Appendix E-1: Racial Equity Impact Analysis, Equity-focused Community Outreach and Public Engagement

This appendix provides more detailed information on the following aspects of racial equity impact analysis and equity-focused community engagement, including:

1) an overview of the proposed project;

2) identification of Environmental Justice Census Tracts within the Loop area;

3) identification of specific project elements that support our Environmental Justice (EJ) populations with improved access to safe alternative transportation options such as transit and multi-modal non-motorized options;

4) detailed community outreach and public engagement in the Segment 2- Confluence Parkway NEPA, the South Community Plan and the work WSDOT did on the Segment 4- Sunset Highway/ SR28 Widening; and

5) identification of the project elements that do not harm to our EJ population but instead provide better access especially non-motorized bike and ped as well as improved transit service, providing better access to services and commercial areas around the loop for our underserved population.

Equitable Project Analysis

The City of Wenatchee and their partners have prepared the following analysis of the Apple Capital Loop Network of Projects to evaluate equitable distribution of project benefits and to identify any inequities that can be mitigated with the Apple Capital Loop project.

This network of project focuses on past inequities by addressing Climate change and Environmental Justice both the planning, design and construction of the projects. The project sponsors have used environmental justice tools such as EJSCREEN, Washington Environmental Health Disparities Map and other mapping programs and reports to identify our Environmental Justice (EJ) populations adjacent to the Apple Capital Loop and to evaluate any disproportionate effects on such populations and neighborhoods.

The project team also aligned these projects with Governor Inslee's Climate Commitment and DNR's Plan for Climate Resilience which both give guidance on lowering greenhouse gas emissions. The planning and selection of the components align directly with these Climate Action Plans. identify inequities in our community that extends to climate, pollution risks.

1. Project Overview

The City of Wenatchee and its partners - the City of , Chelan County, Douglas County, Washington Department of Transportation, Chelan-Douglas Regional Port Authority, LINK Transit, and Chelan-Douglas Transportation Council – are pleased to request a $140 million Infrastructure for Rebuilding America (INFRA) grant from United States Department of Transportation (USDOT) to construct the $263 million Apple Capital Loop project, leveraging $123 million in total match committed from a combination of local, state, and other

sources of funds.

The Apple Capital Loop is, functionally, a network of projects completing an 11-mile loop that serves as the backbone for highway, transit, and active modes of transportation.

The Valley is a growing metropolitan area approaching 100,000 in population, with a diverse citizenry that is 29% Latino and over 11% limited English proficiency (2018 American Community Survey). The Wenatchee Valley is located approximately 160 miles east of Seattle and 45 miles north of Interstate 90. The City of Wenatchee hosts a major switching station and crew change location for the Burlington Northern Santa Fe (BNSF) mainline rail connecting the ports of Seattle and Tacoma to Chicago and markets further east. The region is also home to three major hydroelectric power generation facilities on the Columbia River, exporting clean, renewable power throughout the State of Washington.

Wenatchee is the economic, government, medical and services center for an economic region of approximately 200,000 people, geographically the size of the state of Rhode Island and known as the "Apple Capital of the World." Our local industry contributes significantly to Washington's $3 Billion[1] tree fruit industry by exporting fresh apples and premium cherries globally and employing advanced robotic packing and shipping technologies. As noted in USDOT's ROUTES initiative, "rural transportation networks are critically important for domestic production and export of agriculture". The Apple Capital Loop project exemplifies how cost-effective rural transportation investments can provide lasting benefit to the nation, state, and meet priority transportation goals of safety and economic competitiveness.

Wenatchee's growth has continued despite an underdeveloped transportation network. State highways connecting north to Canada, west to Seattle, south to Interstate 90 and east to Spokane are all rural 2-lane routes. Wenatchee is one of the nation's only metropolitan areas not connected to the interstate highway system *and* lacking a multi-lane connection to the nearest interstate highway[2]. In effect, not being directly served by an Interstate represents underinvestment of federal transportation funds in our region relative to the vast majority of other metropolitan areas in the nation that are connected directly to the Interstate highway network.

The Apple Capital Loop project has been a long-standing regional and community priority built on significant community planning efforts that directly support the key objectives of the INFRA program.

While this is the fourth application to the program and criteria has changed over the years, the goals and impacts of the project have focused on serving our diverse community since its inception. The community is proud of its history of inclusiveness, embracing diverse cultures and collaboration with our neighbors and native partners of the Colville Confederated Tribes, who have a centuries-old history in our region and are invested in the opportunity this project brings to acknowledge, interpret and respectfully showcase their history.

The planning and design of the Loop is focused on expanding access to opportunity for underserved populations as a means to lift the entire Wenatchee Valley community and support economic and social success. The long-lasting infrastructure investments provided by this project will position our region for future success by creating good paying jobs, enhancing transportation equity for residents and households

[1] http://wafarmersmarkets.org/wp-content/uploads/2017/02/State-of-Tree-Fruit-in-WA-2-2-17.pdf

[2] Map of Metropolitan Areas Not Connected to the Interstate Highway System

with limited access to automobiles, and addressing the climate crisis that may dampen the vitality of our economy if not addressed.

The Project reduces Greenhouse Gases (GHG) by addressing congestion at bottlenecks while at the same time expanding clean-fuel transit services and more access to safe walking and bicycling routes, and as adaptation and disaster preparedness for climate-induced wildfire disasters. The project will save lives by providing additional evacuation routes for both motorized and non-motorized vehicles and pedestrians during future urban-interface wildfires, as the community experienced in 2015. These events impact the entire region but especially our most vulnerable populations which are more susceptible to wildfires, floods, and other natural disasters.

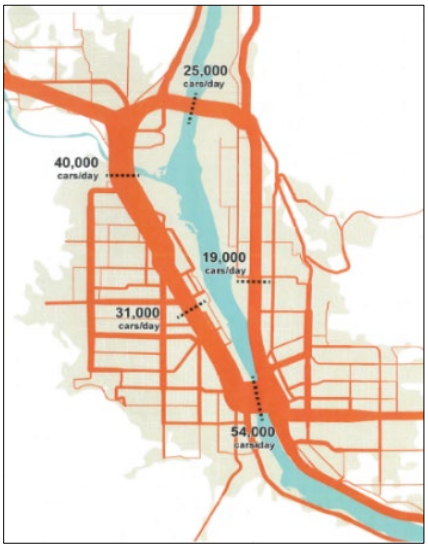
Current work in the Confluence Parkway NEPA process will ensure that any potential project impacts identified that would disproportionately impact Environmental Justice populations are effectively mitigated. Completion of the project is not anticipated to result in disproportionately high and adverse effects on minority or low-income populations, neighborhoods, or communities. Enhanced transit services and improved non-motorized routes will directly and meaningfully advance racial equity and reduce barriers to opportunity for underserved neighborhoods.

Wenatchee and our partners have remained united and made significant progress over the past year, despite the recent economic hardships and related challenges of the COVID-19 pandemic. Since our 2020 application, the City has secured and committed from local partners the final $1 million needed to complete the NEPA process, which has advanced substantially and is on track for completion within approximately one year. We believe the Apple Capital Loop project effectively addresses the INFRA program requirements and merits significant federal participation.

The project narrative below details the merits of this project, with additional supporting documentation provided in the appendices and on the project website www.applecapitalloop.info. We understand that our request for $140 million is substantial and believe the project merits full award. However, an Optional Phasing & Partial Funding Award chart based on the independent utility of project segments is included in appendix F.

The City welcomes clarifying questions during the review process and sincerely appreciates USDOT's consideration of an INFRA investment that will help our region manage growth in an environmentally sustainable manner, while ensuring that ALL citizens of the Wenatchee Valley benefit from increased security, opportunity, and prosperity.

This proposed INFRA grant for completing the Apple Capital Loop will fund a network of projects that, together, will complete an integrated highway, transit, and non-motorized trail "loop" that functions as the backbone of the Wenatchee Valley's transportation system. Our region has made substantial incremental investments in the Loop over the past decades and this grant will address the remaining connectivity and accessibility gaps that have been identified through proactive, regionally coordinated transportation planning at the MPO. The regional travel demand model provides the basis for planning and prioritizing investment strategies and is the basis for this investment.



The Loop project is located in a geographically small and compact urbanized area constrained by steep topography, bisected by the Columbia River and Wenatchee River, and surrounded by mountains. Consequently, the Loop is the only connectivity for travel by any mode of transportation.

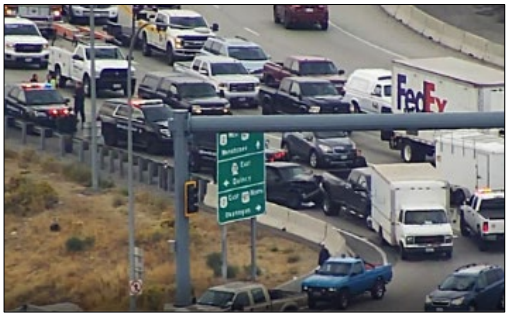
The capacity of the Apple Capital Loop is constrained by three major river crossings. With no supporting network of parallel arterial, collector or local roads that can absorb travel demand, all travel within and through the area relies on the Loop as shown in the traffic volume bandwidth figure.

The City of Wenatchee is effectively an island with only two points of bridge access. Fifty percent of the urban area's population of 70,000 and approximately seventy-five percent of jobs are in Wenatchee and depend on the Loop every day. One key project segment, Confluence Parkway, will create a vital third point of access to/from the city and improve the overall connectivity for travel through and within the entire urbanized area.

Our ability to modernize remaining segments of the Loop has been hindered by the limited availability of local and state funding. With the lack of funding to keep up with economic growth our transportation Loop is incomplete, failing in important locations, impeding local commerce, creating safety issues, and delaying interregional and international freight exports on the NHFN system. This project will build upon $100 million of prior investments over the past two decades, and over $90 million of secured state and local match to complete the project as well as an additional $32 million in requested state funds.

Without the benefit of being served by an interstate highway (I-90), the Wenatchee Valley's NHS and NHFN corridors are a critical connection for regional, national, and worldwide freight exported from this urban area and surrounding agricultural region. In particular, our fruit industry relies on these transportation corridors for short-haul to storage facilities, and then long-haul delivery via refrigerated containers from packing facilities to worldwide markets.

Transportation challenges on the Loop has led to major regional impacts not just for freight mobility, but also for public safety. Wenatchee is home to a regional trauma center serving the greater North Central Washington area. Ambulance transport to this facility is becoming increasingly difficult and unpredictable due to congestion and crashes on the Loop. These transportation issues are limiting the regional economy and resulting in safety issues that this project will mitigate. In spite of these constraints, the economy of the greater Wenatchee area is forecasted to generate continued population and job growth. Increasingly, growth pressure combined with a significant shift to remote work for many large employers in the Seattle area is accelerating migration to the Wenatchee Valley.



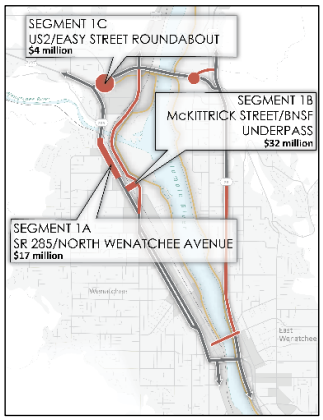
Accident at US2 / Easy Street Intersection

Federal investment can remedy mobility, freight, safety, and economic development challenges in an isolated but urbanized region of the nation, allowing for predictable delivery of fruit to the world, and movement of goods that contribute regional and national economic benefits. Through our Metropolitan Planning Organization, the region is unified in support of this network of four projects (segments) that work together to address transportation needs that will benefit every citizen and business in North Central Washington. The following information summarizes the network of projects with independent utility. Appendix E. Technical Feasibility Analysis provides extensive project detail.

Project Elements

The Apple Capital Loop is a network of four component project segments, each described below including a map that indicates the location of improvements relative to the other project segments.

Segment #1 – SR 285/North Wenatchee Avenue Improvements, McKittrick Street Railroad Underpass, & US 2/Easy Street Roundabout



North Wenatchee Avenue (SR285) is a principal arterial designated as a NHFN Critical Urban Freight Corridor and is on the NHS. This 4-lane arterial with a two-way turn lane carries 40,000 vehicles per day, experiences the highest number of accidents and is the greatest bottleneck along the Loop because no parallel or connecting routes exist. North Wenatchee Avenue is congested for a significant portion of the day and is the only available access to employment both in and outside the city from the north.

During the 2015 Sleepy Hollow wildfire disaster, over 30 acres of industrial area businesses adjacent to North Wenatchee Avenue burned. The city responded with the North Wenatchee Master Plan which identified the need for a railroad grade separation to replace an existing at-grade crossing that connects the industrial area and Waterfront District to North Wenatchee Avenue. Most improvements in Segment #1 are south of the Wenatchee River, but north of the river this subproject improves the US 2/Easy St signalized intersection, an additional bottleneck failing to provide safe and adequate access to the growing commercial, industrial, and residential areas in the city's northerly urban growth area.

Segment (1A) - SR 285 / North Wenatchee Avenue

Major intersections will be modified with an interconnected ITS management system to improve signal operations, and physical improvements include increased turn radii, replacing the two-way center left turn lane with raised medians, adding U-Turns to replace the current and unsafe left turn access, improving transit stops, and improving pedestrian safety and access with wider sidewalks and improved crossings. While these changes will improve freight mobility and general traffic flow, about 60 percent of the traffic on the corridor is destined to the mix of service, retail, and industrial businesses along this segment of the Loop. ITS improvements will also provide active signal priority for transit.

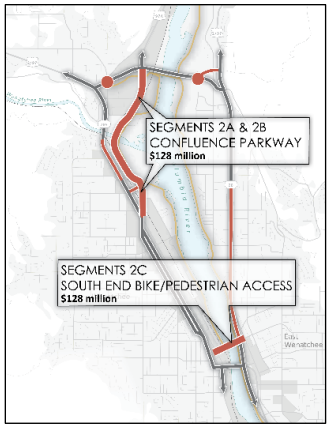
Segment (1B) - McKittrick Street Railroad Underpass

A mainline railroad underpass will be constructed on McKittrick Street, replacing an at-grade crossing one block north at Hawley Street (#065840P), removing conflicts with approximately 24 unit trains per day. Train traffic is anticipated to increase to 28 trains per day by 2035[3]. Each train takes 3-5 minutes to clear the crossing, causing a lengthy car backup on each side of the tracks that often queues to the SR 285/North Wenatchee Avenue intersection, creating great risk of a high consequence train-vehicle accident. The underpass will provide a direct connection to Confluence Parkway (Segment 2) and create improved network connectivity to mitigate the current SR 285/North Wenatchee Avenue bottleneck.

Segment (1C) – US 2 / Easy Street Roundabout

All traffic through the region converges on this segment of the Loop, including trips to/from East Wenatchee, Chelan, Entiat, and other areas north of Wenatchee. This project will replace the existing signal with a multilane roundabout to improve traffic flow and safety for drivers, cyclists, and pedestrians. This intersection provides access to the adjacent and growing commercial, industrial, and residential areas. Currently about 1,200 trucks pass through the intersection each day but increases significantly during peak fruit harvest periods. A full interchange was originally planned, but a roundabout was determined to be a cost-effective solution based on a Value Engineering study completed by WSDOT.

Segment #2 - Confluence Parkway & South End Bike/Pedestrian Access:



Confluence Parkway is the solution to congestion on SR 28/North Wenatchee Avenue, a new bypass corridor included in the Metropolitan Transportation Plan as well as the Washington State Freight Plan. Confluence Parkway (Segments 2A & 2B) is a 2.5-mile bypass for freight, transit, passenger vehicles and cyclists. This segment of the Loop is currently a 4-lane bottleneck connected on both sides by 10 lanes of combined highway and parallel arterial capacity.

Confluence Parkway will work in tandem with SR 285/North Wenatchee Avenue (Segment 1) improvements to eliminate congestion on the worst pinch point on the Loop by increasing north-south capacity from 40,000 vehicles per day to a total capacity 63,000 vehicles per day on parallel corridors, serving a forecasted 60% increase in travel demand as modeled by the MPO. In addition to capacity, this corridor will provide a new bridge across the Wenatchee River, providing a much needed second access to North Wenatchee which is critical to the safe evacuation of the city during wildfire events such as the recent Sleepy Hollow Fires. The bridge will also address a pedestrian deficiency by replacing an existing narrow and structurally problematic Wenatchee River pedestrian bridge. Another key element to this project segment (2A) is replacement of the existing Miller Street railroad at-grade crossing (#065839V) with a grade separation to ensure delay caused by the BNSF mainline is eliminated as well as the potential for high-consequence collisions.

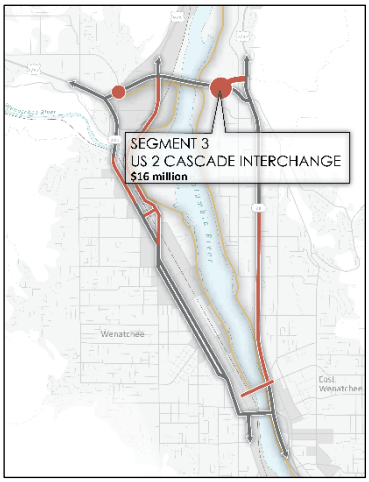
This new arterial will facilitate freight connecting between US 2/97 and the Wenatchee waterfront and central business district. Confluence Parkway will separate through traffic, including freight trucks, from the commercial traffic on SR 285/North Wenatchee Avenue. This will greatly enhance freight mobility and safety

[3] WPPA 2017 Marine Cargo Forecast

in the northern part of the City of Wenatchee while also connecting underserved South Wenatchee neighborhoods with the employment centers north of the city center. Meanwhile, the project will provide significant improvements to an existing non-motorized trail with environmental enhancements through an existing natural area that needs rehabilitation work.

Finally, Segment (2C) includes a key element supporting non-motorized multimodal users to advance the objective of racial equity and barriers to opportunity, as well as improved security and evacuation capacity. The South End Bike/Pedestrian Access connects our most economically disadvantaged, minority neighborhoods on each side of the Columbia River to the non-motorized Apple Capital Loop trail. The loop trail provides safe non-motorized connection between South Wenatchee and East Wenatchee across the Columbia River to provide these Environmental Justice communities with safe access to daily services and one of the most important recreational assets in the valley. This is a key environmental justice investment within an Opportunity Zone (Tract 9611).

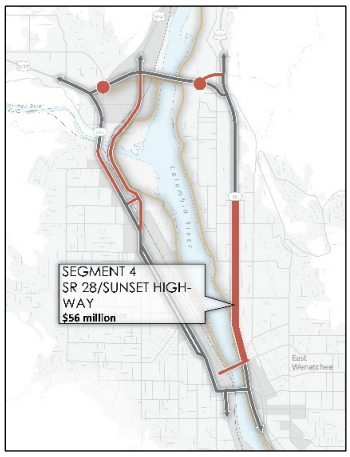
Segment #3 - US2/97 - Cascade Interchange



This new interchange replaces an unsafe and recently closed at-grade intersection to provide access from US 2 to Wenatchi Landing, a 280-acre mixed use commercial development area located on the last remaining undeveloped land within the East Wenatchee Urban Growth Boundary "Wenatchi Landing" derives its name from the traditional cultural spelling of "Wenatchee." The North End Study anticipates that the interchange will leverage $374 million in private investment.

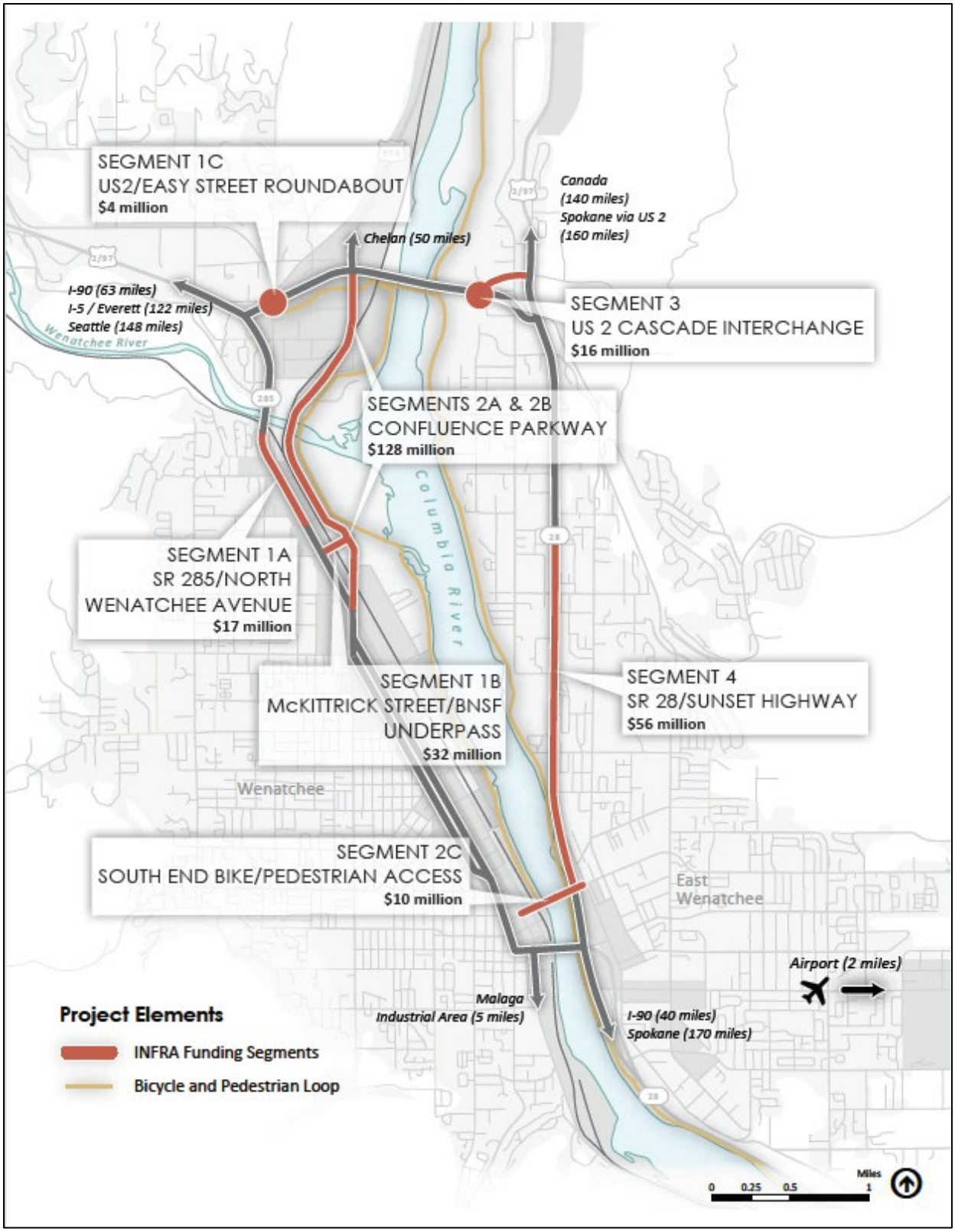
The project will utilize an existing overpass on US 2 to construct a half-diamond grade separated interchange, immediately to the east of the US 2 Columbia River "Odabashian" bridge. This lower cost design emerged from the practical solutions approach to meet the safety and operational demands of the Wenatchi Landing development. The interchange ensures coming development will not create interruption of US2 at this critical location on the Loop. Segment 3 is partially within and Opportunity Zone (Tract 9503).

Segment #4 – SR28/ Sunset Highway Widening



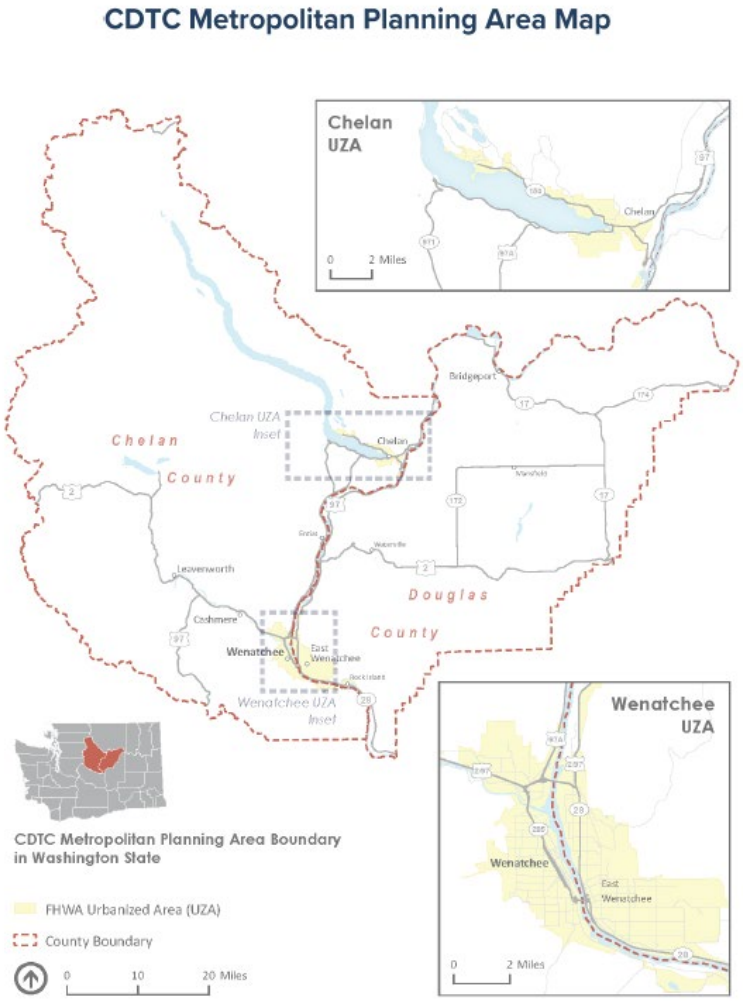
This corridor serves the highest volumes of truck traffic (12 percent of AADT) in the Wenatchee region. This project will enhance safety and mobility on SR 28 in East Wenatchee from 9th Street to Hadley Street. SR 28 is an NHS route and a T-1 freight route with over 10 million tons of freight moved annually. Freight traffic cannot bypass this section of the Loop because Wenatchee's downtown business district restricts heavy truck traffic.

This project widens the existing roadway replacing a 2-lane section with a 4-lane facility with center median between intersections. The project will improve existing intersections, add U-turn capability, and add new medians. These changes provide capacity to double the number of vehicles per day to approximately 35,000, improving freight movement and mobility on this vital urban corridor. Preserving this corridor's freight capacity is a top priority. The existing SR 28/Sunset Highway lacks sidewalks, bicycle lanes and related pedestrian safety features. Children walk along the highway and school buses stop in the travel lane due to lack of shoulder or turnouts. Bus pullouts will be added for use by schools and LINK Transit. These safety benefits will provide significant benefit to low-income and minority neighborhoods located along the west side of SR 28, improving quality of life, safety, mobility, and school access.


SEGMENT 1C
US2/EASY STREET ROUNDABOUT
$4 million
Chelan (50 miles)
Canada
(140 miles)
Spokane via US 2
(160 miles)
I-90 (63 miles)
I-5 / Everett (122 miles)
Seattle (148 miles)
Wenatchee River
SEGMENT 3
US 2 CASCADE INTERCHANGE
$16 million
SEGMENTS 2A & 2B
CONFLUENCE PARKWAY
$128 million
Columbia River
SEGMENT 1A
SR 285/NORTH
WENATCHEE AVENUE
$17 million
SEGMENT 1B
McKITTRICK STREET/BNSF
UNDERPASS
$32 million
SEGMENT 4
SR 28/SUNSET HIGHWAY
$56 million
Wenatchee
SEGMENT 2C
SOUTH END BIKE/PEDESTRIAN ACCESS
$10 million
East
Wenatchee
Airport (2 miles)
Malaga
Industrial Area (5 miles)
I-90 (40 miles)
Spokane (170 miles)
Project Elements
INFRA Funding Segments
Bicycle and Pedestrian Loop
0
0.25
0.5
1
Miles

2. Environmental Justice Analysis

Equity within the Metropolitan Planning Area



One of the requirements for the CDTC Metropolitan Planning Agency is to review Equity in the distribution of benefits and impacts within the Transportation Improvements included in their Transportation Improvement Plan (RTIP).

CDTC must ensure that federal funds programmed in the RTIP avoid disproportionate negative impacts or denial of benefits to disadvantaged populations. This finding is made on the program as a whole, and with the understanding that individual transportation improvements may result in negative impacts to disadvantaged populations given proper review, avoidance and mitigation of environmental impacts through the National Environmental Policy Act (NEPA) process.

The CDTC Equity methodology is to review projects against the following matrix:

- IMPACTS +		
Negative Impacts Have Proportionate Impact at Community or Regional Scale	Direct Benefits to Disadvantaged Populations	+
Disproportionate Negative Impacts to Disadvantaged Populations	Benefits Limited to Non-Disadvantaged Populations	BENEFITS -

In order to evaluate the overall result of the RTIP through an environmental justice framework, RTIP projects are evaluated individually.

Among the broad range of investment categories and transportation improvements, four specific categories ofprojects are automatically considered equitable based on the following types:

- Preservation & Maintenance projects that are prioritized based on empirical data that maximizes the lifespan of the transportation system as a whole.
- Safety improvements that are prioritized by empirical data that maximizes the reduction of risk factors and potential for injury or fatality on the transportation system as a whole, and at locations with a high frequency or severity of crashes.
- Accessibility improvements that are necessary for regulatory compliance and not in locations based on open discretion.
- Public Transportation formula funding utilized to sustain operations and asset management on a systemwide basis.

RTIP projects do not meet the criteria for automatically being deemed equitable are further reviewed. These projects were therefore evaluated on their individual merits according to the following equity considerations:

✓ Project directly benefits disadvantaged populations

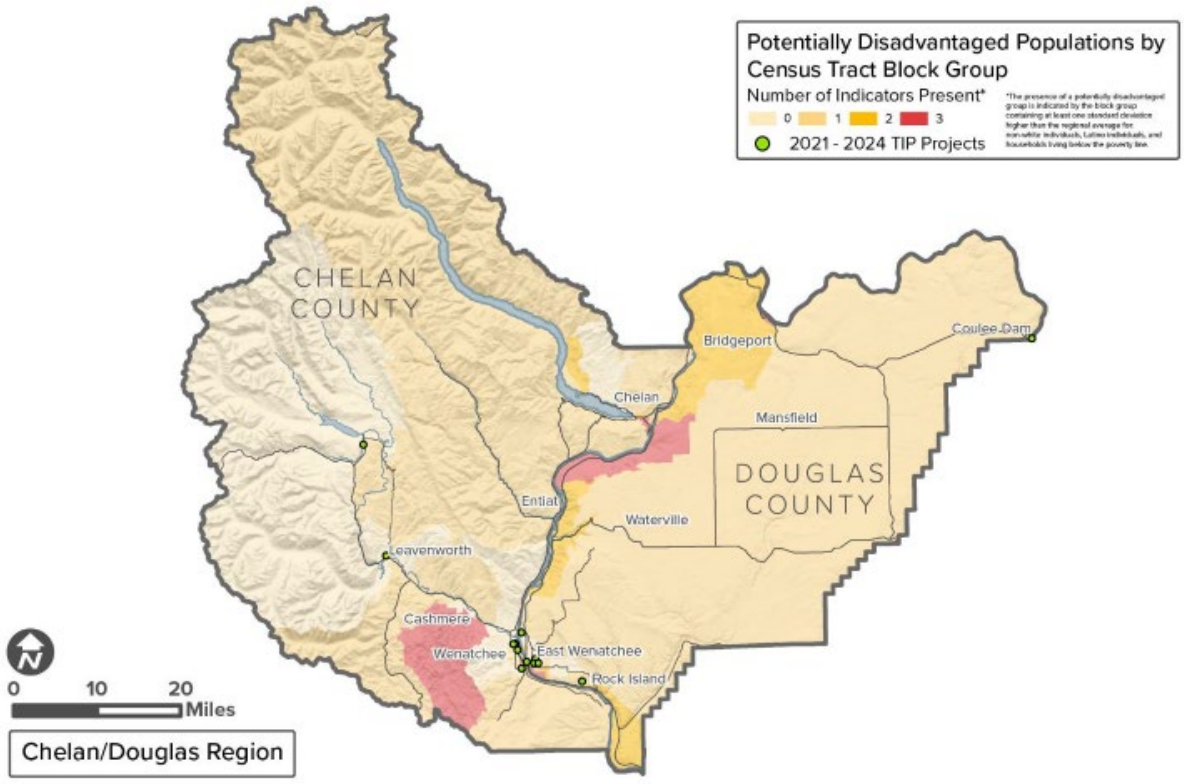
✓ Project indirectly benefits disadvantaged populations

✓ Project benefits and/or impacts are proportionately distributed across the community or region.

✘ Project benefits are limited to non-disadvantaged populations

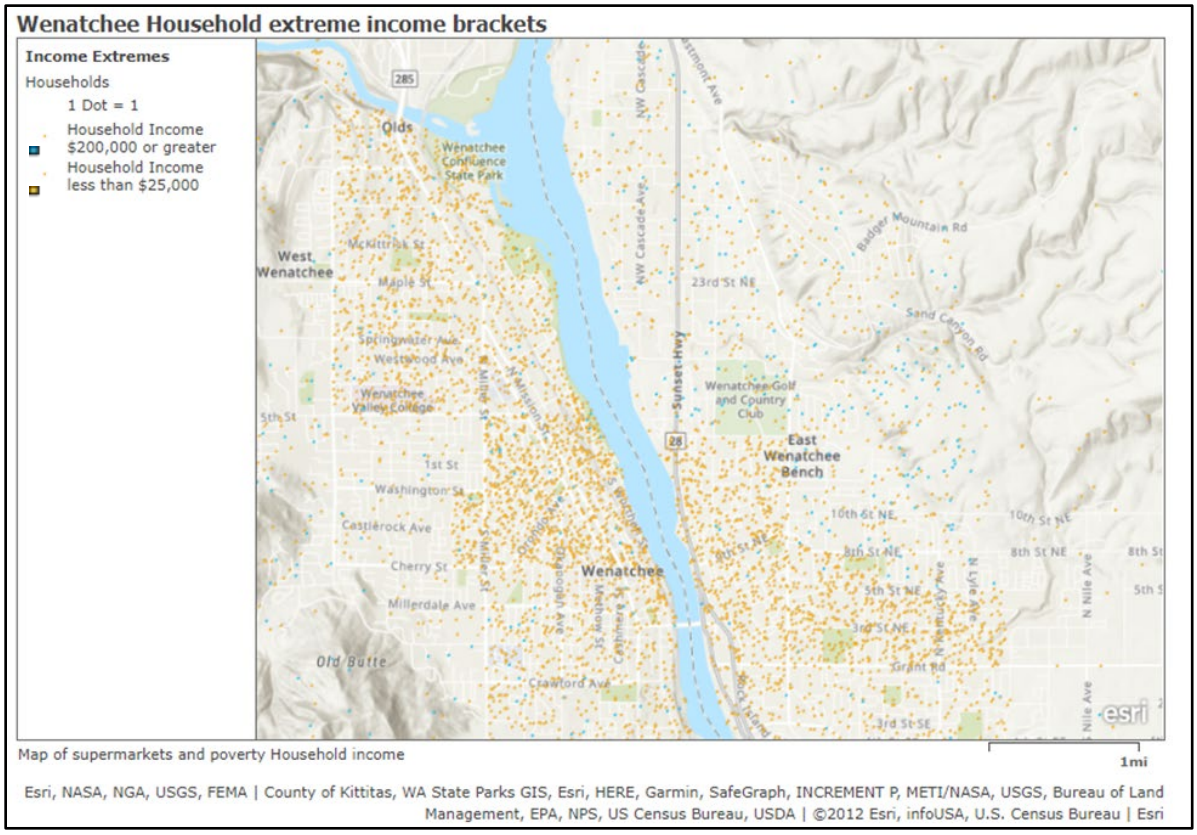
✘ Project results in disproportionate negative impacts to disadvantaged populations.

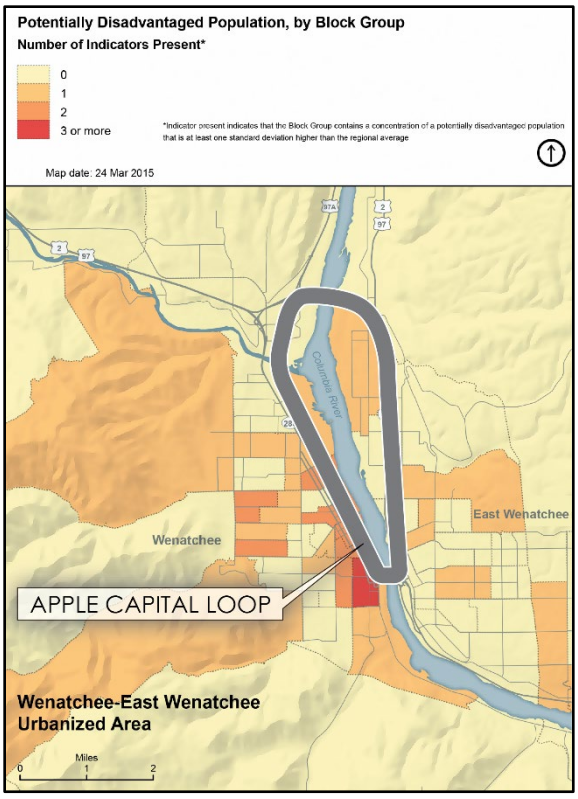
The following map represents the CDTP 2021-2024 TIP Projects plotted on a map indicating Potential Disadvantaged Populations by Census Tract Block Group. The indicator scale indicates the presence of a potentially disadvantaged group is indicated by the block group containing at least one standard deviation higher than the regional average for: non-white individuals, Latino individuals and households living below the poverty line.



Methodology used in the Apple Capital Loop Analysis

The Apple Capital Loop was analyzed for the Affected Environment using multiple mapping websites as well as generic mapping software such as ARCGIS On-line that can display data such as the map below that shows counts of households within the highest and lowest income ranges. Dot density is used to fill in census tracts to show where the richest and poorest households live in the U.S. The highest income range covers households which make $200,000 or more a year. The lowest income range shows households making less than $25,000 a year.





All of these tools are very helpful in understanding the demographics and community elements.

The three Environmental Justice Mapping Tools reviewed for this analysis include:

- EJSCREEN
- The Washington Environmental Health Disparities Map
- Neighborhoods at Risk

The following is a summary of the comparable data found using the Neighborhoods at Risk Tool. This is tool appears to provide the best downloadable reports for each of the project areas.

Summary of Mapping Tools:

EJSCREEN - EPA

EJSCREEN provides the same data as the other two tools with different downloadable standard reports based upon how the user describes the investment using the drawing tool on the map. For example, the route of the Apple Capital Loop can be drawn on the EJSCREEN mapping tool and a buffer around the polygon can be added. For this report, the Apple Capital route was added to the map. The standard reports were run for a buffer of 1 mile and a buffer of 0.5 miles off of the route.

Purposes and Uses of EJSCREEN

EJSCREEN allows users to access high-resolution environmental and demographic information for locations in the United States, and compare their selected locations to the rest of the state, EPA region, or the nation.

- The tool may help users identify areas with:
- Minority and/or low-income populations
- Potential environmental quality issues
- A combination of environmental and demographic indicators that is greater than usual
- Other factors that may be of interest

Washington Environmental Health Disparities Map

The Washington Environmental Health Disparities Map evaluates environmental health risk factors in communities. The model was specifically adapted from CalEnviroScreen—a cumulative environmental impacts assessment mapping tool developed by CalEPA and used in California. —It estimates a cumulative environmental health impact score for each census tract reflecting pollutant exposures and factors that affect people's vulnerability to environmental pollution.

The model is based on a conceptual formula of Risk = Threat * Vulnerability, where threat and vulnerability are based on several indicators.

Threat is represented by indicators that account for pollution burden, which is a combination of environmental effects and environmental exposures in communities. Environmental effects include indicators that account for adverse environmental quality generally, even when population contact with an environmental hazard is unknown or uncertain. Environmental exposures include the levels of certain pollutants that populations come into contact with.

Vulnerability is represented by indicators of socioeconomic factors and sensitive populations for which there is clear evidence that they may affect susceptibility or vulnerability to an increased pollution burden. Indicators in socioeconomic factors measure population characteristics that modify the pollution burden itself. Sensitive populations refer to those who are at greater risk due to intrinsic biological vulnerability to environmental stressors.

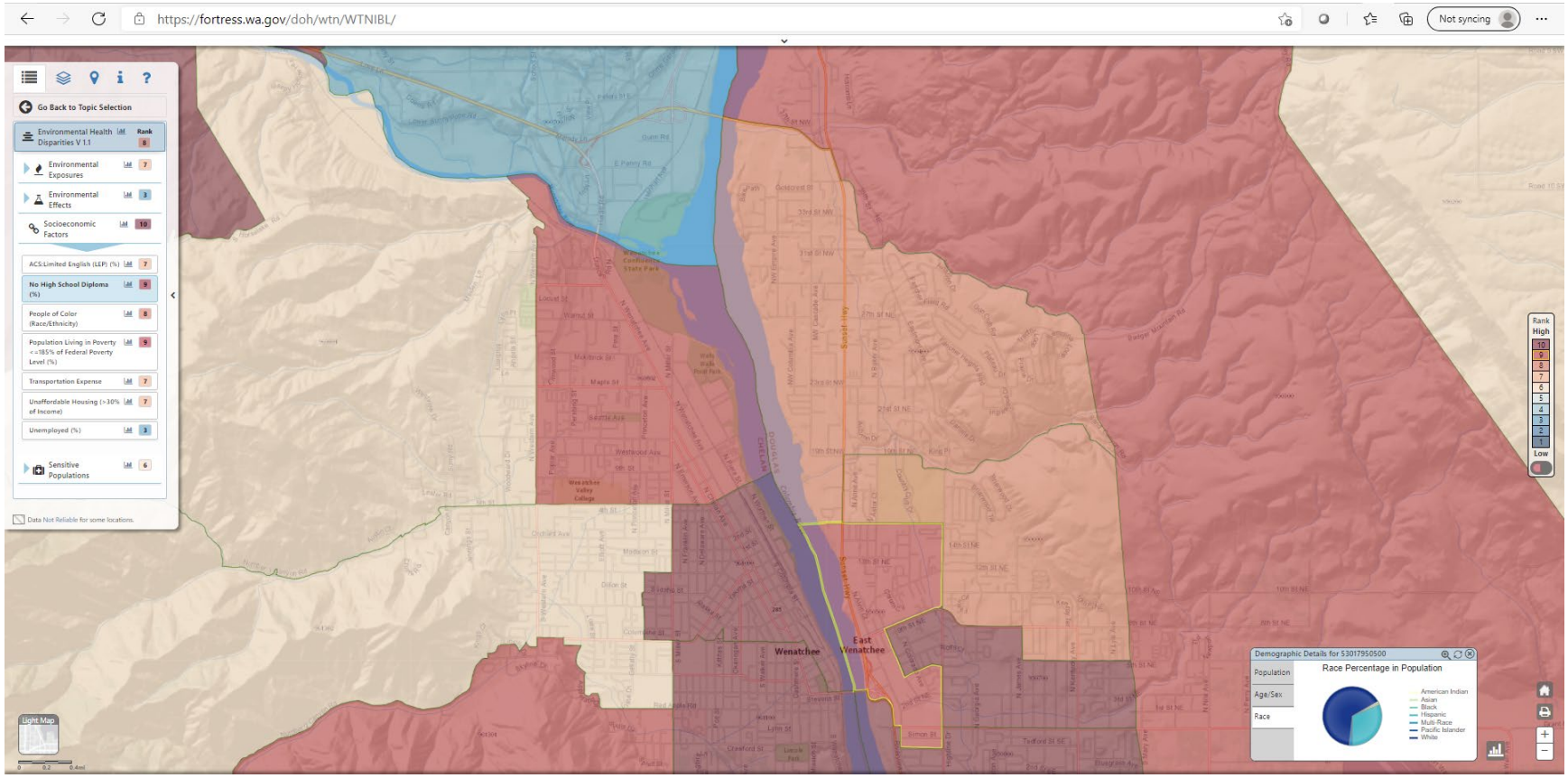
In the model, threat is multiplied by vulnerability in order to reflect the scientific literature that indicates population characteristics often modify and amplify the impact of pollution exposures on certain

vulnerable populations. The rankings help to compare health and social factors that may contribute to disparities in a community. You should not interpret rankings as absolute values. Do not use them to diagnose a community health issue or to label a community.

Version 1.0 Published January 2019

Version 1.1 Published December 2019 (updated measures from American Community Survey and Department of Health for 2013-2017) Did not update Threat indicators derived from EJSCREEN.

Example of mapping from Washington Environmental Health Disparities Map



The challenge with this mapping tool is like EJSCREEN, there is not an option to download a summary report for a Census Tract.

Neighborhoods at Risk Tool

Neighborhoods at Risk is designed to meet community planning needs to protect people and property from the impacts of climate change. A free, web-based tool, Neighborhoods at Risk generates customized, interactive maps and reports that describe characteristics of potentially vulnerable neighborhoods (by census tract). Additionally, Neighborhoods at Risk provides community-level climate projections for temperature and precipitation.

The Analysis below is divided into People and Climate Exposure:

Neighborhoods at Risk	Area			
	Wenatchee	South Wenatchee	East Wenatchee	U.S.
# Selected Tracts	4 Tracts 9608.02 9613.02 9610 9611	1 Tract 9611 (part of Wenatchee's selected Tracts	2 Tracts 9505 9508	
Total Area Population (2019)	34,188	1,821	13,960	324,697,795
Selected Tracts	32,958	1,821	8,782	
People				
People of color and Hispanics	44.8%	73.1%	37.8%	39.3%
Households with no car	7.0%	5.8%	4.5%	8.6%
People who don't speak English well	9.9%	16.3%	6.8%	4.3%
Families in poverty	13.3%	7.6%	6.5%	9.5%
People with Disabilities	16.5%	8.0%	22.0%	12.6%
People over 65 years	15.5%	11.3%	15.7%	15.6%
Educational Attainment- No High School Degree	21.7%	49.0%	18.1%	12.0%
Climate Exposure				
Area lacking tree canopy	95.8%	99.1%	98.6%	
Area of impervious surface	18.6%	28.2%	32.3%	
Area in 500-yr floodplain	7%	10.3%	13%	

Source: U.S. Department of Commerce. 2019. Census Bureau, American Community Survey Office, Washington, D.C., as reported by Headwaters Economics' Neighborhoods at Risk. Retrieved March 2021 from https://headwaterseconomics.org/apps/neighborhoods-at-risk/

Legend

	Below US Average
	Above US Average
	Double or more than the US Average

Neighborhoods at Risk can be used to prioritize capital improvements, conduct vulnerability assessments, inform land use and policy decisions, and support FEMA Hazard Mitigation Plans and Carbon Disclosure Project reporting.

Neighborhoods at Risk reports are based on data from the U.S. Census Bureau, FEMA, Multi-Resolution Land Characteristics Consortium, First Street Foundation, and the Northeast Regional Climate Center's Applied Climate Information System.

The following is a summary of the comparable data found using the Neighborhoods at Risk Tool. This is tool appears to provide the best downloadable reports for each of the project areas.

"**People**" in Neighborhoods at Risk are indicators of populations that are potentially more vulnerable to climate risk and climate-related disasters. Not all people who fit these criteria are more vulnerable, but research shows that these populations are, on average, more likely to experience difficulty during all phases of climate-related disasters including:

- Mitigation: reducing the potential risk
- Preparedness: getting plans and resources ready
- Response: protecting and rescuing
- Recovery: rebuilding

The downloadable Neighborhoods at Risk report provides detailed information and references documenting how each variable is associated with potentially higher risk to climate change.

The four characteristics and filters included under "**Climate Exposure**" in Neighborhoods at Risk are indicators of land area that may experience more significant impacts from climate change. These variables (hurricane flood zones, floodplains, impervious surface, and lack of tree canopy) represent characteristics of our physical environment that make us more or less vulnerable to climate change by affecting the likelihood of extreme heat and flood events.

Why is this measure important?

People

People of color and Hispanics

- Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.

- Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.
- Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.
- Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.
- Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.
- Research has identified measurable disparities in health outcomes between various minority and ethnic communities.
- Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.
- Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.
- Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.
- Hispanics have higher rates of diabetes and asthma.
- American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population. They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.

Households with no car

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

- People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.
- Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.
- During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.
- During heat waves, people without a car are less able to go to community cooling centers or cooler areas.
- Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.

People who don't speak English well

- Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.
- A person's ability to take action during an emergency is compromised by language and cultural barriers.
- Poor English skills can make it harder to follow directions or interact with agencies.
- Lack of language skills can also instill lack of trust for government agencies.
- In many industries, poor English skills can make it harder for people to get higher wage jobs.
- Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.
- Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.
- However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

Families in poverty

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, healthcare, education, vulnerability to natural disasters, and emotional stress.

- To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.
- Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.
- Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.2 Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.
- The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces. Furthermore, those in high-crime areas may not want to open their windows.
- Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.
- Children in poor families, on average, receive fewer years of education compared to children in wealthier families.
- Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.
- Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.

People with Disabilities

Disabled people are subject to health complications that make environmental risks more consequential.

- Disabled people are less likely to have health insurance, compared to the non-disabled population.
- Being confined to a bed raises heat mortality.
- Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.

People over 65 years

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

- Age is the single greatest risk factor related to illness or death from extreme heat.
- The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.
- The likelihood of chronic disease increases with age.
- Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.

Educational Attainment- No High School Degree

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

- People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.
- A study in California[4] found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.
- Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.
- The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.
- Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

[4] Heather Cooley, Eli Moore, Matthew Heberger, and Lucy Allen, Social Vulnerability to Climate Change in California (California Energy Commission Pub. # CEC-500-2012-013, 2012).

[5] Centers for Disease Control and Prevention, "CDC Health Disparities and Inequalities Report — United States,

Climate Exposure

These three categories for the project area represent characteristics of the physical environment that make the population within the area more or less vulnerable to climate change by affecting the likelihood of extreme heat and flood events.

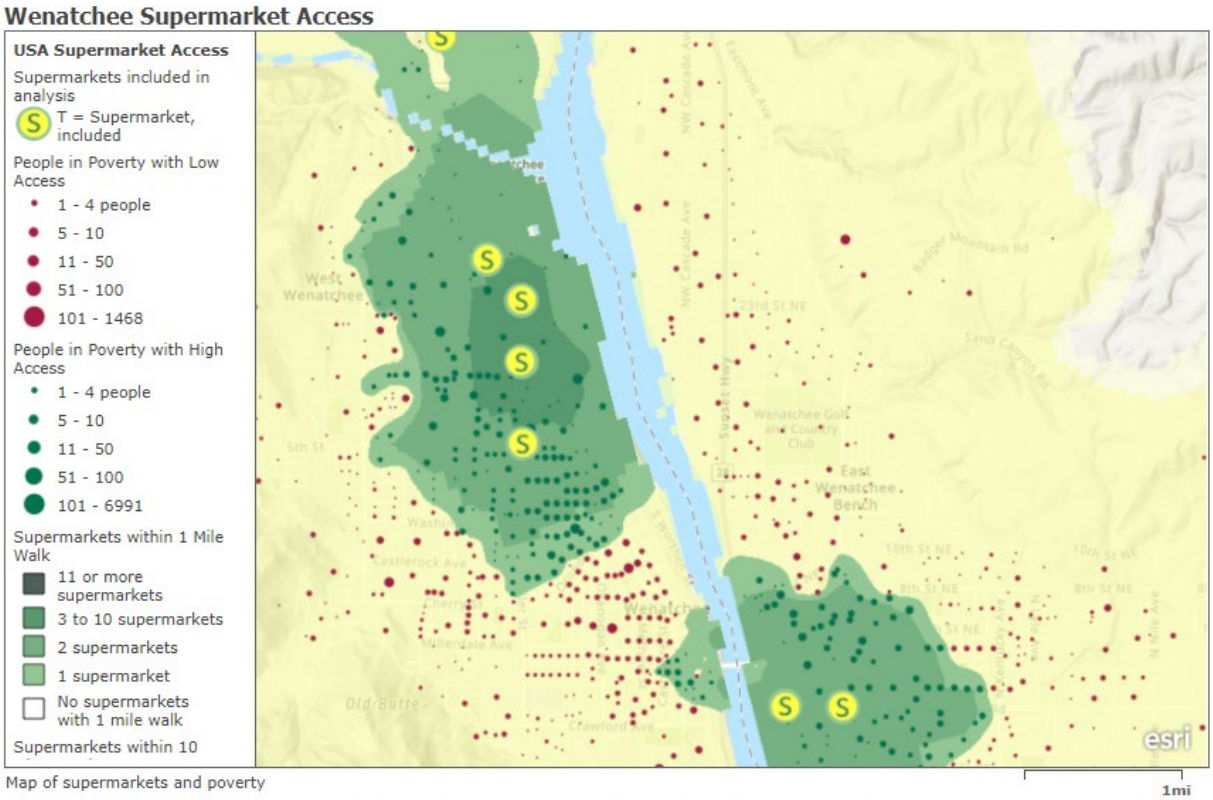
- Area lacking tree canopy-
- Area of impervious surface
- Area in 500-yr floodplain

3. Specific Project Elements that support our Environmental Justice (EJ) populations

Environmental injustice and climate change are about the fact that in many communities it is far easier to find a bag of Cheetos than a carton of strawberries and this only stands to get worse as drought and flooding impact the availability and affordability of nutritious food. This can be the case for EJ populations in the Valley, fresh fruits are of plenty during harvest but during the rest of the year these nutritious items are only found in local grocery stores.

There is no full-service grocery store with fresh produce in South Wenatchee. A resident has to either travel north approximately 2 miles or east miles 1.25 miles across the Columbia River to the shopping area in East Wenatchee. To reach these stores, a family either has to have access to a car, access to convenient transit stops, or non-motorized access that will keep pedestrians, bicyclists and disabled using rolling access safe.

2011," Morbidity and Mortality Weekly Report 60 Suppl. (January 14, 2011). http://www.cdc.gov/mmwr/pdf/other/su6001.pdf



Map of supermarkets and poverty

This project provides improves options for non-motorized users to ensure an equitable Transportation System. These improvements for non-motorized multi-modal users will advance the objective of Racial Equity and Barriers to Opportunity.

Interaction Between Roadway Users

Several key project segments are fundamentally designed to improve interaction between roadway users to reduce the likelihood of severe events described as follows:

- Segment 1A – North Wenatchee Ave (SR 285) corridor improvements are designed to make this principle arterial function better in an urban environment especially as it relates to non-motorized transportation. In an urban environment, pedestrian fatalities are a primary concern. This project widens sidewalks, provides buffers and street crossings at appropriate intervals. In addition, medians and buffers will improve interaction between roadway users in a complete streets approach. This is captured in the BCA, however, with a great increase in non-motorized transportation, the models may not capture the full benefit.

- Segments 1B and 2A eliminate two at-grade crossing one of which is blocked periodically by queuing from Wenatchee Ave. signals reduces the likelihood of vehicle/train accidents at these two rail crossings of BNSF mainline.
- Segments 2A & 2B provide an evacuation corridor. Modeling in the BCA illustrates that when North Wenatchee. Ave. is blocked as it was in the 2015 Sleepy Hollow fires, having Confluence Parkway as an evacuation route has the potential to save 415 lives in a 6-hour period.
- Segment 4 - Sunset Highway / SR 28 Widening improves safety for both motorized and non-motorized movements by reconstructing a 2-lane road way with turn lanes at 6 intersecting streets. The current configuration of Sunset Highway consists of two lanes with varying shoulder widths. There are no sidewalks and the road is not divided, as one should be in an urban core.

Segment 4 - Sunset Highway – Before Improvements

Existing Roadway Configuration

Segment 4 – Sunset Highway - After Improvements

New Multi-modal Non-motorized Access

- Segment 2B-Confluence Parkway North, improves bike/ped access north and south across the Wenatchee River.
- Segment 2C-South End Bike/ Ped Access Connector, improve bike/ped and rolling access for the disabled to proactively address barriers to opportunities and to reverse the disproportional impacts of the lack of multi-modal transportation options and mitigate neighborhood bifurcation of this underserved community.

4. Community Outreach and Public Engagement

Community Outreach

The City and their partners began working with and providing ongoing outreach to agencies, tribes, businesses, and other community members in the early planning phases of the Project.

Recent Confluence Parkway Activities:

This outreach occurred during the development of the Purpose and Need Statement and preliminary Project considerations. As the Project planning and design have progressed, the City continues to reach out to those who could be impacted (positively and negatively) by the Project. In order to ensure that everyone has access to meeting information, Project meetings hosted by the City on April 10, 2019, and March 5, 2020, included interpretation services for Spanish speakers. In addition, Project information has been shared via email and social media posts in both English and Spanish and has been shared with both English-speaking and Spanish-speaking radio stations. The City has and will continue to engage interested parties through the following:

- Presentations at local community group meetings
- Meetings with interested parties and stakeholders
- Mailings and email updates at key Project milestones
- Media updates via radio and print ads for Project events

Key comments received via public meetings and other outreach events concerning social resources, communities, and environmental justice are summarized below.

- Concern about an increase in development that could be brought as a result of the new roadway and associated impacts of any such development on the environment, culture as a rural town, and natural resources.
- Desire to use berms or trees and shrubs to screen the railroad and roadway and help decrease noise.
- Comments on the importance of bicycle and pedestrian connectivity and safety in the area.
- Suggestion to use minimal/motion detected traffic lights for reduced light pollution.
- Desire for an educational center at the Horan Natural Area.
- Comment that putting the pedestrian bridge underneath the road bridge would impede views of the skyline and river and would be noisier than the current condition.
- Suggestion to add signage to the Apple Capital Recreation Loop Trail in both English and Spanish.
- Comment that relieving congestion, improving business access, and accommodating bicycles and pedestrians are substantial improvements for the community.

The City will continue to solicit feedback on the Project through the engagement types outlined above and will meaningfully engage the community through a participation process that is inclusive, effective,

and accessible to all. Additional public meetings are planned for 2021 and the City plans to continue to take community and stakeholder feedback into consideration as the Project advances.

Tribal Consultation and Coordination

FHWA and WSDOT have conducted government-to-government coordination with Native American Tribes, and the City has coordinated with Tribes about the Project. Although there are no Tribal reservations present within the Project footprint, the area where the Project is taking place is of significant importance to local tribes.

FHWA and WSDOT initiated Section 106 consultation with the Confederated Tribes of the Colville Reservation, the Confederated Bands and Tribes of the Yakama Nation, and the Sauk-Suiattle Indian Tribe and provided a first draft of the Area of Potential Effects (APE) for review on April 25, 2019. WSDOT provided the Project's *Archaeological Study Plan* (Bundy 2019) to consulting parties on May 2, 2019, and the results of preliminary fieldwork in September 2019. WSDOT staff participated in an on-site tour attended by the Confederated Tribes of the Colville Reservation and the Confederated Bands and Tribes of the Yakama Nation (as well as the City and Chelan PUD) on March 2, 2020. WSDOT staff participated in a City-led conference call update on archaeological work on July 1, 2020. At that meeting, the *Revised Archaeological Study Plan* (Bundy and Punke 2020) was discussed. The final APE was provided to consulting parties on November 3, 2020.

The City has also coordinated with Native American Tribes during the Section 106 process. The City notified Native American Tribes of fieldwork occurring the week of June 10, 2019, and a member of the Wenatchi P'squosa Advisory Committee visited archaeological fieldwork underway on June 11, 2019. On November 18, 2019, the City met with the Confederated Tribes of the Colville Reservation and the Wenatchi P'squosa Advisory Committee to discuss the Project. A member of the Wenatchi P'squosa Advisory Committee also participated in a February 22, 2020 Project location tour with Congresswoman Kim Schrier, the City, and other agencies. The City led another site tour on February 24, 2020 with the Confederated Tribes of the Colville Reservation and the Wenatchi P'squosa Advisory Committee. The City notified Native American Tribes of archaeological work occurring the weeks of March 16, 2020, June 15, 2020, and October 19, 2020. The City participated in a conference call with Native American Tribes and other agencies to discuss a coordinated approach to cultural resources in the Wenatchee Flats area on December 10, 2020.

Impacts to tribes and cultural resources will be completed though the Section 106 process and are not discussed further in this document. The Section 106 process is ongoing and will likely conclude with the development of a Section 106 Memorandum of Agreement due to an adverse impact to a historic structure.

Public engagement is key to project delivery and provides a basis for support for transportation investments. Public Outreach Links Available on the project website www.applecapitalloop.info

PAST PUBLIC ENGAGEMENT INFORMATION

Chelan-Douglas Metro Area Demographic Profile
Our Valley, Our Future Action Plan
Public Engagement Exhibits (Segments 1,2,3)
North Wenatchee Avenue Open House (Segments 1,2)
"Applying Innovation through Wireless Charging of Transit Busses"
Public Outreach Meeting (April 10, 2019)
Confluence Parkway Public Meeting

Appendix E: Technical Apple Capital Loop Detailed Technical Feasibility Analysis-February 2020 – Prepared to support INFRA Grant Application, Section 3. Public Engagement. Public engagement is ongoing; however, several key efforts are summarized in this section of the larger technical feasibility analysis. This referenced section details engagement activities as of February 2020.

Additional documents detail specific Community Outreach and Public Engagement Activities:

Segment 1-N. Wenatchee Ave Corridor Improvement Project: Fall 2018 Outreach Summary

Can be found as Appendix G: Outreach Summary on the Apple Capital Loop Website

Segment 2C- South End Bike/Ped Access Connector

South Wenatchee Community Plan can be found at: Imagine South Wenatchee | Wenatchee, WA

The Transportation and Infrastructure page from Imagine South Wenatchee is displayed on the next page for easy reference.

This sub-area plan provides recommendations for developing connections – physical, economic, social and cultural – to tie the neighborhood together, while acknowledging the importance of the regional transportation improvements.

This outreach identified that the inaccessibility of the Apple Capital Loop Trail to South Wenatchee and that SR 285 and the BNSF Tracks limit access to regional recreation and trails. Both of these identified concerns will be addressed with the implementation of Segment 2C – South End Bike / Ped Access Connector. The improve multi-modal, non-motorized Bridge will connect this neighborhood with the Apple Capital Loop Trail and the business activities in East Wenatchee.

Segment 2: Confluence Parkway Assessment: Social, Community, and Environmental Justice Technical Study is in draft form and should be finalized later this Spring.

Transportation and Infrastructure

Why It's Important for South Wenatchee:

Transportation and infrastructure support all aspects of livability. Infrastructure enables mobility, safety, physical activity, environmental protection, and economic development.

Community Priorities

- Community members agreed that the single greatest priority is to create a safe and connected pedestrian environment. Many feel that there are not enough safe routes to school, which places young children at unacceptable levels of risk. Lighting and sidewalks (a crucial aspect of a safe and connected pedestrian environment) have consistently been the top priority for South Wenatchee.
- Residents think access to transit could be enhanced. People felt that more specialized forms of transit that supported work commuting or special populations could be explored.
- Residents felt that SR 285 and the railroad tracks limit access to regional recreation facilities and trails. Arterial streets such as Crawford Avenue, Ferry Street, Mission Street, and Wenatchee Avenue create pedestrian barriers and divide the community. Creating safe pathways around these barriers is a priority.
- South Wenatchee is a gateway to Mission Ridge, East Wenatchee, and Malaga. Gateways change perceptions of visitors and residents.
- The famous Apple Capital Loop Trail is inaccessible to South Wenatchee. A pedestrian bridge over the railroad tracks connecting to the pipeline bridge would remedy this problem and a safety problem resulting from trespassing on the tracks.
- South Wenatchee has many alleys that are in need of repair. These alleys serve many residents and businesses and are pedestrian corridors. Enhancing the alleys to make them inviting deters crime and improves livability.
- Pedestrian activity is very high in South Wenatchee. Creating pedestrian corridors that connect the neighborhood will also help the city prioritize its transportation investments. A pedestrian plan should be developed. For example, Stevens Street is an important corridor connecting South Wenatchee with the Hospital and High School. The road is not very well suited for cars.
- Parking was identified as a high priority for South Wenatchee businesses to support services and retail shops, particularly on South Wenatchee Avenue. Angled parking should be considered (See Transportation White Paper in the Appendices).

Residents of South Wenatchee rely on public and non-motorized transportation twice as much as other city residents.

Typical topics within transportation and infrastructure include:

Sidewalks	Mobility
Safety	Public Transit
Stormwater Drainage	Multimodal
Lighting	Accessibility
Parking	

Parking in dense neighborhoods creates congestion. Developing opportunities for small parking lots is recommended while maximizing on street parking. Focusing on the removal of junk vehicles will also provide additional parking and cleaner streets.

- Squilchuck Creek has never been evaluated by FEMA for flood concerns. Flood control and mitigation may be necessary upon the evaluation of drainage and flood risk.

5. Conclusions and Next Steps

As noted above Public Engagement and Outreach is a continuous process that will continue throughout the implementation of this project. The Public Engagement has informed the planning and design process and will enable the project to address past inequities relating to access and barriers to opportunity, climate change.

Although, current analysis indicates that the proposed segments will improve multi-modal access to the EJ neighborhood and will not disproportionately impact these neighborhoods during construction. Continued analysis and monitoring will continue as the City and its partners moves through the phases of the project. All identified mitigation measures will be implemented and monitored post-construction for compliance and community enhancement.

Attachments:

Neighborhoods at Risk Tool Summary Reports

- Wenatchee
- South Wenatchee
- East Wenatchee

EJSCREEN Reports

The following EJSCREEN reports were run for the Apple Capital Loop with a 0.5 mile buffer and a 1 mile buffer

- Standard Reports
  - EJSCREEN Report
  - ACS 2018 Report
  - Census 2010 sf Report

HEADWATERS ECONOMICS

Neighborhoods at Risk

Selected Tracts

Selected Location(s):

Wenatchee, WA

Comparison Location:

U.S.

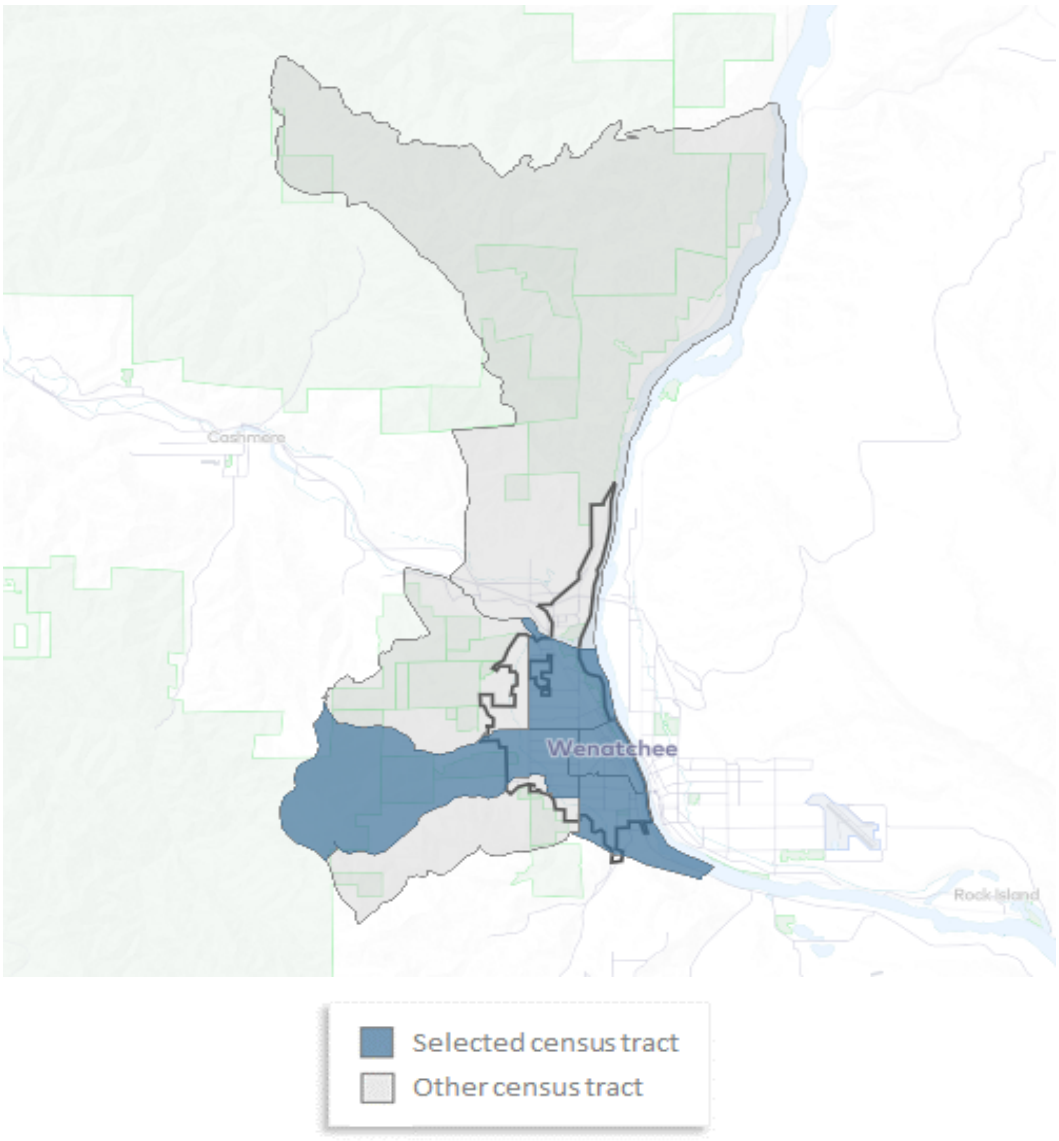
Produced by

Headwaters Economics'

Economic Profile System (EPS)

March 15, 2021

Area of Interest



Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: **headwaterseconomics.org**.

Neighborhoods at Risk

Neighborhoods at Risk is a free, web-based tool that provides cities with neighborhood-level information about at-risk populations and their vulnerability to the impacts of climate change.

Free and easy-to-use: Quickly create maps and reports of socioeconomic and climate data.

Available nation-wide: Explore socioeconomic and climate data for any community or county in the nation.

Updated continuously: Make use of the latest available, published government data.

headwaterseconomics.org/apps/neighborhoods-at-risk

Neighborhoods at Risk

Selected Tracts

Table of Contents

Summary: This front page shows a quick comparison for many of the indicators covered in this report.

Click the links above for quick access to report sections.

Neighborhoods at Risk

Selected Tracts

Summary

Indicators 2019*	Selected Tracts	U.S.	Percent Difference Selected Tracts vs. U.S.
People under 5 years	7.5%	6.1%	21%
People over 65 years	15.5%	15.6%	-1%
People of color (including Hispanic)	44.8%	39.3%	13%
People who don't speak English well	9.9%	4.3%	79%
People without a high school degree	21.7%	12.0%	58%
Families in poverty	13.3%	9.5%	33%
Housing units that are rentals	48.1%	36.0%	29%
Households with no car	7.0%	8.6%	-21%
People with disabilities	16.5%	12.6%	27%
People without health insurance	10.5%	8.8%	18%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.
Medium Reliability: Data with CVs between 12 & 40% are in orange. These values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

* ACS 5-year estimates: 2019 represents average characteristics from 2015-2019.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/par.

Neighborhoods at Risk

Selected Tracts

Summary

What do we measure on this page?

This page shows a quick comparison for many of the indicators covered in this report to highlight how the selected tracts differ from the United States as a whole.

The percent, or relative, difference between the selected tracts and the U.S. is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Neighborhoods at Risk

Selected Tracts

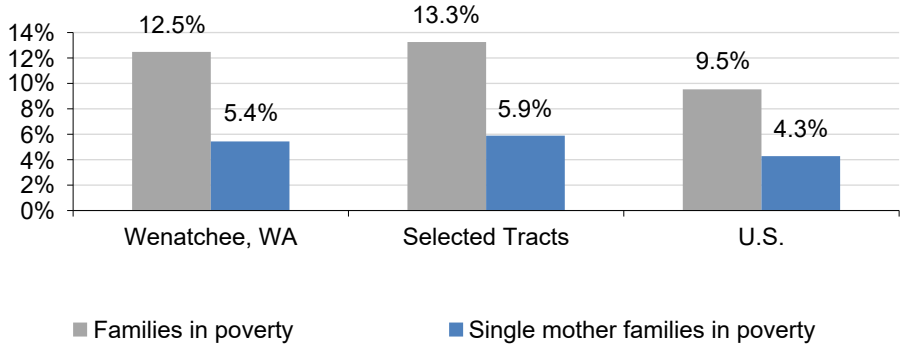
Families in Poverty

	Wenatchee, WA	Selected Tracts	U.S.
Total families for whom poverty status is determined, 2019*	7,654	7,062	79,114,031
Families in poverty	955	936	7,541,196
Families with children in poverty	692	692	5,581,063
Single mother families in poverty	416	416	3,385,236
Percent of Total, 2019*			
Families in poverty	12.5%	13.3%	9.5%
Families with children in poverty	9.0%	9.8%	7.1%
Single mother families in poverty	5.4%	5.9%	4.3%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Families in poverty	2.2	2.4	-0.5
Families with children in poverty	0.2	0.3	-0.8
Single mother families in poverty	-0.5	-0.5	-0.5

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

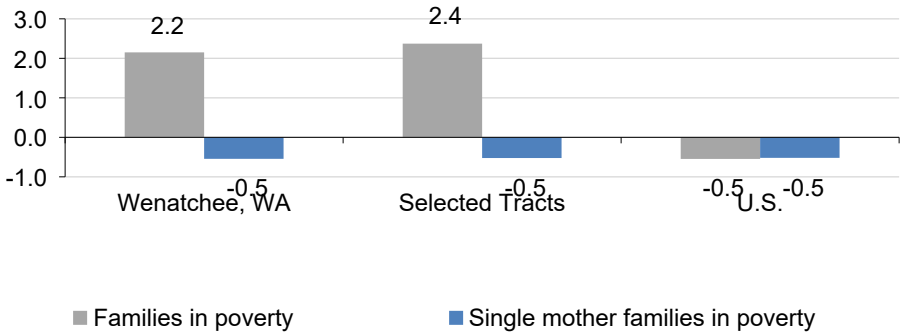
Families in Poverty, Percent of Total, 2019*

- Selected Tracts has the largest share of single mother families in poverty (5.9%).



Families in Poverty, Change in Percentage Points, 2010*-2019*

- The largest change in the share of single mother familes in poverty occurred in Wenatchee, WA, which went from 6.0% to 5.4%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.[1]

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.[11, 2]

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.[2] Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.[5]

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.[1, 2] Furthermore, those in high-crime areas may not want to open their windows.[2]

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.[1]

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.[12]

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.[2]

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.[11]

Superscript numbers refer to references provided at the end of the report.

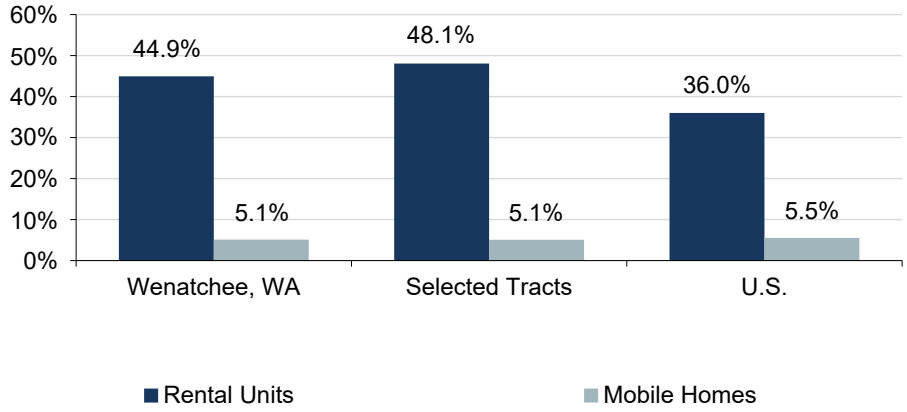
Rental & Mobile Homes

	Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Housing Units, 2019*	12,744	12,105	120,756,048
Rental Units	5,727	5,817	43,481,667
Mobile Homes	652	614	6,681,368
Percent of Total, 2019*			
Rental Units	44.9%	48.1%	36.0%
Mobile Homes	5.1%	5.1%	5.5%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Rental Units	7.7	9.5	4.4
Mobile Homes	-1.1	-1.9	-0.3
Median Home Value (MHV), 2019* (2014 $s)	$253,600	na	$217,500
Change in MHV, 2010*-2019* (2014 $s)	$22,833	na	-$3,305

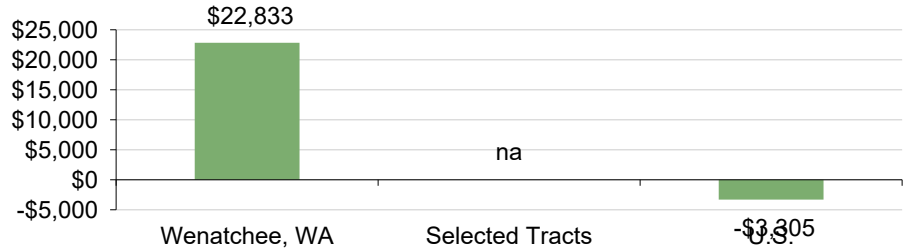
High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Rental Units and Mobile Homes as a Percent of Total Housing Units, 2019*

- Selected Tracts has the largest share of rental units (48.1%).
- The U.S. has the largest share of mobile homes (5.5%).



Change in Median Home Value, 2010*-2019* (2014 $s)



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one's living situation, and financial stability.[13]

The financial stress associated with losing one's home is heightened by people's emotional attachment to their home and their neighborhood.[14]

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.[15]

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.[13]

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.[1] High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.[4]

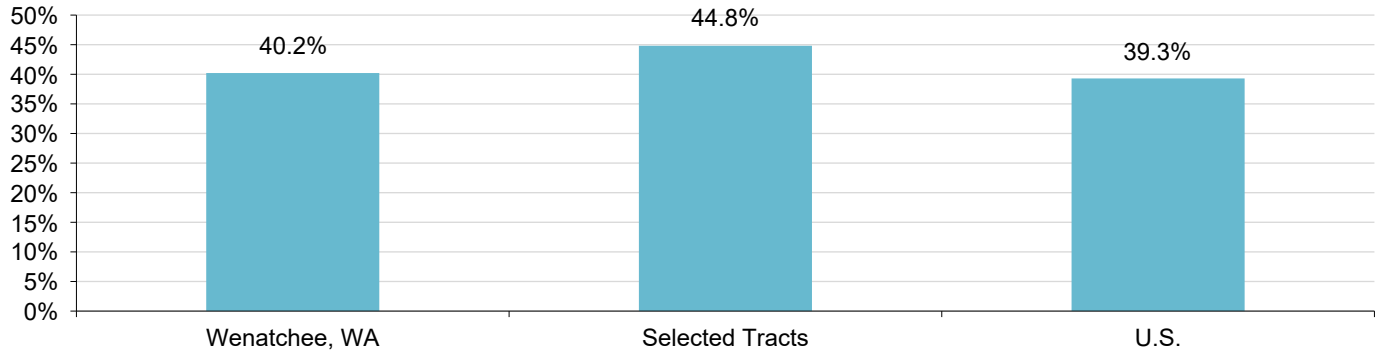
Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.[4,11]

People of Color and Hispanics

	Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	34,188	32,958	324,697,795
White alone	24,838	23,121	235,377,662
Black or African American alone	˙427	˙427	41,234,642
American Indian alone	˙451	˙451	2,750,143
Asian alone	˙238	¨152	17,924,209
Native Hawaii & Other Pacific Is. alone	¨22	¨22	599,868
Some other race alone	˙5,928	˙6,679	16,047,369
Two or more races	˙2,284	˙2,106	10,763,902
Hispanic or Latino (of any race)	11,576	12,817	58,479,370
Not Hispanic or Latino	22,612	20,141	266,218,425
Not Hispanic & White alone	20,441	18,187	197,100,373
People of Color and Hispanics	13,747	14,771	127,597,422
Percent of Total, 2019*			
White alone	72.7%	70.2%	72.5%
Black or African American alone	˙1.2%	˙1.3%	12.7%
American Indian alone	˙1.3%	˙1.4%	0.8%
Asian alone	˙0.7%	˙0.5%	5.5%
Native Hawaii & Other Pacific Is. alone	0.1%	¨0.1%	0.2%
Some other race alone	˙17.3%	˙20.3%	4.9%
Two or more races	˙6.7%	˙6.4%	3.3%
Hispanic or Latino (of any race)	33.9%	38.9%	18.0%
Not Hispanic or Latino	66.1%	61.1%	82.0%
Not Hispanic & White alone	59.8%	55.2%	60.7%
People of Color and Hispanics	40.2%	44.8%	39.3%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People of Color and Hispanics, Percent of Total, 2019*



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

People of Color and Hispanics

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

"People of Color and Hispanics" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from “Total Population.”

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.[1]

Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.[7, 1]

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.[1]

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.[8, 4]

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.[1,9]

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.[5]

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.[10]

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.[5]

Hispanics have higher rates of diabetes and asthma.[5]

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.[2] They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Language Proficiency

	Wenatchee, WA	Selected Tracts	U.S.
Population 5 years or older, 2019*	31,731	30,488	304,930,125
Speak English "not well"***	2,646	3,025	13,193,113
Speak English "not well"***, percent	8.3%	9.9%	4.3%
Speak English "not well"***, change in percentage points**, 2010*-2019*	1.4	1.6	-0.4

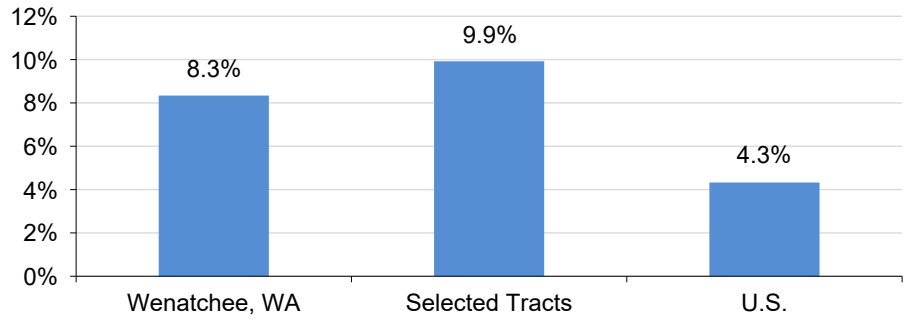
**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.

*** Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

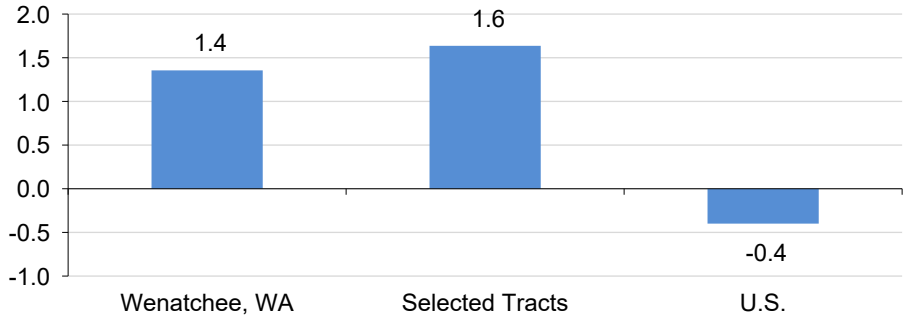
People Who Speak English "Not Well", Percent of Total, 2019*

- Selected Tracts has the largest share of people who speak English "not well" (9.9%).



People Who Speak English "Not Well", Change in Percentage Points, 2010*-2019*

- The largest change in the share of people who speak English "not well" occurred in Selected Tracts, which went from 8.3% to 9.9%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person's ability to take action during an emergency is compromised by language and cultural barriers.[4]

Poor English skills can make it harder to follow directions or interact with agencies.[4]

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.[1]

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.[1]

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.[1] However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

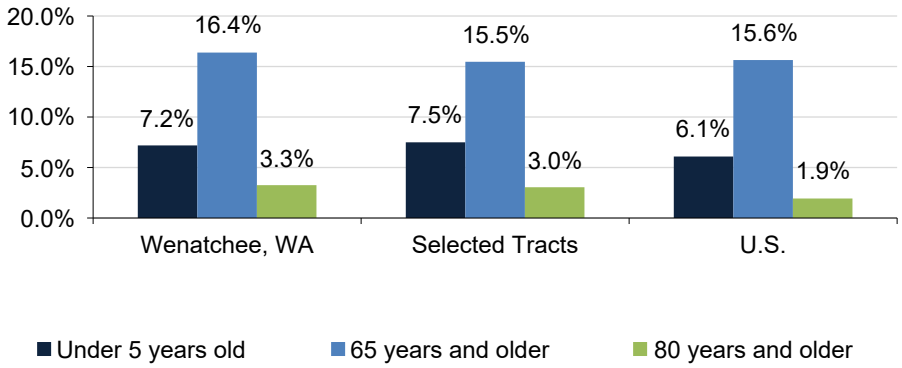
Young & Elderly Populations

	Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	34,188	32,958	324,697,795
Under 5 years old	2,457	2,470	19,767,670
65 years and older	5,600	5,098	50,783,796
80 years and older	1,112	1,004	6,269,017
Percent of Total, 2019*			
Under 5 years old	7.2%	7.5%	6.1%
65 years and older	16.4%	15.5%	15.6%
80 years and older	3.3%	3.0%	1.9%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Under 5 years old	0.8	0.6	-0.5
65 years and older	1.6	1.4	2.9
80 years and older	0.0	-0.3	0.2

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

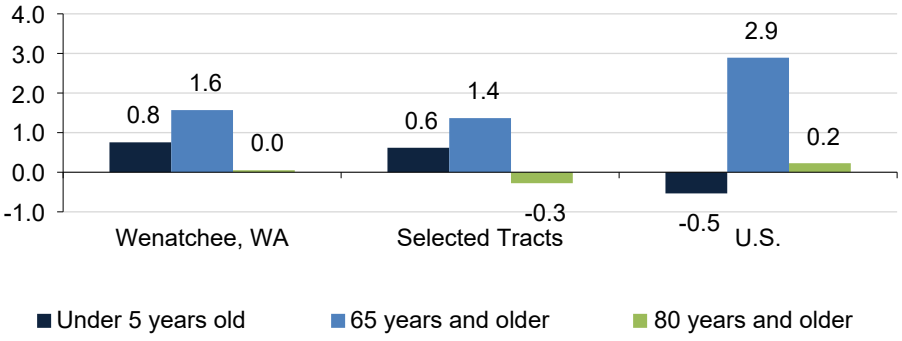
Population by Group, Percent of Total, 2019*

- Selected Tracts has the largest share of people under 5 years old (7.5%).
- Wenatchee, WA has the largest share of people 80 years and older (3.3%).



Population by Group, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people under 5 years old occurred in Wenatchee, WA, which went from 6.4% to 7.5%.
- The largest change in the share of people 80 years and older occurred in Selected Tracts, which went from 3.3% to 3.0%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.[1]

Children's developing bodies makes them particularly sensitive to health problems and environmental stresses.[1]

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.[2]

Because so many factors of a child's life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.[2]

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.[3, 4]

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.[3]

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.[4]

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.[3]

The likelihood of chronic disease increases with age.[1, 5]

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.[3, 6]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Educational Attainment

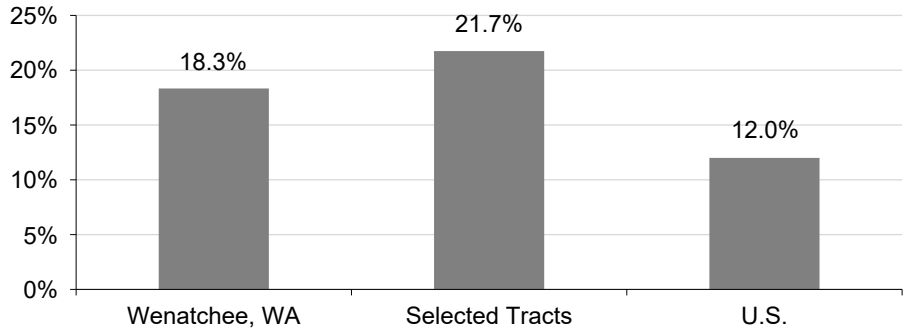
	Wenatchee, WA	Selected Tracts	U.S.
Total Population 25 years or older, 2019*	22,413	21,205	220,622,076
No high school degree	4,109	4,611	26,472,261
No high school degree, percent	18.3%	21.7%	12.0%
No high school degree, change in percentage points**, 2010*-2019*	-0.4	0.6	-3.0

**For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

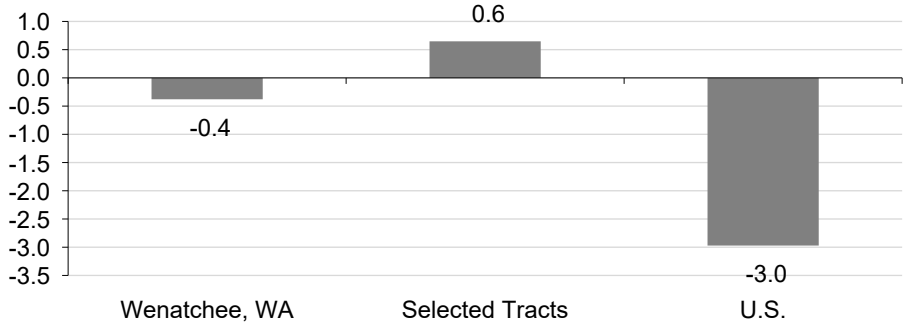
Population with Less than High School Education, Percent of Total, 2019*

- Selected Tracts has the largest share of people with less than a high school education (21.7%).



Population with Less than High School Education, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people with less than a high school degree occurred in the U.S., which went from 15.0% to 12.0%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.[5]

A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.[4]

Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.[7]

The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.[5]

Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

Neighborhoods at Risk

Selected Tracts

Potentially Vulnerable Households

	Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Households, 2019*	12,744	12,105	120,756,048
People > 65 years & living alone	1,050	998	4,527,381
Single female households	1,492	1,497	15,016,964
with children < 18 years	1,010	1,047	9,427,068
Households with no car	856	846	10,395,713
Percent of Total, 2019*			
People > 65 years & living alone	8.2%	8.2%	3.7%
Single female households	11.7%	12.4%	12.4%
with children < 18 years	7.9%	8.6%	7.8%
Households with no car	6.7%	7.0%	8.6%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
People > 65 years & living alone	0.5	0.2	-0.8
Single female households	-0.3	0.4	-0.2
with children < 18 years	-1.5	-0.7	0.0
Households with no car	-1.0	-1.1	-77.3

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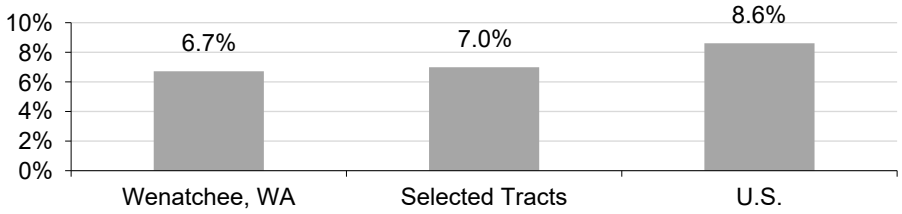
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

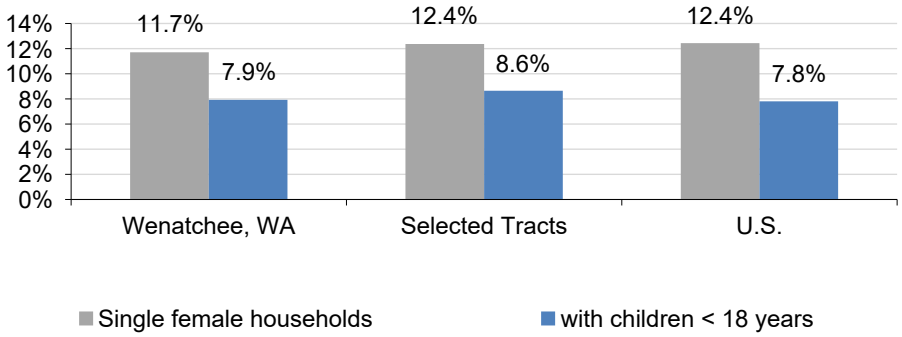
People > 65 Yrs and Living Alone as a Percent of Total Households, 2019*

- Selected Tracts has the largest share of households with people over 65 living alone (8.2%).



Single Female Households as a Percent of Total Households, 2019*

- The U.S. has the largest share of single female households (12.4%).
- Selected Tracts has the largest share of single female households with children (8.6%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.[2]

People 65 and older are particularly vulnerable to heat-related illness,[4] which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.[16]

In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.[17]
Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.[18]

Single-mother families are disproportionally exposed to hazardous levels of air pollution.[4]

Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.[18]

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.[19]

Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.[20]

During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.[4]

During heat waves, people without a car are less able to go to community cooling centers or cooler areas.[4]

Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.[21]

Potentially Vulnerable People

	Wenatchee, WA	Selected Tracts	U.S.
Total civilian noninstitutionalized population, 2019*	33,635	32,405	319,706,872
People w/ disabilities	5,644	5,335	40,335,099
People w/o health insurance	3,297	3,411	28,248,613
Percent of Total, 2019*			
Percent of people w/ disabilities	16.8%	16.5%	12.6%
Percent of people w/o health insurance	9.8%	10.5%	8.8%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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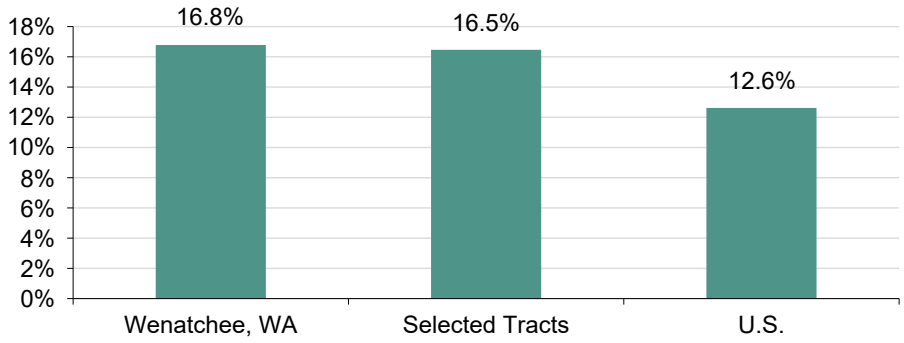
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

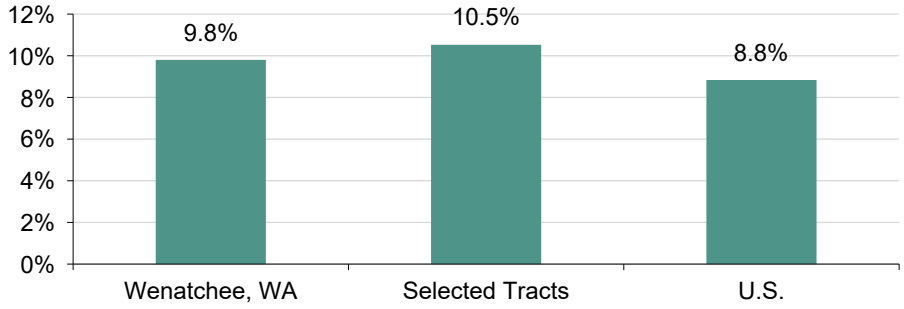
People with Disabilities, Percent of Total, 2019*

- Wenatchee, WA has the largest share of the noninstitutionalized population that is disabled (16.8%).



People without Health Insurance, Percent of Total, 2019*

- Selected Tracts has the largest share of the noninstitutionalized population without health insurance (10.5%).



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Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

Disabled people are less likely to have health insurance, compared to the non-disabled population.[5]

Being confined to a bed raises heat mortality.[2]

Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.[3]

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.[10]

People with lower educational attainment are more likely to be uninsured.[5]

People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.[32,33] This risk is particularly evident among racial and ethnic minorities.[5]

People without health insurance are more likely to use the hospital emergency department for standard health care needs.[5]

About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.[23]

Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.[24]

People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.[4]

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HEADWATERS ECONOMICS

Neighborhoods at Risk

Selected Tracts

Selected Location(s):

South Wenatchee, WA

Comparison Location:

U.S.

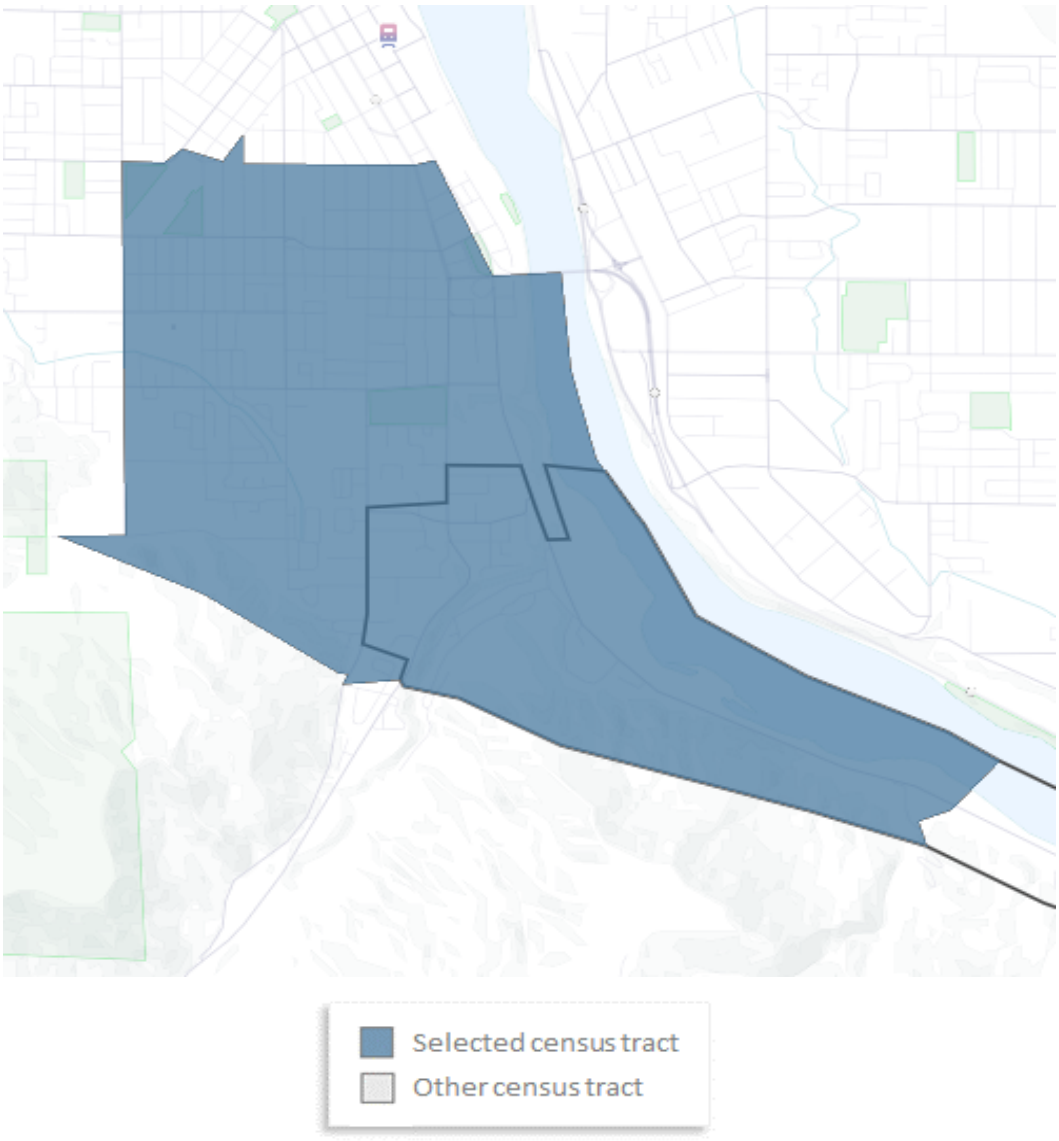
Produced by

Headwaters Economics'

Economic Profile System (EPS)

March 15, 2021

Area of Interest



Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: **headwaterseconomics.org**.

Neighborhoods at Risk

Neighborhoods at Risk is a free, web-based tool that provides cities with neighborhood-level information about at-risk populations and their vulnerability to the impacts of climate change.

Free and easy-to-use: Quickly create maps and reports of socioeconomic and climate data.

Available nation-wide: Explore socioeconomic and climate data for any community or county in the nation.

Updated continuously: Make use of the latest available, published government data.

headwaterseconomics.org/apps/neighborhoods-at-risk

Neighborhoods at Risk

Selected Tracts

Table of Contents

Summary: This front page shows a quick comparison for many of the indicators covered in this report.

Click the links above for quick access to report sections.

Neighborhoods at Risk

Selected Tracts

Summary

Indicators 2019*	Selected Tracts	U.S.	Percent Difference Selected Tracts vs. U.S.
People under 5 years	9.6%	6.1%	45%
People over 65 years	9.2%	15.6%	-52%
People of color (including Hispanic)	64.7%	39.3%	49%
People who don't speak English well	14.3%	4.3%	108%
People without a high school degree	34.2%	12.0%	96%
Families in poverty	13.9%	9.5%	38%
Housing units that are rentals	40.0%	36.0%	10%
Households with no car	**5.8%**	8.6%	-39%
People with disabilities	14.3%	12.6%	13%
People without health insurance	13.0%	8.8%	39%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.
Medium Reliability: Data with CVs between 12 & 40% are in orange. These values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

* ACS 5-year estimates: 2019 represents average characteristics from 2015-2019.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/par.

Neighborhoods at Risk

Selected Tracts

Summary

What do we measure on this page?

This page shows a quick comparison for many of the indicators covered in this report to highlight how the selected tracts differ from the United States as a whole.

The percent, or relative, difference between the selected tracts and the U.S. is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Neighborhoods at Risk

Selected Tracts

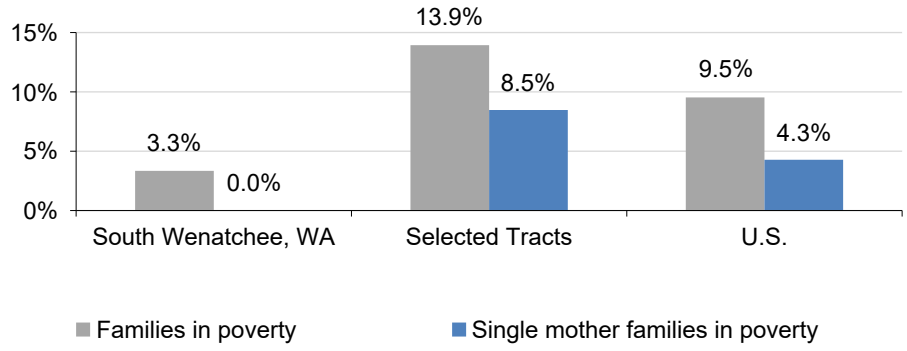
Families in Poverty

	South Wenatchee, WA	Selected Tracts	U.S.
Total families for whom poverty status is determined, 2019*	299	2,325	79,114,031
Families in poverty	**10**	**324**	7,541,196
Families with children in poverty	0	**246**	5,581,063
Single mother families in poverty	0	**197**	3,385,236
Percent of Total, 2019*			
Families in poverty	**3.3%**	**13.9%**	9.5%
Families with children in poverty	**0.0%**	**10.6%**	7.1%
Single mother families in poverty	**0.0%**	**8.5%**	4.3%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Families in poverty	3.3	1.8	-0.5
Families with children in poverty	**0.0**	-0.5	-0.8
Single mother families in poverty	**0.0**	-1.4	-0.5

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

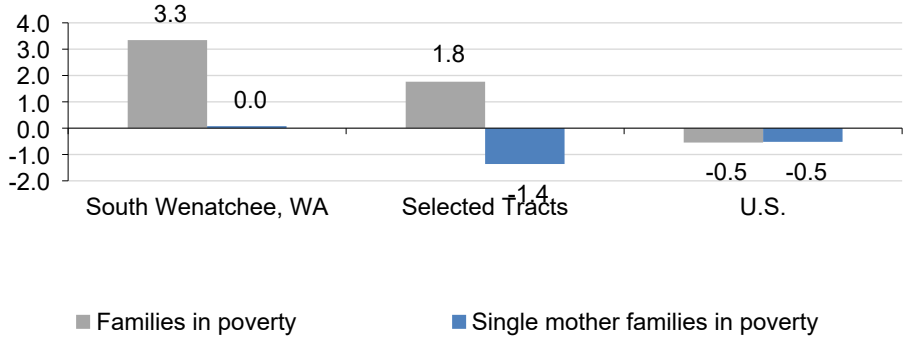
Families in Poverty, Percent of Total, 2019*

- Selected Tracts has the largest share of single mother families in poverty (8.5%).



Families in Poverty, Change in Percentage Points, 2010*-2019*

- The largest change in the share of single mother familes in poverty occurred in Selected Tracts, which went from 9.8% to 8.5%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.[1]

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.[11, 2]

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.[2] Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.[5]

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.[1, 2] Furthermore, those in high-crime areas may not want to open their windows.[2]

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.[1]

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.[12]

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.[2]

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.[11]

Superscript numbers refer to references provided at the end of the report.

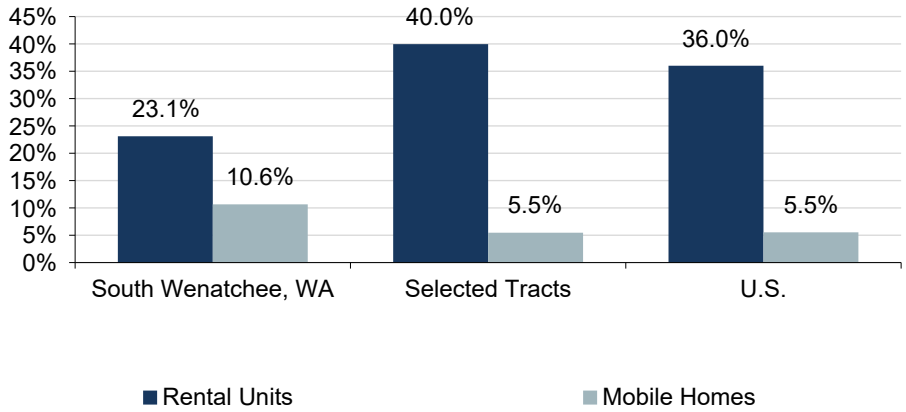
Rental & Mobile Homes

	South Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Housing Units, 2019*	554	3,221	120,756,048
Rental Units	**128**	1,287	43,481,667
Mobile Homes	**59**	**176**	6,681,368
Percent of Total, 2019*			
Rental Units	**23.1%**	40.0%	36.0%
Mobile Homes	**10.6%**	**5.5%**	5.5%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Rental Units	11.0	7.5	4.4
Mobile Homes	-22.0	-5.9	-0.3
Median Home Value (MHV), 2019* (2014 $s)	$160,100	$225,400	$217,500
Change in MHV, 2010*-2019* (2014 $s)	**$32,704**	**$21,472**	-$3,305

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

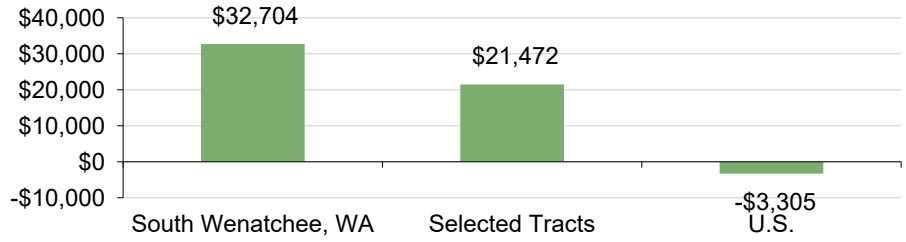
Rental Units and Mobile Homes as a Percent of Total Housing Units, 2019*

- Selected Tracts has the largest share of rental units (40.0%).
- South Wenatchee, WA has the largest share of mobile homes (10.6%).



Change in Median Home Value, 2010*-2019* (2014 $s)

- The largest change in median home value occurred in South Wenatchee, WA, which went from $127,396 to $160,100.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one's living situation, and financial stability.[13]

The financial stress associated with losing one's home is heightened by people's emotional attachment to their home and their neighborhood.[14]

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.[15]

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.[13]

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.[1] High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.[4]

Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.[4,11]

People of Color and Hispanics

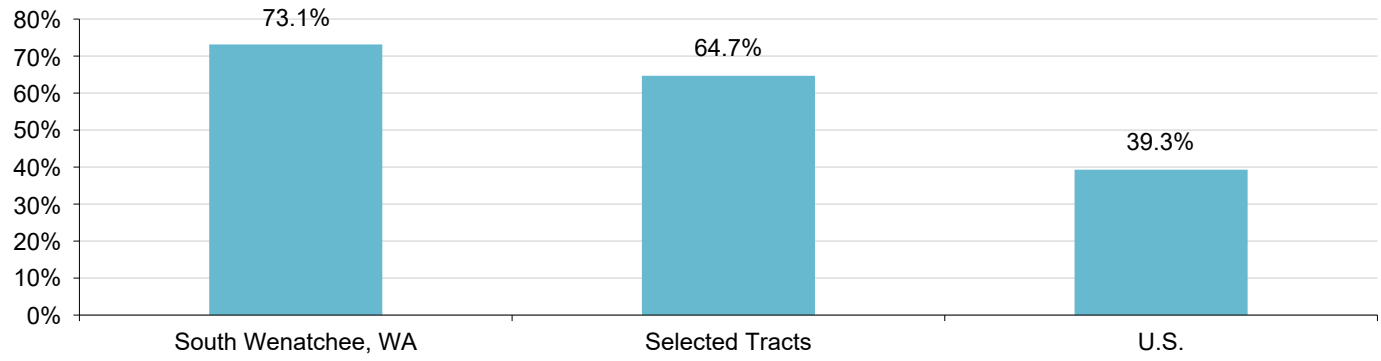
	South Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	˙1,821	10,869	324,697,795
White alone	˙1,258	6,134	235,377,662
Black or African American alone	¨0	¨214	41,234,642
American Indian alone	¨0	¨160	2,750,143
Asian alone	¨0	¨0	17,924,209
Native Hawaii & Other Pacific Is. alone	¨0	¨0	599,868
Some other race alone	¨563	˙4,094	16,047,369
Two or more races	¨0	˙267	10,763,902
Hispanic or Latino (of any race)	1,332	6,473	58,479,370
Not Hispanic or Latino	489	4,396	266,218,425
Not Hispanic & White alone	489	3,839	197,100,373
People of Color and Hispanics	1,332	7,030	127,597,422

Percent of Total, 2019*

White alone	˙69.1%	56.4%	72.5%
Black or African American alone	¨0.0%	¨2.0%	12.7%
American Indian alone	¨0.0%	¨1.5%	0.8%
Asian alone	¨0.0%	¨0.0%	5.5%
Native Hawaii & Other Pacific Is. alone	¨0.0%	¨0.0%	0.2%
Some other race alone	¨30.9%	˙37.7%	4.9%
Two or more races	¨0.0%	˙2.5%	3.3%
Hispanic or Latino (of any race)	˙73.1%	59.6%	18.0%
Not Hispanic or Latino	˙26.9%	40.4%	82.0%
Not Hispanic & White alone	˙26.9%	35.3%	60.7%
People of Color and Hispanics	˙73.1%	64.7%	39.3%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People of Color and Hispanics, Percent of Total, 2019*



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CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

People of Color and Hispanics

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

"People of Color and Hispanics" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from “Total Population.”

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.[1]

Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.[7, 1]

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.[1]

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.[8, 4]

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.[1,9]

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.[5]

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.[10]

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.[5]

Hispanics have higher rates of diabetes and asthma.[5]

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.[2] They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Language Proficiency

	South Wenatchee, WA	Selected Tracts	U.S.
Population 5 years or older, 2019*	1,667	9,825	304,930,125
Speak English "not well"***	271	1,409	13,193,113
Speak English "not well"***, percent	**16.3%**	14.3%	4.3%
Speak English "not well"***, change in percentage points**, 2010*-2019*	-17.6	0.7	-0.4

**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.

*** Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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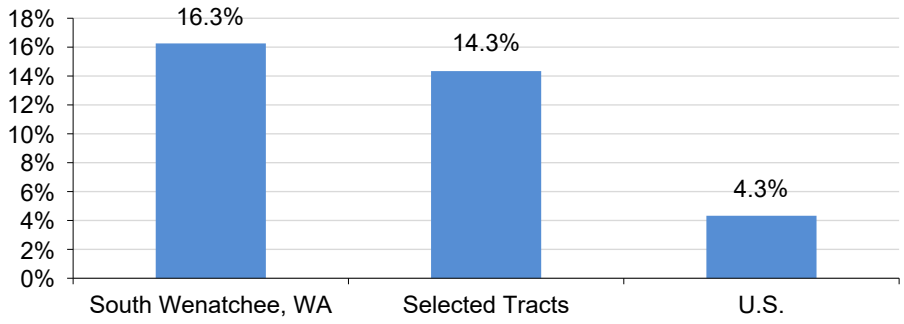
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

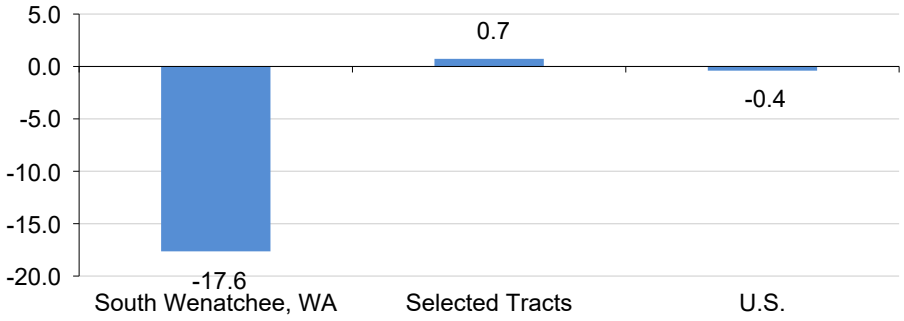
People Who Speak English "Not Well", Percent of Total, 2019*

- South Wenatchee, WA has the largest share of people who speak English "not well" (16.3%).



People Who Speak English "Not Well", Change in Percentage Points, 2010*-2019*

- The largest change in the share of people who speak English "not well" occurred in South Wenatchee, WA, which went from 33.9% to 16.3%.



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CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person's ability to take action during an emergency is compromised by language and cultural barriers.[4]

Poor English skills can make it harder to follow directions or interact with agencies.[4]

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.[1]

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.[1]

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.[1] However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

Neighborhoods at Risk

Selected Tracts

Young & Elderly Populations

	South Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	1,821	10,869	324,697,795
Under 5 years old	**154**	1,044	19,767,670
65 years and older	206	1,002	50,783,796
80 years and older	**47**	217	6,269,017
Percent of Total, 2019*			
Under 5 years old	**8.5%**	9.6%	6.1%
65 years and older	11.3%	9.2%	15.6%
80 years and older	**2.6%**	2.0%	1.9%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Under 5 years old	-3.2	**0.0**	-0.5
65 years and older	4.3	-0.6	2.9
80 years and older	2.6	-0.5	0.2

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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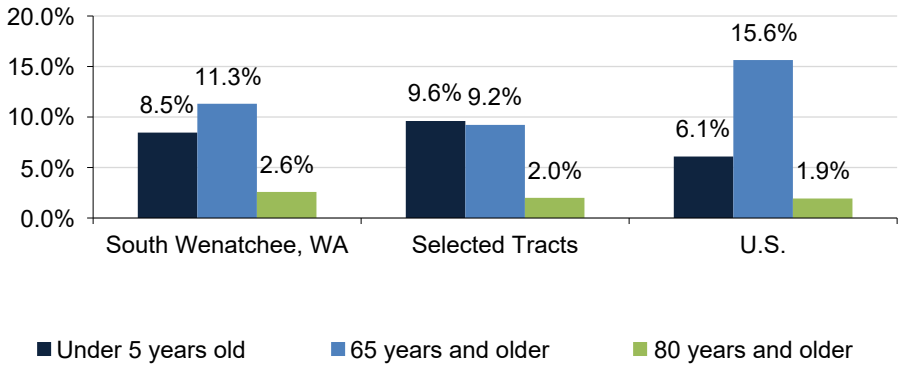
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

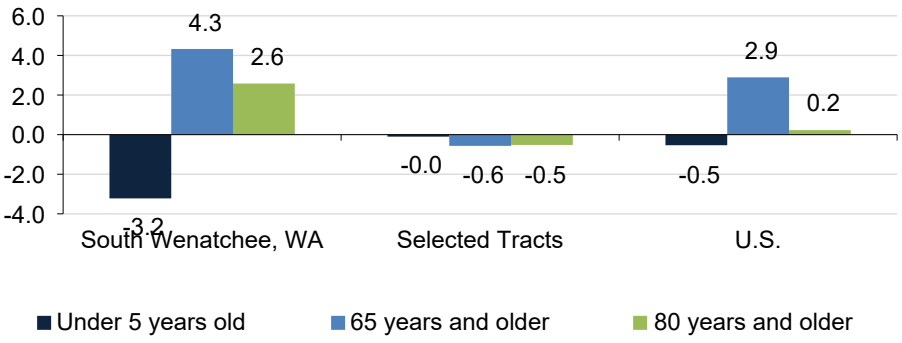
Population by Group, Percent of Total, 2019*

- Selected Tracts has the largest share of people under 5 years old (9.6%).
- South Wenatchee, WA has the largest share of people 80 years and older (2.6%).



Population by Group, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people under 5 years old occurred in South Wenatchee, WA, which went from 11.7% to 8.5%.
- The largest change in the share of people 80 years and older occurred in South Wenatchee, WA, which went from 0.0% to 2.6%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.[1]

Children's developing bodies makes them particularly sensitive to health problems and environmental stresses.[1]

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.[2]

Because so many factors of a child's life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.[2]

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.[3, 4]

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.[3]

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.[4]

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.[3]

The likelihood of chronic disease increases with age.[1, 5]

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.[3, 6]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Educational Attainment

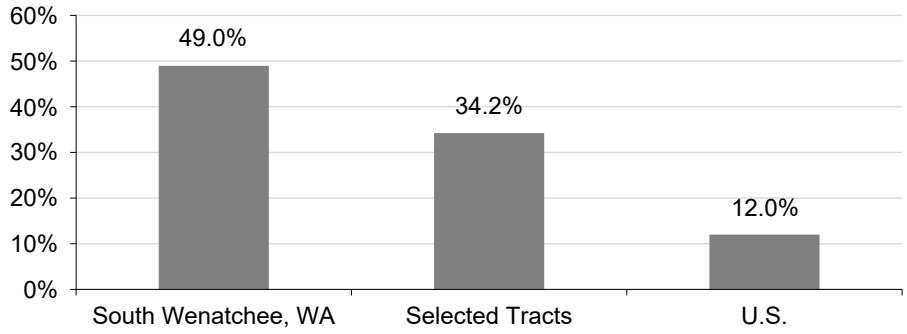
	South Wenatchee, WA	Selected Tracts	U.S.
Total Population 25 years or older, 2019*	1,058	6,128	220,622,076
No high school degree	518	2,098	26,472,261
No high school degree, percent	49.0%	34.2%	12.0%
No high school degree, change in percentage points**, 2010*-2019*	-6.8	-0.4	-3.0

**For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

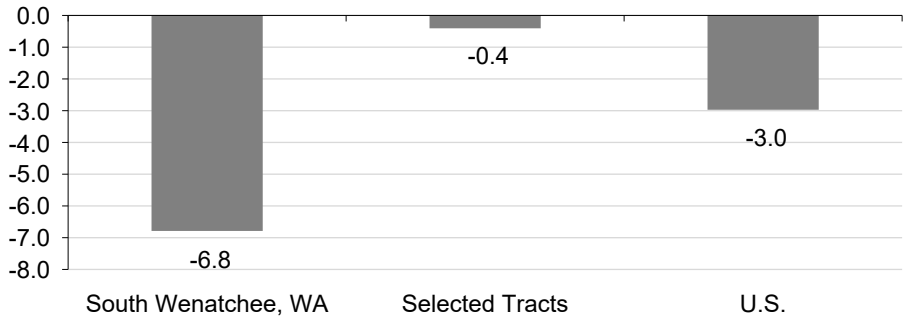
Population with Less than High School Education, Percent of Total, 2019*

- South Wenatchee, WA has the largest share of people with less than a high school education (49.0%).



Population with Less than High School Education, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people with less than a high school degree occurred in South Wenatchee, WA, which went from 55.7% to 49.0%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.[5]

A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.[4]

Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.[7]

The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.[5]

Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

Neighborhoods at Risk

Selected Tracts

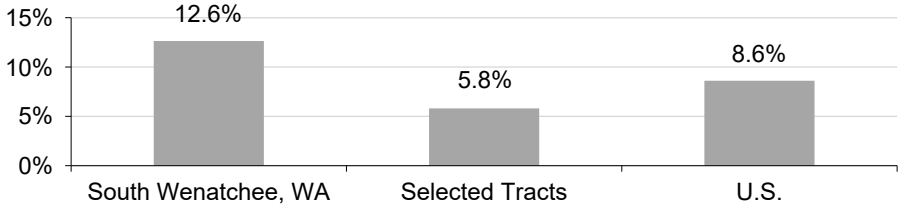
Potentially Vulnerable Households

	South Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Households, 2019*	554	3,221	120,756,048
People > 65 years & living alone	**36**	**120**	4,527,381
Single female households	**74**	503	15,016,964
with children < 18 years	**74**	487	9,427,068
Households with no car	**70**	187	10,395,713
Percent of Total, 2019*			
People > 65 years & living alone	**6.5%**	**3.7%**	3.7%
Single female households	**13.4%**	15.6%	12.4%
with children < 18 years	**13.4%**	15.1%	7.8%
Households with no car	**12.6%**	5.8%	8.6%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
People > 65 years & living alone	6.5	-4.0	-0.8
Single female households	4.5	-2.1	-0.2
with children < 18 years	4.5	1.7	0.0
Households with no car	7.8	-3.5	-77.3

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

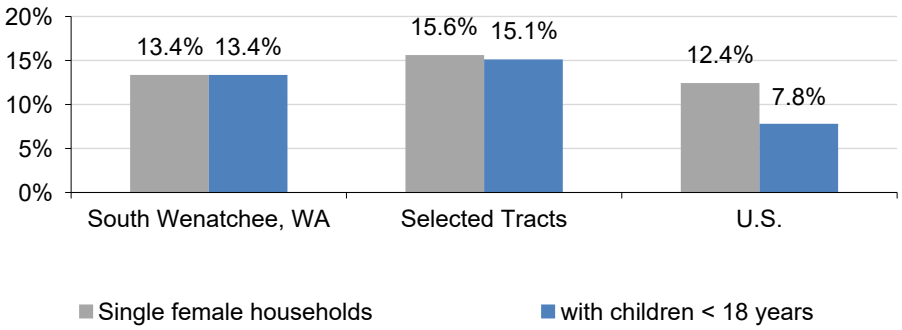
People > 65 Yrs and Living Alone as a Percent of Total Households, 2019*

- South Wenatchee, WA has the largest share of households with people over 65 living alone (6.5%).



Single Female Households as a Percent of Total Households, 2019*

- Selected Tracts has the largest share of single female households (15.6%).
- Selected Tracts has the largest share of single female households with children (15.1%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.[2]

People 65 and older are particularly vulnerable to heat-related illness,[4] which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.[16]

In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.[17]
Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.[18]

Single-mother families are disproportionally exposed to hazardous levels of air pollution.[4]

Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.[18]

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.[19]

Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.[20]

During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.[4]

During heat waves, people without a car are less able to go to community cooling centers or cooler areas.[4]

Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.[21]

Neighborhoods at Risk

Selected Tracts

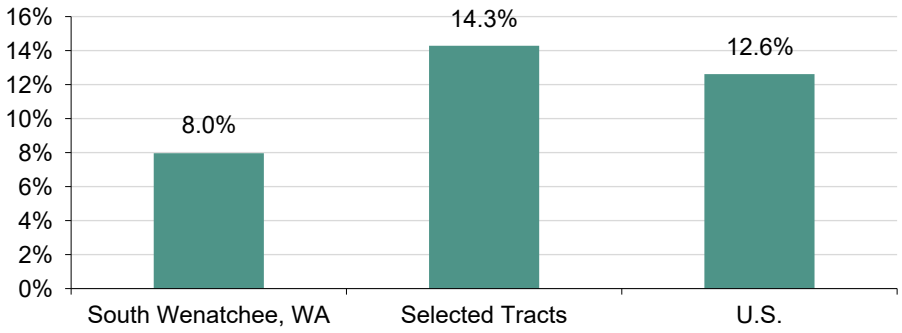
Potentially Vulnerable People

	South Wenatchee, WA	Selected Tracts	U.S.
Total civilian noninstitutionalized population, 2019*	1,821	10,781	319,706,872
People w/ disabilities	**145**	1,540	40,335,099
People w/o health insurance	**252**	1,405	28,248,613
Percent of Total, 2019*			
Percent of people w/ disabilities	**8.0%**	14.3%	12.6%
Percent of people w/o health insurance	**13.8%**	13.0%	8.8%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

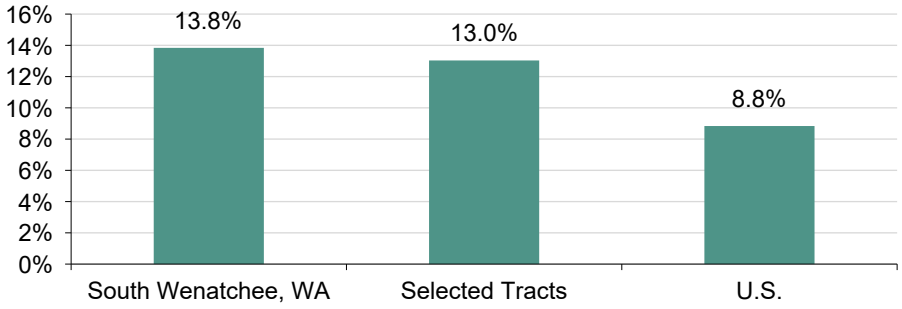
People with Disabilities, Percent of Total, 2019*

- Selected Tracts has the largest share of the noninstitutionalized population that is disabled (14.3%).



People without Health Insurance, Percent of Total, 2019*

- South Wenatchee, WA has the largest share of the noninstitutionalized population without health insurance (13.8%).



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

Disabled people are less likely to have health insurance, compared to the non-disabled population.[5]

Being confined to a bed raises heat mortality.[2]

Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.[3]

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.[10]

People with lower educational attainment are more likely to be uninsured.[5]

People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.[32,33] This risk is particularly evident among racial and ethnic minorities.[5]

People without health insurance are more likely to use the hospital emergency department for standard health care needs.[5]

About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.[23]

Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.[24]

People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.[4]

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HEADWATERS ECONOMICS

Neighborhoods at Risk

Selected Tracts

Selected Location(s):

East Wenatchee, WA

Comparison Location:

U.S.

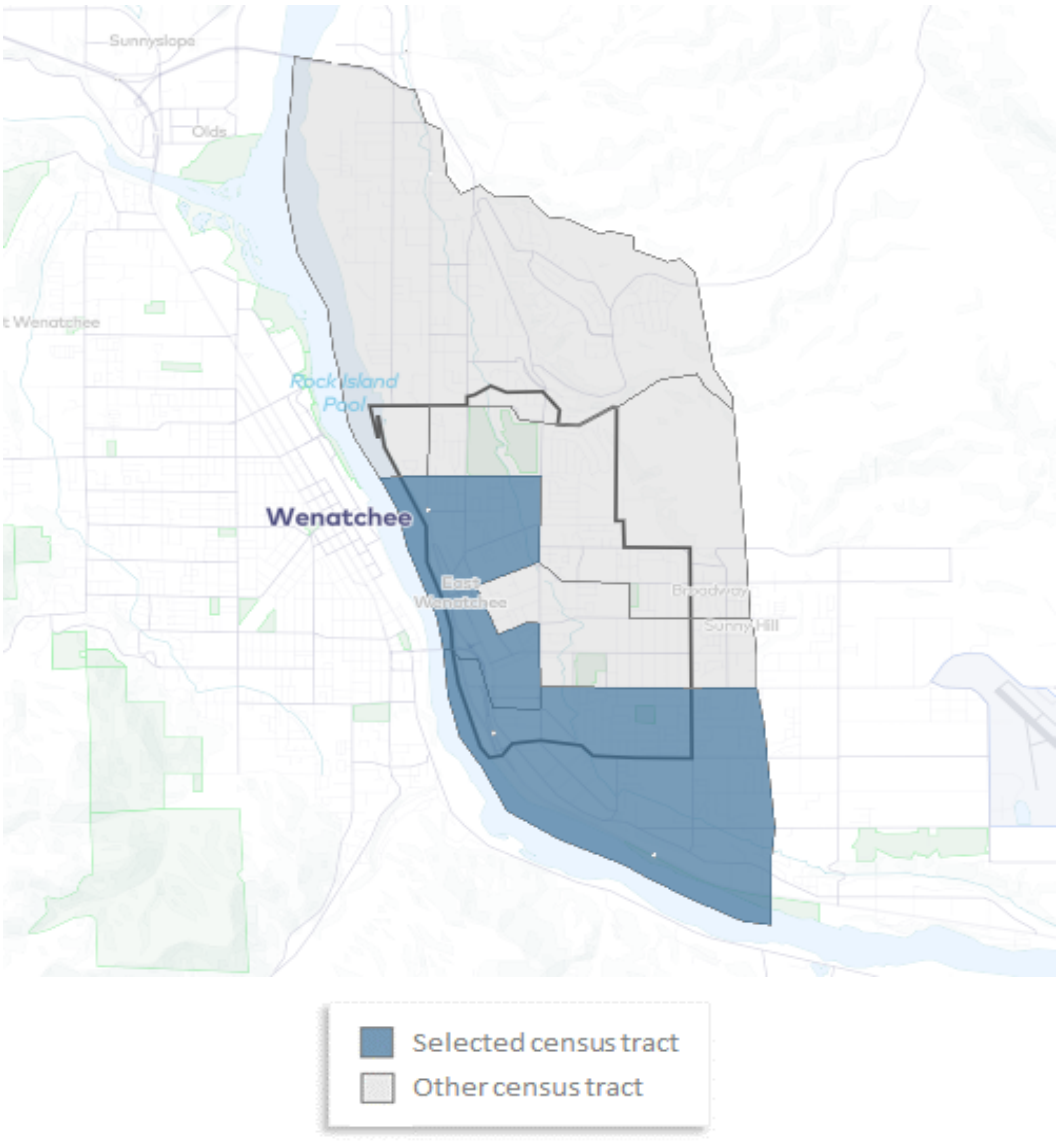
Produced by

Headwaters Economics'

Economic Profile System (EPS)

March 15, 2021

Area of Interest



Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: **headwaterseconomics.org**.

Neighborhoods at Risk

Neighborhoods at Risk is a free, web-based tool that provides cities with neighborhood-level information about at-risk populations and their vulnerability to the impacts of climate change.

Free and easy-to-use: Quickly create maps and reports of socioeconomic and climate data.

Available nation-wide: Explore socioeconomic and climate data for any community or county in the nation.

Updated continuously: Make use of the latest available, published government data.

headwaterseconomics.org/apps/neighborhoods-at-risk

Neighborhoods at Risk

Selected Tracts

Table of Contents

Summary: This front page shows a quick comparison for many of the indicators covered in this report.

Click the links above for quick access to report sections.

Neighborhoods at Risk

Selected Tracts

Summary

Indicators 2019*	Selected Tracts	U.S.	Percent Difference Selected Tracts vs. U.S.
People under 5 years	8.3%	6.1%	31%
People over 65 years	15.7%	15.6%	1%
People of color (including Hispanic)	37.8%	39.3%	-4%
People who don't speak English well	6.9%	4.3%	46%
People without a high school degree	18.1%	12.0%	41%
Families in poverty	6.5%	9.5%	-38%
Housing units that are rentals	37.7%	36.0%	5%
Households with no car	**4.5%**	8.6%	-63%
People with disabilities	22.0%	12.6%	54%
People without health insurance	7.7%	8.8%	-13%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.
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Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

* ACS 5-year estimates: 2019 represents average characteristics from 2015-2019.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/par.

Neighborhoods at Risk

Selected Tracts

Summary

What do we measure on this page?

This page shows a quick comparison for many of the indicators covered in this report to highlight how the selected tracts differ from the United States as a whole.

The percent, or relative, difference between the selected tracts and the U.S. is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Neighborhoods at Risk

Selected Tracts

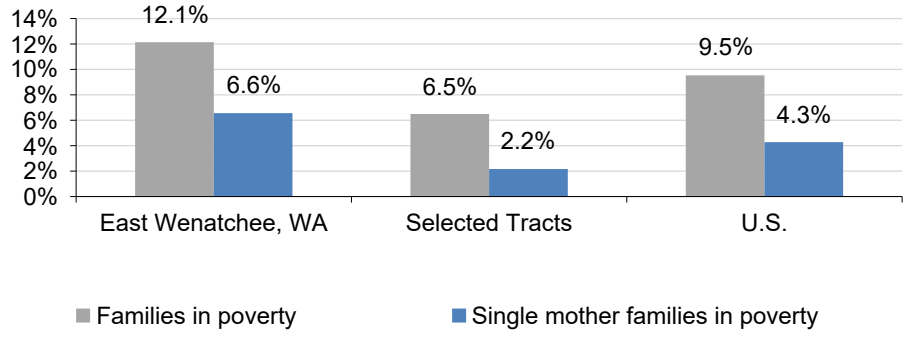
Families in Poverty

	East Wenatchee, WA	Selected Tracts	U.S.
Total families for whom poverty status is determined, 2019*	3,567	2,172	79,114,031
Families in poverty	433	141	7,541,196
Families with children in poverty	339	**96**	5,581,063
Single mother families in poverty	234	**47**	3,385,236
Percent of Total, 2019*			
Families in poverty	12.1%	6.5%	9.5%
Families with children in poverty	9.5%	**4.4%**	7.1%
Single mother families in poverty	6.6%	**2.2%**	4.3%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Families in poverty	-0.3	-4.5	-0.5
Families with children in poverty	-2.2	-6.2	-0.8
Single mother families in poverty	0.4	-2.5	-0.5

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

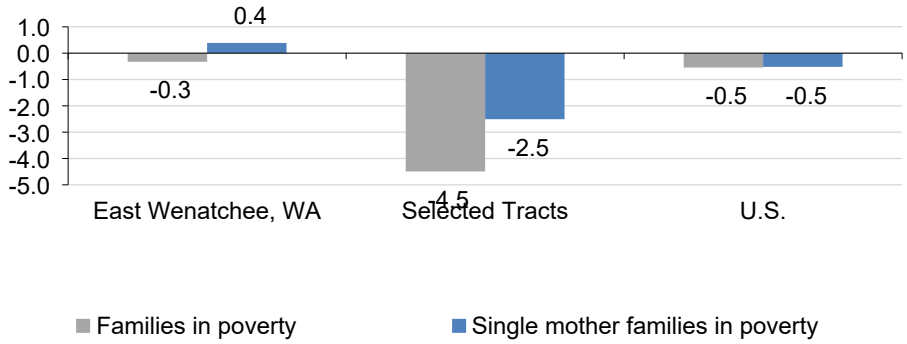
Families in Poverty, Percent of Total, 2019*

- East Wenatchee, WA has the largest share of single mother families in poverty (6.6%).



Families in Poverty, Change in Percentage Points, 2010*-2019*

- The largest change in the share of single mother familes in poverty occurred in Selected Tracts, which went from 4.7% to 2.2%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.[1]

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.[11, 2]

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.[2] Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.[5]

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.[1, 2] Furthermore, those in high-crime areas may not want to open their windows.[2]

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.[1]

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.[12]

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.[2]

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.[11]

Superscript numbers refer to references provided at the end of the report.

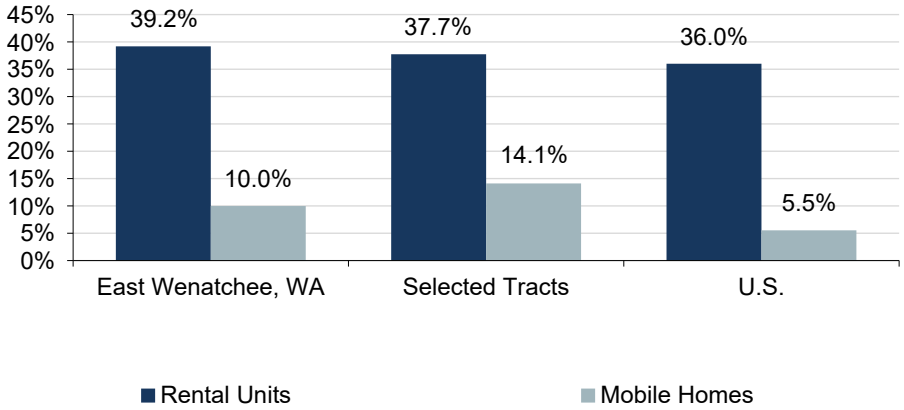
Rental & Mobile Homes

	East Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Housing Units, 2019*	4,971	3,267	120,756,048
Rental Units	1,948	1,233	43,481,667
Mobile Homes	496	461	6,681,368
Percent of Total, 2019*			
Rental Units	39.2%	37.7%	36.0%
Mobile Homes	10.0%	14.1%	5.5%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Rental Units	-2.7	3.3	4.4
Mobile Homes	3.9	3.6	-0.3
Median Home Value (MHV), 2019* (2014 $s)	$274,800	na	$217,500
Change in MHV, 2010*-2019* (2014 $s)	$24,695	na	-$3,305

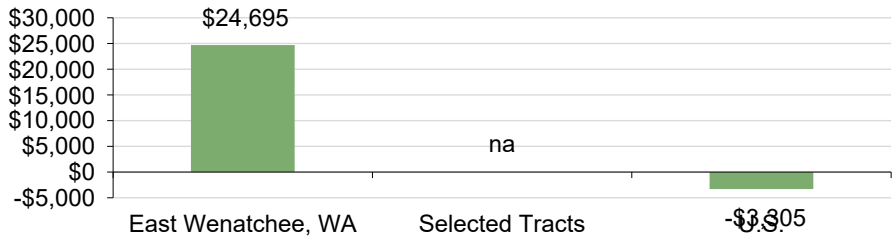
High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Rental Units and Mobile Homes as a Percent of Total Housing Units, 2019*

- East Wenatchee, WA has the largest share of rental units (39.2%).
- Selected Tracts has the largest share of mobile homes (14.1%).



Change in Median Home Value, 2010*-2019* (2014 $s)



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one's living situation, and financial stability.[13]

The financial stress associated with losing one's home is heightened by people's emotional attachment to their home and their neighborhood.[14]

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.[15]

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.[13]

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.[1] High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.[4]

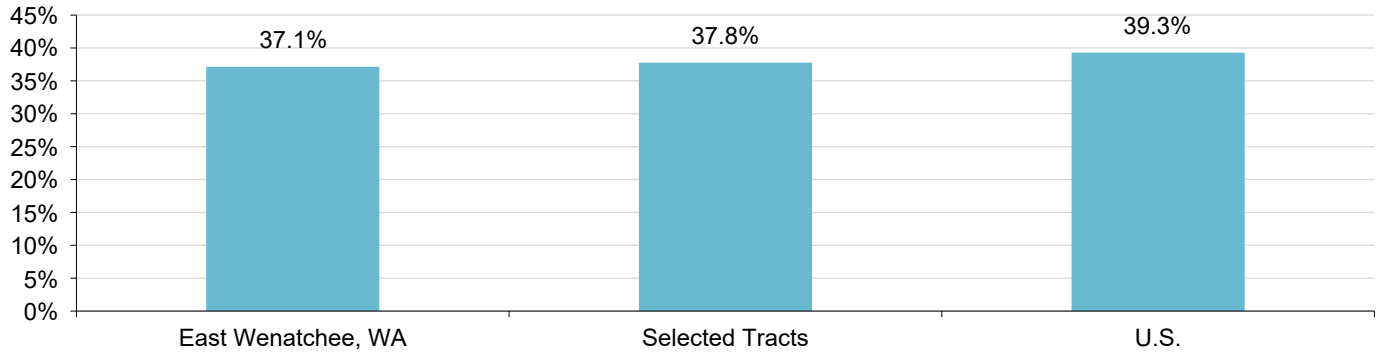
Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.[4,11]

People of Color and Hispanics

	East Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	13,960	8,782	324,697,795
White alone	9,408	5,809	235,377,662
Black or African American alone	¨47	¨128	41,234,642
American Indian alone	¨113	¨59	2,750,143
Asian alone	˙79	¨118	17,924,209
Native Hawaii & Other Pacific Is. alone	¨89	¨49	599,868
Some other race alone	3,583	˙2,282	16,047,369
Two or more races	˙641	˙337	10,763,902
Hispanic or Latino (of any race)	4,493	2,753	58,479,370
Not Hispanic or Latino	9,467	6,029	266,218,425
Not Hispanic & White alone	8,775	5,465	197,100,373
People of Color and Hispanics	5,185	3,317	127,597,422
Percent of Total, 2019*			
White alone	67.4%	66.1%	72.5%
Black or African American alone	¨0.3%	¨1.5%	12.7%
American Indian alone	¨0.8%	¨0.7%	0.8%
Asian alone	¨0.6%	¨1.3%	5.5%
Native Hawaii & Other Pacific Is. alone	¨0.6%	¨0.6%	0.2%
Some other race alone	25.7%	˙26.0%	4.9%
Two or more races	˙4.6%	˙3.8%	3.3%
Hispanic or Latino (of any race)	32.2%	31.3%	18.0%
Not Hispanic or Latino	67.8%	68.7%	82.0%
Not Hispanic & White alone	62.9%	62.2%	60.7%
People of Color and Hispanics	37.1%	37.8%	39.3%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People of Color and Hispanics, Percent of Total, 2019*



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

People of Color and Hispanics

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

"People of Color and Hispanics" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from “Total Population.”

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.[1]

Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.[7, 1]

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.[1]

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.[8, 4]

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.[1,9]

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.[5]

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.[10]

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.[5]

Hispanics have higher rates of diabetes and asthma.[5]

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.[2] They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.[5]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Language Proficiency

	East Wenatchee, WA	Selected Tracts	U.S.
Population 5 years or older, 2019*	12,829	8,053	304,930,125
Speak English "not well"***	781	559	13,193,113
Speak English "not well"***, percent	6.1%	6.9%	4.3%
Speak English "not well"***, change in percentage points**, 2010*-2019*	-1.3	2.5	-0.4

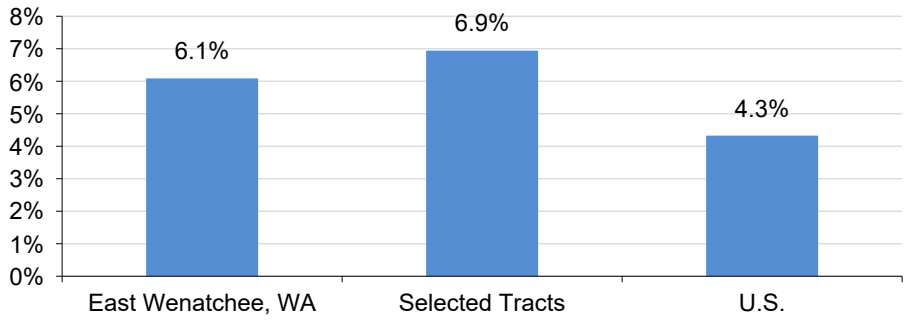
**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.

*** Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

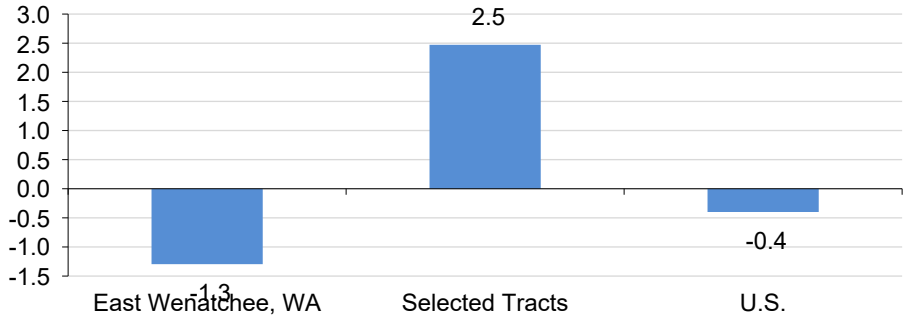
People Who Speak English "Not Well", Percent of Total, 2019*

- Selected Tracts has the largest share of people who speak English "not well" (6.9%).



People Who Speak English "Not Well", Change in Percentage Points, 2010*-2019*

- The largest change in the share of people who speak English "not well" occurred in Selected Tracts, which went from 4.5% to 6.9%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person's ability to take action during an emergency is compromised by language and cultural barriers.[4]

Poor English skills can make it harder to follow directions or interact with agencies.[4]

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.[1]

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.[1]

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.[1] However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

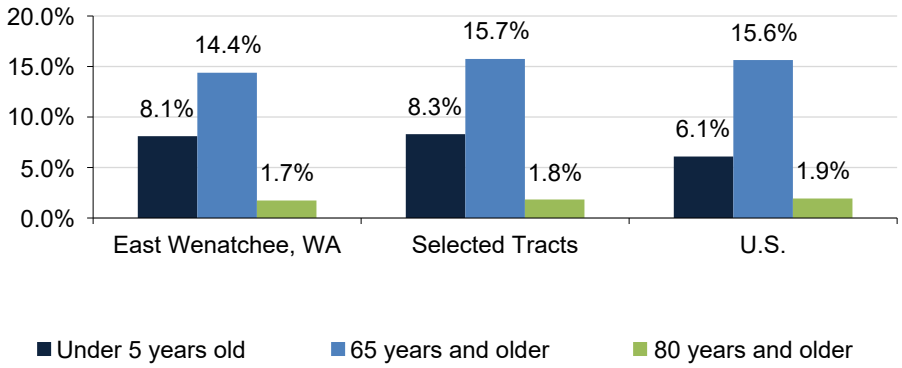
Young & Elderly Populations

	East Wenatchee, WA	Selected Tracts	U.S.
Total Population, 2019*	13,960	8,782	324,697,795
Under 5 years old	1,131	729	19,767,670
65 years and older	2,008	1,383	50,783,796
80 years and older	242	161	6,269,017
Percent of Total, 2019*			
Under 5 years old	8.1%	8.3%	6.1%
65 years and older	14.4%	15.7%	15.6%
80 years and older	1.7%	1.8%	1.9%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
Under 5 years old	0.9	1.9	-0.5
65 years and older	0.6	1.7	2.9
80 years and older	0.7	0.7	0.2

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

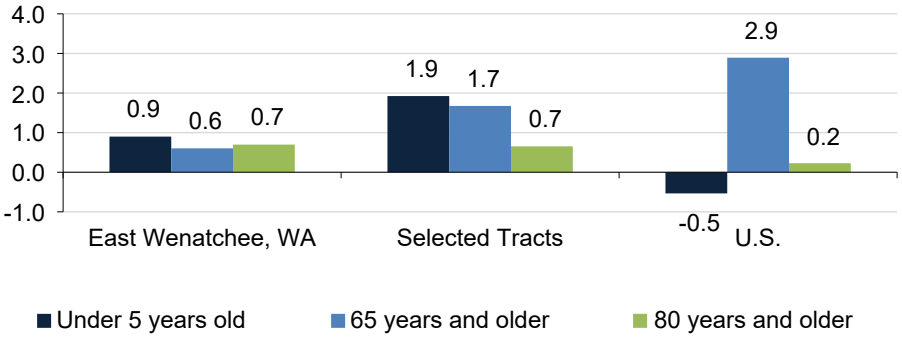
Population by Group, Percent of Total, 2019*

- Selected Tracts has the largest share of people under 5 years old (8.3%).
- The U.S. has the largest share of people 80 years and older (1.9%).



Population by Group, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people under 5 years old occurred in Selected Tracts, which went from 6.4% to 8.1%.
- The largest change in the share of people 80 years and older occurred in East Wenatchee, WA, which went from 1.0% to 1.7%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.[1]

Children's developing bodies makes them particularly sensitive to health problems and environmental stresses.[1]

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.[2]

Because so many factors of a child's life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.[2]

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.[3, 4]

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.[3]

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.[4]

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.[3]

The likelihood of chronic disease increases with age.[1, 5]

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.[3, 6]

CHANGES IN BOUNDARIES: Data describing change over time can be misleading when geographic boundaries have changed.
The Census provides documentation about changes in boundaries at this site: www.census.gov/geo/reference/boundary-changes.html

Educational Attainment

	East Wenatchee, WA	Selected Tracts	U.S.
Total Population 25 years or older, 2019*	8,403	5,471	220,622,076
No high school degree	1,590	988	26,472,261
No high school degree, percent	18.9%	18.1%	12.0%
No high school degree, change in percentage points**, 2010*-2019*	-0.5	2.2	-3.0

**For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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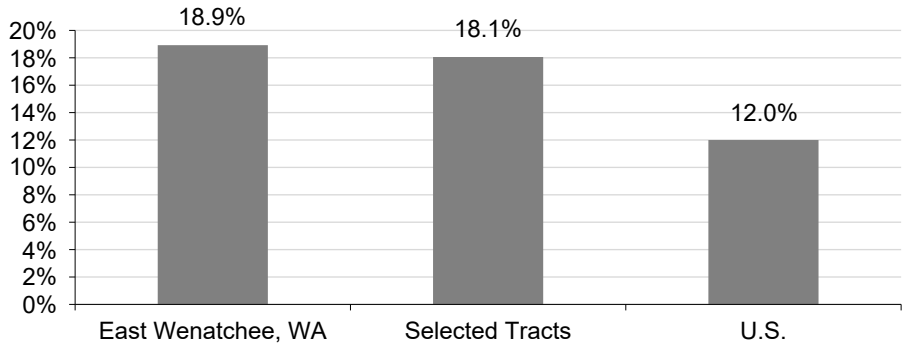
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

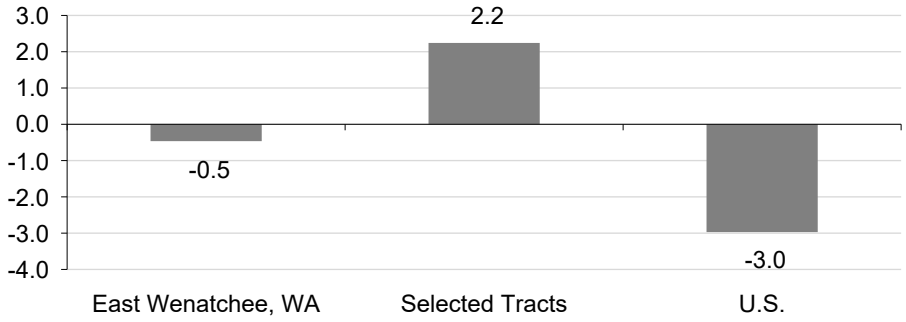
Population with Less than High School Education, Percent of Total, 2019*

- East Wenatchee, WA has the largest share of people with less than a high school education (18.9%).



Population with Less than High School Education, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people with less than a high school degree occurred in the U.S., which went from 15.0% to 12.0%.



* ACS 5-year estimates used. 2019 represents average characteristics from 2015-2019; 2010 represents 2006-2010.

CITATION: U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C., reported by Headwaters Economics' Neighborhoods at Risk, headwaterseconomics.org/apps/neighborhoods-at-risk.

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.[5]

A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.[4]

Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.[7]

The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.[5]

Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).[5]

Neighborhoods at Risk

Selected Tracts

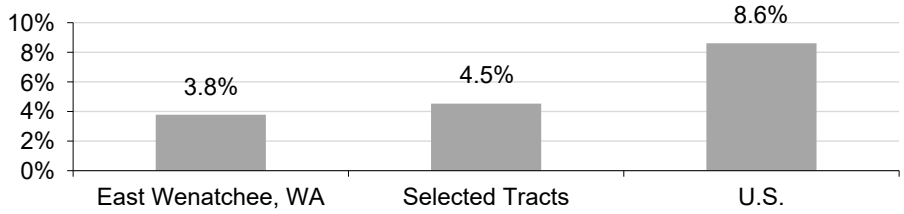
Potentially Vulnerable Households

	East Wenatchee, WA	Selected Tracts	U.S.
Total Occupied Households, 2019*	4,971	3,267	120,756,048
People > 65 years & living alone	167	121	4,527,381
Single female households	850	520	15,016,964
with children < 18 years	600	354	9,427,068
Households with no car	188	148	10,395,713
Percent of Total, 2019*			
People > 65 years & living alone	3.4%	3.7%	3.7%
Single female households	17.1%	15.9%	12.4%
with children < 18 years	12.1%	10.8%	7.8%
Households with no car	3.8%	4.5%	8.6%
Change in Percentage Points, 2010*-2019*			
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.			
People > 65 years & living alone	1.8	1.6	-0.8
Single female households	3.9	4.1	-0.2
with children < 18 years	2.3	3.3	0.0
Households with no car	1.3	1.9	-77.3

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

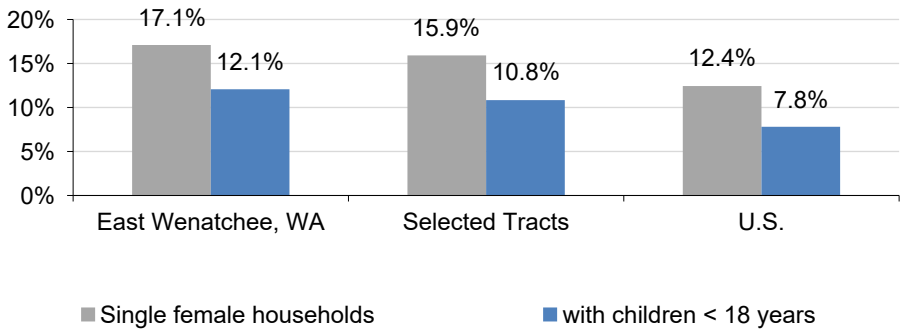
People > 65 Yrs and Living Alone as a Percent of Total Households, 2019*

- The U.S. has the largest share of households with people over 65 living alone (3.7%).



Single Female Households as a Percent of Total Households, 2019*

- East Wenatchee, WA has the largest share of single female households (17.1%).
- East Wenatchee, WA has the largest share of single female households with children (12.1%).



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Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.[2]

People 65 and older are particularly vulnerable to heat-related illness,[4] which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.[16]

In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.[17]
Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.[18]

Single-mother families are disproportionally exposed to hazardous levels of air pollution.[4]

Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.[18]

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.[19]

Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.[20]

During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.[4]

During heat waves, people without a car are less able to go to community cooling centers or cooler areas.[4]

Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.[21]

Potentially Vulnerable People

	East Wenatchee, WA	Selected Tracts	U.S.
Total civilian noninstitutionalized population, 2019*	13,923	8,699	319,706,872
People w/ disabilities	2,961	1,914	40,335,099
People w/o health insurance	983	671	28,248,613
Percent of Total, 2019*			
Percent of people w/ disabilities	21.3%	22.0%	12.6%
Percent of people w/o health insurance	7.1%	7.7%	8.8%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
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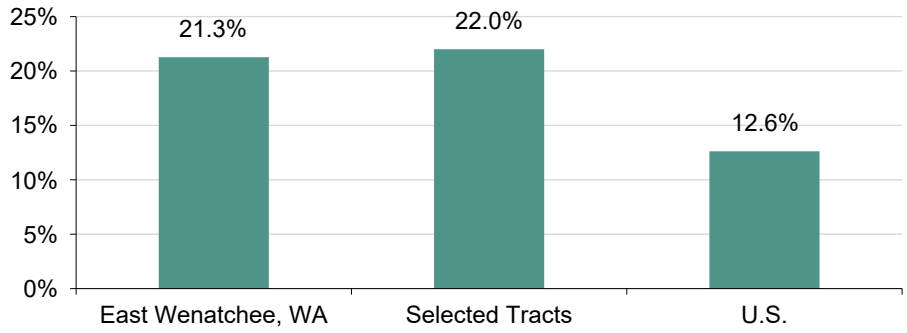
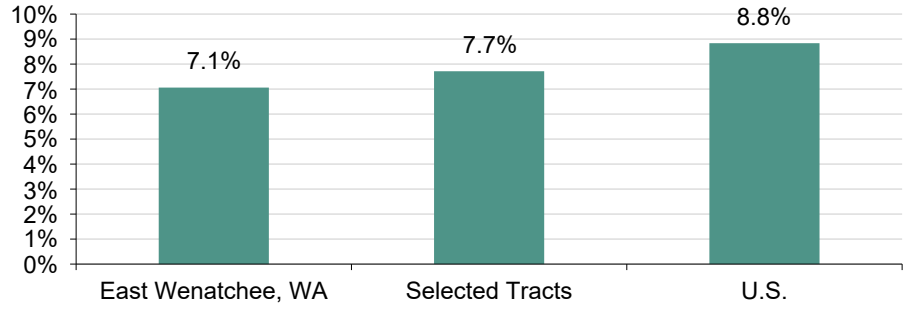
People with Disabilities, Percent of Total, 2019*

- Selected Tracts has the largest share of the noninstitutionalized population that is disabled (22.0%).



People without Health Insurance, Percent of Total, 2019*

- The U.S. has the largest share of the noninstitutionalized population without health insurance (8.8%).



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Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

Disabled people are less likely to have health insurance, compared to the non-disabled population.[5]

Being confined to a bed raises heat mortality.[2]

Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.[3]

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.[10]

People with lower educational attainment are more likely to be uninsured.[5]

People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.[32,33] This risk is particularly evident among racial and ethnic minorities.[5]

People without health insurance are more likely to use the hospital emergency department for standard health care needs.[5]

About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.[23]

Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.[24]

People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.[4]

Literature Cited

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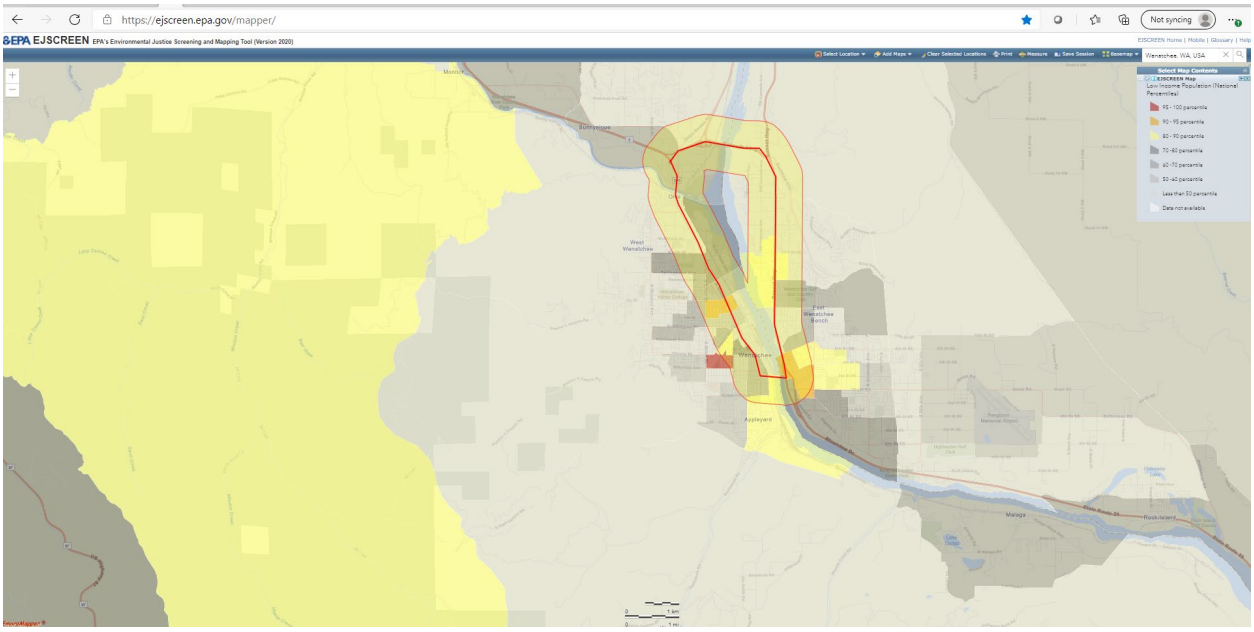
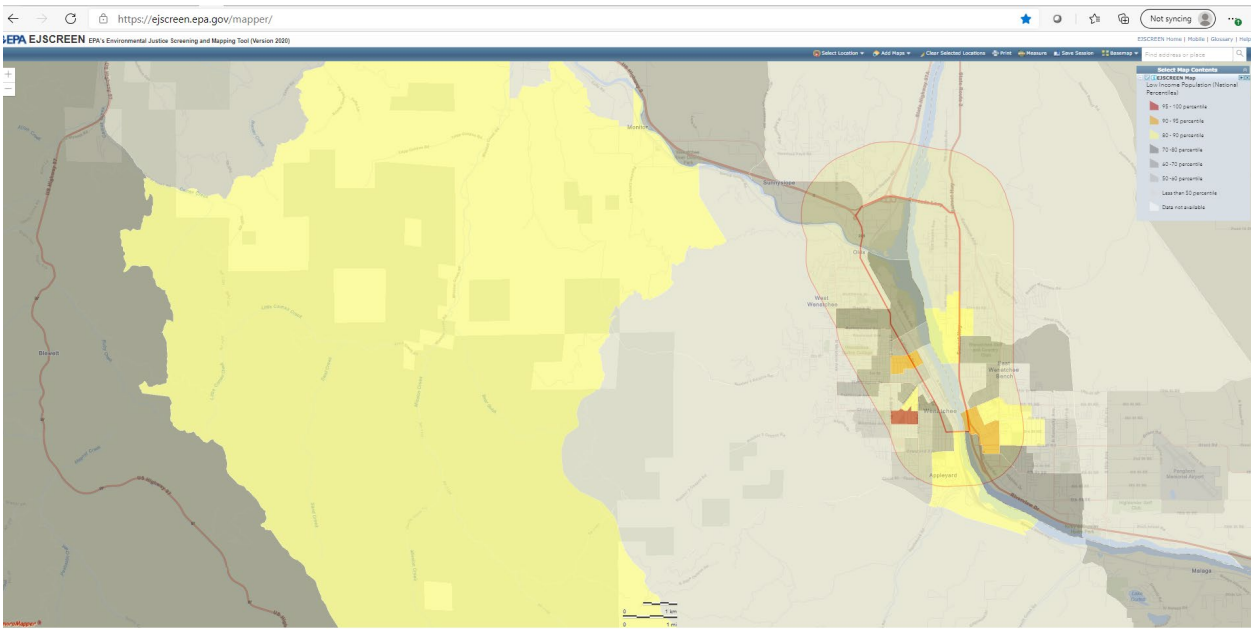
EJSCREEN for Apple Capital Loop 0.5 mile buffer



EJSCREEN for Apple Capital Loop 1 mile buffer



EJSCREEN Report (Version 2020)

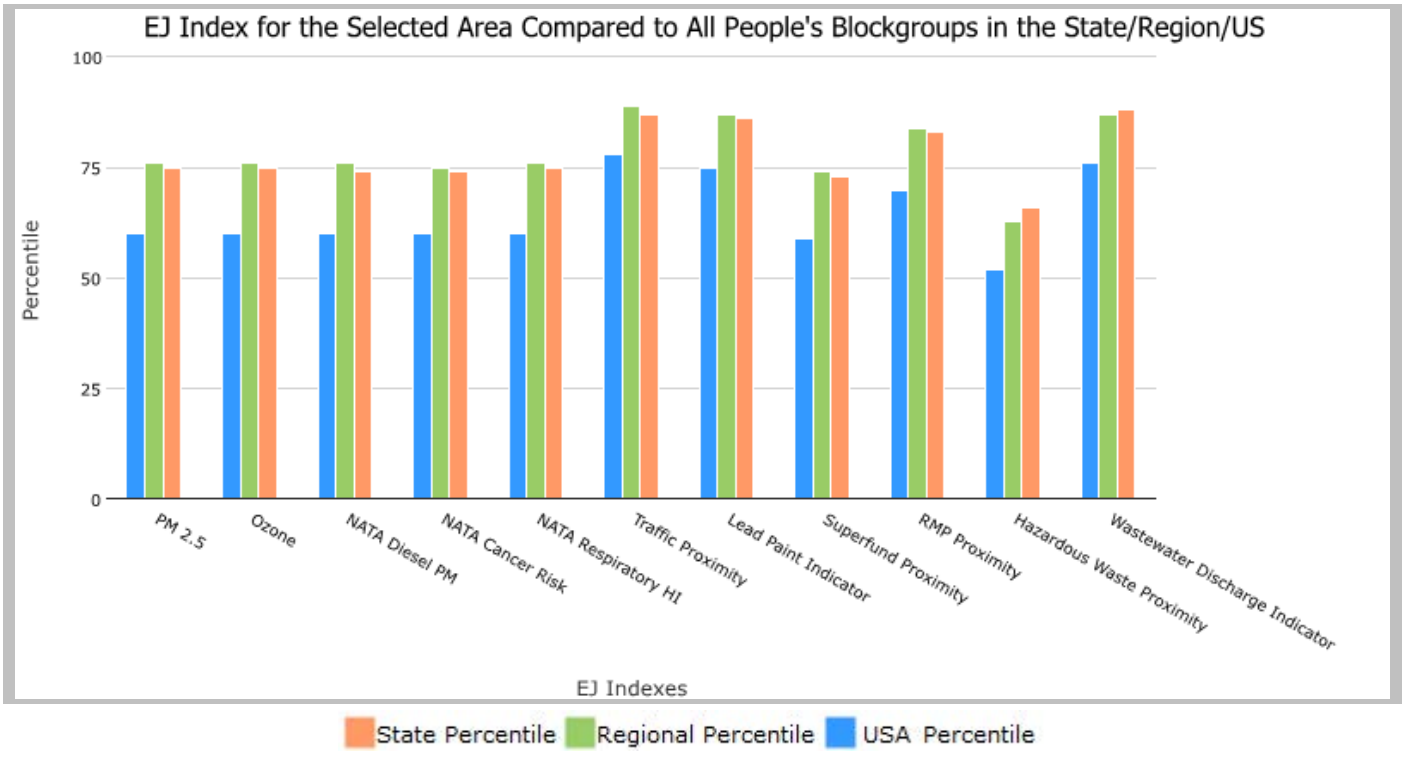
0.5 miles Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 25,221

Input Area (sq. miles): 10.48

Apple Cap Loop

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	75	76	60
EJ Index for Ozone	75	76	60
EJ Index for NATA* Diesel PM	74	76	60
EJ Index for NATA* Air Toxics Cancer Risk	74	75	60
EJ Index for NATA* Respiratory Hazard Index	75	76	60
EJ Index for Traffic Proximity and Volume	87	89	78
EJ Index for Lead Paint Indicator	86	87	75
EJ Index for Superfund Proximity	73	74	59
EJ Index for RMP Proximity	83	84	70
EJ Index for Hazardous Waste Proximity	66	63	52
EJ Index for Wastewater Discharge Indicator	88	87	76



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

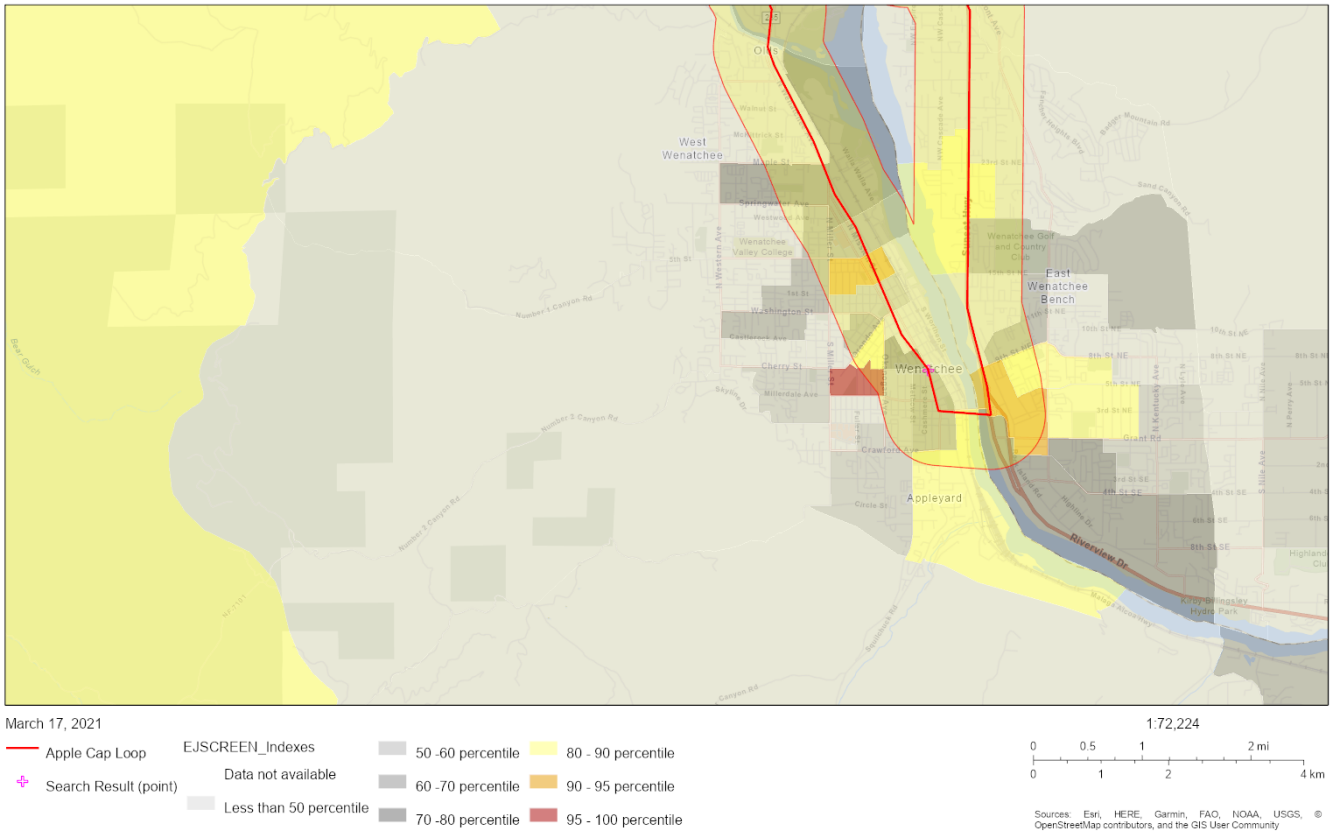
EJSCREEN Report (Version 2020)

0.5 miles Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 25,221

Input Area (sq. miles): 10.48

Apple Cap Loop



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJSCREEN Report (Version 2020)

0.5 miles Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 25,221

Input Area (sq. miles): 10.48

Apple Cap Loop

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.15	8.21	80	8.52	69	8.55	69
Ozone (ppb)	41.8	37.3	79	39.1	69	42.9	41
NATA* Diesel PM (µg/m^3)	0.212	0.585	19	0.481	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	29	34	26	31	<50th	32	<50th
NATA* Respiratory Hazard Index	0.5	0.5	49	0.46	50-60th	0.44	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	790	610	79	510	83	750	77
Lead Paint Indicator (% Pre-1960 Housing)	0.38	0.23	77	0.22	79	0.28	69
Superfund Proximity (site count/km distance)	0.013	0.19	2	0.13	11	0.13	8
RMP Proximity (facility count/km distance)	2.7	0.63	96	0.65	95	0.74	94
Hazardous Waste Proximity (facility count/km distance)	0.27	1.9	36	1.5	40	5	30
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	4.9E-06	0.0091	66	3.1	60	9.4	43
Demographic Indicators							
Demographic Index	40%	29%	78	29%	79	36%	63
People of Color Population	42%	31%	73	28%	78	39%	60
Low Income Population	38%	27%	75	30%	70	33%	65
Linguistically Isolated Population	5%	4%	74	3%	78	4%	72
Population With Less Than High School Education	21%	9%	90	9%	90	13%	80
Population Under 5 years of age	8%	6%	71	6%	71	6%	71
Population over 64 years of age	15%	15%	61	15%	59	15%	58

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Apple Cap Loop

Summary of ACS Estimates	2014 - 2018
Population	25,221
Population Density (per sq. mile)	2,848
People of Color Population	10,520
% People of Color Population	42%
Households	9,564
Housing Units	10,351
Housing Units Built Before 1950	2,391
Per Capita Income	29,107
Land Area (sq. miles) (Source: SF1)	8.86
% Land Area	88%
Water Area (sq. miles) (Source: SF1)	1.17
% Water Area	12%

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	25,221	100%	845
Population Reporting One Race	24,032	95%	1,813
White	19,972	79%	737
Black	89	0%	86
American Indian	344	1%	173
Asian	138	1%	149
Pacific Islander	44	0%	47
Some Other Race	3,445	14%	621
Population Reporting Two or More Races	1,188	5%	280
Total Hispanic Population	9,390	37%	767
Total Non-Hispanic Population	15,831		
White Alone	14,700	58%	571
Black Alone	89	0%	86
American Indian Alone	311	1%	173
Non-Hispanic Asian Alone	111	0%	149
Pacific Islander Alone	44	0%	47
Other Race Alone	16	0%	51
Two or More Races Alone	559	2%	159
Population by Sex			
Male	12,627	50%	647
Female	12,593	50%	454
Population by Age			
Age 0-4	1,979	8%	283
Age 0-17	6,150	24%	323
Age 18+	19,070	76%	467
Age 65+	3,898	15%	230

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018 .

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Apple Cap Loop

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	16,391	100%	444
Less than 9th Grade	1,909	12%	290
9th - 12th Grade, No Diploma	1,526	9%	131
High School Graduate	4,508	28%	269
Some College, No Degree	4,955	30%	262
Associate Degree	1,695	10%	189
Bachelor's Degree or more	3,493	21%	232
Population Age 5+ Years by Ability to Speak English			
Total	23,242	100%	755
Speak only English	15,600	67%	483
Non-English at Home[1+2+3+4]	7,642	33%	513
[1]Speak English "very well"	4,308	19%	381
[2]Speak English "well"	1,194	5%	226
[3]Speak English "not well"	1,466	6%	170
[4]Speak English "not at all"	674	3%	186
[3+4]Speak English "less than well"	2,140	9%	246
[2+3+4]Speak English "less than very well"	3,334	14%	282
Linguistically Isolated Households*			
Total	494	100%	105
Speak Spanish	473	96%	104
Speak Other Indo-European Languages	21	4%	26
Speak Asian-Pacific Island Languages	0	0%	19
Speak Other Languages	0	0%	12
Households by Household Income			
Household Income Base	9,564	100%	206
< $15,000	1,145	12%	140
$15,000 - $25,000	1,139	12%	135
$25,000 - $50,000	2,589	27%	176
$50,000 - $75,000	1,762	18%	168
$75,000 +	2,929	31%	210
Occupied Housing Units by Tenure			
Total	9,564	100%	206
Owner Occupied	5,008	52%	179
Renter Occupied	4,555	48%	166
Employed Population Age 16+ Years			
Total	19,669	100%	579
In Labor Force	12,450	63%	464
Civilian Unemployed in Labor Force	633	3%	181
Not In Labor Force	7,219	37%	304

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Apple Cap Loop

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	20,939	100%	962
English	15,009	72%	631
Spanish	5,627	27%	797
French	49	0%	145
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	74	0%	65
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	105	1%	195
Chinese	2	0%	19
Japanese	N/A	N/A	N/A
Korean	0	0%	19
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	0	0%	19
Other Asian	44	0%	51
Tagalog	0	0%	19
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	0	0%	19
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	0	0%	19
Total Non-English	5,930	28%	1,150

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018.
*Population by Language Spoken at Home is available at the census tract summary level and up.

EJSCREEN Census 2010 Summary Report

Location: User-specified linear location
Ring (buffer): 0.5-miles radius
Description: Apple Cap Loop

Summary	Census 2010
Population	23,706
Population Density (per sq. mile)	2,681
People of Color Population	8,946
% People of Color Population	38%
Households	8,868
Housing Units	9,550
Land Area (sq. miles)	8.84
% Land Area	88%
Water Area (sq. miles)	1.19
% Water Area	12%

Population by Race	Number	Percent
Total	23,706	-------
Population Reporting One Race	22,964	97%
White	17,441	74%
Black	103	0%
American Indian	315	1%
Asian	218	1%
Pacific Islander	52	0%
Some Other Race	4,836	20%
Population Reporting Two or More Races	742	3%
Total Hispanic Population	7,954	34%
Total Non-Hispanic Population	15,752	66%
White Alone	14,760	62%
Black Alone	68	0%
American Indian Alone	216	1%
Non-Hispanic Asian Alone	207	1%
Pacific Islander Alone	44	0%
Other Race Alone	42	0%
Two or More Races Alone	415	2%

Population by Sex	Number	Percent
Male	11,808	50%
Female	11,898	50%

Population by Age	Number	Percent
Age 0-4	2,028	9%
Age 0-17	6,471	27%
Age 18+	17,235	73%
Age 65+	3,060	13%

Households by Tenure	Number	Percent
Total	8,868	
Owner Occupied	4,414	50%
Renter Occupied	4,454	50%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

EJSCREEN Report (Version 2020)

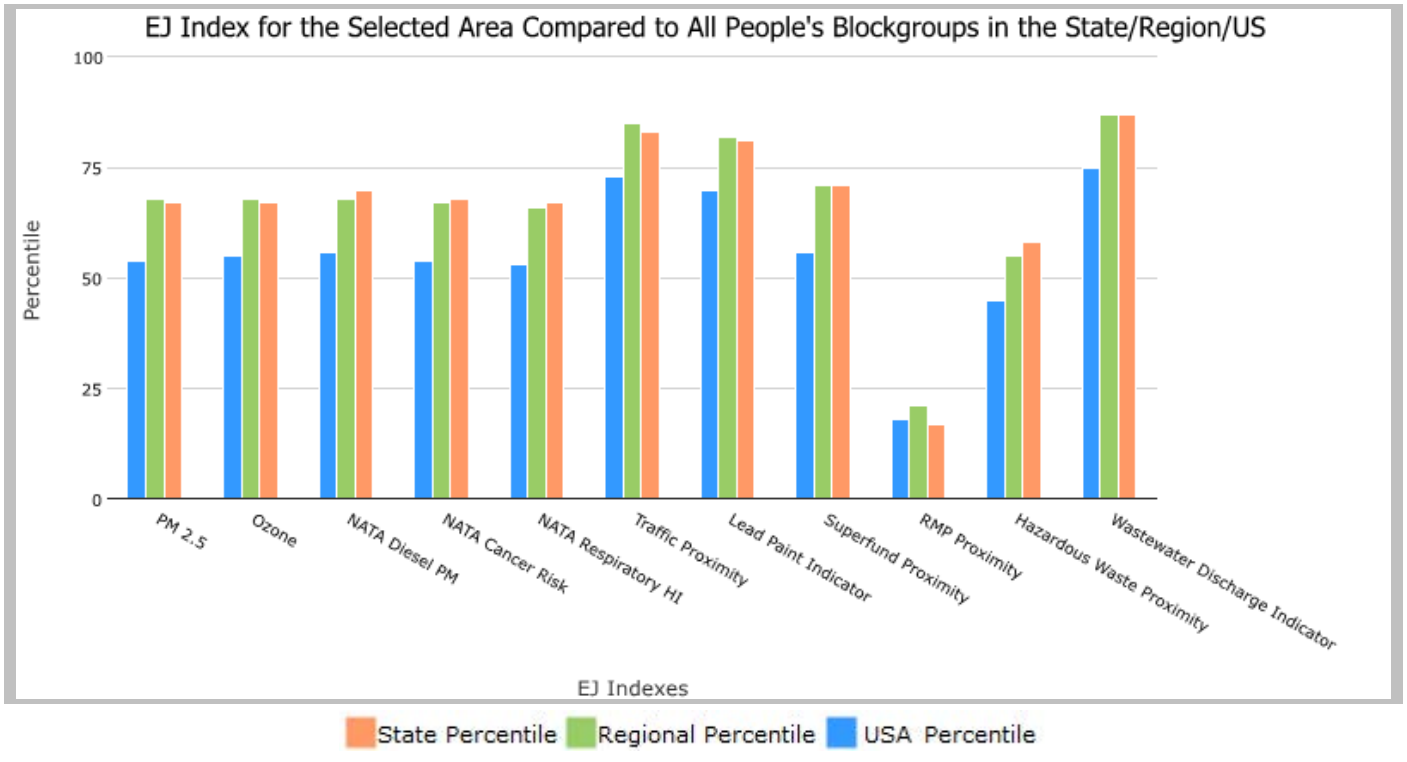
1 mile Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 44,263

Input Area (sq. miles): 19.32

Apple Cap Loop

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	67	68	54
EJ Index for Ozone	67	68	55
EJ Index for NATA* Diesel PM	70	68	56
EJ Index for NATA* Air Toxics Cancer Risk	68	67	54
EJ Index for NATA* Respiratory Hazard Index	67	66	53
EJ Index for Traffic Proximity and Volume	83	85	73
EJ Index for Lead Paint Indicator	81	82	70
EJ Index for Superfund Proximity	71	71	56
EJ Index for RMP Proximity	17	21	18
EJ Index for Hazardous Waste Proximity	58	55	45
EJ Index for Wastewater Discharge Indicator	87	87	75



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

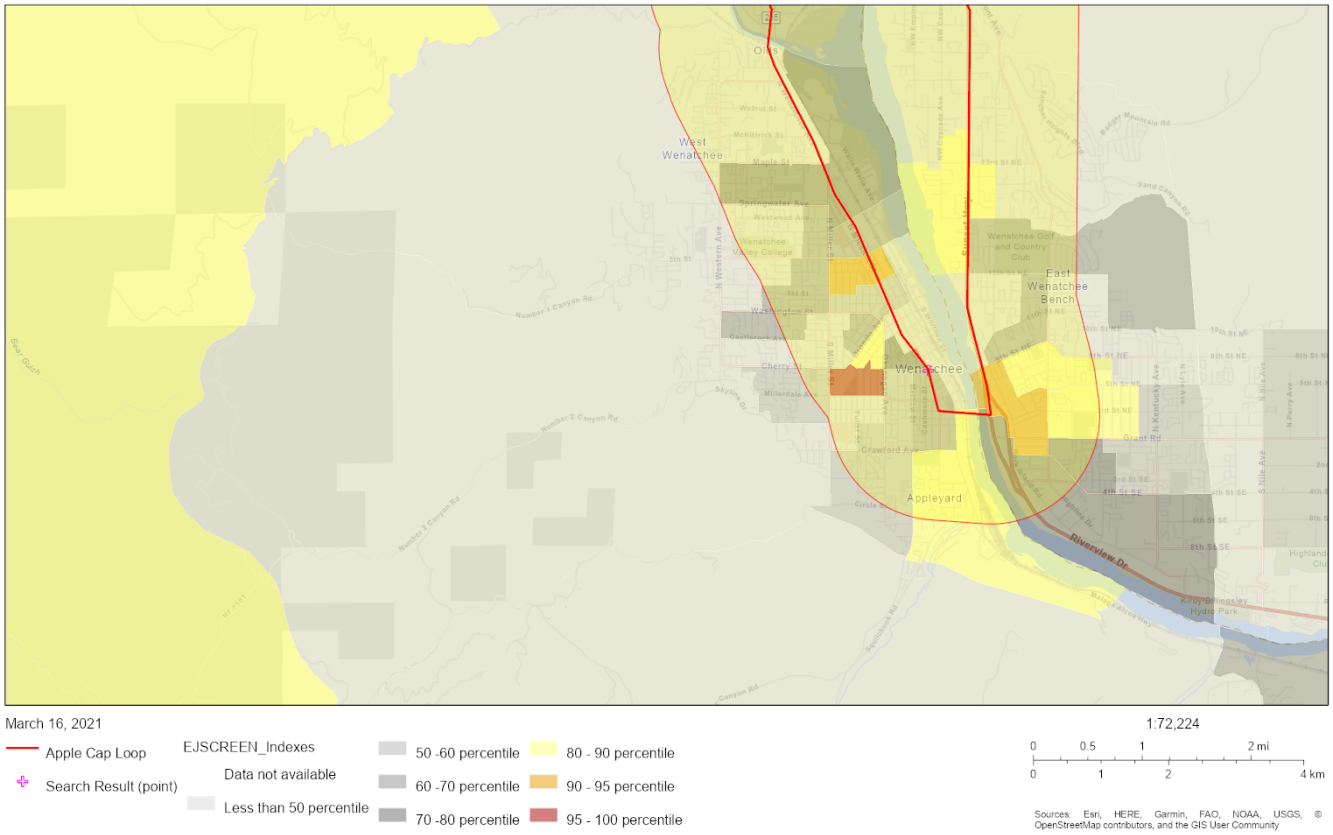
EJSCREEN Report (Version 2020)

1 mile Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 44,263

Input Area (sq. miles): 19.32

Apple Cap Loop



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJSCREEN Report (Version 2020)

1 mile Ring around the Corridor, WASHINGTON, EPA Region 10

Approximate Population: 44,263

Input Area (sq. miles): 19.32

Apple Cap Loop

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	9.14	8.21	80	8.52	69	8.55	68
Ozone (ppb)	41.8	37.3	79	39.1	69	42.9	41
NATA* Diesel PM (µg/m^3)	0.203	0.585	19	0.481	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	29	34	26	31	<50th	32	<50th
NATA* Respiratory Hazard Index	0.5	0.5	49	0.46	50-60th	0.44	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	600	610	73	510	77	750	72
Lead Paint Indicator (% Pre-1960 Housing)	0.32	0.23	74	0.22	74	0.28	64
Superfund Proximity (site count/km distance)	0.013	0.19	2	0.13	11	0.13	8
RMP Proximity (facility count/km distance)	2.4	0.63	94	0.65	94	0.74	93
Hazardous Waste Proximity (facility count/km distance)	0.25	1.9	35	1.5	39	5	29
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	4.1E-06	0.0091	65	3.1	59	9.4	42
Demographic Indicators							
Demographic Index	36%	29%	73	29%	73	36%	58
People of Color Population	36%	31%	67	28%	73	39%	55
Low Income Population	35%	27%	71	30%	65	33%	61
Linguistically Isolated Population	4%	4%	70	3%	75	4%	69
Population With Less Than High School Education	18%	9%	87	9%	86	13%	75
Population Under 5 years of age	7%	6%	65	6%	64	6%	65
Population over 64 years of age	16%	15%	63	15%	61	15%	61

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 1-miles radius
Description: Apple Cap Loop

Summary of ACS Estimates	2014 - 2018
Population	44,263
Population Density (per sq. mile)	2,720
People of Color Population	16,151
% People of Color Population	36%
Households	16,437
Housing Units	17,725
Housing Units Built Before 1950	3,297
Per Capita Income	28,654
Land Area (sq. miles) (Source: SF1)	16.27
% Land Area	91%
Water Area (sq. miles) (Source: SF1)	1.63
% Water Area	9%

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	44,263	100%	845
Population Reporting One Race	42,303	96%	1,848
White	35,655	81%	737
Black	190	0%	121
American Indian	416	1%	173
Asian	317	1%	149
Pacific Islander	78	0%	47
Some Other Race	5,647	13%	621
Population Reporting Two or More Races	1,960	4%	280
Total Hispanic Population	14,189	32%	767
Total Non-Hispanic Population	30,074		
White Alone	28,112	64%	571
Black Alone	172	0%	103
American Indian Alone	354	1%	173
Non-Hispanic Asian Alone	268	1%	149
Pacific Islander Alone	78	0%	47
Other Race Alone	30	0%	51
Two or More Races Alone	1,060	2%	240
Population by Sex			
Male	21,981	50%	647
Female	22,282	50%	454
Population by Age			
Age 0-4	3,184	7%	283
Age 0-17	11,078	25%	323
Age 18+	33,185	75%	467
Age 65+	7,158	16%	230

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018 .

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 1-miles radius
Description: Apple Cap Loop

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	28,746	100%	444
Less than 9th Grade	2,861	10%	290
9th - 12th Grade, No Diploma	2,364	8%	131
High School Graduate	7,820	27%	269
Some College, No Degree	8,930	31%	262
Associate Degree	2,893	10%	189
Bachelor's Degree or more	6,772	24%	232
Population Age 5+ Years by Ability to Speak English			
Total	41,079	100%	755
Speak only English	29,278	71%	483
Non-English at Home[1+2+3+4]	11,801	29%	513
[1]Speak English "very well"	6,652	16%	381
[2]Speak English "well"	1,957	5%	226
[3]Speak English "not well"	2,335	6%	171
[4]Speak English "not at all"	857	2%	186
[3+4]Speak English "less than well"	3,193	8%	246
[2+3+4]Speak English "less than very well"	5,150	13%	282
Linguistically Isolated Households*			
Total	715	100%	105
Speak Spanish	666	93%	104
Speak Other Indo-European Languages	30	4%	26
Speak Asian-Pacific Island Languages	6	1%	19
Speak Other Languages	13	2%	35
Households by Household Income			
Household Income Base	16,437	100%	206
< $15,000	1,601	10%	140
$15,000 - $25,000	1,746	11%	135
$25,000 - $50,000	4,293	26%	176
$50,000 - $75,000	3,191	19%	168
$75,000 +	5,606	34%	210
Occupied Housing Units by Tenure			
Total	16,437	100%	206
Owner Occupied	9,666	59%	179
Renter Occupied	6,770	41%	166
Employed Population Age 16+ Years			
Total	34,205	100%	579
In Labor Force	21,547	63%	464
Civilian Unemployed in Labor Force	1,039	3%	181
Not In Labor Force	12,658	37%	304

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 1-miles radius
Description: Apple Cap Loop

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	37,243	100%	962
English	26,549	71%	640
Spanish	10,120	27%	797
French	122	0%	145
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	126	0%	65
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	146	0%	195
Chinese	12	0%	64
Japanese	N/A	N/A	N/A
Korean	3	0%	19
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	0	0%	19
Other Asian	68	0%	51
Tagalog	2	0%	19
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	30	0%	155
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	12	0%	92
Total Non-English	10,693	29%	1,150

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018.
*Population by Language Spoken at Home is available at the census tract summary level and up.

EJSCREEN Census 2010 Summary Report

Location: User-specified linear location
Ring (buffer): 1-miles radius
Description: Apple Cap Loop

Summary	Census 2010
Population	42,079
Population Density (per sq. mile)	2,588
People of Color Population	13,979
% People of Color Population	33%
Households	15,836
Housing Units	16,927
Land Area (sq. miles)	16.26
% Land Area	91%
Water Area (sq. miles)	1.66
% Water Area	9%

Population by Race	Number	Percent
Total	42,079	-------
Population Reporting One Race	40,766	97%
White	32,266	77%
Black	163	0%
American Indian	486	1%
Asian	415	1%
Pacific Islander	75	0%
Some Other Race	7,360	17%
Population Reporting Two or More Races	1,313	3%
Total Hispanic Population	12,256	29%
Total Non-Hispanic Population	29,823	71%
White Alone	28,100	67%
Black Alone	118	0%
American Indian Alone	340	1%
Non-Hispanic Asian Alone	397	1%
Pacific Islander Alone	67	0%
Other Race Alone	67	0%
Two or More Races Alone	733	2%

Population by Sex	Number	Percent
Male	20,709	49%
Female	21,370	51%

Population by Age	Number	Percent
Age 0-4	3,324	8%
Age 0-17	11,292	27%
Age 18+	30,787	73%
Age 65+	5,870	14%

Households by Tenure	Number	Percent
Total	15,836	
Owner Occupied	9,115	58%
Renter Occupied	6,720	42%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.