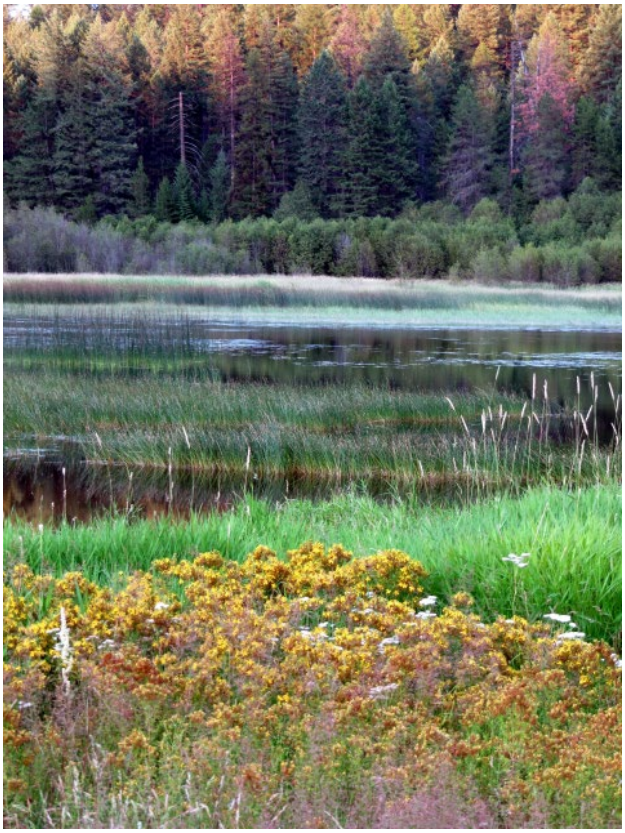
Source: Stevens County (2026), BERK (2026).

Ecosystems

Natural Areas and Resources. Stevens County is home to a range of natural resources, including rivers, riparian areas, lakes, mountains, forests, and public lands. The Columbia River borders the west side of the county and the Spokane River borders the south side. The Colville River passes by Colville and Chewelah and connects to the Columbia River south of Kettle Falls. Several lakes are located in the county, including Loon Lake and Deer Lake on the southeast side and Waitts Lake south of Chewelah. Parts of the county contain shrubsteppe habitat.

Plants and Animals. There are several endangered species in Stevens County, including the gray wolf and Canada Lynx (Washington Department of Fish and Wildlife, 2026). Other key species include caribou and various species of fish. A large range of other mammals, birds, and aquatic life are also present.

Exhibit 15: Little Pend Oreille National Wildlife Refuge



Source: US Fish and Wildlife Service (2026).

Water Resources

Water Resources. Stevens County is primarily served by the Colville River Watershed. The river's major tributaries include the Little Pend Oreille River and Mill Creek (Washington Department of Ecology, 2026). Subsurface aquifers provide water for local wells and communities. Stevens PUD owns and operates 18 water systems in and near the county (Exhibit 16).

The Water Resource Inventory Area (WRIA) 59 Water Resource Management Board has placed a high priority on research and development of water supplies to meet current and future growth (Stevens County, 2026). The County has cited water storage projects and water rights as key to providing necessary water supplies. Water storage projects under consideration include small to medium sized ponds with seasonal storage, water storage with multipurpose uses such as hydropower, infiltration trenches, and aquifer storage and recharge projects (Stevens County, 2026).

Water availability is also affected by regulatory constraints. In WRIA 59, Chapter 173-559 WAC establishes instream base flows for the upper and lower Colville River and limits new surface-water appropriations. The rule provides no allocation for new consumptive uses from the Colville River mainstem from July 16 through September 30 (Chapter 173-559 WAC). In southern Stevens County, WRIA 54 is subject to Spokane River instream-flow requirements and

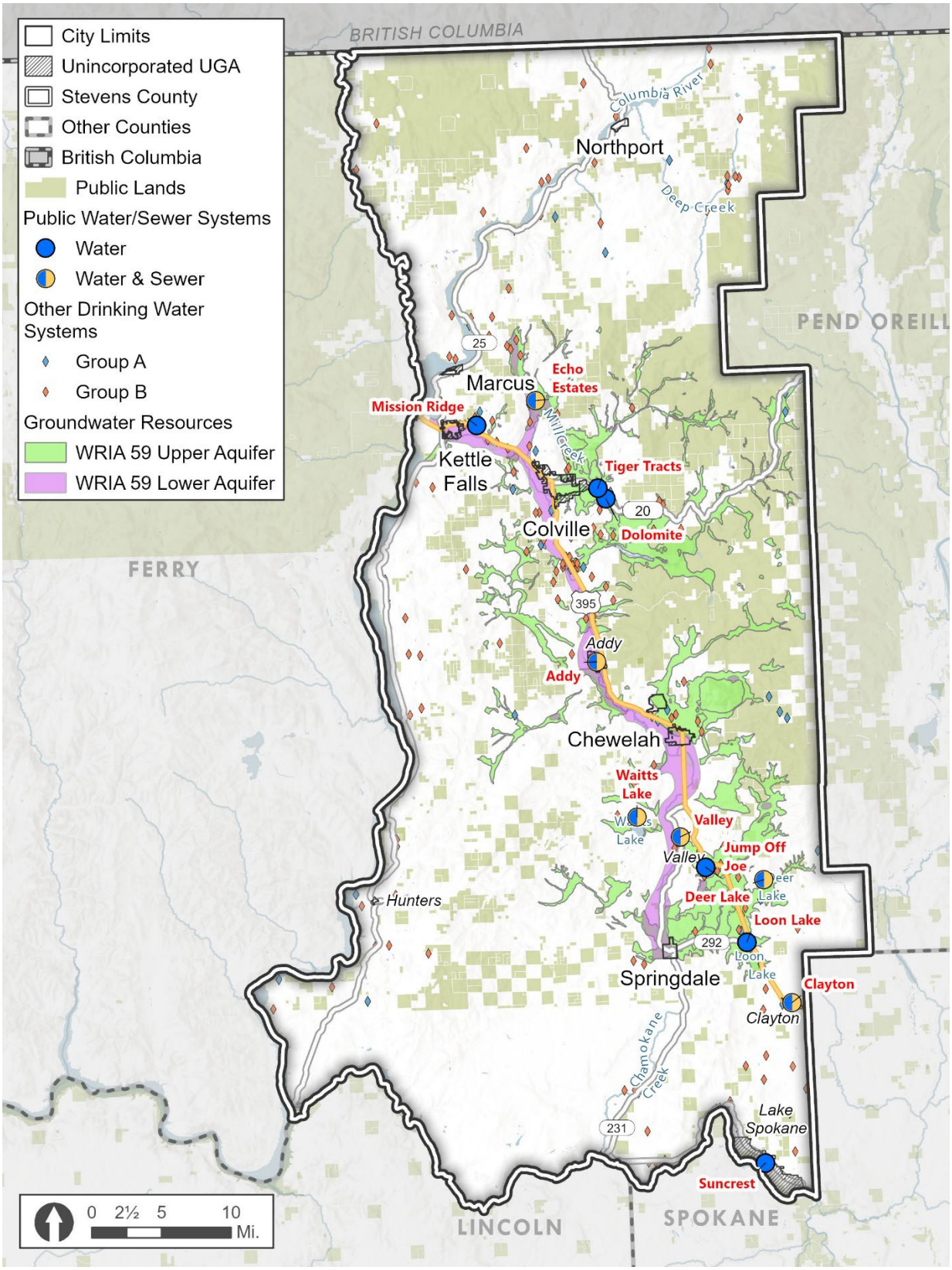
mitigation requirements for new groundwater use from the Spokane Valley–Rathdrum Prairie Aquifer. The portion of WRIA 55 within the County is subject to Little Spokane River instream flows and closures on tributary streams (Washington Department of Ecology, 2022, 2023). Ecology is also conducting pre-adjudication work for Lake Roosevelt and WRIA 58, which could affect the validity and priority of water rights in that area.

Stevens County has recently developed a locally controlled water bank for the WRIA 59 Colville River Watershed to help address long-term water supply needs. The water bank is intended to make water available for future domestic, municipal, industrial, and agricultural uses while also supporting instream flows and watershed health. Development of the water bank has involved coordination with local residents and local, state, and tribal governments and has included the acquisition and transfer of existing water rights into the State's Trust Water Rights Program. As additional water rights are acquired, portions may be reserved for instream use while the remaining water can be made available through the water bank to support growth and other water needs within Stevens County. The water bank provides the County with a tool for improving long-term water supply reliability in areas where access to new water rights may otherwise be constrained.

Groundwater Resources. Groundwater is an important source of water for rural residences, agriculture, public water systems, and other uses throughout the County, with availability depending on local geology, aquifer characteristics, and connection to surface water. Within WRIA 59, groundwater occurs in shallow unconsolidated aquifers, a deeper confined aquifer beneath portions of the Colville River Valley, and bedrock fracture aquifers. The shallow aquifers can provide moderate quantities of water in some valley and terrace areas, while the deeper confined aquifer supports higher-capacity municipal, industrial, and agricultural wells in portions of the main valley. Bedrock groundwater is more widely used across the watershed but generally has lower yields; the WRIA 59 Watershed Plan Addendum notes that many bedrock wells produce less than 5 gallons per minute. Groundwater and surface water are also interconnected, particularly in the shallow aquifers, so the availability and effects of additional groundwater development depend on location, aquifer characteristics, and hydraulic connection to streams and rivers (Stevens County, 2019). The lower confined aquifer is a relatively productive groundwater source in the Colville Valley and may have capacity for additional development in some areas (Kahle et al., 2003).

Water Infrastructure. As discussed above, Stevens PUD provides water services to the County, including unincorporated urban growth areas and limited areas of more intensive rural development (LAMIRDs), as shown in Exhibit 16. The cities and towns have their own water systems. In Washington, Group A public water systems generally serve 15 or more service connections or 25 or more people per day, while Group B systems serve fewer than 15 connections and fewer than 25 people per day. According to the Washington State Department of Health, there are 59 active Group A water systems in Stevens County, including the 12 systems operated by Stevens PUD, and 194 Active Group B Water Systems. Outside of water service areas, private well systems are the primary source of water.

Exhibit 16: Groundwater Resources and Water Infrastructure



Source: Stevens PUD, Stevens County GIS (2026).

Cultural & Natural Resources Considerations for Climate Risk and Vulnerability Assessment

Engagement with the Stevens County Climate Policy Advisory Team found several considerations for cultural and natural resources:

Challenges

- Insect populations have increased because winters have not been cold enough for regular life cycles. This means there are more pests, which could affect agriculture and communities.
- Harmful algae blooms have increased, which can affect recreation, agriculture, and ecosystems.
- The County has seen climate impacts to water quality.
- Water levels have been lower than normal in anticipation of runoff and due to repair work at Grand Coulee.
- Some bedrock wells have been having supply issues.

Opportunities

- The lower aquifer contains substantial additional groundwater supplies that could be developed to support future domestic, municipal, agricultural, and industrial needs. Additional hydrogeologic analysis may be needed to document the hydraulic relationship between the lower aquifer and surface-water resources, along with legal water-rights analysis to determine the availability and potential constraints on developing new groundwater supplies.
- The County could invest in a water truck and fill stations for when individual wells are dry.
- Continued development of the WRIA 59 Water Bank could provide water for future domestic, municipal, agricultural, and other uses while placing a portion of acquired water rights into instream use. Continued coordination between natural resource programs such as the Voluntary Stewardship Program (VSP), Floodplains by Design (FbD), Flood Control Assistance Account Program (FCAAP), water banking, and WRIA 59 watershed planning to identify and implement multi-benefit projects that address water supply, water quality, flood risk, riparian and floodplain function, aquatic habitat, and agricultural land use. Coordinating these programs can also align planning, technical analysis, landowner participation, and state and federal funding around common project areas and priorities.
- Restore floodplains and wetlands in valley-bottom areas and evaluate other passive water-storage projects could increase groundwater recharge, temporarily store runoff, and retime surface-water delivery. These projects can also improve riparian and aquatic habitat and create wetter, lower-fuel areas that may help reduce wildfire exposure for valley-bottom communities.

- Coordinate land use planning with water availability and groundwater source constraints, particularly in areas with limited groundwater availability or where instream-flow rules, stream closures, or hydraulic continuity with surface water limit development of new water supplies.
- Continue to acquire, transfer, and manage water rights through the WRIA 59 Water Bank, with an emphasis on areas where future residential, municipal, agricultural, or economic development could otherwise be constrained by water availability.
- Coordinate with Stevens PUD, cities, fire districts, and other water providers on drought and emergency water-supply planning, including potential interties, shared fill stations, emergency wells, and backup sources. Provide public information on hauled-water provisions, water storage and cistern options, and other practical measures for properties in areas with limited or unreliable groundwater supplies.
- Ensure cooperation between county officials and federal land management agencies through National Environmental Policy Act (NEPA) environmental analyses

Buildings & Infrastructure

Stevens County is dependent on a large number of built assets that provide necessary services to residents, businesses, and visitors. These assets include buildings, government facilities, utility infrastructure, waste disposal, and energy generation infrastructure. Additionally, the dispersed, rural nature of Stevens County means that the transportation network between employment centers, public services, and residents is an extremely important lifeline for this community.

Buildings & Energy

Residential, Commercial, and Industrial Buildings. Stevens County has roughly 19,000 housing units as of the 2023 American Community Survey. Of these housing units 73.7% are single-family detached homes, andmobile/manufactured homes are the next largest group. (U.S. Census Bureau, 2024).

Employment sectors in Stevens County are primarily health care and social assistance, retail trade, manufacturing, accommodation and food service, construction, and agriculture. Most jobs in the county are located within incorporated areas of Colville, Chewelah, and Kettle Falls. However, most of the population does not live in incorporated areas.

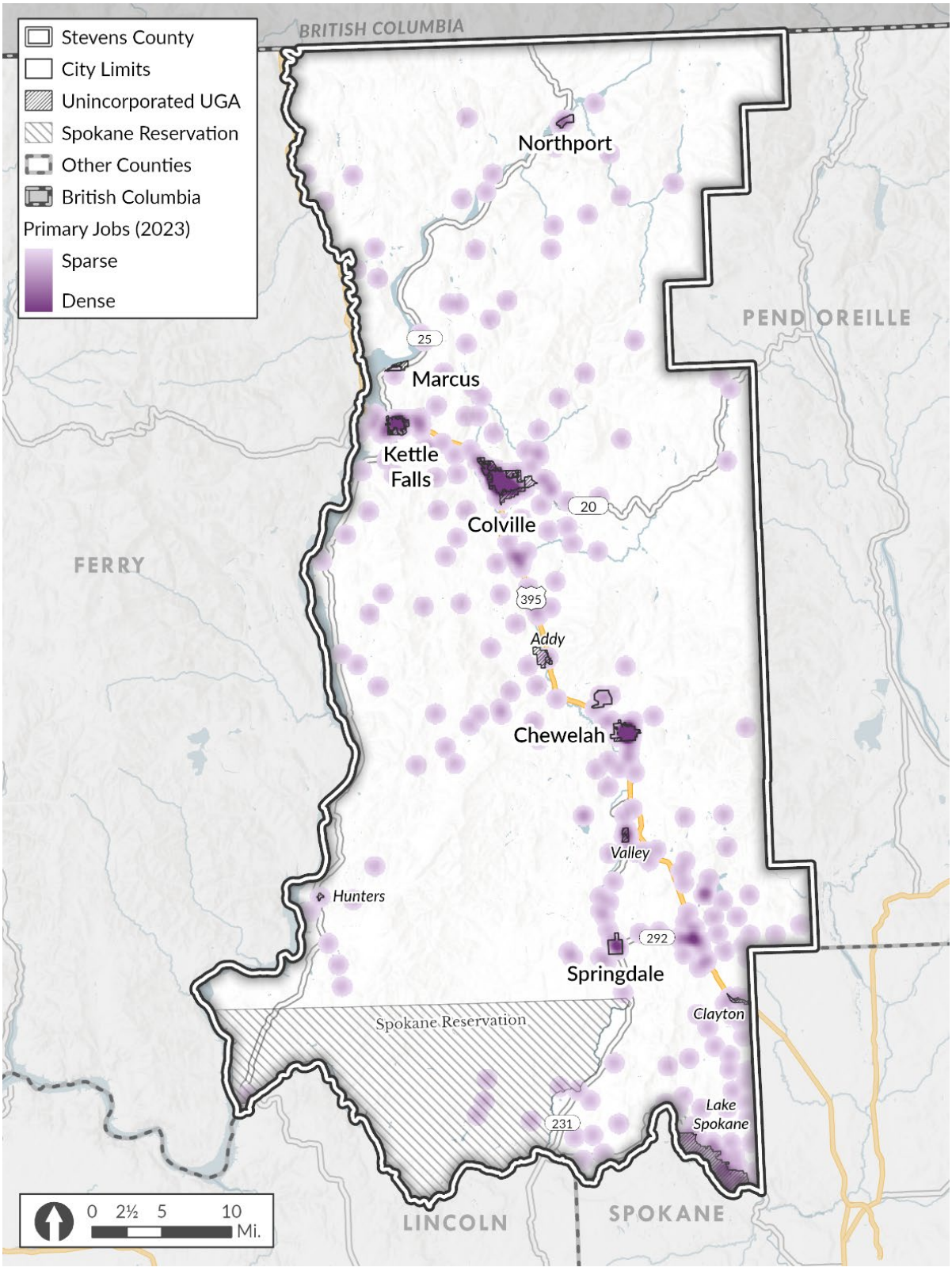
Many of the jobs identified in Exhibit 17 that are in unincorporated parts of the county are in the agriculture, forestry, fishing, hunting, construction, or manufacturing sectors. These sectors require fewer buildings and therefore have fewer overall energy inputs than other sectors. However, these sectors are all dependent on outdoor workers and are therefore more impacted by poor climate conditions.

Government Facilities. Government buildings include County government offices and courts which are all located in the City of Colville.

Educational Facilities. School districts in Stevens County include the Chewelah, Columbia (Stevens), Colville, Deer Park, Evergreen, Kettle Falls, Loon Lake, Mary Walker, Nine Mile Falls, Northport, Onion Creek, Orient, Summit Valley, Valley, and Wellpinit districts. They are shown in Exhibit 18. There are nine family child care providers, seven child care centers, and two school age only programs in the county per the Child Care Aware Washington 2026 report (Child Care Aware of Washington, 2025). This includes providers in and near Colville, Valley, Kettle Falls, and Chewelah. Post-secondary education includes Spokane Community College's campus in Colville and the Washington State University Stevens County Extension in Colville.

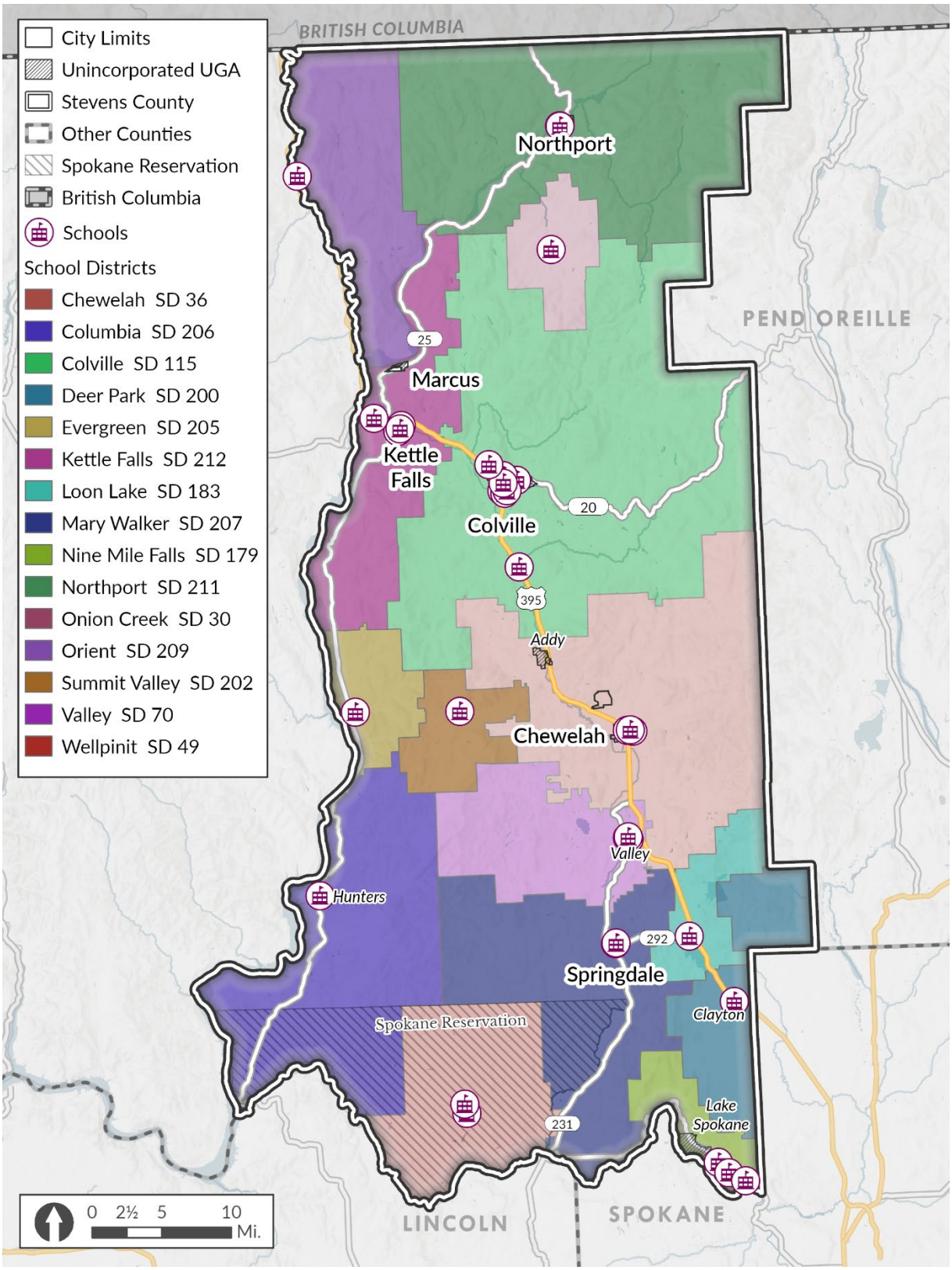
Energy Infrastructure and Generation. Energy providers in the county include Avista Energy via a service contract with Bonneville Power Administration (BPA), and Inland Power and Light as seen in Exhibit 19 and Exhibit 20. Avista receives 25% of its energy capacity from BPA hydroelectric projects and other providers of wind-generated electricity. Avista generates 75% of its capacity internally from hydroelectric, biomass, coal, and natural gas facilities.

Exhibit 17: Primary Jobs in Stevens County



Source: U.S. Census Bureau (2023).

Exhibit 18: School Districts in Stevens County



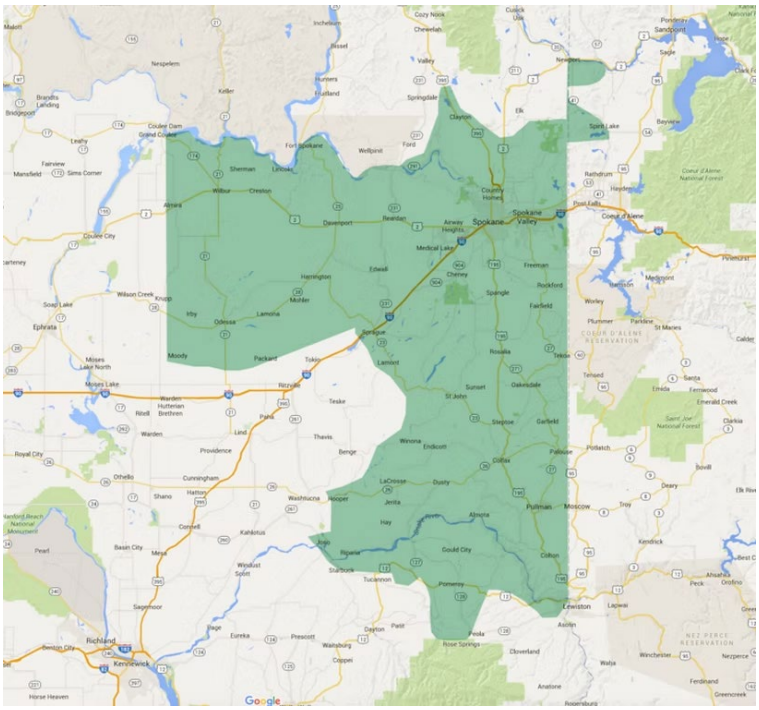
Source: Stevens County GIS (2026), BERK (2026).

Exhibit 19: Avista Service Area and Fuel Mix



Source: AvistaCorp Annual Report (2026).

Exhibit 20: Inland Power and Light Service Area



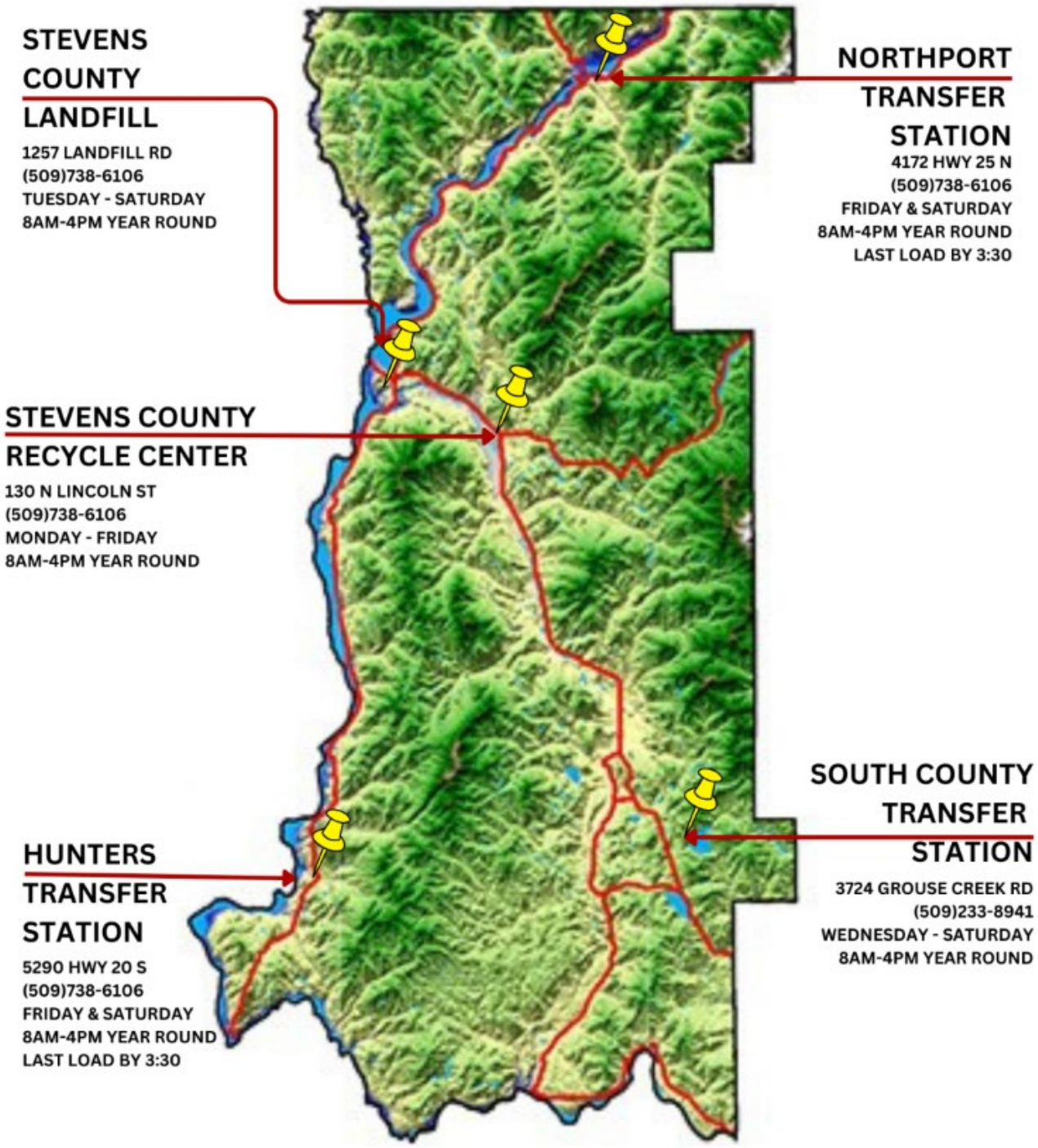
Source: Inland Power and Light Website (2025).

Energy infrastructure managed by these providers includes miles of transmission lines, substations, dams, and Avista's Kettle Falls Biomass Electricity Generation Station. These assets are susceptible to damage from climate related hazards and may be at risk for electrical outages from wildfires. As much of the county is identified as a highly impacted community for climate events and service reliability by the Washington State Department of Health Environmental Health Disparities Map and the Avista Electric Reliability Map (AvistaCorp, 2026), Avista has highlighted steps that they are taking to increase the resiliency of the grid in the wake of increase wildfire risk in their service area (Avista Wildfire Resiliency, 2026). This includes power shutoffs for public safety when dry weather and high winds create extreme fire risk.

Waste Management

Solid Waste Services. Solid waste services are provided in part by Stevens County Solid Waste (Stevens County Solid Waste, 2026). This department does not provide household trash or recycling collection services but manages a collection of transfer and recycling stations (Exhibit 21). Residents of unincorporated areas of Stevens County must bring their solid waste to the stations or hire private haulers including A&B Services, Sphuler Inc. or Sunshine Refuse and Recycling to collect solid waste. Each of these providers are licensed to operate in the county by the Washington Utilities and Transportation Commission (UTC).

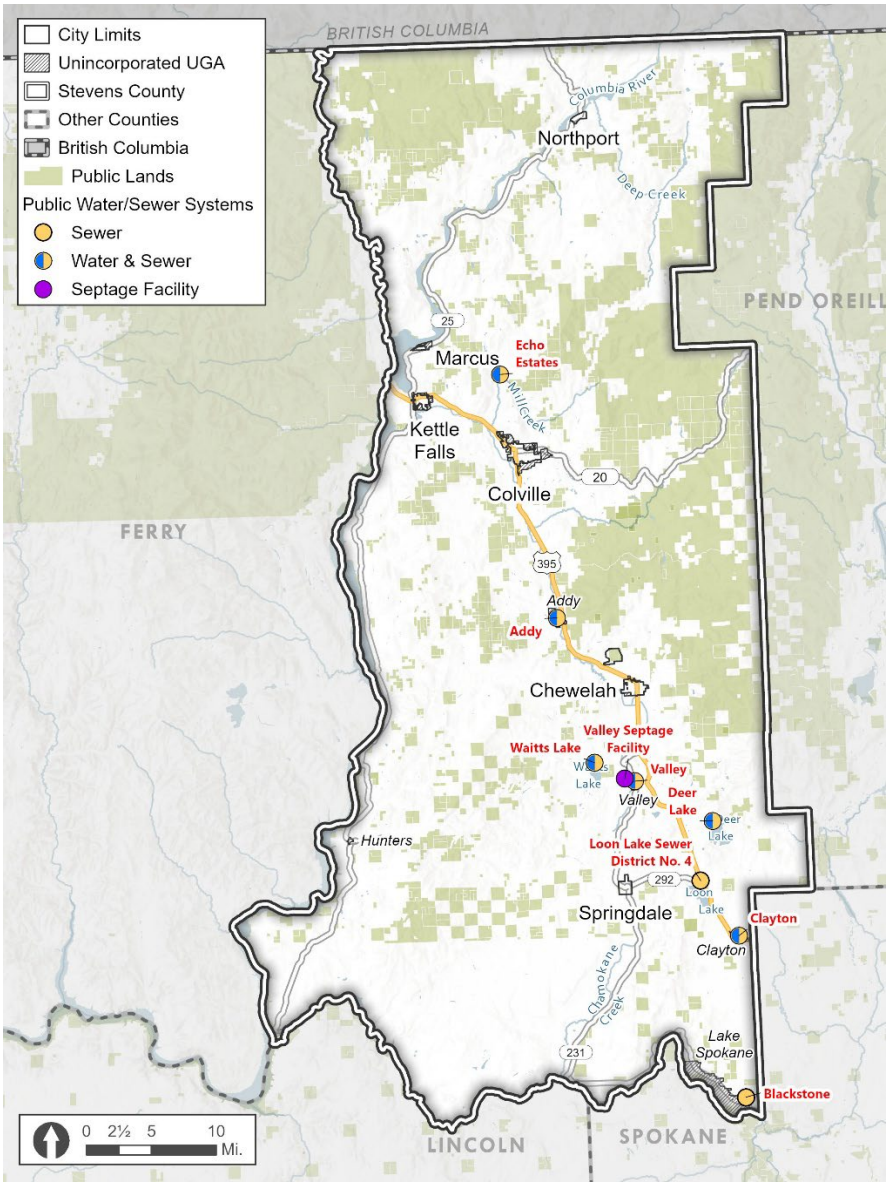
Exhibit 21: Stevens County Solid Waste Collection Locations



Source: Stevens County Solid Waste (2026).

Wastewater Infrastructure. Unincorporated areas of the County are served by Stevens PUD, Loon Lake Sewer District No. 4, or by private septic tank and drain field systems. Stevens PUD operates eight wastewater systems in the county as well as a septage disposal and reuse facility as seen in Exhibit 22. Stevens PUD predominantly serves residents of unincorporated Stevens County. The district has roughly 5,000 customers, which includes a small part of Spokane County as well. Loon Lake Sewer District No. 4 also provides sewer service to approximately 809 customers surrounding Loon Lake. Public sewer service is also provided within the incorporated communities of Colville, Chewelah, Kettle Falls, and Springdale. The towns of Northport and Marcus have no public sewer and rely on individual septic and drainfield systems.

Exhibit 22: Stevens PUD Service Area Map



Source: Stevens PUD, Stevens County GIS (2026).

Stormwater Infrastructure. The County applies stormwater standards to new development such as the Washington Department of Ecology's Stormwater Management Manual for Eastern Washington.

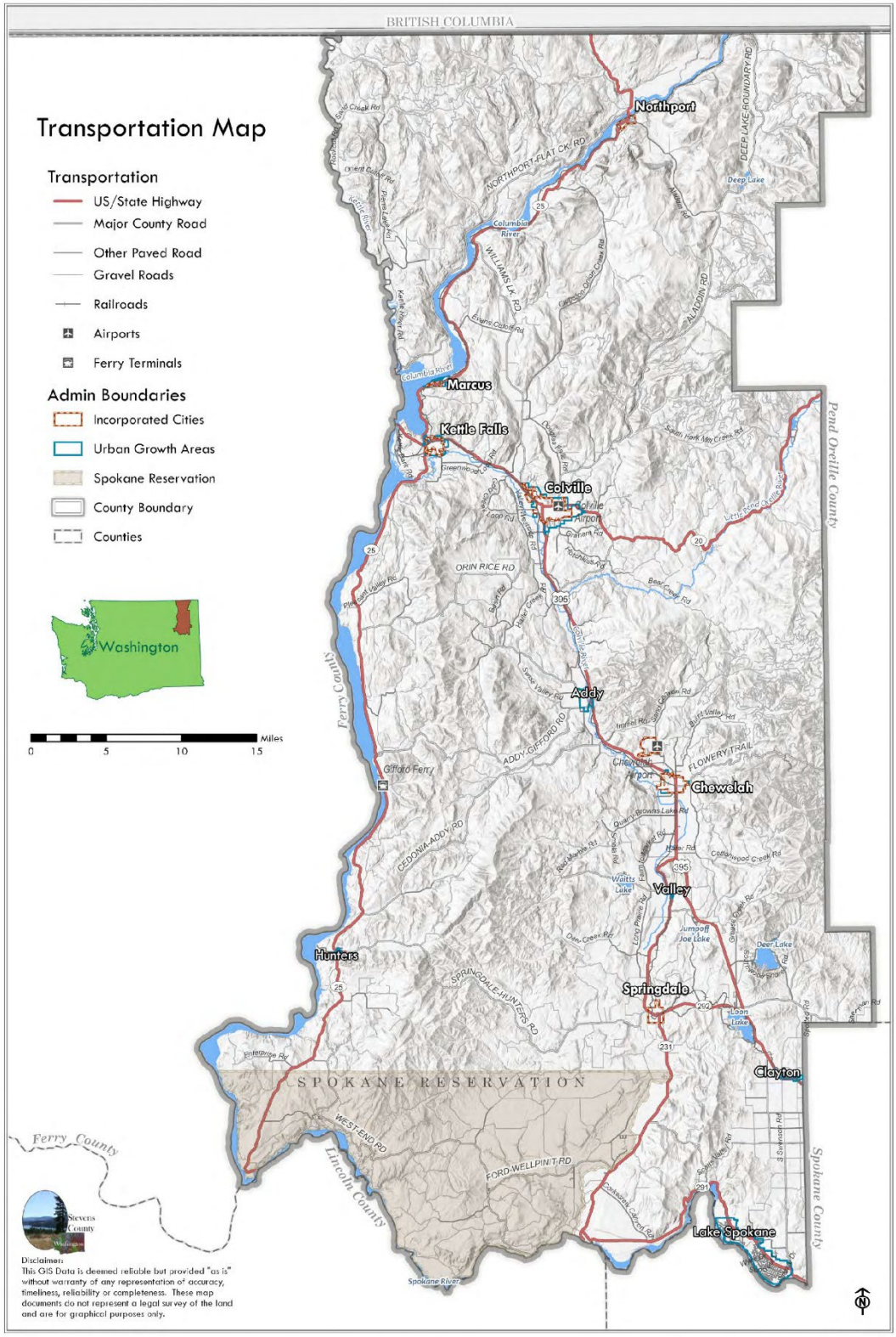
Transportation

Major Transportation. Major routes serving Stevens County include SR 25, 395, 291, 292, 231 and the North Cascades Highway, also known as SR 20 (Exhibit 23). There are also two small publicly owned municipal airports, including the Colville Municipal Airport with several privately-owned hangars on city-leased land and the Chewelah Municipal Airport. There are several small privately-owned rural airports elsewhere in the county as identified in Exhibit 9. The St. Paul and Pacific Northwest Railroad operates commercial rail freight lines between Chewelah northward into Canada as seen in Exhibit 24. The Columbia River also makes water transportation possible in the western part of the county south through to the Grand Coulee Dam northeastward to the Pend Oreille River. The Grand Coulee Dam does not have a system of locks and is therefore not passable by vessels.

The Northeast Washington Regional Transportation Planning Organization (NEW RTPO) is a sub-organization of the Tri-County Economic Development District (TEDD) and supports regional efforts to improve regional transportation through planning and coordination with state, tribal, and local government agencies.

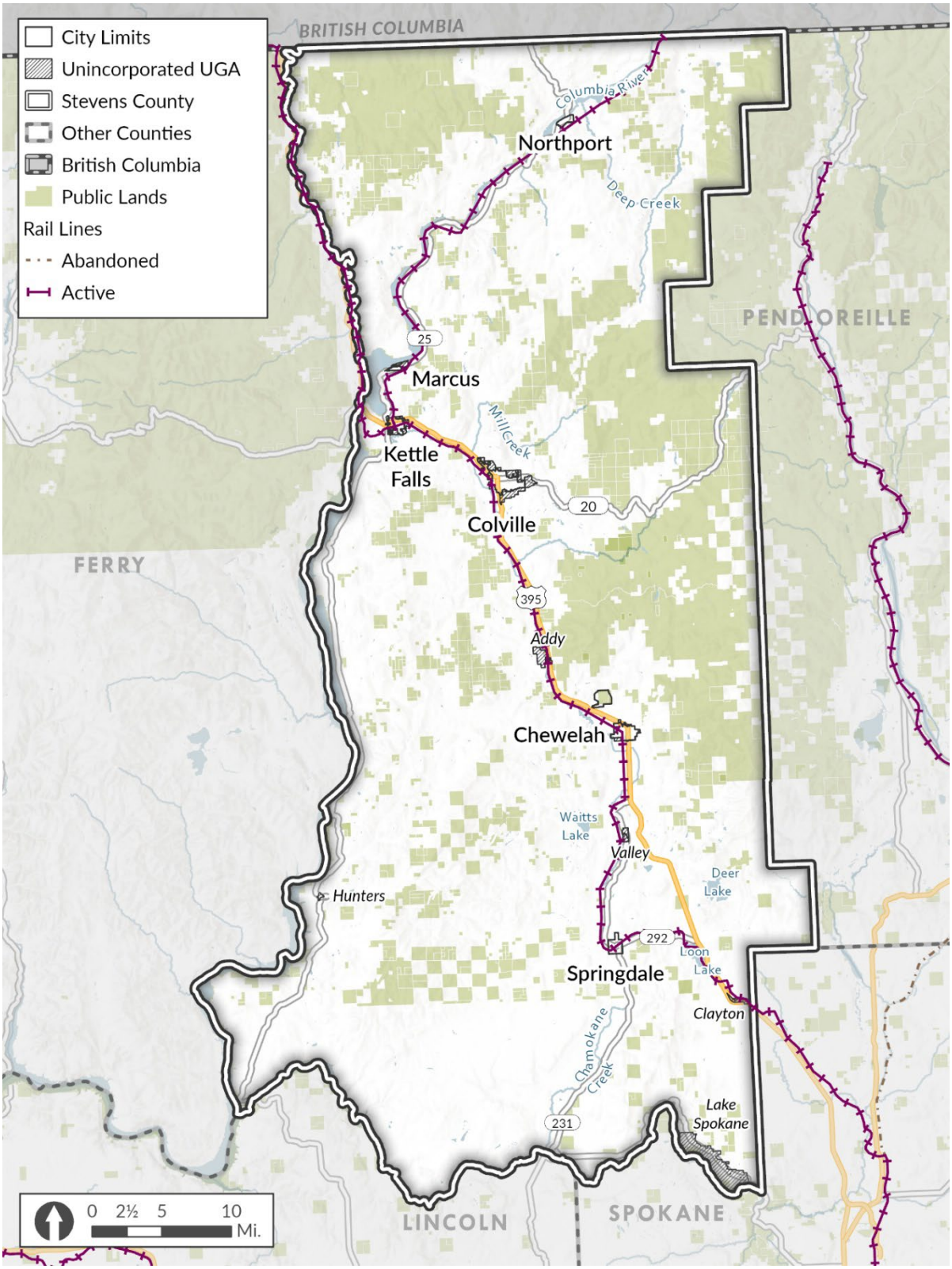
Local Transportation. Public transportation is provided to vulnerable populations in Stevens County via the Rural Resources Dial-A-Ride program. Rural Resources also operates fixed commuter bus routes in Northern Stevens County, Kettle Falls and Chewelah. Additionally, there is a private shuttle operated by Gold Line which runs between Kettle Falls and Spokane with several stops on the route throughout Stevens and Spokane Counties including Spokane Airport. There are also three bus routes and one ferry operated by the Colville Tribes. Buses run from Inchelium to Nespelem, Inchelium to Colville, and Omak to Nespelem to Coulee Dam. The Ferry runs from Inchelium to Gifford via Franklin D Roosevelt Lake. Active transportation infrastructure includes sidewalks in Kettle Falls, Chewelah, and Colville.

Exhibit 23: County Transportation Facilities



Source: Stevens County Comprehensive Plan Volume II Appendices, (2020).

Exhibit 24: Active and Abandoned Railroads in Stevens County



Source: WSDOT (2025), BERK (2026).

Buildings and Infrastructure Considerations for Climate Risk and Vulnerability Assessment

Engagement with the Stevens County Climate Policy Advisory Team found several considerations for buildings and infrastructure:

Challenges

- There are impacts from the Upper Columbia River Superfund site and Teck Smelter in Trail, British Columbia, Canada, including water impacts and lead impacts to homes, which affects human health.
- When people lose their homes to fire, they depend on County social services to house and support them, and these services are already overwhelmed.

Opportunities

- The Upper Columbia River Superfund site cleanup could also be an opportunity to improve local resilience.
- Add more communication towers and bridges and culverts to deal with larger flood events.
- Strengthen building code provisions for alternative energy and allow alternative energy sources and features to increase resilience.
- Create a new landowner packet for new residents and property owners to understand how to make their property more resilient.

Land Use & Economic Development

Zoning & Development

Rural/agricultural and urban investments can be exposed to flooding, wildfire, drought, and other climate-related hazards. Changes in the size and shape of designated critical areas and shoreline environments could affect abutting land and shoreline uses. Depending on length and severity of events and need for reconstruction, there could be impacts to the local tax base due to displacement or changes in property values.

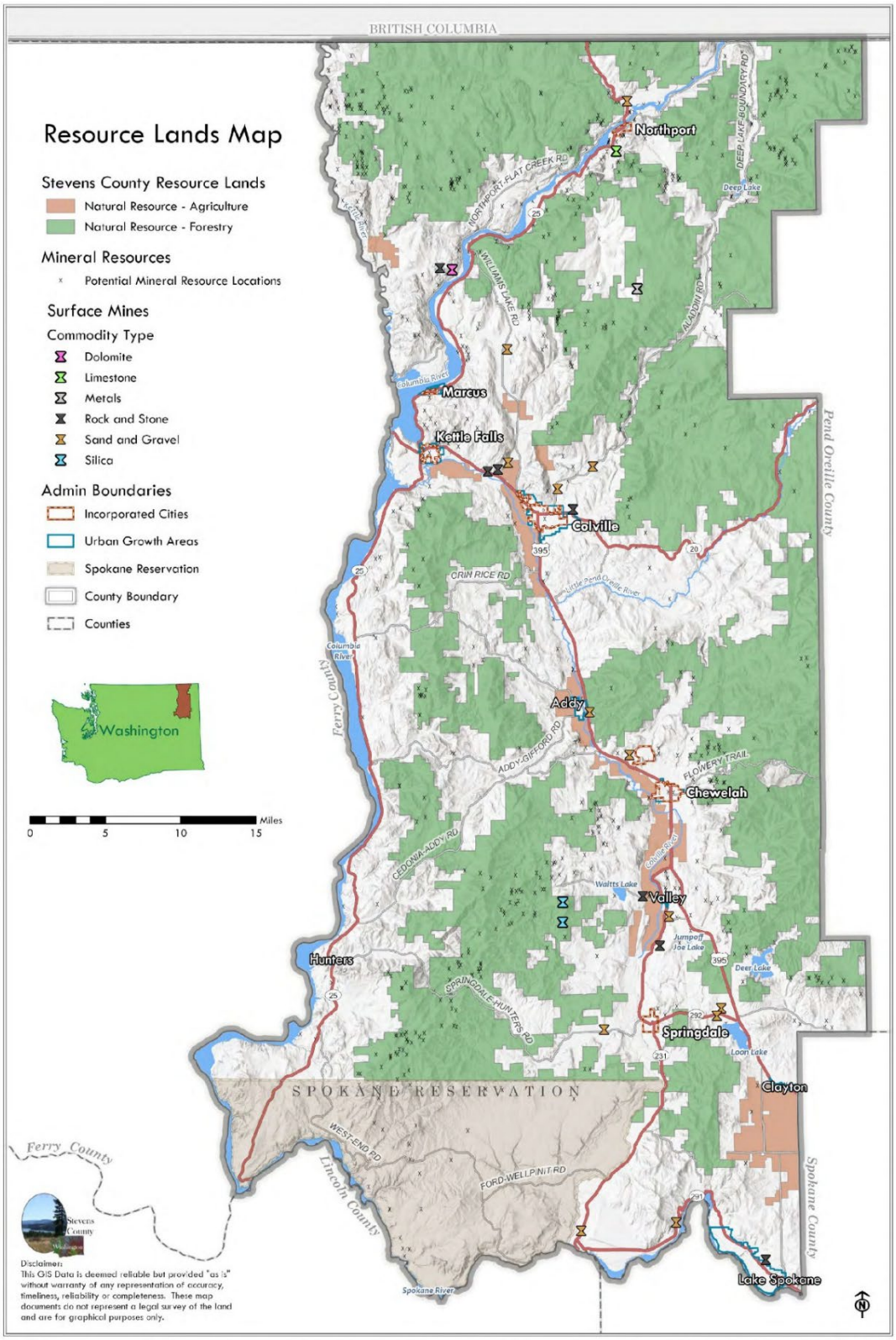
Resource Lands. Stevens County contained 313,982 acres of agricultural land in 2025 per the Washington State Department of Agriculture (WSDA, 2026). This accounts for roughly 19% of the overall land area in the county and includes forested areas used for resource extraction rather than preservation. The top agricultural land uses/crops being grown in the county are as follows:

- Pasture Forest – 198.5k Acres
- Pasture – 44.7k Acres
- Grass Hay – 15.9k Acres
- Alfalfa Hay – 13.7k Acres
- Alfalfa/Grass Hay (combined) – 10.1k Acres
- Idle/Fallow Ag Land – 7.8k Acres

- Wheat – 3.9k Acres
- Oat Hay – 3.0k Acres
- Barley Hay – 2.6k Acres
- Conservation – 2.3k Acres
- Triticale Hay – 1.8k Acres
- Wheat Fallow (seasonally idle) – 1.7k Acres
- Barley – 1.4k Acres

Other resource lands include managed forests that are either managed as restricted for timber harvest or are working forests per the Washington Forest Protection Association.(WFPA, 2026) Most (893k acres) of the 1.15 million acres of forested land in Stevens County is managed as a working forest for timber harvest. Additional acres (257k) are restricted for harvest and under either tribal, state, federal, county, or private ownership. Both working and restricted forests provide necessary ecosystem services and employment opportunities in Stevens County. Ecosystem services include carbon sequestration and habitat protection for animal and insect species. Direct and indirect employment opportunities include timber harvesting, forestry, recreation, and milling. A resource lands map can be found in Exhibit 25.

Exhibit 25: Resource Lands and Minerals in Stevens County



Source: Stevens County Comprehensive Plan Volume II Appendices (2020).

Residential Uses. Housing in Stevens County is most concentrated in three of the six incorporated areas as well as the Lake Spokane Urban Growth Area (UGA). There are smaller residential concentrations in the three small towns of Marcus, Northport, and Springdale as well as in other unincorporated communities, UGAs, or Census designated places. The most recent estimates produced by the Washington State Office of Financial Management note that 78.8% of residents live in unincorporated areas (including UGAs). Residential populations in the county by jurisdiction are included in Exhibit 26. Exhibit 31 shows what areas of the county are designated for residential uses.

Exhibit 26: April 1 Population Estimates for Stevens County

	2020 Population Census	2021 Population Estimate[1]	2022 Population Estimate	2023 Population Estimate	2024 Population Estimate	2025 Population Estimate	2026 Population Estimate
Unincorporated Stevens County	36,675	36,925	37,172	37,405	37,605	37,720	37,870
Chewelah	2,470	2,485	2,535	2,580	2,645	2,675	2,680
Colville	4,917	4,910	4,900	4,925	4,955	4,945	5,030
Kettle Falls	1,636	1,655	1,650	1,640	1,640	1,645	1,625
Marcus	216	215	215	215	215	215	220
Northport	297	295	295	295	295	295	295
Springdale	234	240	283	290	295	305	305

Source: Washington OFM, (2026), BERK (2026).

Most of the housing stock in both incorporated and unincorporated areas of Stevens County are single family units with the majority of multi-family units located in Colville. Nearly 30% of all units in unincorporated Stevens County are mobile or special use homes (including manufactured homes). A full list of housing types in the county can be found in Exhibit 27.

Exhibit 27: Housing Types in Stevens County

	2026 Postcensal Estimate of Total Housing Units	2026 Postcensal Estimate of One Unit Housing Units	2026 Postcensal Estimate of Two or More Unit Housing Units	2026 Postcensal Estimate of Mobile Homes and Specials
Unincorporated Stevens County	18,385	12,759	197	5,429
Chewelah	1,329	863	251	215
Colville	2,381	1,497	672	212
Kettle Falls	774	522	173	79
Marcus	92	63	0	29
Northport	156	130	8	18
Springdale	136	68	6	62

Source: Washington OFM (2026), BERK (2026).

Older homes present a risk as they may be less resilient to climate related hazards identified in the Hazards section of this document. Primarily they are less likely to have air conditioning to manage extreme heat, proper air filtration to manage smoke, or may have been built in areas that, at the time of their construction, were at low risk for priority hazards but are now within areas of high risk. This shift in areas impacted by climate hazards poses a major challenge to homeowners as fire and flood risk may be a limiting factor in insuring their home against future disasters. Countywide, the median home was built in 1985 (Exhibit 28). The area around Kettle Falls has the highest share of housing built before 1960 (Exhibit 29).

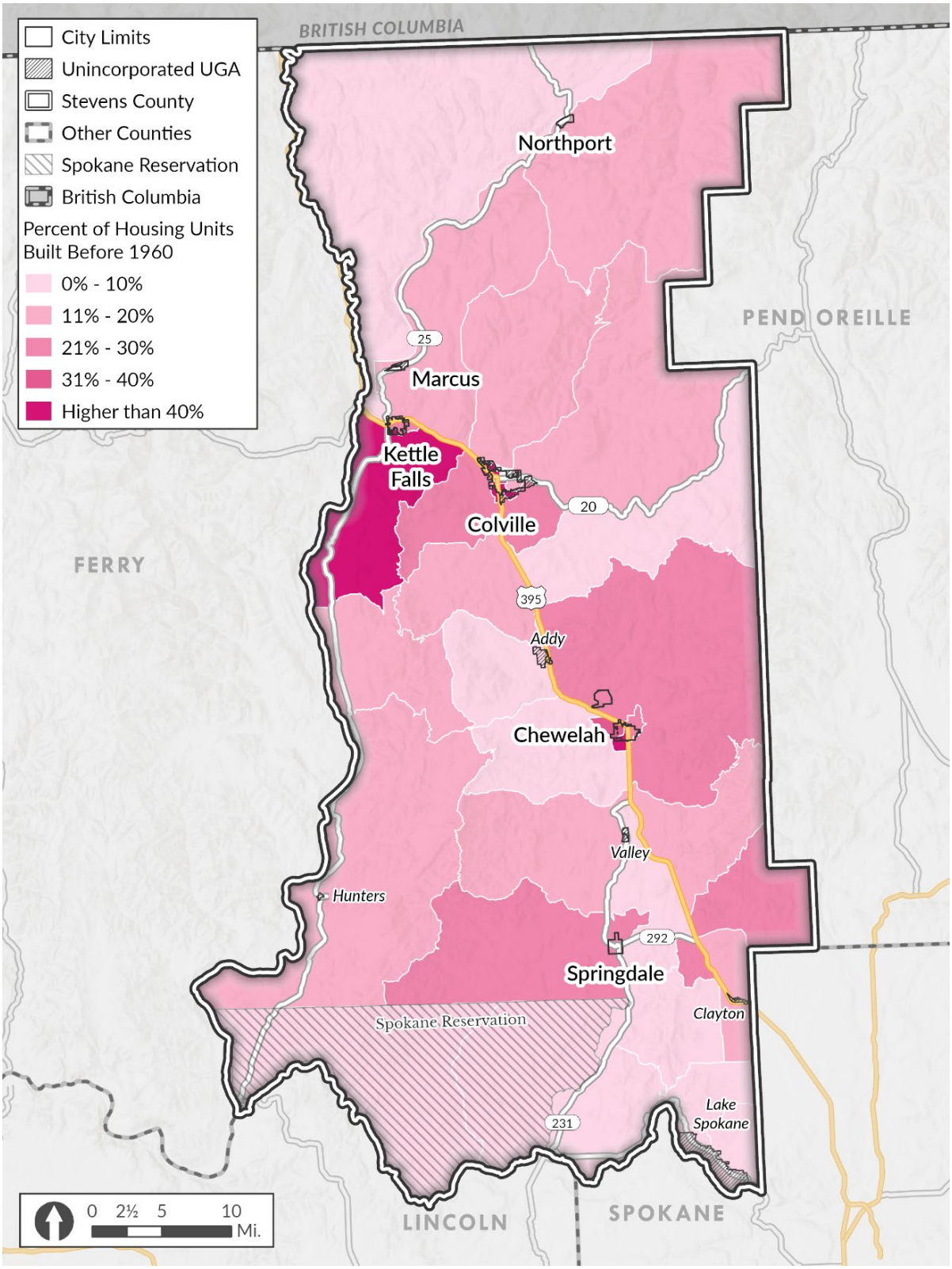
Exhibit 28: Median Housing Age by Jurisdiction in Stevens County

	Median Housing Age
Stevens County (county-wide)	1985
Chewelah	1976
Colville	1968
Kettle Falls	1980
Marcus	1950
Northport	1957
Springdale	1969

Source: U.S. Census Bureau (2024), BERK (2026).

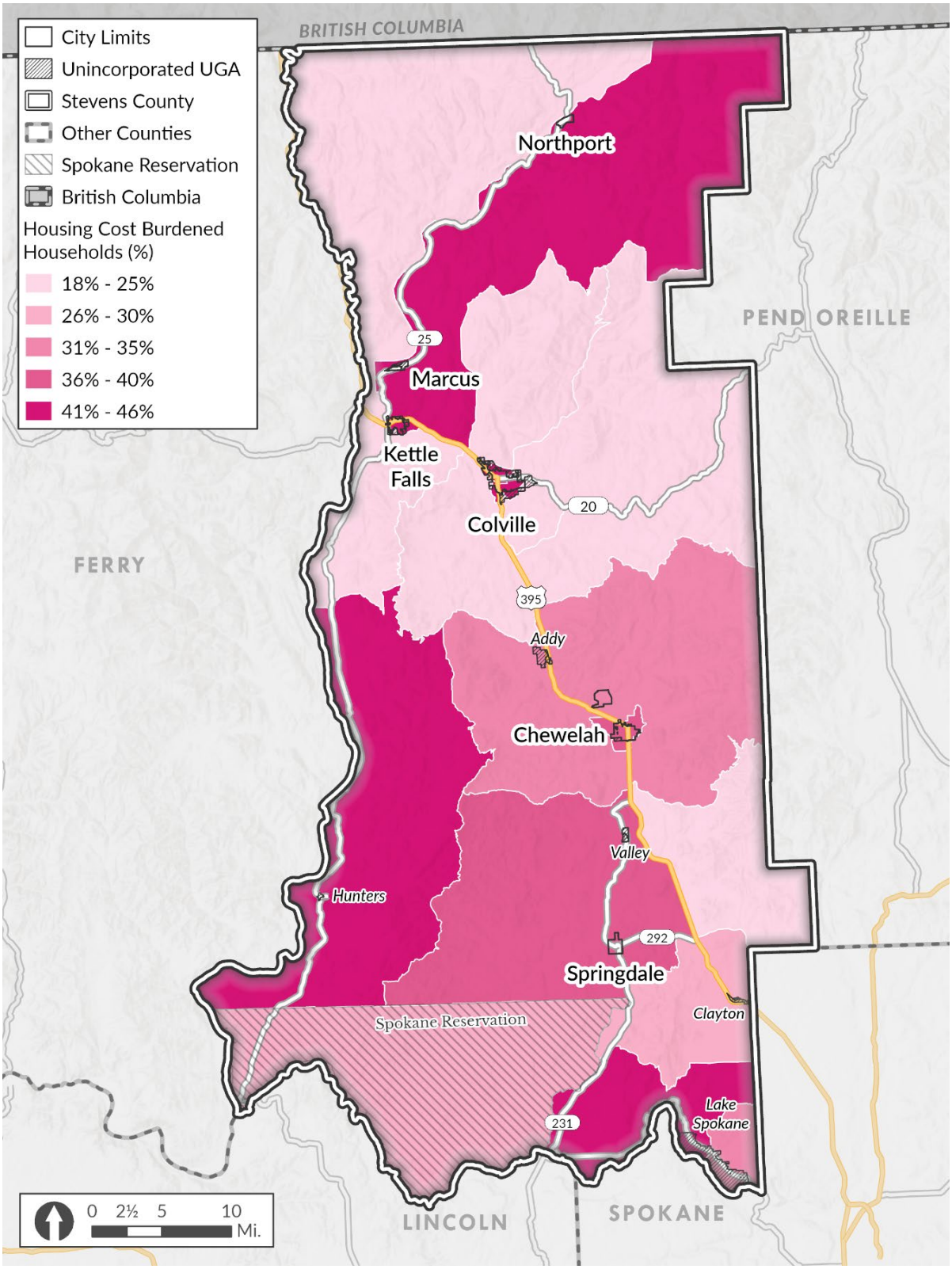
Aside from the physical characteristics of homes in Stevens County, housing cost burden may be an indicator for possible vulnerability to climate hazards. Housing cost burden is defined as spending more than 30% of income on housing costs and earning less than 80% Area Median Income (AMI). Data on housing cost burden is limited to the Census tract level and may have high error rates but Exhibit 30 provides a map of countywide housing cost burden. Housing cost burden can be attributable to lower wages or employment opportunities while it can also indicate increased housing costs as may be the case for certain higher earning Census tracts.

Exhibit 29: Share of Housing Units Built Before 1960



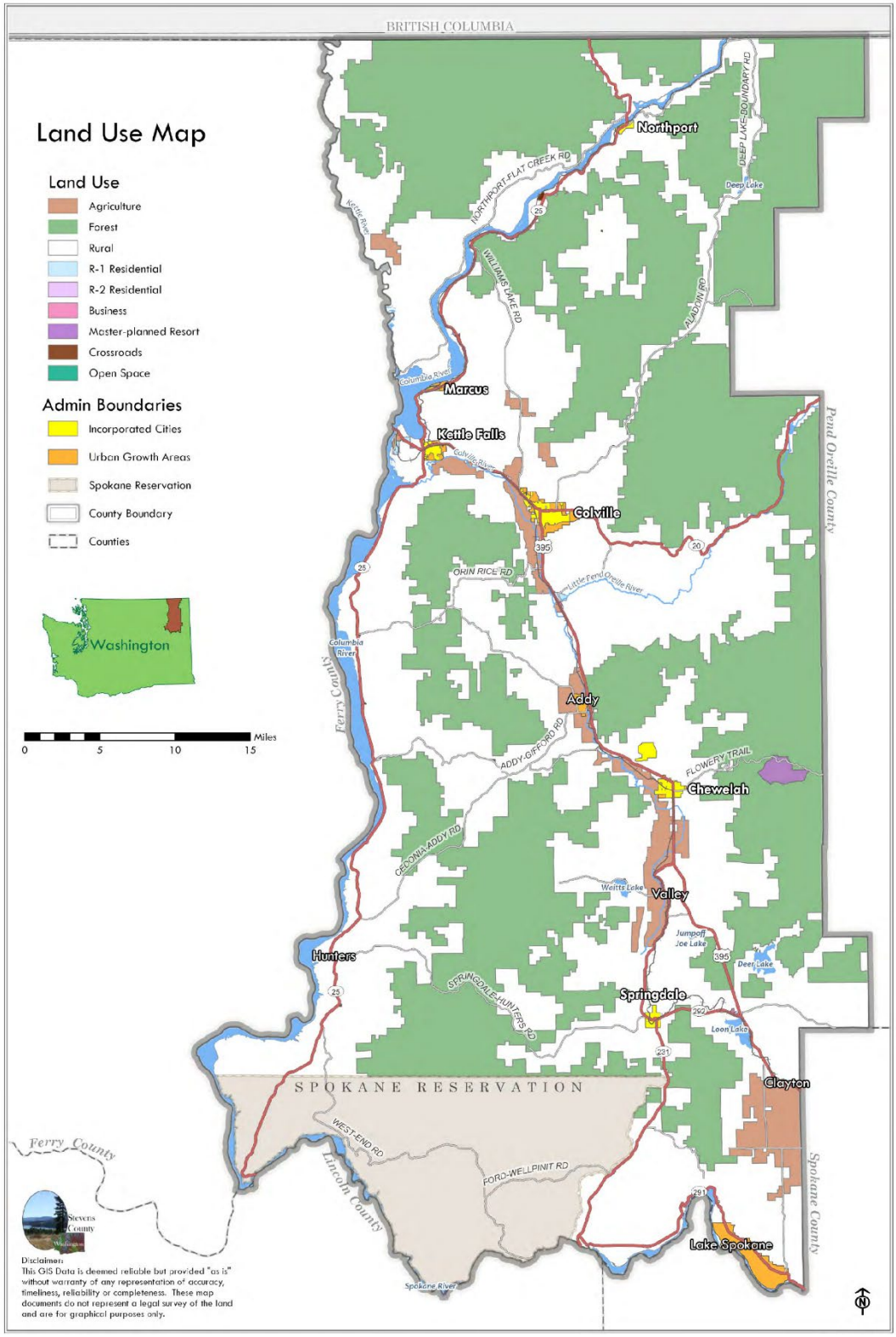
Source: U.S. Census Bureau (2024), BERK (2026).

Exhibit 30: Housing Cost Burden in Stevens County



Source: U.S. Census Bureau (2024), BERK (2026)

Exhibit 31: Stevens County Land Use Map



Source: Stevens County Comprehensive Plan Volume II Appendices (2020).

Economic Development

Agriculture. This segment of the economy in Stevens County makes up a large portion of the land area and economic opportunity in Stevens County. Per the United States Department of Agriculture 2022 Report (USDA, 2022), Stevens County's agriculture has a market value of approximately $33 million and ranks 28th of 39 counties in the state. The largest contributors in the county include the following agricultural products:

- Grains, oilseeds, dry beans, dry peas ($4.1 Million)
- Vegetables, melons, potatoes, sweet potatoes ($916K)
- Livestock and associated products such as meat, milk, and wool ($2.0 Million)
    - Poultry/eggs ($231K)
    - Hogs/Pigs ($251K)
    - Sheep, goats ($351K)
    - Horses, ponies, mules, burros, donkeys ($377K)
    - Other ($793K)

The agricultural economy relies heavily on predictable growing seasons for plants as well as on the safety of workers and animals as they related to climate hazards. For this reason, the industry may be impacted by climate hazards including summer drought, wildfires, and extreme heat or by extreme precipitation, flooding, and storms in the winter months. Agriculture is also highly dependent on water resources, and drought and water rights issues can have significant impacts on this industry. A significant portion of agricultural activity occurs in valley bottoms and along modified river and stream corridors that are subject to periodic flooding. Changes in the timing, frequency, or severity of flood events could increase crop losses, erosion, infrastructure damage, and interruptions to agricultural operations.

Forestry. Forestry based jobs could be impacted by wildfire, drought, and other hazards. As mentioned in the previous section, 893k acres of the 1.15 million acres of forested land in Stevens County are managed as a working forest that is estimated to support 779 direct jobs and 2,104 total jobs and provide an estimated $164.3 million in total wages. Wildfires may impact this sector in the short term by putting workers at risk and reducing overall forest health but may also contribute to long term impacts as wildfires damage both restricted and working forests.

Outdoor Workers. Washington has many outdoor workers, estimated to be roughly 21% (Clemans-Cope, Dubay, Pugazhendhi, & Pancini, 2025) of the total workforce in the state. To better understand and estimate workers in unincorporated areas of the county, the analysis of outdoor workers excludes the Census tracts that encompass Colville (Tract 9505) and Chewelah (Tract 9507). Of the 6,360 total primary jobs in the remaining, mostly unincorporated Census tracts, 25.4% are deemed to be in sectors that are predominantly outdoors (U.S. Census Bureau, 2024). These sectors are listed below in Exhibit 32. These 1,613 outdoor workers are particularly at risk from the impacts of extreme heat, wildfire smoke, or worsening air pollution. This outdoor worker estimation does not account for seasonal workers, especially in the natural resources industry, who are at increased health risk from wildfire smoke and extreme heat. It also does not include the emergency personnel dispatched to Stevens County to combat

wildfires each summer who are exposed to health and safety risk when fighting fires or providing emergency care to impacted communities.

Exhibit 32: Primary Job Counts in "Unincorporated" Census Tracts

Sector	NAICS Category	Primary Jobs in Mostly Unincorporated Census Tracts
Agriculture, Forestry, Fishing and Hunting	11	407
Mining, Quarrying, and Oil and Gas Extraction	21	436
Construction	23	334

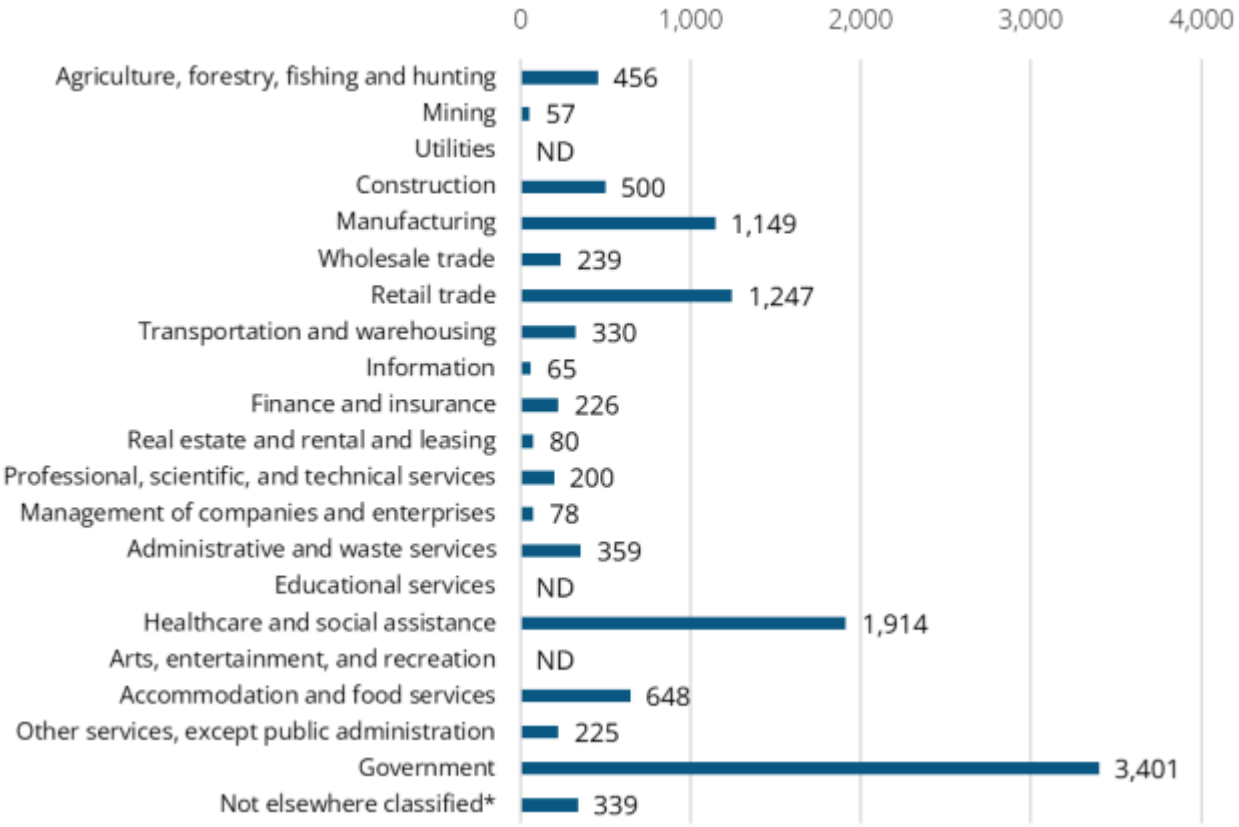
Source: U.S. Census Bureau (2024), BERK (2026).

Employment. Washington Employment Security Department (ESD) estimates that in 2024, 11,512 individuals were employed in Stevens County (based on data for jobs that are eligible for state unemployment insurance). While agriculture has a large acreage footprint in the county, the most frequent jobs are in government or healthcare/social services (see Exhibit 33) (Washington Employment Security Department, 2026). The top average earning sectors in Stevens County are as follows:

- Management of companies and enterprises - $82,998.
- Mining - $75,326.
- Information - $72,328.
- Administrative and waste services - $66,805.
- Finance and insurance - $64,218.

Local Businesses and Industries. The top employment sectors in Stevens County are government, healthcare and social assistance, retail trade, manufacturing, and accommodations/food service per the ESD. This data does not account for farm related employment ESD datasets. Employees in healthcare and social services are likely concentrated at hospitals and clinics throughout the county. As mentioned in the Buildings & Energy section of this document, most jobs are in Colville and other incorporated areas of the county. Per the ESD and TEDD, Stevens County is known as a destination for outdoor recreation enthusiasts and tourism, which affect retail trade, accommodation services, and food services. Seasonal unemployment trends collected and published by the ESD are attributed to both summer tourism and the seasonal nature of the logging industry. These trends can be seen in Exhibit 34.

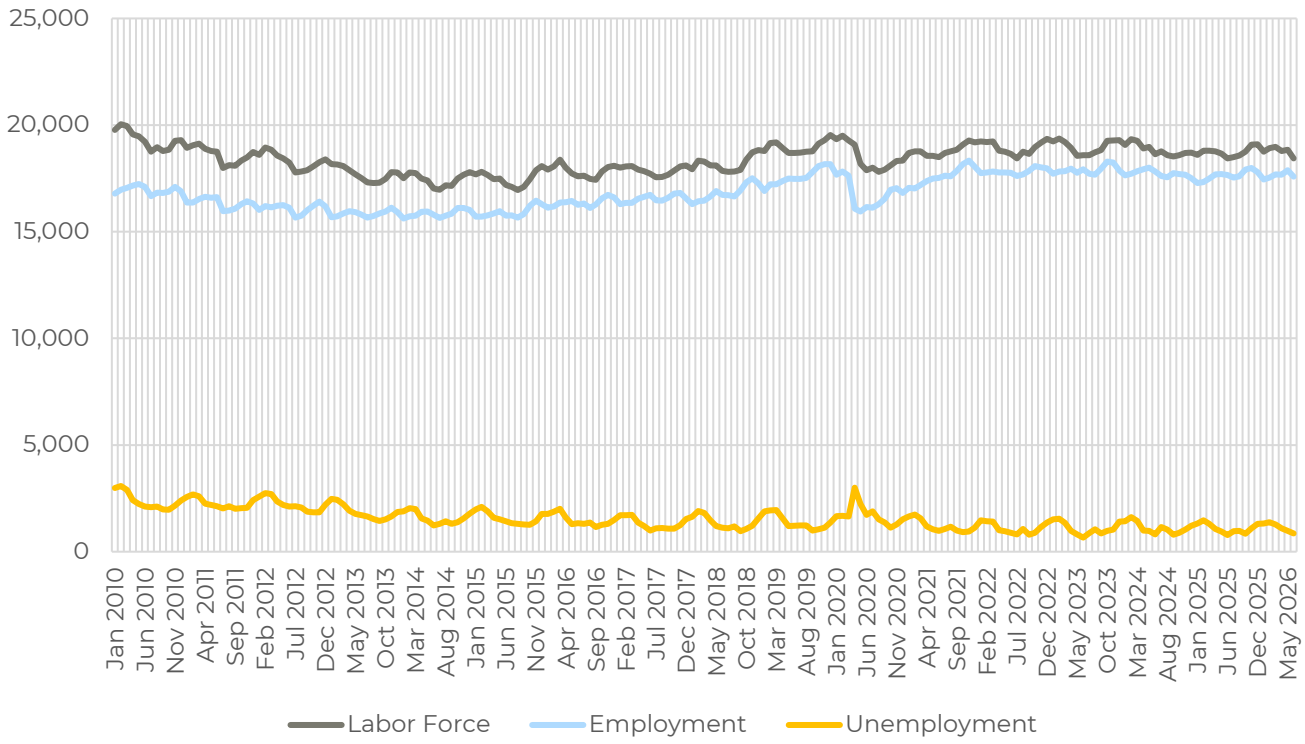
Exhibit 33: 2024 Annual Average Employment by Industry



Source: ESD (2025).

Since the ESD began collecting data on labor force trends in 1990, Stevens County has maintained a median unemployment rate of 8.4%. County-wide unemployment trends can be seen in Exhibit 34 which shows a seasonal dip in employment in the winter months and spike in warmer months between 2010 and present day. Though the unemployment rate is currently below the historical median, it has increased between June 2025 and June 2026 when it went from 4.3% to 4.7%. June 2026 unemployment is slightly higher than the statewide average of 4.4%.

Exhibit 34: Monthly Employment Trends in Stevens County Washington, 2010-2026



Source: ESD (2026), BERK (2026).

TEDD and ESD both consider Stevens County to be a hub for certain industries that are more active during warm weather months meaning that a shifting climate poses a risk to employment security. Fewer seasonal employment opportunities may exist as health and safety for workers in these fields worsens due to poor climate conditions.

Land Use and Economic Development Considerations for Climate Risk and Vulnerability Assessment

Engagement with the Stevens County Climate Policy Advisory Team found several considerations for land use and economic development:

Challenges

- There is not enough workforce housing in general.
- There are not enough trained workers.
- Reduced snowpack diminishes forest growth and the timber industry and reduces the already diminished winter recreation-based employment.

Opportunities

- Consider opportunities to improve critical areas mapping to better understand how future development could be affected given the aging housing stock in the county. Specifically, digitized Federal Emergency Management Agency (FEMA) flood hazard data based on updated elevation data would improve awareness of the extent of flood hazards.
- Continue progress on the Comprehensive Flood Hazard Management Plan for Chewelah and pursue discounts for FEMA flood insurance.
    - Consider targeted buyouts for repetitive loss properties and watershed-scale natural floodplain restoration.
- Recognize that addressing unmet housing need is more than just addressing seasonal housing, it is also addressing general workforce housing.
    - Note that DNR, US Forest Service, and Washington Department of Fish and Wildlife (WDFW) provide housing for seasonal firefighters and other seasonal employees.
- TEDD and NEW RTPO Transportation Plan should continue to address and mitigate the identified transportation concerns related to safety, investments, maintenance, and coordination across jurisdictions and the three Native American Reservations in the region. The County could support TEDD in addressing response or economic strategies to uplift impacted agricultural and natural resource-based employers that are affected by wildfires and poor air quality. TEDD will likely have to shift the Comprehensive Economic Development Strategy (published 2022) to better address the growing risk of climate related employment insecurity.
- Provide community members with opportunities to build resilience in their own homes and neighborhoods by providing information and training and emphasizing positive ways to make an impact.
- Require that updates be made every few years to county Community Wildfire Protection plans
- Require individualized fire protection plans for all new construction in the wildland urban interface

Hazards

This section builds on numerous County and other agency hazard management and emergency management plans and addresses a full range of potential climate-related hazards including:

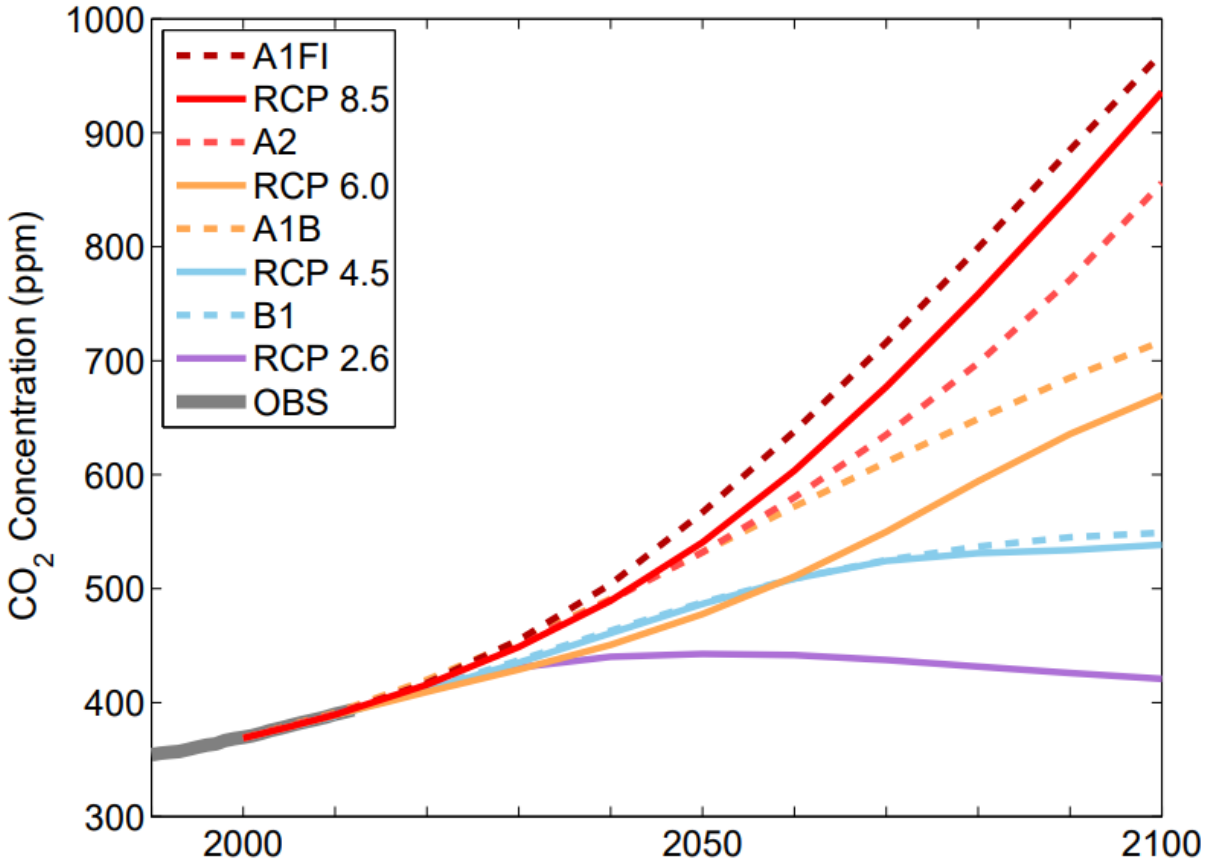
- Flooding
- Extreme Precipitation and Storms
- Wildfires, Smoke, and Air Pollution
- Extreme Heat and Drought
- Landslides and Other Geologic Hazards

Introduction

A shifting climate may create or exacerbate hazards that can cause harm to people or damage to other assets. This can include flooding, extreme precipitation events, wildfires and smoke, extreme heat and drought, and landslides or other geologic hazards worsened by extreme precipitation or flooding.

The University of Washington Climate Impacts Group (UWCIG) has developed a model to project future climate impacts across the state (UW Climate Impacts Group, 2026). Data from this model may be used by cities and counties in Washington to understand how drought, extreme heat, extreme precipitation, flooding, wildfire, and other hazards are likely to change on average compared to the period of 1980-2009. This hazards analysis uses the “RCP 8.5” scenario, which is considered the “business as usual scenario” where emissions continue to rise, and the “RCP 4.5” scenario, which is a “middle of the road” climate scenario that assumes global greenhouse gas emissions will peak around mid-century and then decline. All climate scenarios available in the UWCIG model have similar results through 2050, around the horizon of the Comprehensive Plan periodic update, which is 2047; models diverge looking at time periods later in the century, as shown in Exhibit 35 (UW Climate Impacts Group, 2026).

Exhibit 35: Climate Scenarios and CO_2 Concentration



Notes: RCP 2.6 is an extremely low scenario that reflects aggressive greenhouse gas reduction and sequestration efforts. RCP 4.5 is a low scenario in which greenhouse gas emissions stabilize by mid-century and fall sharply thereafter. RCP 6.0 is a medium scenario in which greenhouse gas emissions increase gradually until stabilizing in the final decades of the 21st century. RCP 8.5 is a high scenario that assumes continued increases in greenhouse gas emissions until the end of the 21st century. Scenarios OBS, B1, A1B, A2, and A1FI are old climate scenarios that have some similarities to the new scenarios (RCP scenarios).
Source: UW Climate Impacts Group (2020).

These scenarios help our communities to prepare and plan ahead for potential future impacts.

The State of Washington references the Climate Mapping for a Resilient Washington prepared by UWCIG to be a source of best available science and scientifically credible projections, but the planning guidance and associated state rules also expect that local governments would supplement the tool, with more precise climate impact data as available. (UW Climate Impacts Group, 2026) (WAC 365-196-443).

Based on the available information, the county is exposed to a variety of climate hazards, as summarized in Exhibit 36. Extreme heat and drought hazards are severe and affect the entire county. Extreme precipitation and storms are expected to see some increases in magnitude. Riverine flooding and landslide hazards are severe for some areas.

Exhibit 36: Exposure to Hazards in Stevens County

Hazard	Stevens County
Flooding	2
Extreme precipitation and storms	2
Wildfire/smoke and air pollution	4
Extreme heat and drought, reduced streamflow	4
Geologic hazards – landslides	2

Legend: Exposure area or extent or population– Greater 4, Some 2, Limited 0
Sources: UW Climate Impacts Group (2026), BERK (2026).

Flooding

The largest floodplains in Stevens County center around the Colville River (Exhibit 39). Many of these areas are currently used for agricultural purposes (Stevens County Natural Resources, 2024). Flooding can directly affect cropland, pasture, farm access, fencing, irrigation infrastructure, stored materials, and agricultural buildings. Prolonged standing water can kill established crops and prevent access to fields for planting, weed control, harvest, and other seasonal operations. The floodplains south of Chewelah flood especially frequently, to the point that some locals call it “Lake Chewelah.” Several creeks run through Chewelah and feed into the Colville River, and the area has seen extensive flooding in the past. There are approximately 1,300 buildings located in the floodplain. Most of these buildings are single family dwellings (856 buildings) and agricultural structures (172) (Stevens County Assessor, 2026).

Stevens County Natural Resources is working on floodplain management with Floodplains by Design, a public-private partnership administered by the Washington State Department of Ecology. This work includes collaborating with farmers, residents, businesses, tribes, and municipalities to identify and develop multi-benefit floodplain projects. For the 2025–2027 biennium, Stevens County received approximately $2.06 million for the Chewelah Valley Restoration and Integrated Floodplain Management Project. The award supports construction of the County’s pilot floodplain restoration project near the confluence of Chewelah Creek and the Colville River, including floodplain restoration, a berm setback, and easement acquisition, as well as continued integrated floodplain planning to identify and advance additional projects.

Projections from the University of Washington Climate Impacts Group show increases to peak streamflows in the Colville River, particularly near Chewelah (Exhibit 38). Peak streamflows in other streams are also expected to increase, with large increases in Little Chamokane Creek and Chamokane Creek, which are both located on the Spokane Reservation. 25-year peak streamflows are also expected to occur more frequently by the 2040s, with return intervals of 7-20 years for the Colville River and 5-29 years for other streams. The shortest return intervals are on the south end of the Colville River (near Chewelah), Little Chamokane Creek and Chamokane Creek (on the Spokane Reservation), and Dragoon Creek (near Clayton).

Exhibit 37: Flooding South of Chewelah



Source: Stevens County Natural Resources (2024).

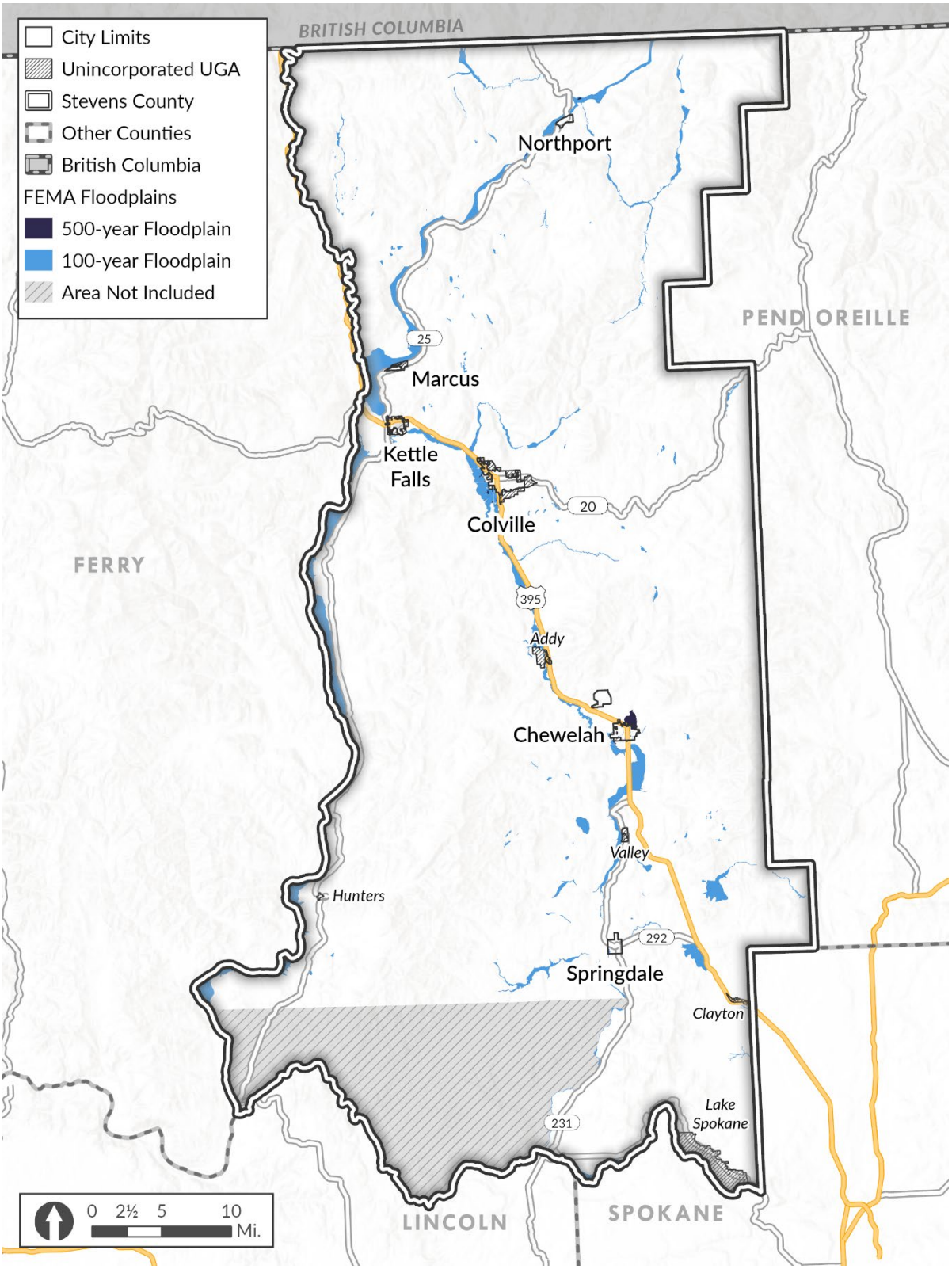
Exhibit 38: Flooding Indicators

Indicator	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
Peak Streamflow – Colville River	+7 to +19%, depending on segment Largest increase on south end near Chewelah	+9 to +25%, depending on segment Largest increase on south end near Chewelah

Indicator	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
Peak Streamflow – Other Streams	-1 to +21%, depending on stream and segment Largest increase for Little Chamokane Creek and Chamokane Creek (on the Spokane Reservation)	-3 to +40%, depending on stream and segment Largest increase for Little Chamokane Creek and Chamokane Creek (on the Spokane Reservation)
Return Interval of 25-year Peak Streamflow – Colville River	7 to 20 years, depending on segment Shortest interval on south end near Chewelah	7 to 14 years, depending on segment Shortest interval on south end near Chewelah
Return Interval of 25-year Peak Streamflow - Other Streams	6 to 29 years, depending on stream and segment Shortest interval for Little Chamokane Creek and Chamokane Creek (on the Spokane Reservation), and Dragoon Creek (near Clayton)	5 to 22 years, depending on stream and segment Shortest interval for Little Chamokane Creek and Chamokane Creek (on the Spokane Reservation), and Dragoon Creek (near Clayton)

*Compares modeling for the 2040s with the 1990s. The RCP 4.5 scenario is considered the "middle of the road" scenario in which there are decreases to emissions around mid-century. The RCP 8.5 scenario is considered the "business as usual" scenario in which there are continued increases in greenhouse gas emissions until the end of the 21st century. Differences in RCP models are limited through 2050.
Source: UW Climate Impacts Group (2026), BERK (2026).

Exhibit 39: Floodplains



Source: FEMA (1990), BERK (2026).

Extreme Precipitation and Storms

Stevens County sometimes experiences severe storms, including thunderstorms, hailstorms, heavy rain, and wind. Projections from the University of Washington Climate Impacts Group show increases to the 2-year storm and 25-year storm magnitude by the 2040s under the RCP 8.5 scenario (the only scenario for which data is available) (Exhibit 40). Increases to total annual precipitation are also expected. In the context of increasing summer droughts, this may mean heavier precipitation in the fall, winter, and spring months (Exhibit 47). Rain-on-snow events have contributed to flooding in and around Chewelah, where rainfall combined with rapid snowmelt can produce high runoff over short periods and increase flows in local creeks.

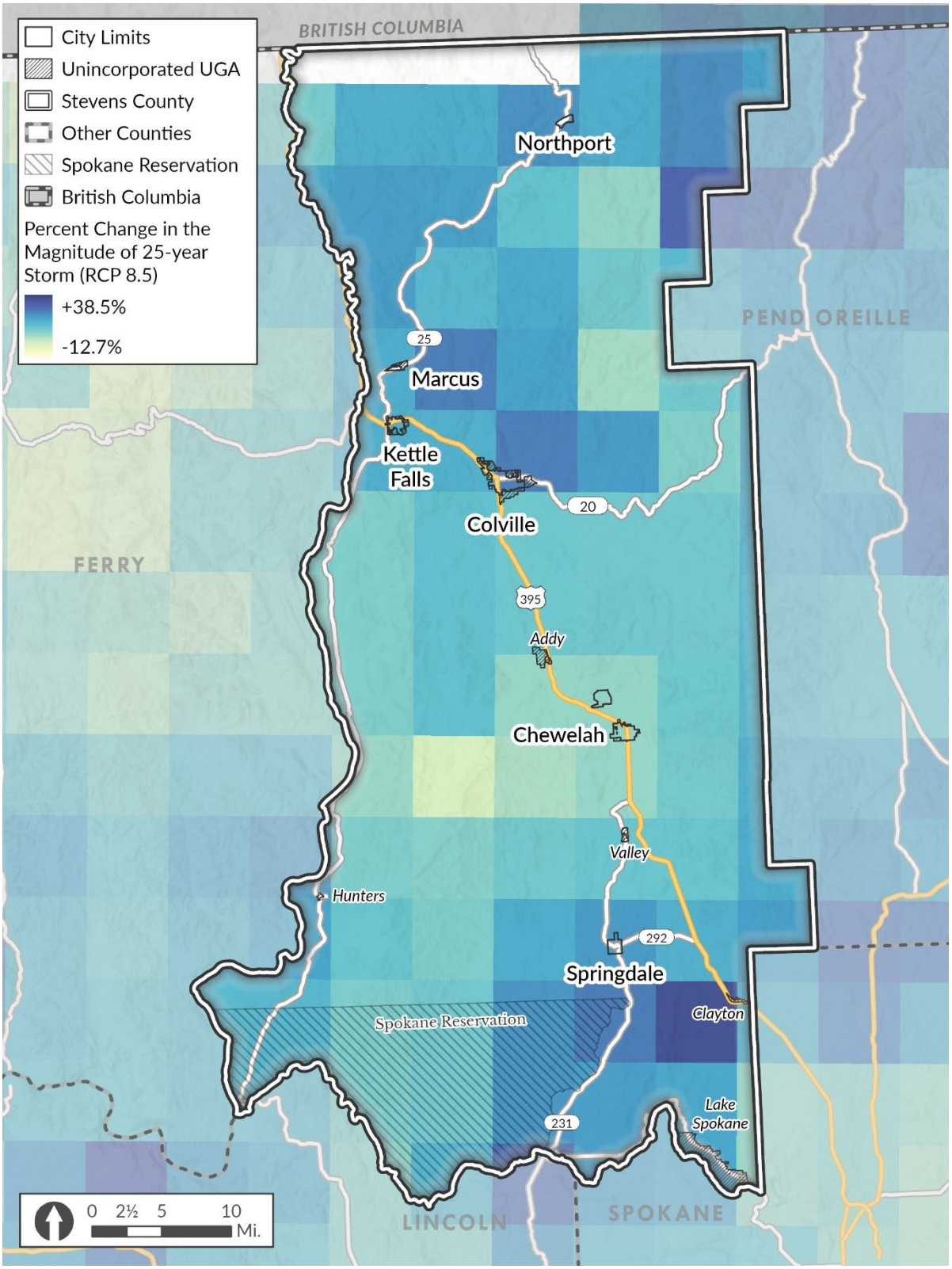
As shown in Exhibit 41, the change in magnitude of the 25-year storm is expected to be most pronounced in the north and south parts of the county, including north of Colville and around Springdale.

Exhibit 40: Extreme Precipitation and Storms Indicators

Indicator	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change - RCP 8.5 Scenario (High Emissions)
Heavy Precipitation / 2-year Storm Magnitude (County average)	No data**	+9%
Extreme Precipitation / 25-year Storm Magnitude (County average)	No data**	+9%
100-year, 6-hour Storm Magnitude (Colville area)	No data**	+0%
Total Annual Precipitation (County average)	No data**	+11%

*Compares modeling for the 2040s with the 1990s. The RCP 4.5 scenario is considered the "middle of the road" scenario in which there are decreases to emissions around mid-century. Differences in RCP models are limited through 2050. The RCP 8.5 scenario is considered the "business as usual" scenario in which there are continued increases in greenhouse gas emissions until the end of the 21st century.
**The UW Climate Impacts Group does not have data for all indicators for all scenarios.
Source: UW Climate Impacts Group (2026), BERK (2026).

Exhibit 41: Percent Change in Heavy Precipitation Magnitude – RCP 8.5*



Source: UW Climate Impacts Group (2026), BERK (2026). *Note: No data available for RCP 4.5.

Wildfire, Smoke, and Air Pollution

As shown in Exhibit 43, Stevens County has a history of wildfires. In the past five years, this has included many smaller fires throughout the county and larger fires to the southwest of Northport and south of Springdale. Some areas of the county present challenges for fire suppression, especially where topography and lack of roads limit access or fuels and weather impact fire behavior (Exhibit 44).

Climate projections suggest that by the 2050s, the county will experience more high fire days annually when compared to the 1980s (Exhibit 42). On average, there is a 53-63% chance that climate and fuel conditions will be optimal for wildfire in Stevens County between 2030 and 2059. In some areas, there is a projected 97% chance of these conditions. Stevens County also ranks highly for wildfire smoke exposure when compared to other parts of Washington (Washington State Department of Health, 2026).

A shifting climate can also increase exposure to other types of air pollution due to warmer temperatures and less summer rainfall. Exposure to ozone or PM 2.5 can aggravate asthma, cause heart attacks, and exacerbate other respiratory and cardiovascular conditions (US EPA, 2026). Ozone can stunt plant growth, damage crops, and make it harder for plants to absorb carbon dioxide (USDA, 2025). As shown in Exhibit 45 and Exhibit 46, there is high PM 2.5 concentration in some parts of Stevens County compared to other parts of Washington. Areas around Colville and to the north are especially impacted.

Exhibit 42: Wildfire and Smoke Indicators

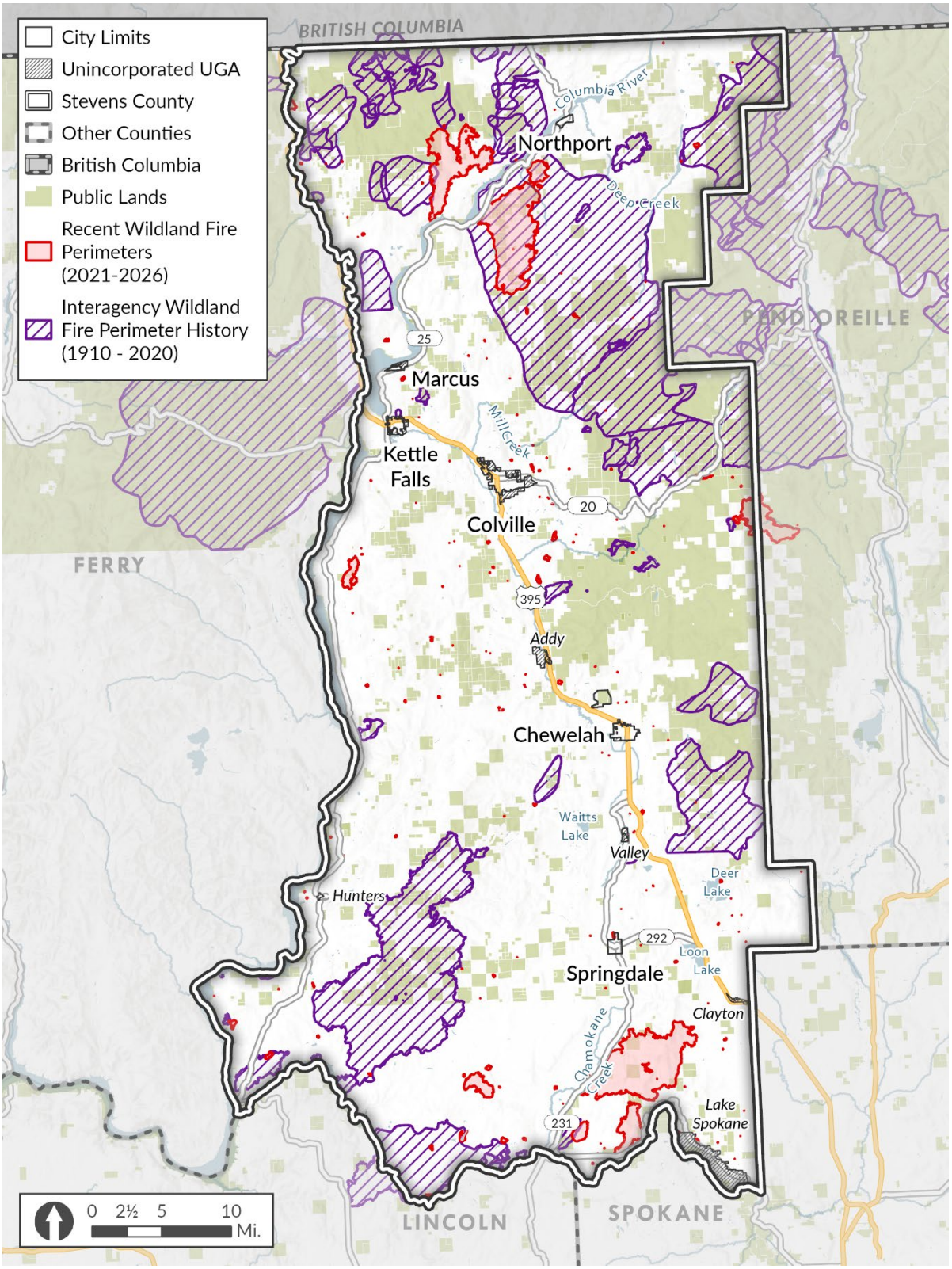
Indicator	Projected Change* - RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
High Fire Danger Days Annually (County average)	+7 days	+9 days
Likelihood of Climate and Fuel Conditions for Wildfire (in the 30-year period, County average)	53% (as high as 97% in some parts of the county)	63% (as high as 97% in some parts of the county)

Indicator	Current Condition
Wildfire Smoke Exposure Rank, Department of Health	9-10 (of 10, 10 being the highest exposure)

*Change in high fire danger days compares modeling for the 2050s with the 1980s.Likelihood of climate and fuel conditions is for the period between 2030 and 2059.
The RCP 4.5 scenario is considered the “middle of the road” scenario in which there are decreases to emissions around mid-century. The RCP 8.5 scenario is considered the “business as usual” scenario in which there are continued increases in greenhouse gas emissions until the end of the 21st century. Differences in RCP models are limited through 2050.

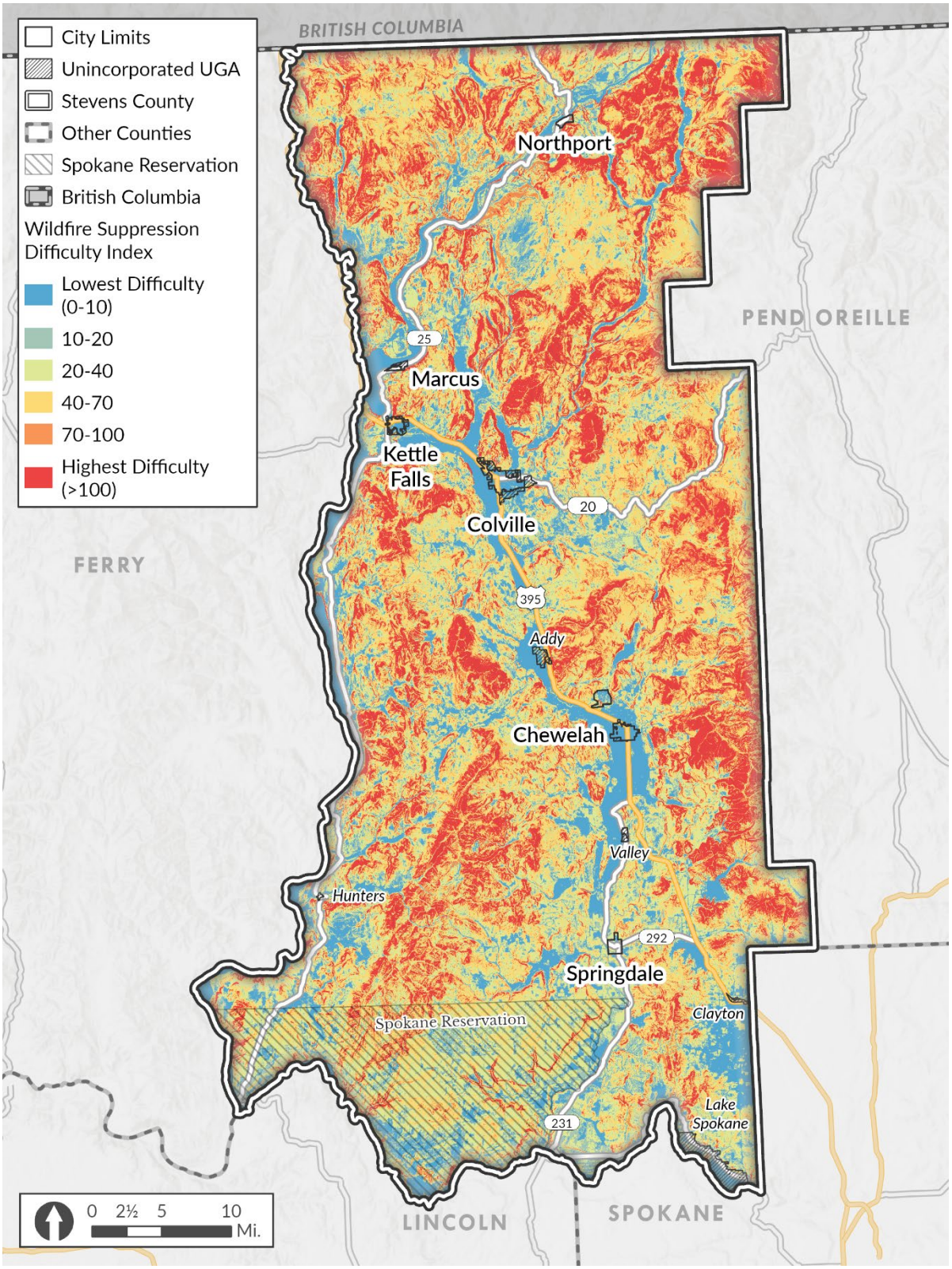
Source: Climate Impacts Group (2026), Washington State Department of Health (2026), BERK (2026).

Exhibit 43: Wildland Fire History



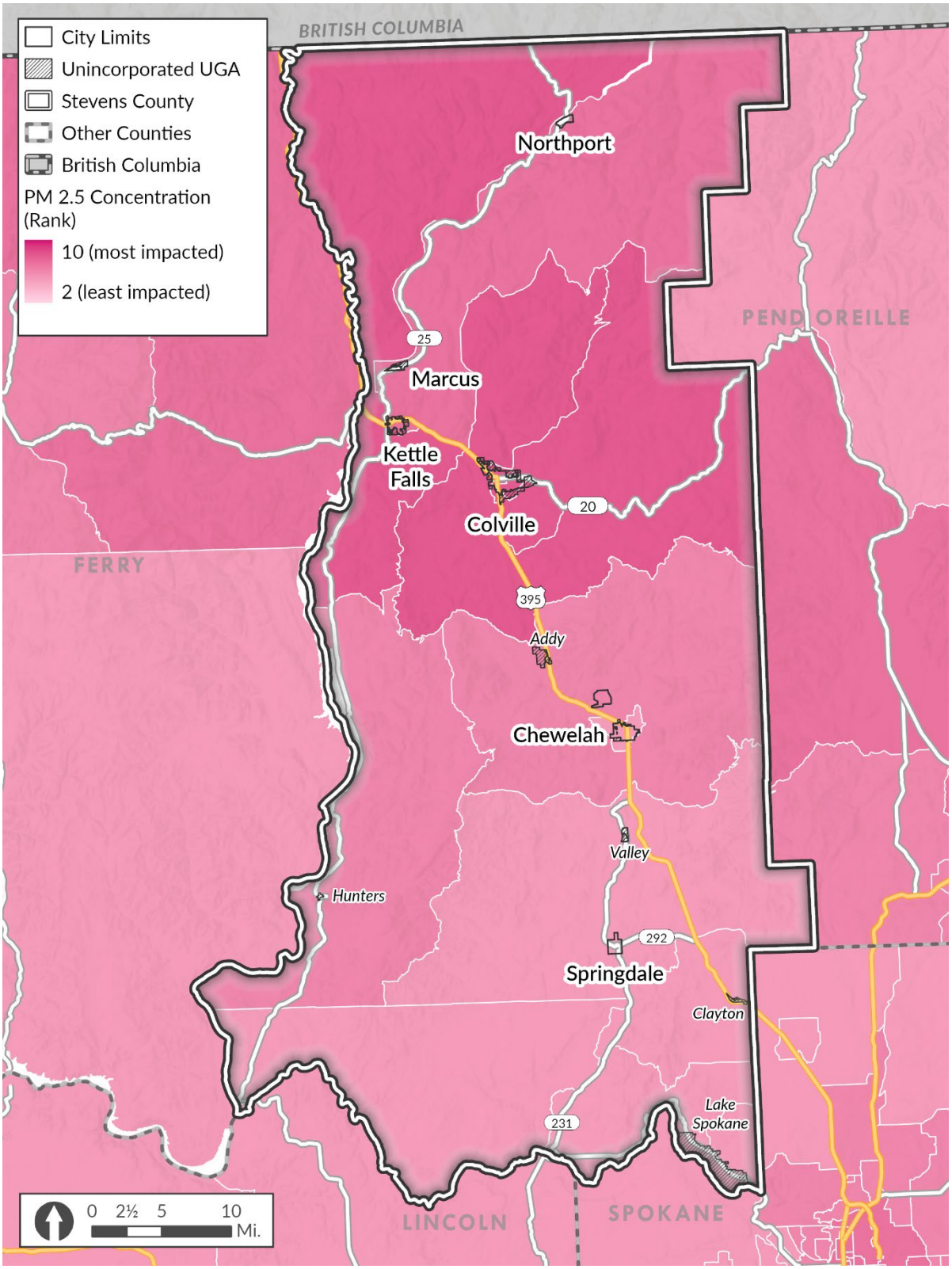
Source: National Interagency Fire Center (2026), BERK (2026).

Exhibit 44: Wildfire Suppression Difficulty



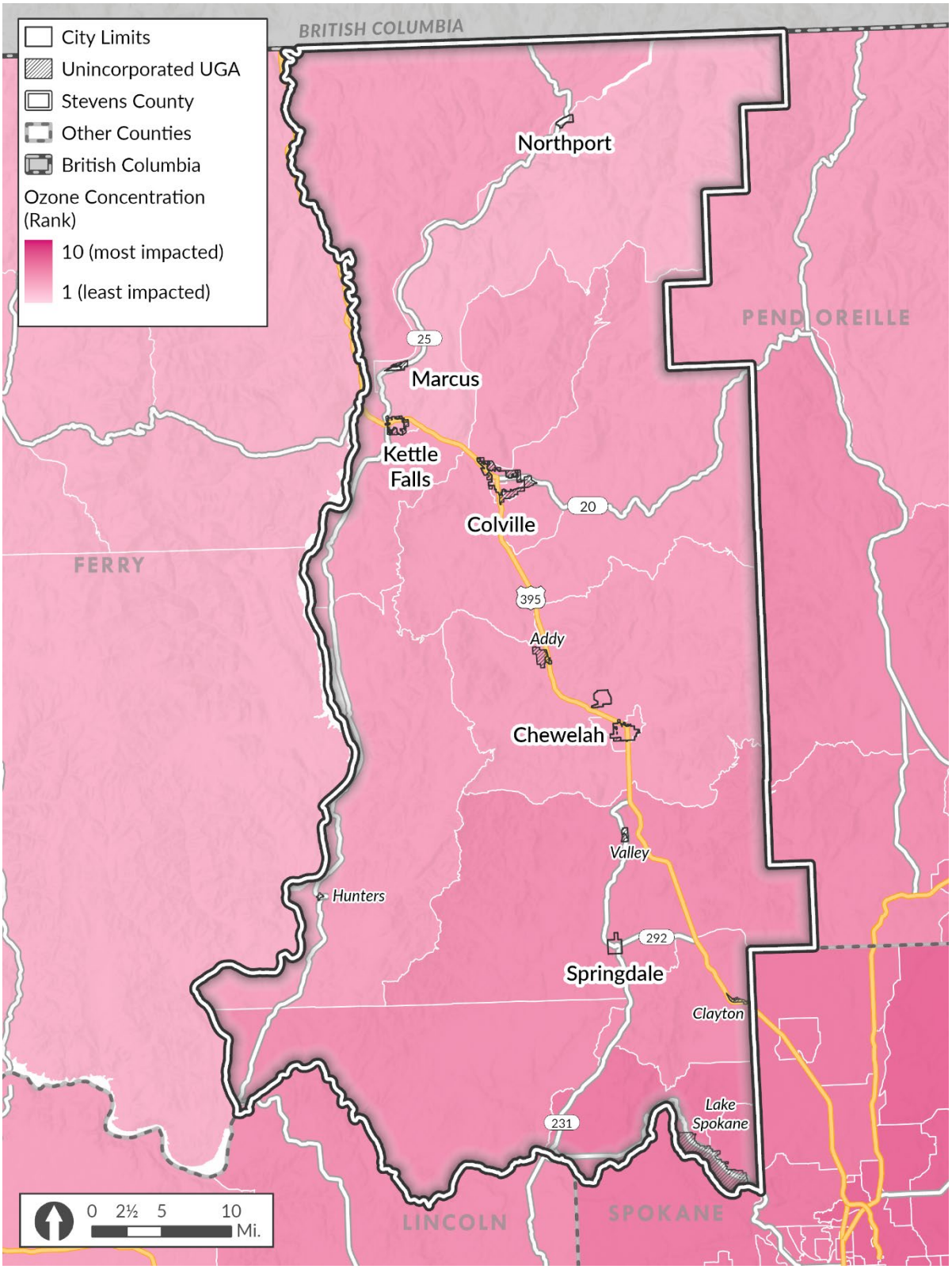
Source: US Forest Service (2026), BERK (2026).

Exhibit 45: PM 2.5 Concentration



Source: Washington State Department of Health (2026), BERK (2026).

Exhibit 46: Ozone Concentration



Source: Washington State Department of Health (2026), BERK (2026).

Extreme Heat and Drought

Extreme heat and drought are hazards that affect Stevens County regularly. Climate modeling suggests that these effects will continue and worsen in the future, with increases in hot days and average summer maximum temperatures (Exhibit 47). Snowpack is expected to decrease substantially by the 2040s, affecting streamflows, which are also expected to decrease for the Colville River and some other streams.

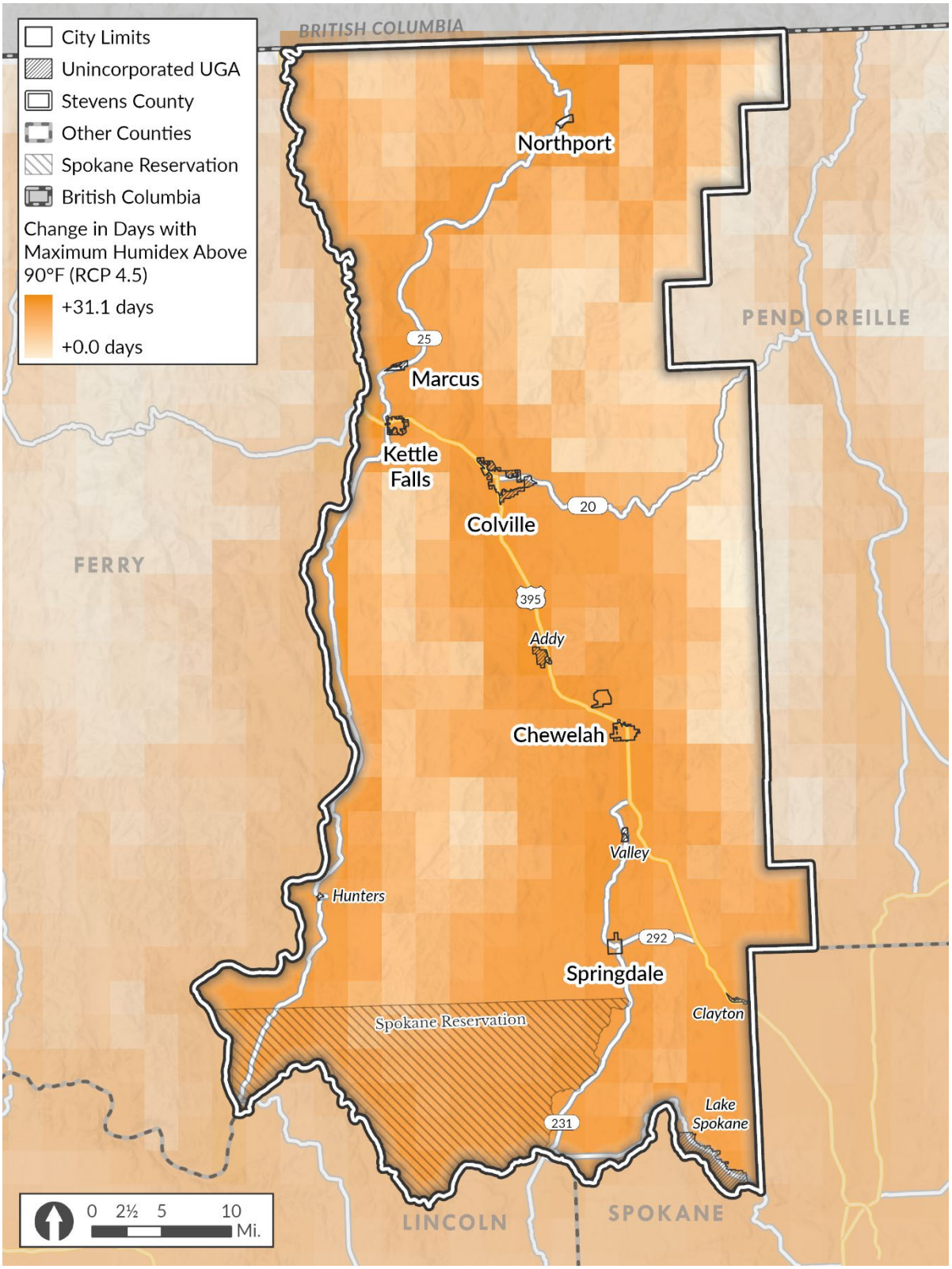
Increases in hot days will affect the entire county, with greater increases at lower elevations (Exhibit 48 and Exhibit 49). This also corresponds to tree canopy coverage, which is higher in the mountains and lower in the valleys (see Exhibit 50).

Exhibit 47: Extreme Heat and Drought Indicators

Indicator	Projected Change – RCP 4.5 Scenario (Moderate Emissions)	Projected Change* - RCP 8.5 Scenario (High Emissions)
Maximum Humidex above 90° F Humidex (County average)	+17 days	+19 days
Average Summer Maximum Temperature (County average)	+3.9 ° F	+5.2 ° F
April 1 Snowpack (County average)	-73%	-79%
Late Summer Precipitation (mid-July to mid-September, County average)	No data**	-15%
Summer Streamflow – Colville River	-10 to -18%, depending on segment	-21 to -28%, depending on segment
Summer Streamflow – Other Streams	+5% to -31%, depending on stream and segment Little Pend Oreille River, Mill Creek, and Deep Creek have the greatest decrease	-1 to -40%, depending on stream and segment Little Pend Oreille River, Mill Creek, Deep Creek, Quartz Creek, and Grouse Creek have the greatest decrease

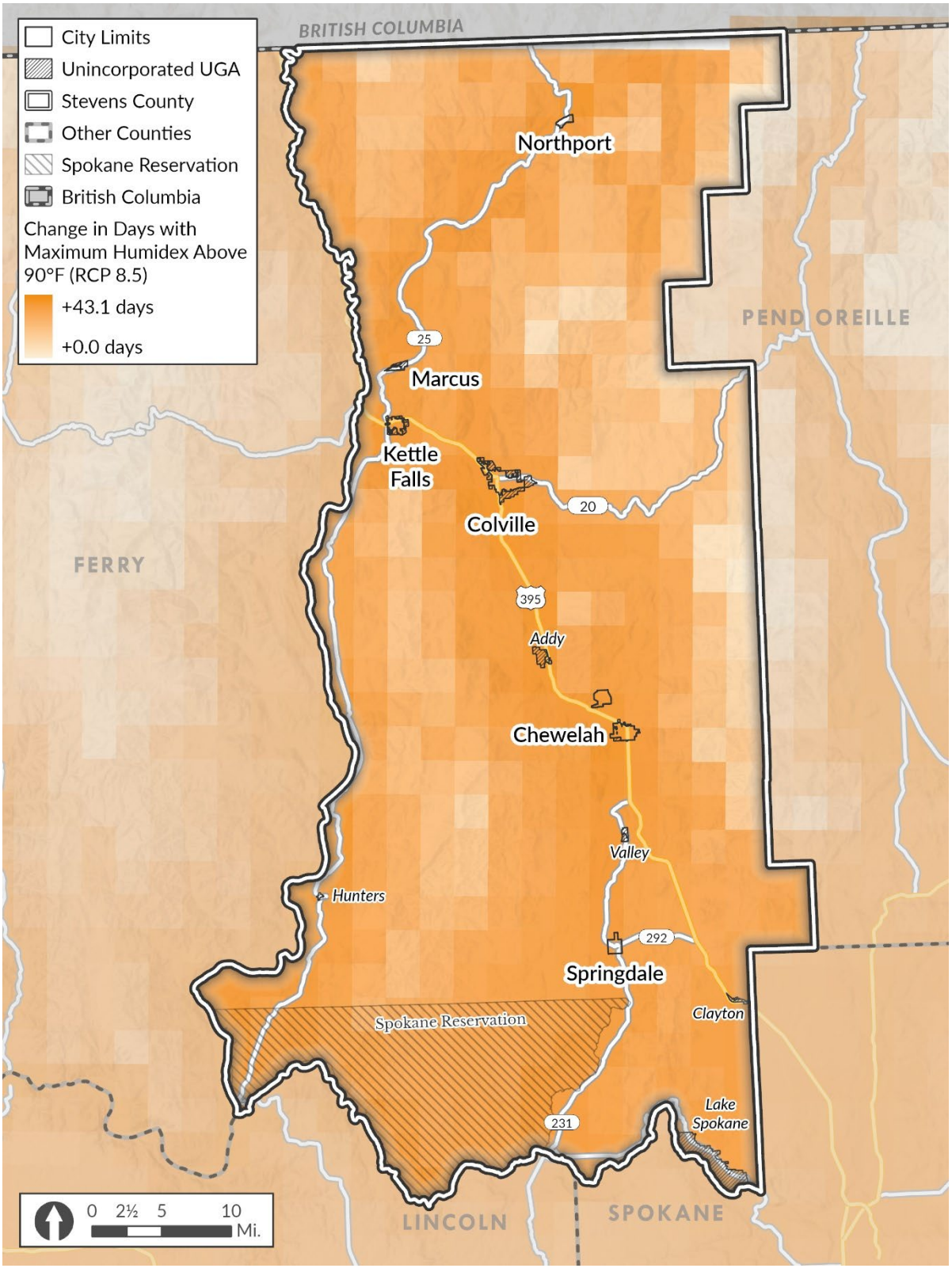
*Compares modeling for the 2040s with the 1990s, RCP 4.5 and 8.5 scenarios. The RCP 4.5 scenario is considered the "middle of the road" scenario in which there are decreases to emissions around mid-century. The RCP 8.5 scenario is considered the "business as usual" scenario in which there are continued increases in greenhouse gas emissions until the end of the 21st century. Differences in RCP models are limited through 2050.
**The UW Climate Impacts Group does not have data for all indicators for all scenarios.
Source: UW Climate Impacts Group, (2026), BERK (2026).

Exhibit 48: Change in Hot Days - RCP 4.5



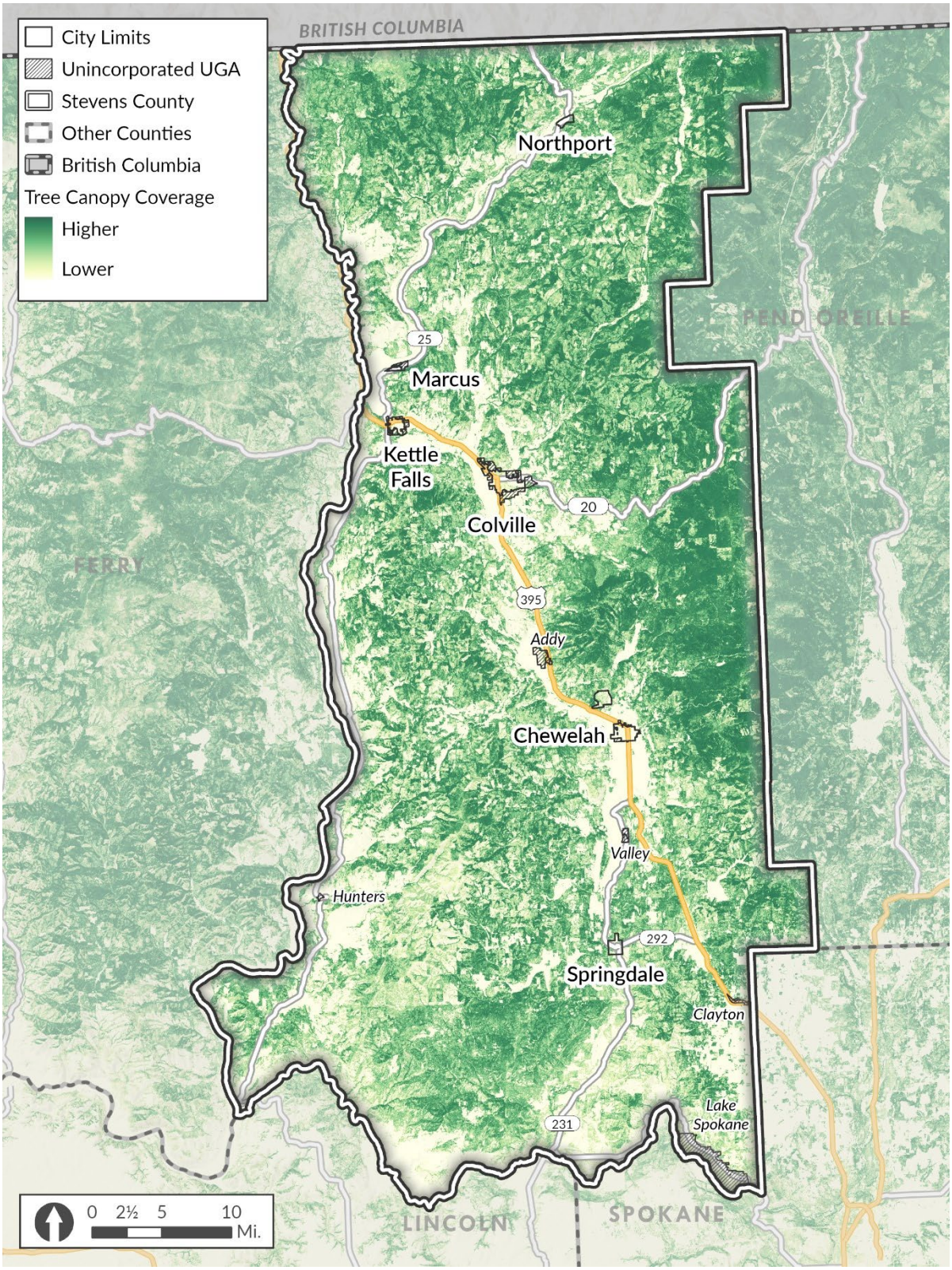
Source: UW Climate Impacts Group (2026), BERK (2026).

Exhibit 49: Change in Hot Days – RCP 8.5



Source: UW Climate Impacts Group (2026), BERK (2026).

Exhibit 50: Tree Canopy Cover



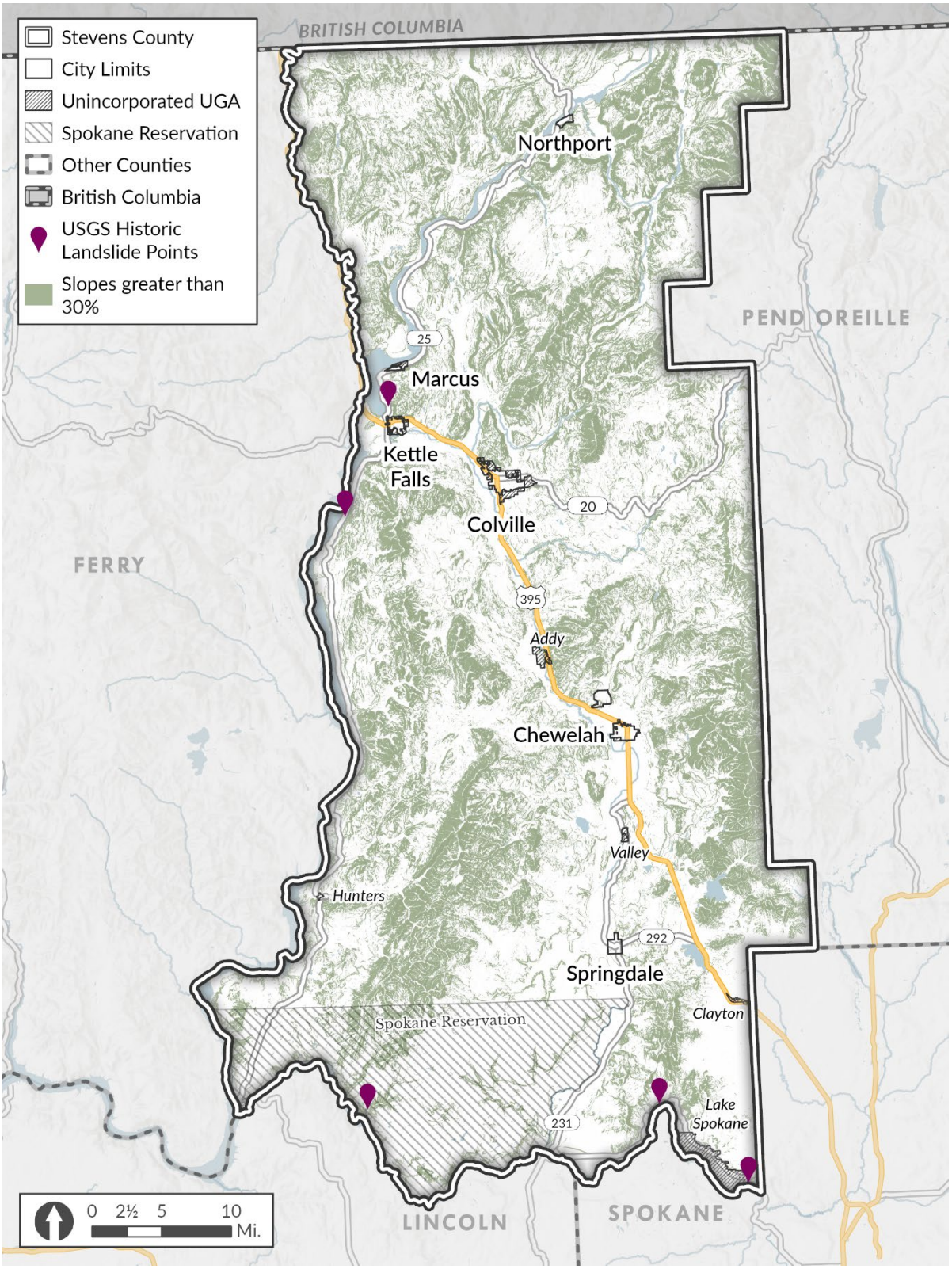
Source: NLCD (2023), BERK (2023).

Landslide & Other Geologic Hazards

Landslide hazards are affected by climate hazards. Landslides can occur at any time of the year but are most common in the winter wet season (Washington DNR, 2026). While climate projections are not available for landslide hazards specifically, increases in precipitation, peak streamflows, and wildfires could increase the risk of landslides in Stevens County.

Landslides have occurred in the past at various locations along the Columbia River (Exhibit 51). There are also steep slopes located in many locations around the county.

Exhibit 51: Landslides and Steep Slopes



Source: USGS (2025), Stevens County (2018), BERK (2026).

Summary of Assets and Hazards

The table below (Exhibit 52) is organized by the Assets and Hazards examined in this Section. These early results show community well-being, cultural & natural resources, buildings & infrastructure, and land use & economic development are exposed to climate hazards. This table "previews" what will be addressed in more detail in a Climate Risk and Vulnerability Assessment in later climate planning steps. The results of this report will be vetted by community members and agencies to fold in more local information about assets and exposure, as well as measures to adapt and respond to climate impacts.

Exhibit 52: Stevens County Assets and Hazards by Sector

Theme	Sectors	Assets	Exposures to Climate Hazards	Other Factors Influencing Impacts	Consequences
Community Wellbeing	Health & Well-being	▪ Population health ▪ Medical facilities ▪ Social services	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat	Health conditions, age (young children and older adults), pregnancy	▪ Impacts to human health (heat and smoke-related illnesses, accidents) ▪ Greater pressure on medical providers ▪ Access disruptions to medical care and social services
	Emergency Management	▪ Emergency response ▪ Evacuation routes	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat	Evacuation route connectivity	▪ More demand for emergency response ▪ Impacts to roads and other infrastructure for emergency response ▪ Impacts to evacuation routes
Cultural & Natural Resources	Agriculture & Food Systems	▪ Food production ▪ Food distribution	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat, and drought	Outdoor workers, lower incomes, and food cost	▪ Health and/or income impacts for outdoor workers ▪ Damage to crops ▪ Impacts to food access and supply chains

Theme	Sectors	Assets	Exposures to Climate Hazards	Other Factors Influencing Impacts	Consequences
	Cultural Resources & Practices	▪ Historic and cultural resources ▪ Community resources	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat, and drought	Building quality, significance of land-based traditions for Tribal cultural practices	▪ Damage to historic and cultural buildings and sites, parks, other facilities ▪ Habitat impacts that affect First Foods ▪ Disruption to cultural practices due to smoke and heat, and other hazards
	Ecosystems	▪ Natural areas and resources ▪ Plants and animals	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat, and drought	Fuels buildup, habitat management	▪ Damage to natural resources and habitat and disruption of natural cycles
	Water Resources	▪ Water resources ▪ Water infrastructure	Flooding, extreme heat and drought	Existing water use and demand, infrastructure quality	▪ Greater water demand for agriculture ▪ Damage to infrastructure ▪ Reduced water supply
Buildings & Infrastructure	Buildings & Energy	▪ Residential, commercial, and industrial buildings ▪ Government facilities ▪ Educational facilities ▪ Energy infrastructure and generation	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat	Building and infrastructure quality, income and cost of utilities, use of electric-powered medical devices	▪ Greater demand for energy for cooling ▪ Damage to infrastructure and buildings

Theme	Sectors	Assets	Exposures to Climate Hazards	Other Factors Influencing Impacts	Consequences
	Waste Management	▪ Solid waste services ▪ Wastewater infrastructure ▪ Stormwater infrastructure	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat	Outdoor workers, infrastructure quality	▪ Health and/or income impacts for outdoor workers ▪ Damage to infrastructure ▪ Disruption of service
	Transportation	▪ Major transportation ▪ Local transportation	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat	Lack of vehicle, amount of impervious surfaces	▪ Disruptions to personal, business, government, and emergency travel ▪ Increased pressure on some routes ▪ Damage to infrastructure ▪ Health hazards to pedestrians, cyclists, and transit users
Land Use & Economic Development	Zoning & Development	▪ Resource lands ▪ Residential uses	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat, and drought	Housing age and quality, access to green space, amount of impervious surfaces, lower incomes, displacement risk	▪ Changes in housing stock availability due to hazard events ▪ Increased risk of wildfire damage to structures ▪ With changes in extreme precipitation and flooding, risk to shoreline property and infrastructure damage and displacement
	Economic Development	▪ Agriculture ▪ Forestry ▪ Outdoor workers ▪ Local businesses and industries ▪ Employment	Flooding, extreme precipitation and storms, wildfire and smoke, extreme heat, and drought	Outdoor workers, supply chain during emergencies, transportation access	▪ Increased disruptions of business continuity and lost revenue and wages from flooding, wildfires, and other hazards ▪ Decreased opportunities for warm-season activities during the hottest part of the year (e.g., from heat, forest fires, low water levels)

Areas of Lower and Higher Adaptive Capacity

This section identifies community indicators about the population's socioeconomic and housing conditions that often predispose community members to have greater or lesser challenges to preparing for or responding to climate hazards, and which areas of the county may benefit from strategies in terms of emergency management, wildfire and flood hazard preparedness, and other strategies.

Community Indicators

Adaptive capacity refers to the ability of a person or community to adjust to a hazard, take advantage of new opportunities, or cope with change. People are likely to have more challenges to prepare for or respond to climate hazards when they are living in poverty, unemployed, lacking health insurance, with disabilities, living alone, living in homes without modern improvements, and/or experiencing racial disparities or linguistic isolation.

Stevens County has certain economic, housing, and demographic characteristics that make some of its residents and infrastructure more vulnerable to climate related hazards. These indicators of adaptive capacity are listed in Exhibit 53.

In most categories identified, Stevens County has less adaptive capacity than the state as a whole. However, for indicators such as individuals living alone and access to a vehicle, Stevens County is more resilient. In Stevens County, 10.4% of households are individuals living alone and 24.5% of individuals over 65 are living alone (compared to 11.1% and 26.1% statewide) (U.S. Census Bureau, 2024). Those who live alone are less likely to seek care or have strong social networks in the event of an emergency. Stevens County also has a larger population with disabilities than the state average (Exhibit 53 and Exhibit 54).

Similarly, older individuals are less likely to be able to manage climate impacts due to pre-existing health conditions, mobility constraints, and lower social connectivity. In 2024, 25.3% of the population was over age 65, an increase from 23.3% in 2020, 19.7% in 2015, and 16.1% in 2010.

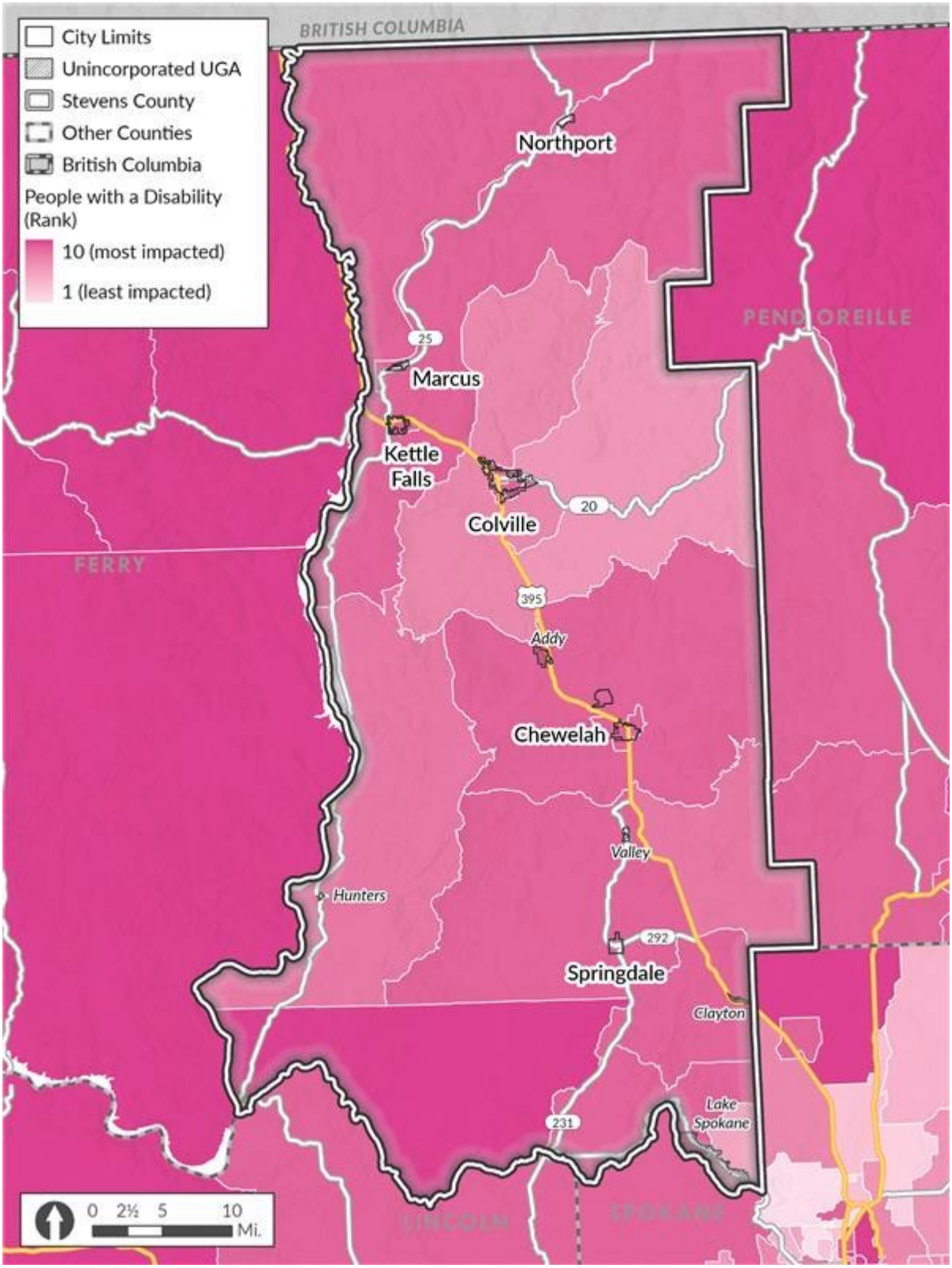
Aside from impacts that predominantly affect older individuals and those living alone, some chronic health conditions may be indicators for diminished resiliency to impacts such as heat and smoke. Currently Stevens County has higher rates than Washington state in major health indicators for climate resilience such as COPD, asthma, diabetes, and high blood pressure (Center for Disease Control, 2024). Prevalence and symptom severity for COPD and asthma are worsened by poor air quality. Individuals with diabetes may experience worsened glycemic control and vascular complications from both extreme heat and poor air quality. Individuals with high blood pressure may be at higher risk of other, more severe cardiovascular complications.

Exhibit 53: Indicators of Adaptive Capacity in Stevens County and Washington State

Indicators: 2024 ACS, Percent, unless stated	County	WA
Persons Living Alone	10.4%	11.1%
No Access to a Vehicle	4.1%	7.1%
Disability	17.7%	13.6%
Adults Without Health Insurance	5.6%	6.3%
Poverty (population)	12.0%	9.9%
Over 18 - Less than a High School Degree /GED	9.5%	8.3%
Unemployment Rate (in labor force) (Census 2024)	5.3%	5.1%
Unemployment Rate (ESD June 2026)	4.7%	5.2%
Sub-optimal Housing Condition (Built before 1960)	17.7%	20.3%
Renter-Occupied Housing Units (Population)	20.2%	36.2%
People of Color (Race, non-White Alone)	15.0%	34.2%
Hispanic (any Race)	3.6%	13.7%
Linguistic Isolation (speak English less than very well)	0.3%	3.8%

Sources: US Census Bureau (2024), Washington ESD (2026).

Exhibit 54: Disability Prevalence Stevens County



Source: US Census ACS (2024), Washington State Department of Health (2026), BERK, (2026).

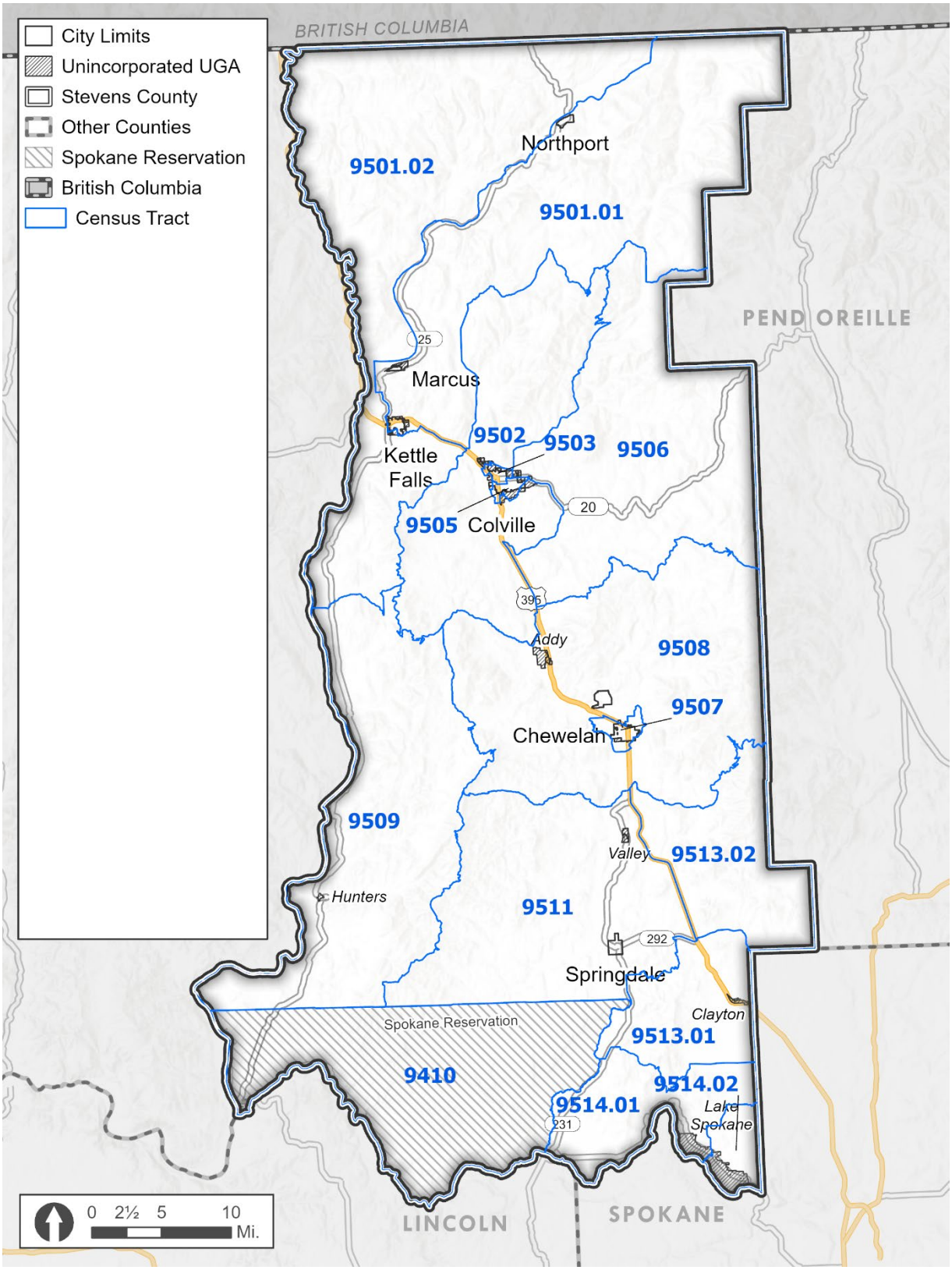
Potential Isolation of Residents in County

This section crosswalks information from the Community Wellbeing section of this document, with indicators listed above in the Adaptive Capacity section focusing on populations that may need more support to overcome isolation and have access to medical and social services, transportation, and shelter.

Indicators considered include the following: persons who are elderly or have a disability and persons who live in mobile/manufactured homes or older homes that may be more damaged than other types during climate-related hazards and events. For this analysis of potential isolation, we are comparing Census tracts to better understand the areas of the county that are more geographically isolated from population centers.

Census Tracts 9501.02, 9505, and 9507 are population centers and partially encompass either Kettle Falls, Colville, or Chewelah, respectively. Additionally Census tracts 9508, 9509, 9410, 9511, 9513, and 9514 will be called south county whereas 9501, 9502, 9503, 9505, 9506, 9507 will be considered north county (Exhibit 55).

Exhibit 55: Census Tracts in Stevens County



Source: US Census Bureau (2023), BERK (2026).

Areas of the county with higher percentages of residents above age 65 as seen in Exhibit 56 are likely to have higher rates of individual isolation. These areas are slightly more concentrated outside of the incorporated areas (columns with red labels) and UGAs. Additionally, Census tracts 9410, 9502, and 9514.01 have higher percentages of young people who may also be partially susceptible to certain climate hazards. There is no geographic trend in age distribution or isolation stemming from aging population.

Exhibit 56: Age Distribution of Residents by Census Tract

	County	9410	9501.01	9501.02	9502	9503	9505*	9506	9507*	9508	9509	9511	9513.01	9513.02	9514.01	9514.02
0-5	4.9%	7.5%	3.2%	1.5%	6.0%	5.0%	6.4%	2.7%	5.2%	3.7%	6.0%	4.4%	8.6%	4.1%	6.3%	4.1%
5-19	18.3%	21.2%	16.9%	10.9%	23.9%	17.9%	16.0%	19.7%	12.3%	12.9%	13.3%	21.5%	14.6%	18.2%	25.1%	20.1%
20-64	51.5%	50.5%	51.9%	50.1%	51.0%	52.9%	49.7%	52.3%	55.6%	53.8%	49.5%	41.9%	56.7%	50.3%	51.3%	55.3%
65-79	20.7%	17.0%	24.8%	26.8%	16.4%	18.0%	16.8%	24.6%	20.5%	23.1%	26.0%	28.3%	17.2%	24.3%	14.9%	16.8%
80+	4.6%	3.7%	3.2%	10.8%	2.7%	6.2%	11.1%	0.8%	6.4%	6.5%	5.2%	4.0%	3.0%	3.0%	2.4%	3.7%

Source: U.S. Census Bureau (2024), BERK, (2026).
Note: Blue highlighted cells are larger than countywide percentage.
*Census tract 9505 is Colville and Census tract 9507 is Chewelah.

Areas of the county with higher percentages of individuals with disabilities as seen in Exhibit 57 are less likely to be able to reach social services in case of a climate-related disaster or may be less equipped to handle certain interruptions. Again, there is no geographic trend in distribution of disabilities or vulnerability stemming from an individual's disability status.

Exhibit 57: Percent of Residents with Disabilities by Census Tract Compared to Countywide

	County	9410	9501.01	9501.02	9502	9503	9505*	9506	9507*	9508	9509	9511	9513.01	9513.02	9514.01	9514.02
Any disability	17.70%	23.50%	19.6%	22.5%	13.0%	18.0%	22.8%	14.1%	17.6%	20.6%	16.4%	20.6%	20.0%	14.6%	16.3%	11.4%
With a hearing difficulty	5.80%	7.70%	5.6%	7.2%	3.4%	2.7%	3.6%	5.9%	4.4%	10.1%	6.8%	6.9%	9.8%	6.1%	3.9%	4.9%
With a vision difficulty	3.20%	5.40%	4.6%	4.5%	1.6%	4.9%	2.2%	3.3%	3.3%	3.0%	2.8%	3.8%	1.9%	1.4%	3.0%	2.7%
With a cognitive difficulty	7.10%	10.20%	8.5%	10.3%	5.0%	9.3%	13.9%	4.5%	9.8%	4.8%	3.6%	9.2%	8.6%	4.2%	4.9%	4.3%
With an ambulatory difficulty	9.50%	15.50%	11.3%	10.7%	4.7%	8.7%	14.8%	7.6%	9.3%	9.0%	11.6%	13.6%	5.1%	6.9%	11.5%	6.4%
With a self-care difficulty	3.30%	3.30%	5.9%	5.1%	1.8%	5.0%	4.0%	2.5%	5.9%	1.5%	1.4%	4.6%	2.3%	0.6%	1.5%	3.6%
With an independent living difficulty	8.20%	12.90%	12.6%	8.3%	5.8%	11.7%	13.9%	5.2%	9.4%	6.6%	6.7%	8.8%	4.8%	4.6%	9.8%	4.2%

Source: U.S. Census Bureau (2024), BERK (2026).
Note: Blue highlighted cells are larger than countywide percentage
*Census tract 9505 is Colville and Census tract 9507 is Chewelah.

Most Census tracts in the county have either one or both vulnerabilities stemming from housing characteristics. Exceptions include much of the south county in Census tracts 9508, 9509, 9513.02, and 9514.02 (See Exhibit 28 and Exhibit 58). This is likely attributable to the proximity to more economic opportunities, growth near the Lake Spokane UGA and the proximity to Spokane and its surrounding area. Individuals in older homes are likely to experience the impacts of climate events more acutely due to the presumed low-adaptive capacity of their homes. Older and manufactured homes are less likely to have air conditioning, are possibly located in wildfire or flood prone areas that were less at-risk at the time of construction or may have inadequate air filtration systems to combat wildfire smoke and particulate matter. While there is some information that can be gleaned from housing age and characteristics, housing cost burden can also play a major role. Analysis on housing cost burden and this metric's relationship with adaptive capacity can be found in Exhibit 30.

Exhibit 58: Share of Mobile Homes and Older Homes in Stevens County by Census Tract

	County	9410	9501.01	9501.02	9502	9503	9505*	9506	9507*	9508	9509	9511	9513.01	9513.02	9514.01	9514.02
Mobile home or other types of housing	20.4%	30.7%	11.9%	22.8%	23.1%	4.6%	4.6%	28.4%	24.7%	20.0%	16.3%	42.0%	21.6%	19.5%	28.4%	9.2%
Houses older than 1960	17.6%	3.3%	18.0%	30.0%	18.3%	48.8%	34.3%	4.6%	38.8%	17.2%	14.4%	12.2%	13.2%	14.3%	2.9%	1.1%

Source: U.S. Census Bureau (2024), BERK, (2026).
Note: Blue highlighted cells are larger than countywide percentage
*Census tract 9505 is Colville and Census tract 9507 is Chewelah.

Next Steps

This document will be vetted and improved in response to review by the County and Climate Policy Advisory Team and an engagement process with agencies, partners, and the public. It will eventually be folded into a more complete Climate Vulnerability and Risk Assessment. The County's mitigation and resilience strategies will be developed from existing plans and evolve through public and agency feedback, which will help create a strong Climate Resilience Element that meets local needs.

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