

# Health Element

Clark County Comprehensive Growth Management Plan

## *Growing Healthier*

Pathways from the built environment to health:

## Affordable, Quality Housing



## Introduction

Section 36.70A.070 of the Washington State Growth Management Act requires that a Housing Element be included in all county and city Comprehensive Plans. The legislative finding that supports this policy warns that rising housing costs may place an extraordinary burden on low-income households, and concludes that “absent any incentives to provide low-income housing, market conditions will result in housing developments in many areas that lack units affordable to low-income households, circumstances that can cause adverse socioeconomic effects.”<sup>1</sup> This finding does not specifically mention health as a reason to incentivize low-income housing development. However, health is a compelling reason to do so given that the persons most likely to benefit are from populations with a disproportionately high rate of health problems.<sup>2</sup> The primary goal of this section is to identify the health impacts of increasing the availability of housing for all economic segments in the community who are challenged by housing costs, with a focus on Extremely Low-Income (ELI) and low-income households.

## Housing and Health

**Americans spend about 60% of their time in the home, so it is no surprise that the housing environment is one of the major direct influences on overall health.**<sup>3</sup> A research summary by

**Social capital** refers to the value that comes from having strong social networks. An example of social capital is the value of a friend who connects you with a job opportunity.

the Robert Wood Johnson Foundation points to the potential health benefits of housing: residential stability and security, protection from the elements, decreased exposure to infectious disease and pollutants, reduced

exposure to allergens, a stable platform for ongoing delivery of health care and other home-based services, and enhanced **social capital**.<sup>4</sup> Equally important is the fact that opportunities to

further improve health through the built environment are always mediated by the ability to access its health-promoting features. It is therefore critical that as counties and cities plan, they not only ensure equal access to housing, but housing that provides equal access to locations, services and amenities in a built environment that promotes positive health outcomes. In this section, we provide an overview of research on the relationship between health and three types of housing (affordable, adequate and healthy), as well as looking at the health impacts of both home ownership and homelessness.



### **Affordable housing**

#### *Three approaches to evaluating affordability*

We discuss three ways of assessing affordable housing, summarized in Table 2.1. The federal government has traditionally defined housing as affordable when gross housing costs including utilities do not exceed 30% of a household’s gross income.<sup>5</sup> For a large and sprawling county like Clark, a more relevant measure is one that takes into account the additional costs associated with the location of a home. Developed by the Center for Neighborhood Technology and the Center for Transit Oriented Development, the Housing + Transportation Affordability Index captures the hidden costs when households are not in compact neighborhoods with walkable

streets, access to transit, and a wide variety of stores and services. Such neighborhoods have high **location efficiency** in that they require less time, money, and fuel for residents to meet their everyday travel requirements as compared to neighborhoods in inefficient locations.

Transportation costs alone can range from 15% of household income in location efficient areas to over 28% in inefficient locations. Using this measure, housing is considered affordable not at a 30% income threshold, but at a threshold of 45% of household income, when the housing cost includes either rental or mortgage *plus* transportation expenses.<sup>6</sup>

**Location efficient** places require less time, money, and fuel for residents to meet their everyday travel requirements compared to neighborhoods that require long commutes, lack transit, and are removed from retail services.

A third method of evaluating affordability comes from the Washington Center for Real Estate Research, housed at Washington State University.<sup>7</sup> The center calculates an affordability index measuring the ability of a typical middle-income family to make payments on a median-priced home. When there is a balance between ability to pay and housing cost, the index value is 100; higher values mean greater affordability. This measure assumes that 25% of gross income can be used for principal and interest payments on a mortgage.

**Table 2.1. Measures of housing affordability**

Traditional Measure of Affordable Housing	Housing + Transportation Index	Washington State Housing Affordability Index
30% of income spent on housing	45% of income spent on housing & transportation	25% of income spent on principal and interest

*Supply and demand*

**Housing prices may increase risks and decrease protective factors.** Housing supply and demand determine housing prices, in that when demand

**Extremely Low-Income** households earn less than 30% of Area Median Income. This definition is used by US Department of Housing and Urban Development (HUD) in distributing housing aid. **Area Median Income** (AMI) is a figure established by HUD to determine median income for a given area by household size. It is commonly used in determining eligibility for housing assistance programs.

exceeds supply, prices rise. People with limited financial resources have very few appropriate housing options, so often have little choice but to live in unaffordable, unhealthy or inadequate housing, and sometimes end up homeless. In some geographic areas and for some income levels, there is a dramatic mismatch between the demand for affordable housing and the available supply. A 2010 study by the National Low Income Housing Coalition found that ELI households can afford only half of the prevailing rent for a 2-bedroom apartment, and that nationally, there are only 37 units affordable and available for every 100 ELI households.<sup>8</sup> In Washington State, it is estimated that there are only 31 affordable and available rental units per 100 ELI households, and only 60 units for every 100 very low-income households.<sup>9</sup> Very low-income households are defined as those earning less than 50% of **Area Median Income**.<sup>10</sup>

**Table 2.2 Persons in/units of unaffordable, inadequate and unhealthy housing in US**

Unaffordable Housing-US	Inadequate Housing-US	Unhealthy Housing-US
44.2 million Americans lived in unaffordable housing in 2008. <sup>11</sup> *	5.8 million units or 5.2% of all housing units were inadequate in 2009. <sup>12</sup>	23.4 million housing units were unhealthy in 2009. <sup>13</sup>

\*Uses 30% of income threshold

*Health and affordability*

**Unaffordable housing contributes to illnesses related to lack of resources.** A large body of research exists on the health impacts of housing affordability, and key findings are summarized

by reports from governmental and non-profit health and housing agencies.<sup>14,15,16</sup> The research cited is consistent in identifying affordability as the factor that most influences the quality of housing people can obtain and in which neighborhoods they live. When the affordability threshold is exceeded, the percentage of income needed just for housing leaves tenants with too few resources to meet other basic needs such as food, insurance or transportation. Not only are these individuals and families at risk of frequent moves and overcrowding as they try to keep a roof over their heads, but the diversion of needed resources is associated with depression, deferred medical care, impaired relationships, stress, high blood pressure, increased exposure to infectious disease. Among children, dangers include malnutrition, underdevelopment and poor school performance.<sup>17</sup>

### **Inadequate housing**

**Inadequate housing leads to increased risk of injury and exposure to severe weather.** The CDC's *Healthy Housing Reference Manual* provides highly specific guidelines for safe, healthy, structurally sound housing and describes the health consequences of inadequacy. Adequate housing improves health outcomes by meeting basic needs of residents including protection from the elements, temperature regulation, lighting, hygiene, and physical safety. When housing is inadequate, it is characterized by moderate or severe physical or structural problems such as but not limited to deficiencies in plumbing or heating, frayed electrical wiring, or steep stairs without railings, all of which put residents' health at risk.<sup>18</sup>

### **Unhealthy housing**

**Unhealthy housing results in exposure to toxins, allergens, and infectious disease.** While adequate, affordable housing provides a stable and protective setting for people to meet

physiological, social, psychological and other needs, unhealthy housing can introduce toxins and disease into their environment. Features of unhealthy housing range from old carpeting that harbors rodents and mites, to water leaks that promote mold, to peeling lead paint in homes built before 1978, to poor air quality.<sup>19</sup> These hazards can be compounded by unhealthy behaviors leading to additional health threats, such as second-hand smoke. Research shows that particles from second hand smoke can accumulate in the home, forming potent carcinogenic compounds.<sup>20</sup> Health consequences may include exacerbation of respiratory illnesses such as asthma, increased risk of cancers and cardiovascular disease due to radon or asbestos, or impaired brain and nervous system development due to lead exposure.<sup>21</sup>

**Table 2.3. Health risks resulting from unaffordable, inadequate, and unhealthy housing**

Housing Conditions	Risk Factors	Health Consequences
<u>Unhealthy</u>	<u>Examples:</u>	<u>Examples:</u>
Flaking paint	Lead	Impaired child
Structurally embedded toxins	Asbestos	development; cancer,
Broken pipes	Bacteria	tuberculosis, hepatitis,
Poor indoor air quality	Radon	water-borne illness,
Overcrowding	Viral Contagion	respiratory disease, asthma
Old, infested carpeting	Allergens	
<u>Inadequate</u>	<u>Examples:</u>	<u>Examples:</u>
Kitchen not plumbed	Food poisoning	Illness from poor food
No cooling system	Overheating	hygiene, dehydration or
Excess moisture	Mold	death from extreme heat
Steep stairs lack banister	Falls	events, exacerbation of
Upstairs windows unsecured	Child falls	respiratory problems,
Uneven floors	Tripping	accidental injury or death
Exposed electrical wires	Electric shock or fire	

### Unaffordable

Insufficient revenue to cover costs of rent and utilities while meeting other basic needs; more frequent moves when can't make rent; more overcrowding to help cover rent.

### Examples:

Food insecurity, housing insecurity, medical or other expenses go unmet or mean not paying rent, lack of control over physical, social environment.

### Examples:

Iron deficiencies, malnutrition, underperforming at school, underdevelopment in children, depression, poor self-care, stress, high blood pressure, relationships impaired, lack of privacy.

## **Health impacts of home ownership**

**Home ownership can have protective qualities.** Despite the losses suffered by homeowners as a result of the current recession, home ownership has historically provided the opportunity to develop stable living conditions, accumulate savings and improve financial standing. Health benefits reported in the literature have included increased residential stability, greater self-esteem and sense of self-efficacy, fewer long-term health issues, and improved mental health. However, some studies identify negative impacts of home ownership when, for example, it may create additional stress due to unforeseen maintenance costs or limit a family's ability to escape poor environmental conditions.<sup>22</sup>

## **Homelessness**

**Homelessness is associated with multiple negative health outcomes.** The federal government defines a homeless person as "An individual who lacks a fixed, regular and adequate nighttime residence; and an individual who has a primary nighttime residence that is a supervised public or privately operated shelter designed to provide temporary living accommodations...an institution that provides a temporary residence for individuals intended to be institutionalized; or a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for

human beings“(Title 42, Chapter 119, Subchapter I of US Code).<sup>23</sup> In a study by the Homeless Resource Center, it was reported that over one million people in the United States experienced homelessness during 2008. The same study reported the results of a national homeless point in time count in January 2008, finding there were 415,202 individuals and 249,212 persons in families homeless in shelters, transitional housing programs, or on the streets on a given day.<sup>24</sup> The health impacts for adults living on the streets are severe: compared to people who are in *any kind of housing*, the homeless have increased risks for exposure to extreme temperatures, respiratory disease, life-threatening infectious diseases (particularly HIV and tuberculosis) nutritional deficits, sleep disorders, victimization, and violent, premature death.<sup>25,26,27</sup> Lacking a reliable address to receive mail or establish residency, they also face major logistical challenges in trying to improve their situation by locating work or even regularly receiving benefit checks or food assistance.

## **Disparities**

The demographics of who has and who does not have access to quality, healthy, affordable housing, and who has no housing at all, are shaped by a host of complex psychosocial and economic influences, such as ethnicity, education, age, or disability. Studies show widespread housing disparities based on socioeconomic status (SES), race and ethnicity, and age.

### **SES**

**Across all demographic groups, inadequate and unhealthy housing disproportionately affects people of lower socioeconomic status.** Affordability is the key determinant of the types of housing people can obtain. Rates of unemployment among minorities (15.8% for African Americans and 12.4% for Hispanics), people with disabilities (13.8%), and those without a high

school diploma (15.6%) contribute to housing disparities.<sup>28</sup> Table 2.4 below indicates the extent of these disparities by showing that the percentage of persons living in inadequate and unhealthy housing in 2009 was significantly higher among lower SES groups. For example, note that householders earning  $\leq$  \$24,999 were almost five times more likely to live in inadequate housing than those earning  $\geq$  \$75,000, and persons without a high school diploma, a key indicator of SES, were more than twice as likely to live in inadequate housing as those with some college education. With few exceptions, but with smaller variances in most instances, the same trend is true for persons with disabilities, females, and other minority groups.<sup>29</sup>

**Table 2.4 Persons living in inadequate or unhealthy housing by race, income and education**

Housing Type	White	Hispanic	Black	$\leq$ \$24,999	$\geq$ \$75,000	Less than HS	Any College
Inadequate	4.1%	7.8%	9.0%	8.5%	2.4%	8.4%	4.1%
Unhealthy	23.3%	26.1%	29.8%	26.6%	21.0%	24.9%	23.6%

**Race and ethnicity**

**Racial and ethnic minorities are disproportionately living in inadequate housing or homeless.**

In 2009 the percent of Whites living in inadequate and unhealthy housing was significantly less than any other racial/ethnic group. The percentage of living in inadequate or unhealthy housing was highest among non-Hispanic blacks, followed by Hispanics and American Indians & Alaskan Natives. Asians and Pacific Islanders had a higher likelihood of living in inadequate housing than whites, but had the least likelihood of living in unhealthy housing than any other group. Other research indicates that ethnic minorities also have a higher rate of homelessness than whites given their percentage in the total population, as evidenced by a national survey that found an estimated 44.6% of homeless persons were White, 37% Black, and 11% Hispanic.<sup>30</sup>

## Age

### Youth and the elderly are especially vulnerable to unhealthy, inadequate, and unaffordable

**housing.** While data on population characteristics related to housing types by age were not available, data on poverty and rates of homelessness were obtained. Due to physical and financial vulnerability and (for older adults) often chronic health issues, children and the aging are at particularly high risk for adverse health impacts associated with unaffordable, inadequate and unhealthy housing and homelessness. Many older adults rely entirely on Social Security Income to support themselves. Of 7.7 million Social Security recipients including persons with disabilities, 57% have no other income and in 2010 received a maximum of \$674 a month.<sup>31</sup> Furthermore, the waiting list for affordable senior housing is often three to five years.<sup>32</sup> Racial/ethnic disparities also persist in the aging population: according to the US census, poverty rates among older adults range from just 3.1% among white married men to 37.5% for black women who live alone and 40.5% for Hispanic women living alone.<sup>33</sup> In terms of homelessness, the 2008 annual homeless assessment report to Congress found that among sheltered homeless persons, 20% were ages 51 to 61 and 4% were 62 or older,<sup>34</sup> suggesting that baby boomers will soon add to the demographic of homeless aging Americans who must face the multiple health risks of living in shelters or on the streets. Elderly homeless, compared to younger adults surveyed in shelters, have a greater likelihood of a chronic disease, more functional disabilities, high blood pressure, elevated creatinine and cholesterol, and less social support:<sup>35</sup>

Child poverty is defined as living in families with incomes below the federal poverty line (\$21,200 for a family of four in 2008).<sup>36</sup> In 2008-2009, 16% of children (20% of children under age six) in America lived in poverty, putting them at high risk for the adverse health impacts of substandard

housing and homelessness. The threat of homelessness was observed in 2008, when 60.3% of sheltered persons in families were children under 18.<sup>37</sup> Research indicates that compared to children who are living in poverty but are housed, homeless children have worse health (more asthma, upper respiratory infections, minor skin ailments, gastrointestinal ailments, parasites, dental problems and chronic physical disorders), more developmental delays, more anxiety, depression and behavior problems, and poorer school attendance and performance.<sup>38,39</sup>

## **Conditions Needed to Thrive**

To thrive, residents need housing options that will not expose them to toxins, disease, extreme temperatures, or risk of injury. Affordable housing offers the benefits of stability and reduced stress, which translate into reduced risk for chronic disease. Housing should not place an undue financial burden on residents that limits or eliminates resources devoted to self care. Health is promoted by housing located near parks, transit, healthy foods, and a mix of destinations.

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# Health Element

Clark County Comprehensive Growth Management Plan

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## *Growing Healthier*

Current Conditions:

**Affordable, Quality Housing**

# Health Data

## Health Outcomes Associated with Housing

There are many health impacts associated with housing. Because housing is a major component of nearly every household budget, it could be linked to any health problem that relates to resources and socioeconomic status. We report health impacts directly related to the three health determinants related to housing: affordability, adequacy and healthfulness. As measures of these determinants, we use the indicators listed in the table below. While there are many possible indicators, we tried to choose the most relevant for each health determinant. Additional indicators of each determinant are discussed in subsequent sections.

**Table 2.2** Housing Determinants of Health, 2008

Determinant	Measure	Clark County Value
Unhealthy housing	Asthma hospitalizations per 100,000 population, 2004-2008	63.4
Unaffordable housing	Percent of adults who could not afford to see a doctor, 2003-2008	13 %
Inadequate housing	Unintentional injuries as a cause of Years of Potential Life Lost (YPLL), 2004-2008 (rank)	3 <sup>rd</sup> leading cause of YPLL

*Unhealthy, unaffordable, and inadequate housing contribute to asthma, lack of health care, and premature death in Clark County. Sources: Center for Health Statistics, Washington DOH 2010; BRFSS, 2003-2008; CAPE 2010<sup>1,2,3</sup>*

As noted, asthma can be developed or triggered as a result of unhealthy indoor air quality and allergens. Unaffordable housing diverts resources that could otherwise be used for self-care, including doctor visits. This is especially true for children living in unaffordable housing.

Unintentional injury is a leading cause of years of potential life lost in Clark County, but it is also

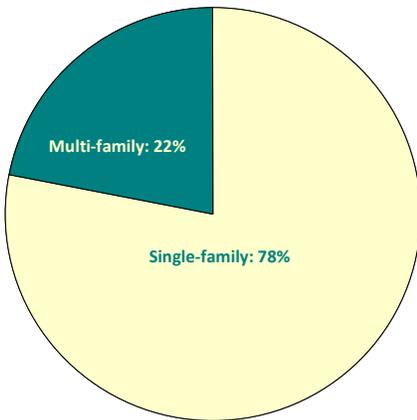
a leading cause of death for some groups. These include racial and ethnic minorities, males, and all people aged less than 50 years.

## Current Conditions

### Overview of Clark County Housing Supply

The housing types available within a community define the range of options available for residents. Housing types are also indicative of the types of neighborhoods available within a community, the densities that can be expected, and the types of services in close proximity to

**Chart 2.1** Housing Types in Clark County, 2009



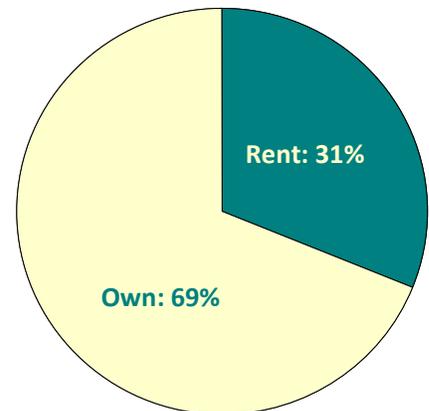
housing. In Clark County, about 22% of housing units are multifamily, meaning 2 or more attached units such as apartment buildings and nursing homes, but excluding town homes. This compares to a statewide figure of about 26%.

The remaining housing stock consists of single-family residences, of which 5% are

mobile homes. Of approximately 151,000 occupied homes in Clark County, 69% are owner-occupied, slightly above the statewide rate of 65%.<sup>4</sup>

Publicly supported housing is available in Clark County through the Vancouver Housing Authority (VHA), and at least 7 other non-profit agencies provide housing or housing assistance. The VHA provides 1,051 units of subsidized housing in Clark County and administers Section 8 vouchers to an additional 2,600 households. VHA also

**Chart 2.2** Housing Tenure in Clark County, 2009



**Table 2.3.** Housing provided by VHA and partners

Program	Units
Subsidized housing	978
Housing with services	188
Workforce housing	1,943
Transitional shelter	302
Total	3,411

provides housing for special populations, managing 260 units of senior housing, 302 units of special-needs housing, and 1,943 units of workforce housing for families earning less than 80% of Area Median Income (AMI). In total, there are 3,411 housing units or shelter beds available for households in need (Table 2.3).<sup>5</sup>

Source: VHA 2010 Report to the Community

### Housing Affordability

As explained in the literature review, government programs and financial institutions generally define affordability by applying a threshold of 30% of gross income spent on housing and utilities. The Department of Housing and Urban Development (HUD) determines affordability by estimating the earnings that would be required to rent a modest two-bedroom unit at average Fair Market Rate (FMR) without exceeding the 30% threshold. The rate for Clark County is published by the US Department of Housing and Urban Development, which determined that in 2011, Fair Market Rent (FMR) for a two-bedroom apartment was \$905. In order for this to be affordable, a household must earn a wage of \$17.38 an hour, or \$36,160 annually, assuming a 40-hour workweek for 52 weeks per year (even though the average employee only works 34 hours per week). If earning the state minimum wage of \$8.55/hour, to rent a two-bedroom FMR apartment would require one household member to work 81 hours a week for 52 weeks a year, or 2 household members to work 40 hours a week year round. As the average renter wage for the Portland-Vancouver Metropolitan Statistical Area is \$12.71 an

hour, he or she would have to work 55 hours per week year-round, or there must be almost 1.4 workers in the household earning that wage.

Median household income in Clark County in 2009 was \$58,095.<sup>6</sup> Using the 30% affordability threshold, this would allow for an annual housing expenditure of \$17,430, or about \$1450 per month. Despite this substantial “median housing budget,” the proportion of households in Clark County, both homeowners and renters, paying more than 30% of income in housing costs is considerable. Recent census estimates indicate that 41% of homeowners with mortgages, 11% of homeowners without mortgages, and 49% of renters spent 30% or more of household income on housing (Map 2.3). In all, housing in Clark County is unaffordable for 38% (58,657) of all households.

The Housing + Transportation Index, which calculates combined housing and transportation costs, is applicable in Clark County because of the large share of employees who commute long distances outside the county for work. Of the 189,117 residents who worked in 2009, almost 35% (65,960) traveled outside the county or the state to do so, and of those 78% commuted alone in a car, truck or van.<sup>7</sup> Transportation is a major expenditure for most households in Clark County. The Housing + Transportation Affordability Index indicates that much of Clark County has a low level “location efficiency,” meaning that when the costs of transportation are considered, even more residents are living beyond their means than indicated by a 30% affordability threshold. In order to meet the threshold of 45% of income spent on housing and transportation combined, a typical household would have to earn an income of about \$67,000.

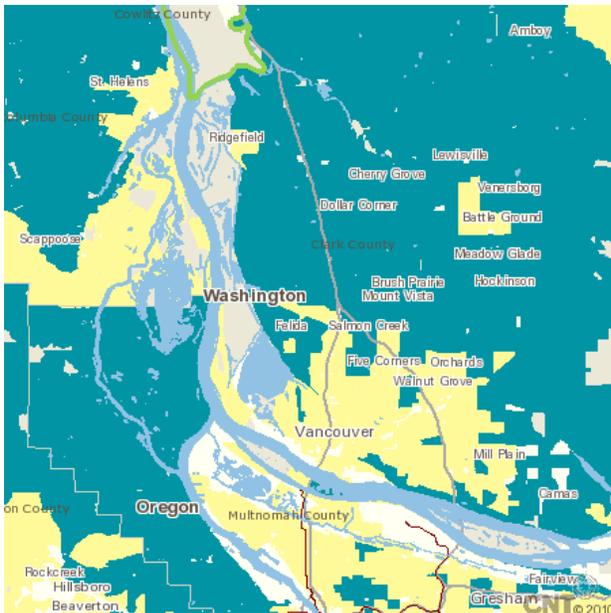
In Clark County in 2009, a typical household paid 52% of their income for housing and transportation combined (29% of income for housing and 23% for transportation).<sup>8</sup> As to be expected, the proportion of income dedicated to transportation varies by location. For example, a typical household in Ridgefield spends 26% of income on transportation, whereas a typical household in Vancouver spends only 21%.

**Table 2.3.** Housing and Transportation (H+T) Costs in Two Clark County Cities, 2010

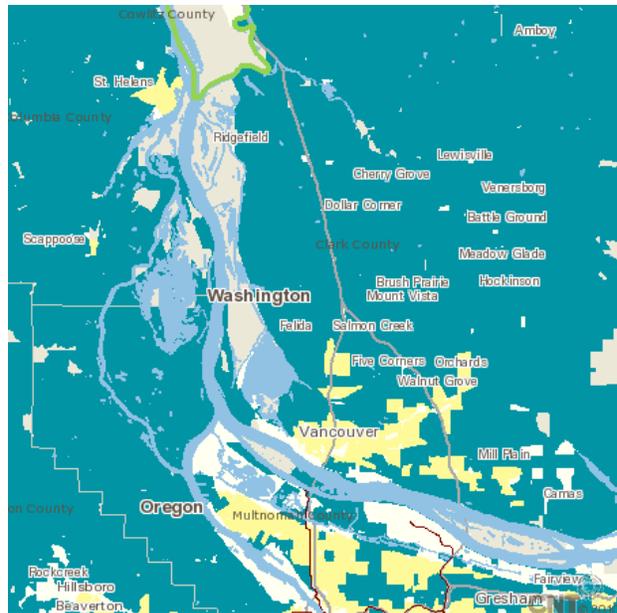
City	Percent of income spent on housing	Percent of income spent on transportation	Percent of income spent on H + T
Ridgefield	32%	26%	57%
Vancouver	25%	21%	46%

*Living in areas with high location efficiency can reduce the combined cost burden of housing and transportation. Source: Center for Neighborhood Technology, 2011.*

**Map 2.1.** Housing Affordability 2010, 30% Threshold: Unaffordable for 43% of pop.



**Map 2.2.** Housing Affordability 2010, 45% Threshold: Unaffordable for 76% of pop.



*Using a 30% threshold of affordability, housing is unaffordable for 43% of the population, but when transportation costs are factored in, 76% of the county population lives in unaffordable housing. Source: Center for Neighborhood Technology, 2011*

According to estimates from the Center for Neighborhood Technology, about 76% percent of

**In 2010, there were nearly 40,000 Clark County households unable to afford decent, safe housing at fair market rent.**

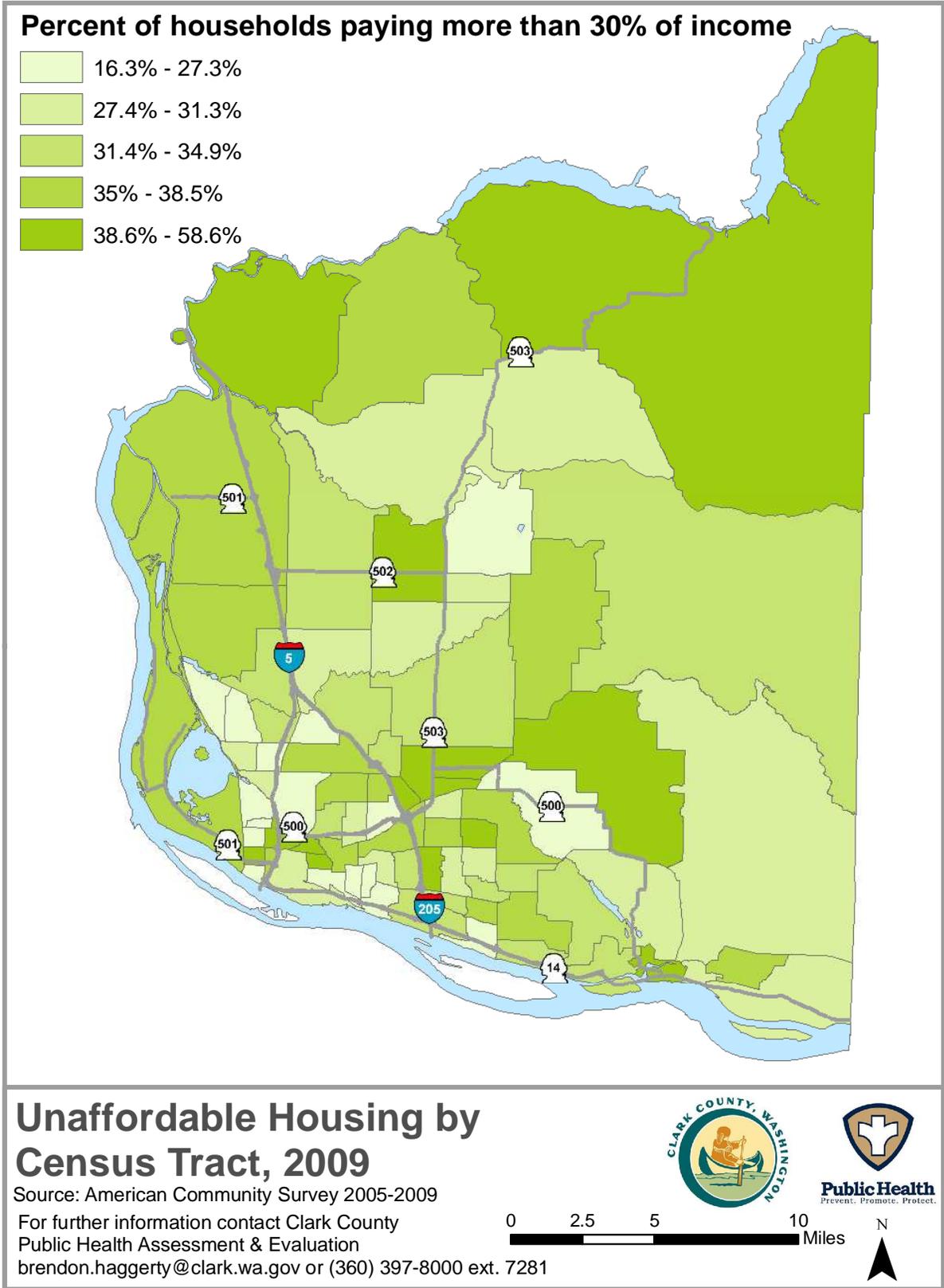
Clark County residents pay more than 45% percent of their income in housing and transportation costs.<sup>9</sup> Given the greater location efficiency in Vancouver, some areas of the county remain affordable even when transportation costs are taken into account. Maps 2.1 and 2.2 (above) show the areas that are affordable (yellow) and unaffordable (blue) using each affordability threshold.

Despite the large number of residents who currently live in unaffordable housing, data from the Washington Center for Real Estate Research show that housing has been becoming more affordable over the course of the recent economic slow-down. Using the Washington Housing Affordability Index, in which 100 signifies a balance between cost and ability to pay for typical families, the center calculates that affordability has dramatically increased since 2008. During the first quarter of 2008, the affordability index registered at 110.5, increasing to 180.7 by the first quarter of 2011.<sup>10</sup> Since 2008, Clark County has had among the highest foreclosure rates in the state. As of September 2011, 1 in 665 homes was in foreclosure, the fifth highest rate among Washington's 39 counties. This reflects a sharp decline from October 2010, when the rate was 1 in 310 homes. However, the real estate data firm RealtyTrac identified a rising trend in foreclosures in Clark County between April and September 2011.<sup>11</sup>

The 2005-2009 estimate of median home value for owner-occupied houses in Clark County was \$258,600, less than the state median of \$277,600.<sup>12</sup> Recent data indicate that the median home value has dropped to about \$194,000 in 2011.<sup>13</sup> As displayed in Map 2.4, higher home values in Clark County are found in outlying areas, while the most affordable home values are found within the Vancouver Urban Growth Area. What this tells us is that the more affordable options in Clark County are largely concentrated within urbanized areas that are closer to services such as retail and transit.

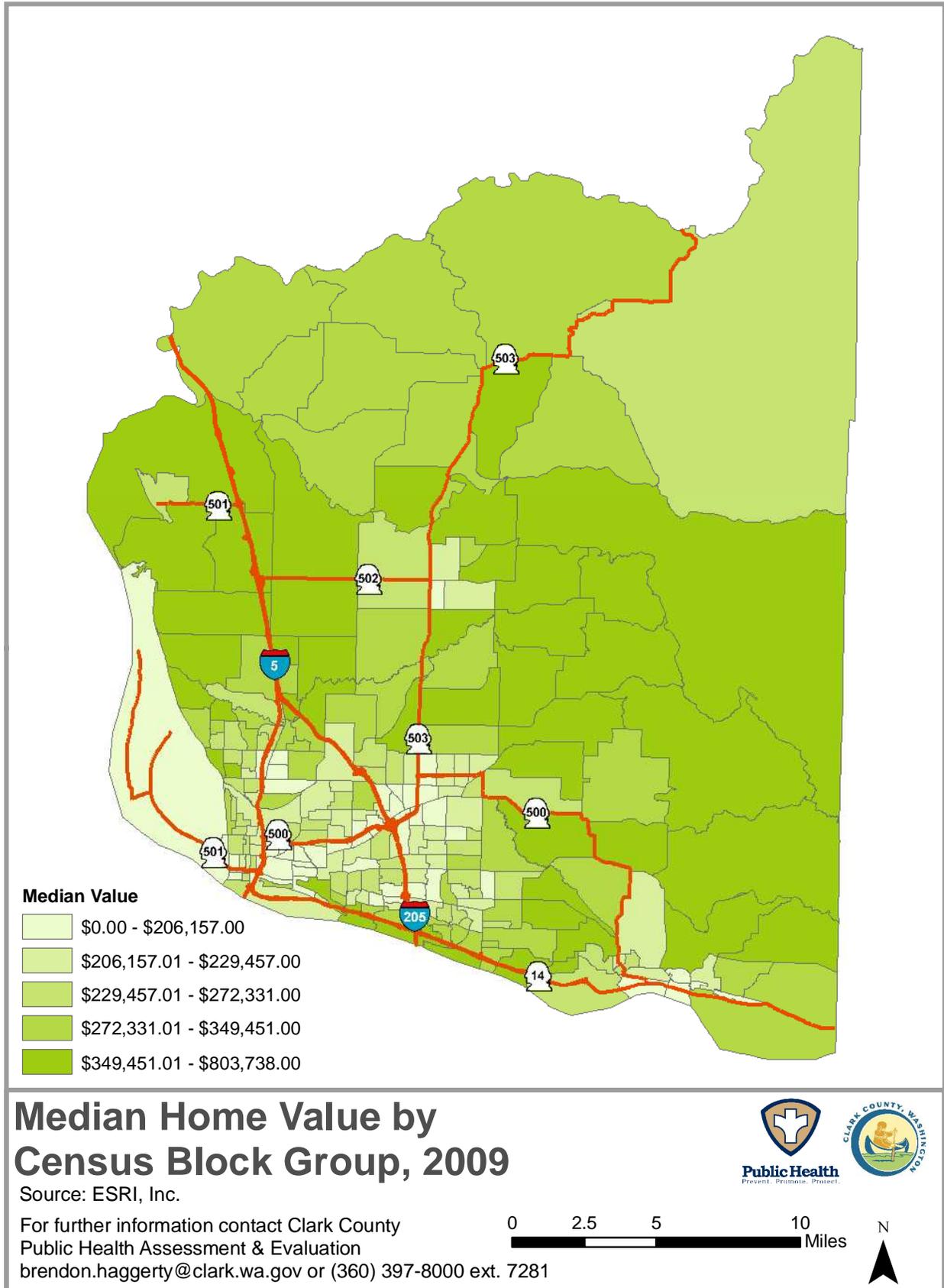
Affordability is clearly a problem for many Clark County residents, but programs designed to address this need are unable to meet the demand. As of March 2011, the VHA was serving almost 7,400 people, but had accumulated a waiting list of 3,295 before closing the list in 2006. About 38% of the households served by VHA earn less than 30% of Area Median Income, qualifying as Extremely Low-Income households. In its 2010 report to the community, VHA cites \$35,000 as the approximate annual income necessary to afford “decent, safe housing at fair market rent for a two bedroom apartment.”<sup>14</sup> The report observes that in 2010, nearly 40,000 households fell short of this threshold.

**Map 2.3 Unaffordable Housing by Census Tract, 2009**



*Darker areas represent a higher percent of households paying 30% or more of their incomes in housing costs. Source: ACS 2005-2009*

**Map 2.4.** Median Home Value by Census Block Group, 2009



*Median home values are higher in outlying areas. Source: ESRI, Inc.*

## Inadequate Housing

Inadequate housing is characterized by the presence of moderate to severe physical or system defects. Examples include lack of hot and cold running water, exposed wiring, failing septic systems, or lack of effective heating and cooling systems. The most recent data on housing adequacy in Clark County come from 2005-2009 American Community Survey (ACS) estimates. The ACS only measures plumbing and kitchen facilities, as described by the US Department of Housing and Urban Development. Complete plumbing facilities are defined as hot and cold running water, a flushable toilet, and a bath or shower. Complete kitchen facilities include a sink, a stove or range, and a refrigerator. As of 2009, about 0.2% (350) of occupied Clark County houses do not have complete plumbing facilities and about 0.5% (860) do not have complete kitchen facilities.<sup>15</sup>

**Table 2.4.** Percent of Housing Lacking Plumbing and Kitchen Facilities, 2009

	<b>Clark County</b>	<b>Washington State</b>
Lacking complete plumbing facilities	0.2%	0.5%
Lacking complete kitchen facilities	0.5%	0.8%

Table 2.4 compares the Clark County rates to Washington State rates, showing that Clark County rates are similar to or slightly lower than statewide rates. No recent county-level information is available on electrical facilities, which would help complete the picture of housing adequacy in the county. However, a national study by the Centers for Disease Control and Prevention (CDC) found that approximately 4% of houses in western states are inadequate.<sup>16</sup>

## **Unhealthy Housing**

Unhealthy housing is characterized by sources of potential exposures to toxins and diseases, indicated by the presence of mold, radon, rodents, peeling lead paint, or lack of a working smoke alarm. A comprehensive evaluation of unhealthy housing at the county level is not possible due to lack of data. However, the national study by the CDC cited above found that approximately 19% of houses in western states are unhealthy.<sup>17</sup> Data are available to help us understand some of the local risk, which we have assessed as follows.

### *Structure Age and Lead*

Structure age is an indicator of the risk for exposure to lead, as housing constructed after 1978 is assumed to be free of lead paint. An estimated 59% of all housing units in Clark County were built after 1979 and pose limited risk of lead exposure. However, approximately 40% of owner-occupied houses and 44% of rental units were built before 1980, indicating an increased risk of exposure. Census data show that 7,822 housing units are over 70 years old, having been built in 1939 or earlier, and another 14,440 are over 50 years old, having been built from 1940 to 1959.<sup>18</sup> While old homes are not necessarily deficient in any way if they've been well maintained, they can present health risks associated with lead exposure and with physical deterioration over time.

### *Second Hand Smoke*

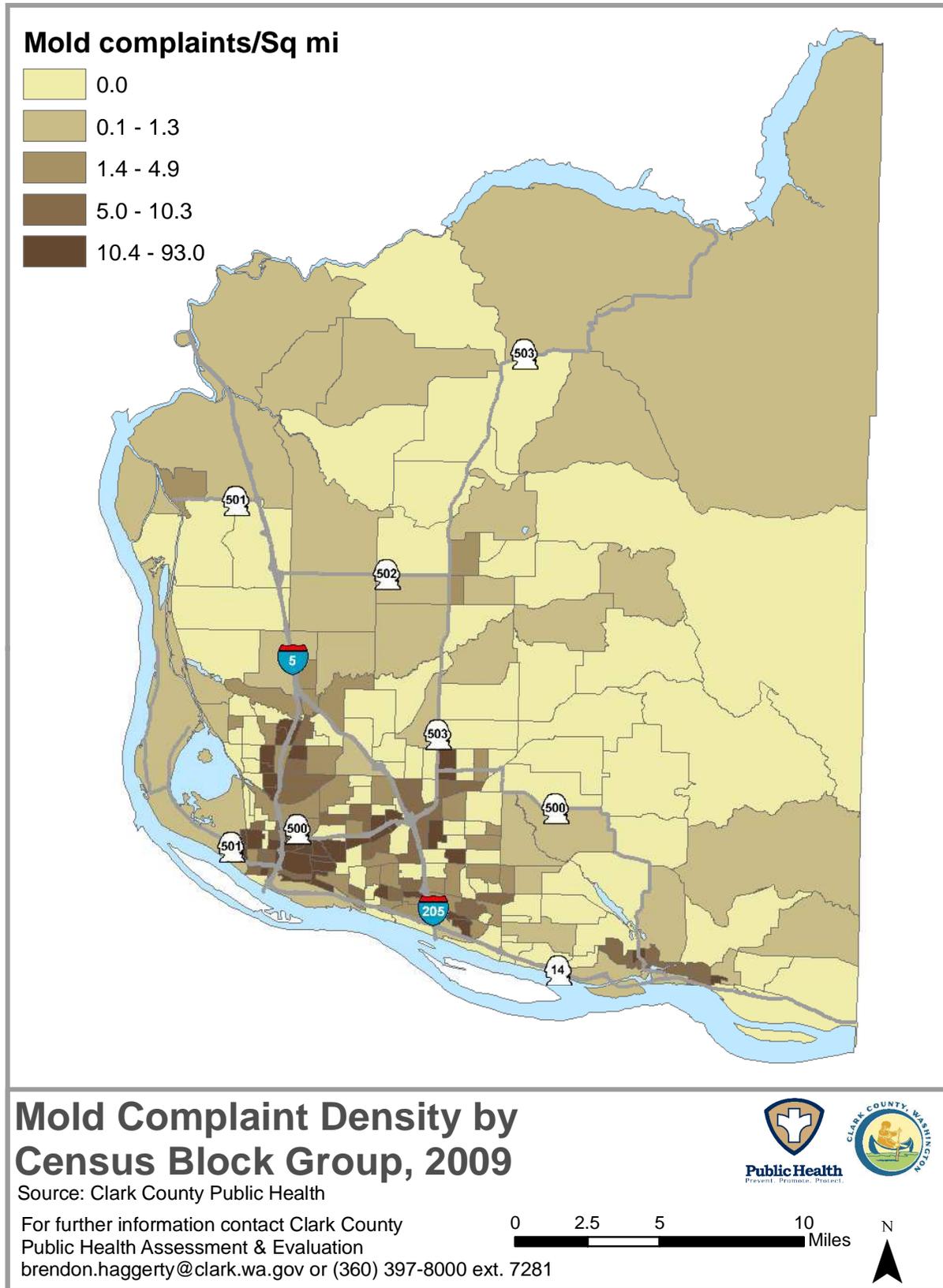
Particles from second hand smoke in and around housing can result in the accumulation of toxins. In Clark County, many multi-family housing complexes have no-smoking policies and

smoking is prohibited in or near almost all VHA properties. As of 2009, 90% of Clark County residents reported that they do not allow smoking in the home.<sup>19</sup>

### *Mold*

Mold, which often results from excessive moisture and is also associated with flooding or plumbing leaks, can diminish indoor air quality and exacerbate respiratory problems. Some mold species produce mycotoxins that cause nausea, headaches, or irritation to the eyes and lungs.<sup>20</sup> Homes in Clark County are susceptible to mold due to the high levels of precipitation in the Pacific Northwest. Map 2.4 shows mold complaints reported to Public Health from 2006-2011. An analysis of mold complaint density by census tract reveals significant correlations between mold complaint density, structure age (-.33), and poverty (.57).

Map 2.4. Mold Complaint Density



*There is a greater density of complaints of household mold in more populated areas. Source: CCPH, 2009*

## Radon

Radon, a naturally occurring gas that can accumulate in buildings, has been identified by the Environmental Protection Agency (EPA) as the main source of environmental radiation and the

**Map 2.4. Radon Risk in Washington**



second leading cause of lung cancer. Map 2.5 shows that Clark County has among the highest levels of predicted radon in Washington per the EPA.<sup>21</sup> Risks can be mitigated or minimized through safe construction techniques and ventilation, and recent

state law requires radon-resistant construction in new homes.

The average radon level in Clark County is 3.1 pCi/L (a measure of radioactivity), compared to a national average of 1.3 pCi/L. The EPA recommends mitigating action when levels are at or above 4 pCi/L. One of the largest radon testing companies in Clark County found that 21% of homes have levels at or above 4 pCi/L.<sup>22</sup> Mitigation typically involves ventilation, sealing, or pressurization of basements or foundations and is comparable in cost to typical home repairs.<sup>23</sup>

## Homelessness

Accurate estimates of homeless populations are difficult to obtain; the best available data come from a point-in-time count conducted annually across the United States. In Clark County, the Council for the Homeless participated in the most recent count in January 2011. The Council found 834 homeless persons in Clark County, of whom 85% were families with children. About 78% of the homeless persons counted were sheltered in emergency, transitional, or safe-haven housing.<sup>24</sup>

# Disparities

## Socioeconomic Status (SES)

In Clark County, low SES households are more likely to rent and are more likely to live in unaffordable housing. Chart 2.3 shows **tenure** by

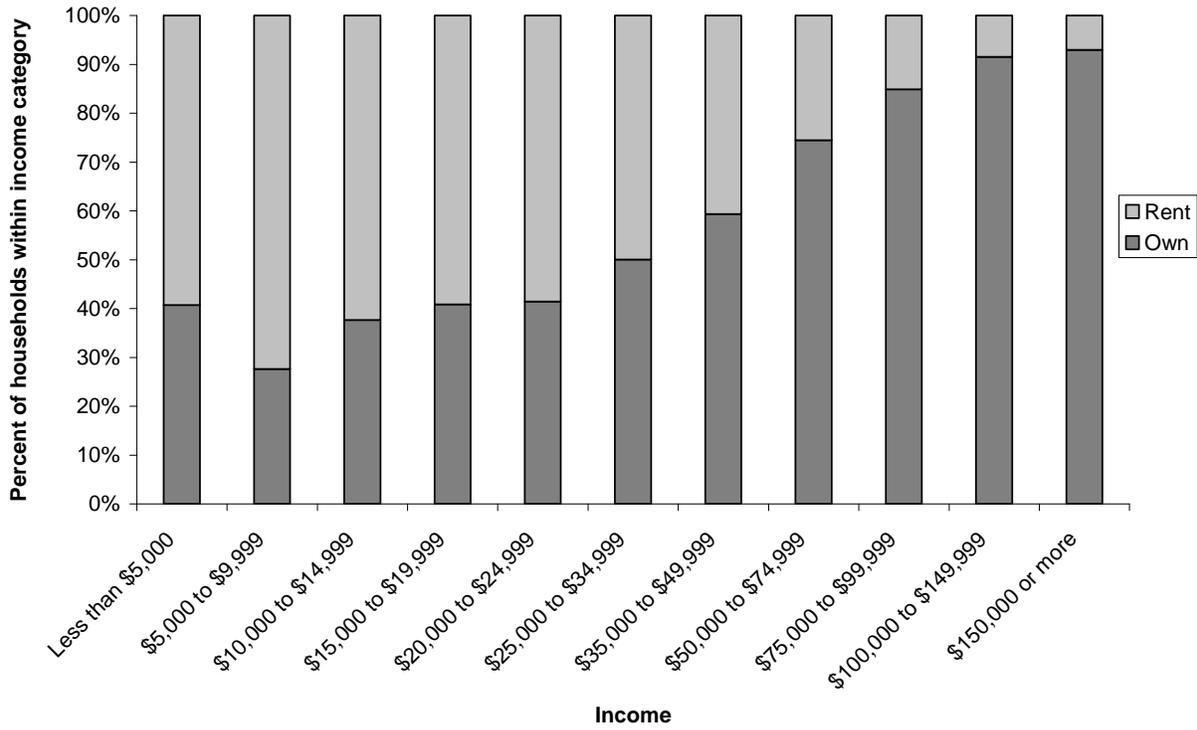
household income. As one would expect, lower income households are more likely to be renters, while greater

**Tenure** refers to whether a resident owns or rents his or her home.

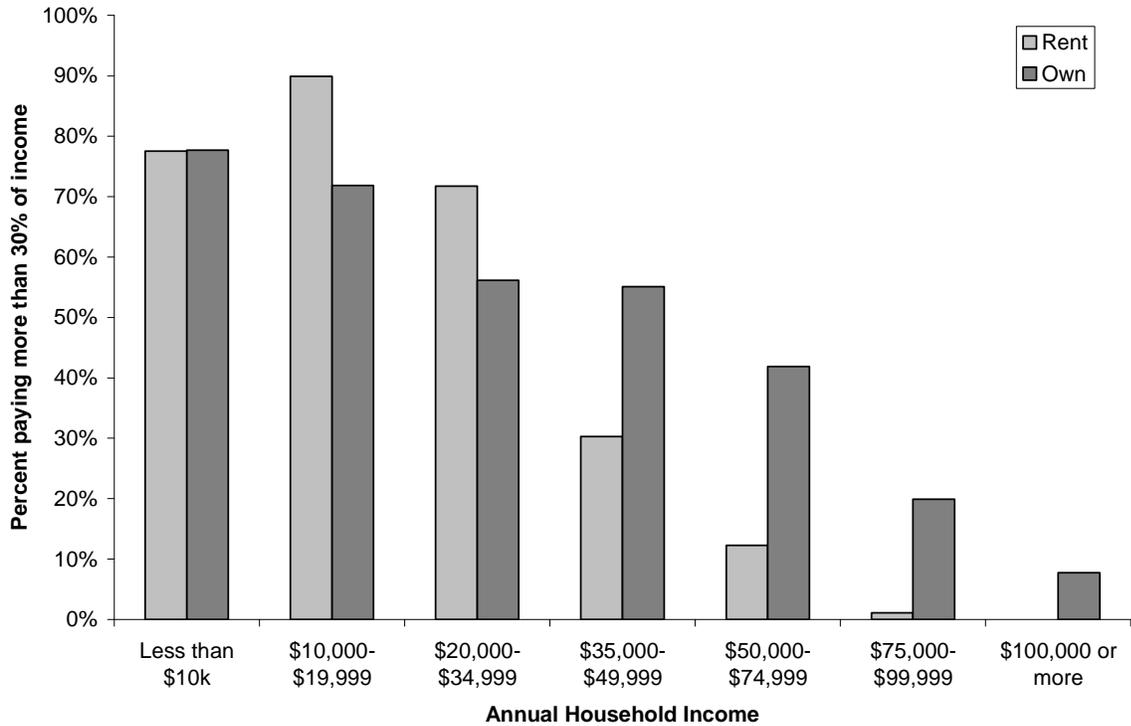
than 90% of the highest income households own their home.<sup>25</sup> The greatest disparity in housing affordability is by income. Some very vulnerable populations rely on very little income, such as elderly or disabled residents whose monthly Social Security payments are \$674 and for whom paying above \$202 in monthly rent would exceed affordability.

For comparison, the FMR for a one-bedroom is \$783.<sup>26</sup> Recent census data show that there are nearly 20,000 households earning less than \$20,000 in Clark County, housing roughly 51,500 people, or 12% of the county population.<sup>27</sup> About 81 percent of these households pay more than 30% of their incomes in housing costs. As illustrated in Chart 2.4, the portion of households paying more than 30% of income in housing costs decreases as income increases.

**Chart 2.3. Housing Tenure by Income in Clark County, 2009**



**Chart 2.4. Housing Affordability by Income and Tenure in Clark County, 2009**



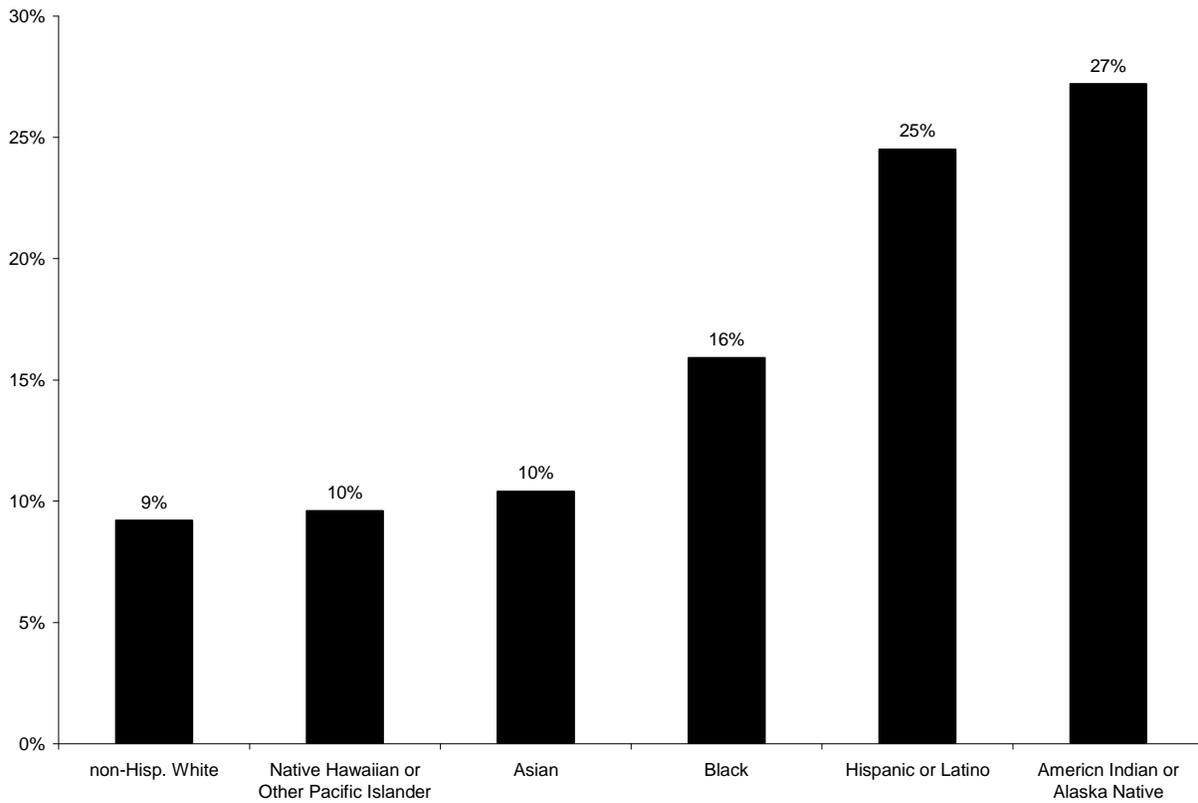
There is insufficient data to assess disparities by SES by most measures of housing adequacy and health. As noted above, lower SES groups tend to rent their homes, and rented housing units are somewhat older than owner-occupied housing units. It is therefore likely that low SES populations face a higher risk of exposures related to structure age, such as lead and mold. As demonstrated above, there is a significant correlation (.57) between poverty rates and mold complaint density by census block group.

We can conclude that low SES households are more likely to live in unaffordable housing and therefore more likely to have insufficient resources for self-care or healthy food. This in turn results in low SES populations facing a higher risk of negative health outcomes such as obesity and diabetes.

### **Race and Ethnicity**

Recent data on proportion of income spent on housing by race are not available. However, it is clear that racial and ethnic minorities are disproportionately represented in the population living below poverty in Clark County. Chart 2.5 below shows that, especially among American Indians, Alaskan Natives, Hispanic or Latino, and African American populations, the poverty rate is very high. We can conclude from this distribution of poverty that racial and ethnic minorities are more likely to experience unaffordable housing and its associated negative health outcomes. However, at the census tract level, no correlation is found between the percent minority population and the percent of households paying 30% or more of their incomes in housing costs.

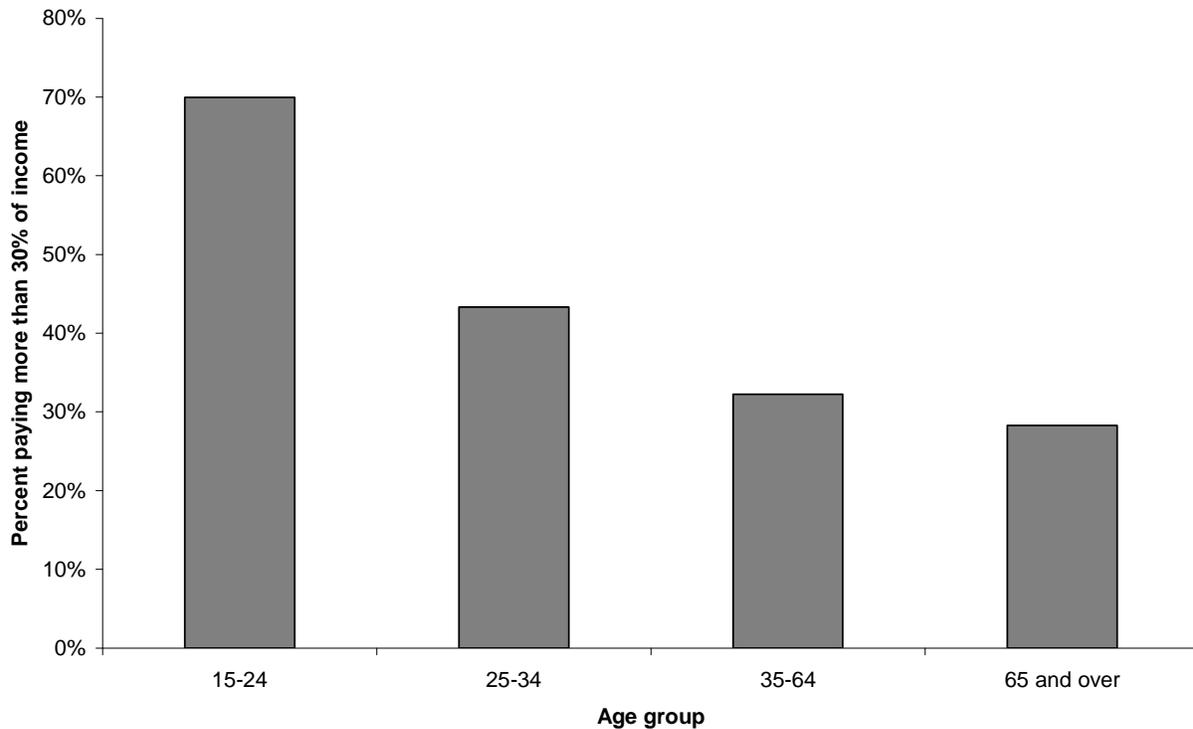
**Chart 2.5. Poverty by Race in Clark County, 2009**



## **Age**

The oldest and youngest members of society are more vulnerable to the effects of unaffordable, inadequate, or unhealthy housing. However, the young do not have the same vulnerabilities as elderly persons. As shown Chart 2.6 below, the percentage of households paying more than 30% of income in housing costs decreases with age. For many young people, paying a large portion of their income in rent is a temporary condition either of being an entry-level worker or a student. A large proportion of these young people can look forward to greater income and greater stability that will allow them to find affordable housing later in life.

**Chart 2.6.** Housing Affordability by Age in Clark County, 2009



### **Disability Status**

As of 2006, approximately 12% of Clark County residents age 16-64 had a disability. Of these 35,000 people with one or more disabilities, nearly 10,000 have disabilities that make employment difficult, and indeed 57% of those with disabilities are unemployed. Among Clark County residents over age 5 with a disability, about 19% live below the poverty threshold, compared to only 8.2% of those without disabilities.<sup>28</sup> Disability status therefore affects income, in turn impacting the type and quality of housing the person can afford. In addition to affordability, housing that is “adequate” for those with sensory or physical disabilities may require special features, such as single-story dwellings, ramps, or modified fixtures. If adequate housing is not available, their housing options will be further limited.

What limited data exist on the Clark County homeless population indicates that it is demographically consistent with national patterns. Families with children constitute a large portion of the homeless, and children are disproportionately represented.

## Summary

Table 2.5 below summarizes findings from the literature compared to current conditions in Clark County.

**Table 2.5.** Summary: Literature Review Findings Compared to Current Conditions

Finding	Conditions in Clark County	Level of Concern
Housing prices may increase risks and decrease protective factors.	43% live in unaffordable housing, increasing to 76% when transportation costs are included.	High
Unaffordable housing contributes to illnesses related to lack of resources.	13% of adults could not afford to see a doctor, and 40,000 households cannot afford fair market rent.	High
Inadequate housing leads to increased risk of injury and exposure to severe weather.	Very few houses in Clark County lack adequate plumbing (0.2%) or adequate kitchen facilities (0.5%).	Low
Unhealthy housing results in exposure to toxins, allergens, and infectious disease.	Clark County has high risk for radon, but lower risks of exposure to lead. There is evidence of mold in Clark County.	Medium
Home ownership has protective qualities.	69% of Clark County households own their home.	Low
Homelessness is associated with multiple negative health outcomes.	78% of Clark County homeless are families with children.	High
Across all demographic groups, inadequate and unhealthy housing disproportionately affects people of lower socioeconomic status.	Low-income households are more likely to live in unaffordable housing. 81% of households earning \$20,000 or less live in unaffordable housing.	High
Racial and ethnic minorities are disproportionately living in inadequate housing or homeless.	Over 15% of African Americans, Hispanics, and Native Americans live in poverty.	High
Youth and the elderly are especially vulnerable to unhealthy, inadequate, and unaffordable housing.	The percent of households in unaffordable housing decreases with the age of the householder.	Medium

Levels of concern were determined by CCPH staff based on research and current conditions and are subject to change. To comment, contact [GrowingHealthier@clark.wa.gov](mailto:GrowingHealthier@clark.wa.gov).

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