

# Climate, Environmental, Equity & Economic Impacts of Sprawl in Clark County

This document provides detail and data support for [a 2020 letter submitted to the Clark County Commission and congressional delegation](#), which discusses recommendations to address the environmental, public health and economic challenges facing the region in light of this bill.

## Climate, Environmental and Public Health Impacts

It seems every day we see yet another headline about how [greenhouse gas emissions are increasing](#), and [everyone no matter where they live will face severe threats](#) from our disrupted climate, and [not in some abstract future but now](#).

[Las Vegas is currently the 2nd-fastest-warming city in the country](#). One main cause of this is [the urban heat-island effect](#) (concrete buildings and asphalt/concrete surface is absorbing and radiating heat back into our cities. [Cities with high rates of sprawl were found to have double the rate of extreme heat events and deaths](#) when compared to compact metropolitan regions. According to the Centers for Disease Control, [higher temperatures decrease the quality of the air we breathe](#), increasing public health risks, leading to more missed school and work days, and [millions in health care costs for Nevadans](#) each year, all of which increase economic stress for our residents.

- Without global action to reduce carbon emissions, [the city will probably experience 96 days of heat above 100F each year by the end of the century, including 60 days over 105F, and seven “off the chart” \(per heat index formula\) days](#).
- [Between 2007 and 2016, there were 437 heat-related deaths in Las Vegas, with the greatest number of those deaths occurring in 2016](#). In 2017, [this number increased](#).
- Sprawling [cities have more heat-related deaths than compact cities](#).

In addition to destroying beautiful views, wildlife habitat and open space recreation, [paving landscapes is a leading cause of greenhouse gas emissions](#). It also [increases flooding](#) and [pollution](#). When compared with equal population growth in infilled city centers, [suburbs were found to increase CO2 emissions](#), while emissions in urban areas remained constant, even with increasing population growth. [A 2014 study by the University of California at Berkeley](#) found that the environmental impact of suburban households is up four times that of households in dense urban areas.

The American Lung Association’s 2019 “State of the Air” report ranks [Las Vegas 13th in the nation for ground level ozone pollution](#) (a decline in air quality since 2018). The Las Vegas metropolitan area has been ranked as [the 15th worst city in America in overall air pollution](#), and [Nevada has the 13th highest rates of asthma compared to other states](#). [Asthma is a leading cause of missed school days](#).

According to the Centers for Disease Control, [roughly 60% of adults in Clark County are overweight or obese](#). [Partners for a Healthy Nevada places this figure at 69%](#), and estimates this raises medical costs for these people by \$3,429 per person (in 2013 dollars). Building more suburbs and sprawling infrastructure promotes inactive lifestyles and impacts the health of those in Las Vegas. However, [communities world-wide with more active modes of travel \(walking, biking, etc.\) have lower rates of](#)

[obesity](#). Policies and community design are recommended to promote transit, land-use, and urban development to encourage walking and cycling for daily travel.

[We don't have much time to take action](#). Multi-jurisdiction cooperation is necessary to craft workable climate solutions.

### **Land Conservation: Good But Not Enough**

Sierra Club fully supports the proposed land-protection designations, including the following:

- Wilderness for Mount Stirling and additions to the South McCullough, Ireteba Peaks and Muddy Mountains Wilderness Areas;
- The Avi Kwa Ame National Monument;
- Additions to the Red Rock Canyon National Conservation Area.

As [Andy Maggi and Jocelyn Torres wrote in a recent op-ed to the Las Vegas Review Journal](#), protecting public lands from development and anthropogenic damage is important to preserve ecosystems for future generations and to protect the environment and species that reside within them. Such protections can also help mitigate climate change. Numerous studies show that undisturbed desert landscapes are [extremely effective in sequestering carbon](#). We fully support these proposals.

Unfortunately, designating currently undeveloped lands will not [increase](#) carbon sequestration; it will only [preserve](#) current carbon sequestration occurring in these lands. Losing the carbon-sequestering function of all lands proposed for development will result in a [net loss](#) of carbon sequestration, and thus an increase in greenhouse gas emissions. The additional loss of the habitat, biodiversity, and stormwater-management services of these lands will seriously degrade Clark County's environment and climate resiliency. Additionally, the [carbon sink potential of arid landscapes may decrease as temperatures increase](#).

We agree with [the Center for Biological Diversity](#) in opposing the designation of Areas of Critical Environmental Concern (ACECs) proposed by the County, because the lands slated for development appear to have higher habitat values than those proposed for ACEC designation, and ACEC language is not strong enough to protect these areas from mineral withdrawal, industrial-scale renewable energy development, off-road travel, poor planning, and other impacts.

Additionally, the legislative amendment to the Multi-Species Habitat Conservation Plan (MSHCP) equates to a congressional exemption of the Endangered Species Act. Habitat loss and fragmentation are leading causes of [the current mass extinction of flora and fauna around the world](#). The SNEDCA proposes to subvert the protections of the ESA in exchange for undisclosed land offsets elsewhere. This legislation would offer a bypass of the ESA by issuing federal permits to be awarded to Clark County without an environmental analysis, and could set a precedent for other localities to use to undermine the ESA, weakening the strongest law protecting endangered species throughout the country. This places habitat and species management in the hands of politicians, not

scientists, and it sets a precedent that threatens to gut the Endangered Species Act's effectiveness across the country. [The County-proposed draft of SNEDCA is a non-starter that we must oppose.](#)

We understand that approximately 129,000 acres of undeveloped land remain within the current growth boundary, and that roughly 60,000 acres are permitted under the current MSHCP. These acres, according to the County, should take approximately 10 years to develop. This gives us time to craft a good bill instead of a fast one.

### **Equity, Economics and Justice**

[The impacts of city sprawl and poor air quality are disproportionately placed on low income communities.](#) Sprawl contributes to further disenfranchisement of redline neighborhoods. The farther suburbs sprawl, the farther away from city centers jobs become, and lack of public transit options creates a direct barrier to work to those without cars in our city. Spatial mobility has been shown to be directly correlated with [upward economic mobility](#); if passed, this bill will disregard low-income, minority neighborhoods that will only add another layer of systematic oppression that individuals must overcome to survive in Las Vegas.

The inequity of modern life exists at many levels. Every child's zip code is now a [predictor of life span](#), [educational success](#), and [future success at life](#). As an example of the intersectionality of these challenges, asthma is one of the leading causes of missed school days; missed schools days are predictors of low graduation rates, which in turn are predictors of low earning potential. Appropriate climate planning in this region has the opportunity to challenge these trends by improving air quality in every part of the Las Vegas Valley regardless of zip code. Growing the developed footprint of the Las Vegas metropolitan area benefits some, but it impacts many more. This is unacceptable.

[The recent distribution of redevelopment funds in Las Vegas](#) indicates that structural inequalities persist that will only be compounded without specific action to change the status quo to improve the lives of those left behind. The current draft of SNEDCA fails to do so.

[Robert Bullard, an environmental justice researcher](#), has identified multiple ways sprawl impacts hurt minorities (to name a few; white flight and the decay of urban public schools, lack of reliable public transit, and air quality impacts in urban centers).

Beyond economic and environmental justice, sprawl raises prices for everyone; it is estimated to cost the U.S. [\\$1 trillion a year](#), because it increases the distance between homes, businesses, services and jobs, which raises the cost of providing infrastructure and public services by at least 10% and up to 40%. The most sprawled American cities spend an average of \$750 on infrastructure per person each year, while denser cities spend closer to \$500. In its [Better Growth, Better Climate report](#), the New Climate Economy has found that acting to implement smarter urban growth policies on a global scale could reduce urban infrastructure capital requirements by more than \$3 trillion over the next 15 years. With appropriate multi-jurisdictional planning and targeted legislation, Clark County can reap the economic benefits of smarter urban growth policies.

Conversely, housing in city centers offers better investment returns than housing in sprawling suburban areas. Real estate is an appreciating asset, but the necessity of personal vehicles to live in suburbia requires the purchase and maintenance of cars, which are highly depreciating assets. When comparing housing options over a decade, [urban housing generated \\$50,000 - \\$150,000](#) more in household equity than the suburban options, due to costs associated with vehicles and fuel.

### **Affordable Housing**

Affordable places to live must be addressed in this region. But building more houses — especially far from jobs, goods and services — is insufficient to meet the needs of all residents. Those who save with less-expensive houses on the outskirts of town will spend those savings with the increased cost of transportation. We will all pay for increased transportation through worsening air quality, less open space protected, longer commute times, lower worker productivity, poorer health outcomes and lower quality of life.

Growth in Clark County must benefit all in the Las Vegas Valley, not just land developers, the construction industry, and those who can afford the new homes. Legislation to sprawl the Las Vegas Valley will only aggravate the current inequity.

We need to grow up and in, not out. The cities of Las Vegas, North Las Vegas, and Henderson, and Clark County need to commit to policies that will increase affordable housing within the current growth boundary.

### **More Roads, More Cars, More Pollution, and More Expense**

Accommodating another million people in the Las Vegas Valley under current sprawl paradigms will fate the Las Vegas Valley to more roads, more cars, and more pollution. According to the Nevada Department of Transportation, the upkeep and construction of already-existing roads will cost the state more than \$10 billion. The highway fuel tax is unable to keep up with these costs. Additional roads will increase burdens on our already-strained resources to maintain what we have.

Cement/concrete production is [one of the leading contributors of carbon emissions](#), roughly 8% of global carbon emissions. [Every 1,000 kg of cement generates roughly 900 kg of CO<sub>2</sub>](#). More paved surfaces in the Las Vegas Valley will inevitably emit more carbon.

In an expensive effort to curb congestion in urban regions across the USA, we have overwhelmingly prioritized one strategy: we have spent decades and hundreds of billions of dollars widening and building new highways. We added 30,511 new freeway lane-miles of road in the largest 100 urbanized areas between 1993 and 2017, an increase of 42 percent. That rate of freeway expansion significantly outstripped the 32 percent growth in population in those regions over the same time period. Yet this strategy has utterly failed to “solve” the problem at hand—delay is up in those urbanized areas by a staggering 144 percent. [From this report.](#)

Because of our nation’s progress adopting renewable energy for electricity generation, [transportation is now the leading sector for greenhouse gas emissions](#). Of that, passenger cars account for roughly

60% of those emissions. Pursuing sprawl will only exacerbate greenhouse gas emissions and other impacts from more vehicles on Clark County's roadways.

Encouraging the adoption of Electric Vehicles (EVs) is a start. According to the NV DMV, EVs comprise ~0.26% of vehicles on the road. Even the most aggressive policy to encourage EV adoption will take years to bring these numbers up enough to improve air quality. More must be done.

The only way to break this cycle is reduce Vehicle Miles Traveled (VMT) by pursuing infill development, walkable neighborhoods and public transit to allow for people to address their needs for work, supplies and services without relying on cars.

Rather than being an economic burden, [infill, urban density and walkable neighborhoods can be drivers of innovation, small businesses success and entrepreneurship](#). In addition, a recent index shows that [urban economic development is inexorably tied to innovative transportation options](#).

### **Where Will the Water Come From?**

The addition of hundreds of thousands of people in expansive suburban neighborhoods will increase demand for water. Where is that going to come from? [The language within the current bill](#), whether intended or not, creates the legal precedent for a water pipeline to be installed to bring in rural groundwater to Las Vegas. As the driest state in the Union, [Nevada is water-insecure](#). Pumping already stressed groundwater stores to meet demand in the short-term — fully knowing this is not a long-term solution, is a direct threat to rural counties and ultimately the survival of Las Vegas. [Sierra Club opposes all titles in the SNEDCA that would further the water-grab pipeline pursued by SNWA](#).

### **Toward Solutions**

Nevada has taken great steps toward greenhouse gas emissions reduction by [adopting a stronger renewable portfolio standard](#), committing [to greenhouse gas reductions across all sectors](#), and with [Governor Sisolak's executive order directing the state to advance climate goals](#). However, [achieving these goals will not be possible without further, stronger action](#).

The Clark County Commission deserves praise for pursuing a Sustainability Plan. However, in its current form, SNEDCA will render any sustainability efforts fruitless. However, a strong County Sustainability Plan in concert with aggressive multi-jurisdiction climate planning can be a powerful force for climate resiliency. Federal legislation can play a role to further climate solutions.

We can no longer pursue land-use paradigms that have increased greenhouse gas emissions, declined air quality, destroyed habitat for the desert tortoise and other species, and inflicted poor health and lack of opportunity on our most vulnerable and least-represented communities. If it fails to address these threats, the "Nevada way" of passing multi-conveyance public lands bills will drastically intensify the social, environmental, public health, and economic challenges facing Clark County. As such, SNEDCA cannot be enacted in its current form. Status quo is no longer sufficient. We need to do better.