

ISSUE BRIEF:

THE ENVIRONMENTAL CASE FOR ZONING REFORM



**DESEGREGATE
CONNECTICUT**

www.desegregatect.org

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INTRODUCTION

Connecticut's environment is one of the state's most treasured resources. And our leaders, on a bipartisan basis, have recognized the need for bold action to protect it. Together, we have set ambitious goals and worked for change.

Despite this consensus, we haven't acted.

Connecticut has largely neglected a primary cause of environmental harm in the state: its zoning laws. These rules have the potential to promote sustainability by channeling development to smart areas and safeguarding natural resources.

Our current zoning is unsustainable.

It prevents denser development in existing residential areas and near transit, increasing growth pressures in unsustainable areas.

This issue brief lays out the environmental case for zoning reform in Connecticut.

This brief proceeds in 3 parts.

Part II leverages data from the [Connecticut Zoning Atlas](#) to show how zoning-enforced sprawl predominates across the state. Part III outlines six key environmental impacts of sprawl. And Part IV highlights the path to pro-environment zoning.

We must get smarter about land use.

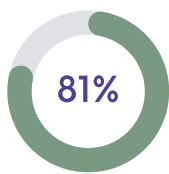
Achieving Connecticut's climate and environmental goals is impossible without rethinking our backwards approach to land use.

With statewide reforms that direct new growth to specific places, Connecticut can make significant progress – but it hasn't a moment to lose.

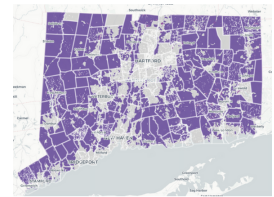


SPRAWL: CONNECTICUT'S DOMINANT LAND USE APPROACH

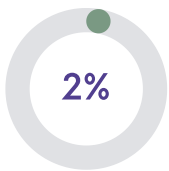
Through zoning laws, Connecticut has mandated sprawl as the dominant mode of land use across the state. We know this is true because of the [Connecticut Zoning Atlas](http://desegregatect.org/atlas), online at desegregatect.org/atlas, which documents how every inch of Connecticut is zoned. It shows that towns mandate development of one housing type to the exclusion of all others: single family homes on large lots.



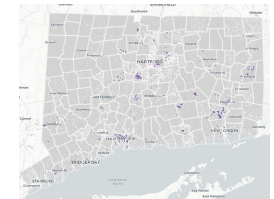
81% of residential land requires a minimum lot size of about an acre or more.



These minimum lot sizes mean that people are spread out across farther distances, requiring them to use their cars and making walkable communities impossible.



2% of the state's land allows multi-family (four-or-more-unit) housing as of right.



This small amount of land zoned for multifamily housing means that we are limiting the opportunities for people to live in walkable communities.

It is also difficult to build multifamily housing near the majority of Connecticut's train and CTfastrak stations, a topic we cover in an [issue brief](#) on transit-oriented zoning.

We also encourage you to check out our [issue brief](#) on minimum lot sizes, which features additional information.



This one-size-fits-all regime is captured by the term “zoning-enforced sprawl.”

The American Planning Association defines sprawl to a collection of “development practices that aggravate the decline of many urban communities and older suburbs, congest streets and highways, demand higher levels of energy consumption, accelerate the loss of natural resources and deteriorate the natural environment, and limit opportunities for the retention and creation of affordable housing.”

According to the American Planning Association, sprawl:



congests
streets and
highways



consumes
higher levels
of energy



accelerates
natural
resource loss



limits opportunities
for affordable
housing

In this brief, we sometimes use the modifier “zoning-enforced” to reflect a simple truth: our land use laws mandate sprawl patterned development in Connecticut.

Zoning-enforced sprawl is not unique to Connecticut, but our state’s zoning laws stand apart as especially environmentally destructive. For example, in a comparison between metropolitan areas in Connecticut, Texas, and California, property law scholar Robert Ellickson found that minimum lot sizes and other density restrictions were by far the worst in Connecticut. These rules restrict housing construction in existing residential areas, channeling growth to far flung areas.

Part III explains the environmental consequences of zoning-enforced sprawl in greater depth.



SIX ENVIRONMENTAL IMPACTS OF SPRAWL

Connecticut's one-size-fits-all zoning creates sprawl, which in turn hurts our environment. We already know that this approach drives up housing costs, cripples our economy, and entrenches segregation by race and class. This section explores six environmental consequences of zoning-enforced sprawl:



Higher Transportation-Related Emissions



Loss of Forests and Farmland



More Flooding, Heat Islands and Stormwater Runoff



More Pollution in Urban Areas



Underutilized Public Transportation



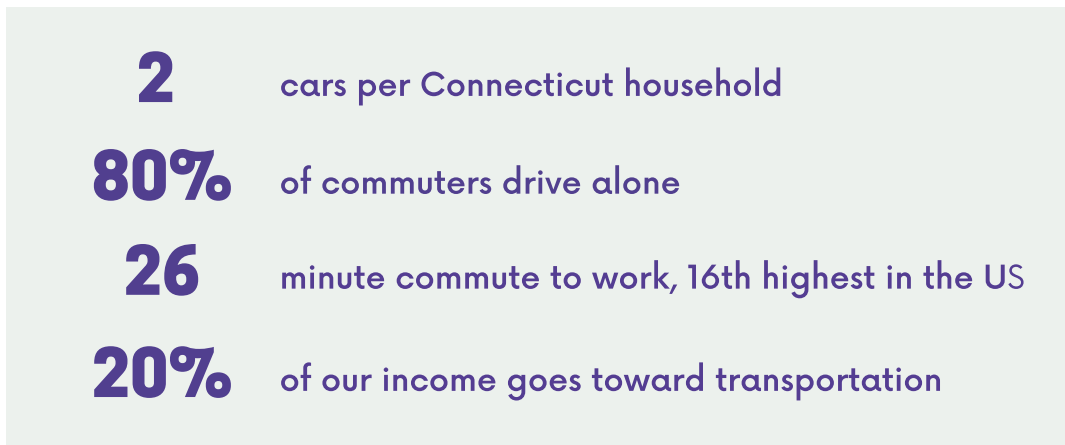
Higher Energy Consumption and Costs



A. Higher Transportation-Related Emissions

Sprawling development forces us to depend on cars and lengthens the distance residents need to drive for work, school, errands, and visits to family and friends.

Car dependency manifests itself in a few key statistics:



And the amount of car use is on the rise. One way to measure this is through the metric of "vehicle miles traveled," which measures the total number of miles we travel in our cars. Between 2000 to 2016, Connecticut's vehicle miles traveled increased by 4%.

With all this driving comes lots of pollution. Transportation emissions have proven to be the largest obstacle preventing Connecticut from achieving its climate goals, and they will continue to hinder progress unless we make a change.

The transportation sector is responsible for:



38% of the state's greenhouse gas emissions



70% of the petroleum consumed in Connecticut

Restrictive zoning rules are directly linked with higher transportation-related emissions. Take these two examples.

First, large lot sizes. Households in towns that zone most of their land for super-large lot of 2+ acres have 36.1% higher transportation-related emissions on average than households in the remaining towns in Connecticut. This gap is almost entirely attributable to differences in vehicle miles traveled, which are 34.5% higher for households in super-large-lot towns.

Second, limits on multifamily housing near transit. These limits reduce access to public transportation, forcing people to use cars instead and exacerbating transportation-related pollution.



More driving means more unhealthy greenhouse gas emissions.

Transportation-related greenhouse gas emissions are a health problem, too. According to a United Health Foundation report, every county in Connecticut suffers from high levels of ozone pollution, or smog. Ozone pollution harms lung health and is particularly dangerous, potentially even fatal, for the young, the old, and those with lung diseases like asthma. The transportation sector is the primary culprit, responsible for 66% of the state's nitrogen oxide emissions (a contributor to ozone pollution).

And finally, driving increases costs for families. Our zoning laws, which force people to drive, mean that 20% of Connecticut households' income goes toward transportation, well above the federal threshold for affordability.

Instead of protecting the environment, Connecticut's zoning rules ensure its decline by forcing residents to rely on cars and drive long distances. Not only that, they hurt our health and our pocketbooks.



B. Loss of Forests and Farmland

Our zoning codes require a huge amount of land for each house – almost a football field in 80% of our neighborhoods, and often more. As a result, we have no choice but to build outward, into our state’s forests and farms. This means we have fewer natural defenses against climate change and a less sustainable food system.

This trend has been a problem for decades. The UConn Center for Land Use Education and Research found that from 1985 to 2010, Connecticut lost:



190 square miles of forest - an area almost six times the size of Manhattan



70 square miles of agricultural fields

These losses hinder our ability to fight climate change. For example, the "carbon sink" from forests and related soils could represent about a decade’s worth of emission reductions. Data from CT Department of Energy and Environmental Protection’s Working and Natural Lands Working Group indicates:



Carbon sequestered and stored in forests and related soils accounted for the equivalent of 20% of total emissions in 2017.

Large core forests (those greater than 500 acres) sequester carbon better than other types of forests. But fragmentation of these core forest areas continues at a rapid pace, reducing their effectiveness as sinks and degrading their overall ecological quality. This fragmentation isn’t just a result of the conversion of forests to homes, but also comes from the addition of the roads and infrastructure that newly constructed units require.

The state is unfortunately open to continued loss of forestland in favor of low-density suburban development. Approximately 71% of forested land in Connecticut is privately owned and, therefore, more susceptible to development.

Connecticut's concomitant loss of farmland likewise poses a threat to the state. A national study in 2019 shows that:



of prime farmland were lost or compromised between 2000-2016, the fourth-highest percentage of any state.

Those losses have had detrimental economic effects, given that our agricultural industry generates \$5.2 billion annually and supports 29,000 jobs. They have also made it harder for us to safeguard the state's long-term food security.

The important work of maintaining forestland and productive farms depends on channeling housing development away from this land and toward already-developed areas within our cities and towns. But zoning rules that limit multifamily housing and mandate large lot requirements do just the opposite – compromising Connecticut's ability to preserve its shrinking forestland and farmland.



C. More Flooding, Heat Islands, and Stormwater Runoff

Sprawl demands that people drive, resulting in more land devoted to paved parking spaces and lots. In turn, this paved land attracts and reflects heat. It also creates more stormwater runoff than unpaved land, making it more difficult for us to address flood risks increasing due to climate change.

Why do we have so much paved (sometimes called “impermeable”) surfaces? Zoning requirements play a big role in making us pave more than we need.

We’ve already pointed out that large-lot zoning requires more roads and driveways than small-lot zoning.

Another zoning provision that contributes to more pavement is the parking mandate. Our [research](#) shows that the average town with parking mandates requires 1.73 spots per studio apartment and 1.87 spots for each 2+ bedroom apartment. According to [another study](#) of suburban residential developments:



Parking mandates induce higher rates of driving, and force us to build up to 30% more parking than we need.

Parking mandates have turned a considerable amount of our state’s land into empty parking lots and spaces, exacting high costs to the built and natural environments while providing only illusory benefits.

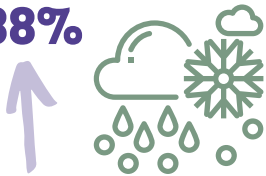
What are the consequences of so much paving?

First, impervious surfaces create dangerous “[heat islands](#)” where high temperatures become trapped. Asphalt and concrete in particular absorb and re-radiate heat back into the air. When those materials replace vegetation, we lose shade and moisture that cool our cities.

According to SmartGrowth Network, over 1,000 Americans die every year from heat-related incidents. Low-income people and the elderly are disproportionately impacted. With temperatures expected to rise by 5 degrees over the next 50 years in Connecticut, we must reduce the amount of land in our state that concentrates heat and puts vulnerable residents at risk.

Second, overbuilt roads and parking contribute to flooding, which is becoming more frequent as the state's rainfall increases year after year.

38%



In 2018, the state experienced an increase in precipitation by 38% over 100-year state averages.

As just one example, in September 2021, Hurricane Ida dumped over 8 inches of rain in several hours, causing \$7 million in damage to homes, businesses, and infrastructure. With precipitation from rain and snow estimated to increase in the Northeast by as much as 20% over the next few decades, we should do everything we can to stop overpaving our state.

Third, parking lots and other impervious surfaces contribute to stormwater runoff that pollutes waterways. When rainfall is diverted, instead of being absorbed back into the ground, it picks up pollutants from rooftops, streets, and sidewalks.



The more impermeable surface we create, the more we pollute our already vulnerable waterways.

One study showed that when just 10% of an area's watershed is covered in impermeable parking surfaces, higher levels of pollutants can be found down river. Stormwater runoff carries toxic substances like gasoline, antifreeze, and brake dust into Connecticut's rivers and lakes.



D. More Pollution in Urban Areas

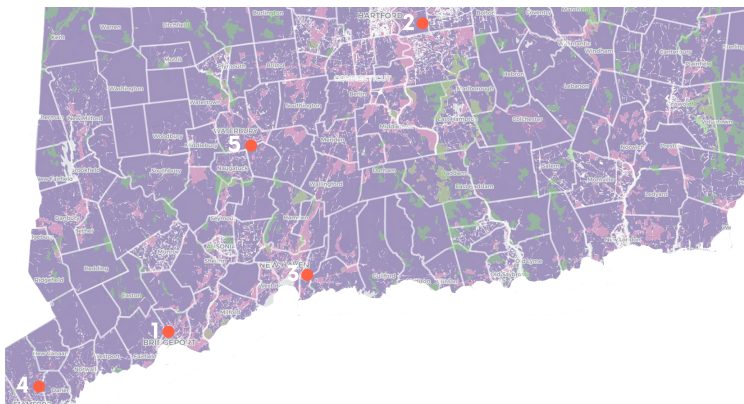
Zoning-enforced sprawl does not just harm suburban and rural communities. It has devastating consequences for Connecticut's urban communities too.

Our cities are located along or at the intersection of major highways. Land use policies that force Connecticut residents to drive force more driving to happen around and through our cities.

Many of the drivers are suburban residents commuting to work or other activities in cities. City residents use cars less often than suburban and rural residents. A quarter of households in most of Connecticut's larger cities don't even own a car!

Nationally, research has shown that non-Hispanic White people disproportionately contribute to air pollution, while Black and Hispanic people are disproportionately exposed to that pollution and its effects. The American Lung Association reports that Asian, Hispanic, and, especially, Black Americans are more likely to die prematurely as a result of air pollution than White Americans. This disparity persists regardless of income, but low socioeconomic status has also been found to increase the risk of premature death from air pollution.

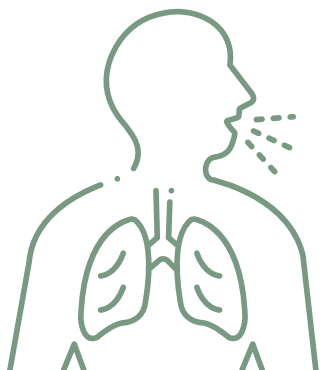
Is this true in Connecticut, too? Yes. According to the CT Department of Energy and Environmental Protection, 71% of people of color and 51% of people in poverty in Connecticut live in just 5 cities, all with major interstate highways:



LIVE IN JUST 5 CITIES:

1. Bridgeport
2. Hartford
3. New Haven
4. Stamford
5. Waterbury

It is no surprise, then, that asthma is more common among Connecticut's Black and Hispanic residents than among non-Hispanic White residents.



Black and Hispanic children are:

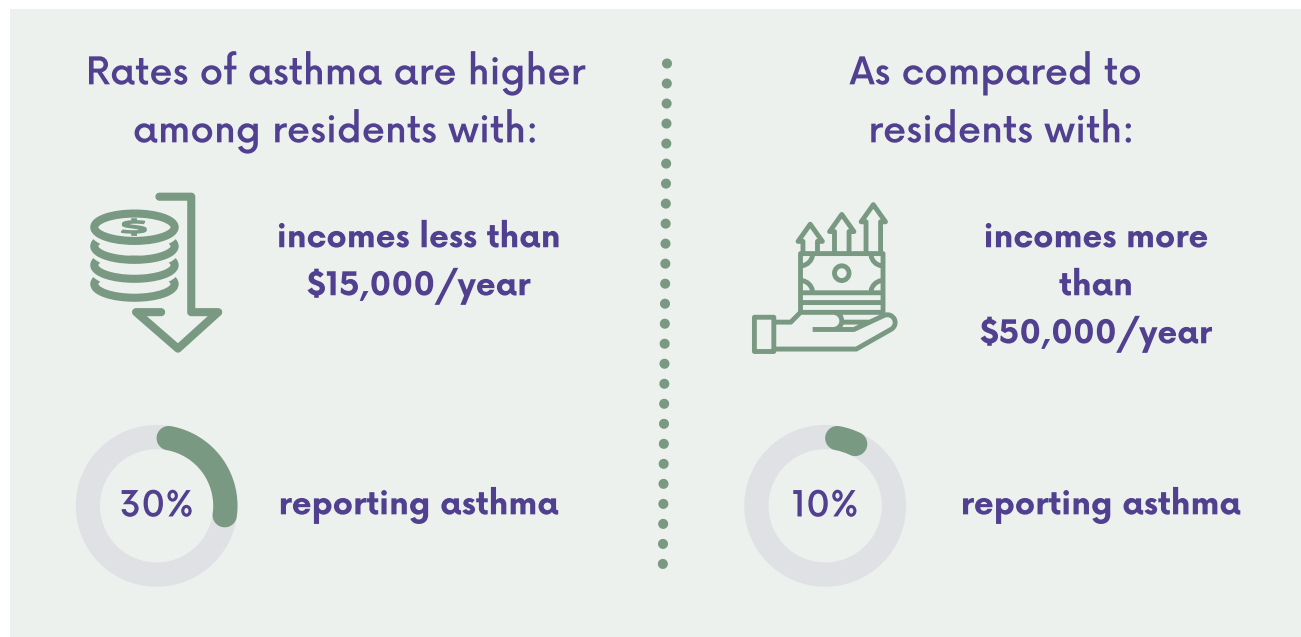
4.5 times more likely

Black and Hispanic teens are:

3 times more likely

to be hospitalized for asthma than their non-Hispanic White peers.

A 2015 survey found that in New Haven, rates of asthma are highest among residents with an income of less than \$15,000 per year, with 30% of those living in extreme poverty reporting asthma. By contrast, only 10% of those with an income of over \$50,000 report asthma.



Our land use policies, which lead to sprawl and more driving, have driven up air pollution in cities, which has had significant negative impacts on families of color and low-income people.



E. Underutilized Public Transportation

Connecticut has a decent public transportation system and has taken steps to increase its network of bus rapid transit and passenger rail. Unfortunately, zoning policies that force us to build residential sprawl result in the system being underutilized.

Let's start with the positive, identifying recent investments in public transit. CTfastrak opened in 2015 with an investment of \$567 million from the state and has served millions of riders; CTTrail opened the Hartford Line in 2018 with an investment of nearly \$600 million from the state and has served 634,000 riders across its nine current stations (with several more stations in the works); nearly 40 million people ride MetroNorth's New Haven Line annually; and the state is spending \$1.23 million to expand service on the Waterbury Line. Additionally, the federal infrastructure bill is set to deliver \$1.3 billion to Connecticut in direct public transportation funding, with an additional \$130 billion available through competitive grants.

Unfortunately, public investment in these safer, more efficient, greener transportation systems is negated by zoning-enforced sprawl. By encouraging people to spread out over broad swaths of land, far from transit stations, Connecticut effectively forces people to opt out of mass transit use. Zoning-enforced sprawl also leaves behind those who cannot afford a personal vehicle or who are unable to drive because of age or disability.

Severe limits on housing near transit prices out car-free residents from most transit towns where they could otherwise live, work, and thrive. Unfortunately, most of the state's 40 transit towns make it difficult to build multifamily housing near transit. The dearth of homes near transit stations forces people to drive to get there or bypass them altogether. This pattern creates a feedback loop, in which meager ridership depresses political appetite for transit investments, making service worse and ridership even lower.



F. Higher Energy Consumption and Costs

Zoning-enforced sprawl doesn't just take up a lot of land; it also means that homes consume intensive amounts of energy. Banning multifamily housing and requiring large lot sizes effectively requires construction of the least energy-efficient form of housing: single family homes on large lots.

Single-family homes require much more energy to heat, cool, and electrify than smaller scale homes or those in multifamily buildings. And while multifamily buildings are becoming more energy efficient, single-family homes are consuming more energy than ever before.



Likewise, high minimum lot sizes lead to the construction of less energy efficient homes. These regulations preclude the development of townhomes and other small-scale housing. Further, homes on large lots have more rooms and a larger building area, requiring more energy to heat, cool, and electrify.

As a result, Connecticut towns that require super-large lots (i.e., those with minimum lot mandates of about 2 acres or more) have much higher housing-related emissions than towns without such requirements. Households in these towns have 18.1% higher housing-related carbon emissions, a disparity that is attributable to much higher fuel oil (44.5%) and electricity (19.4%) consumption.

IV THE PATH TO PRO-ENVIRONMENT ZONING

While zoning-enforced sprawl wreaks environmental destruction, land use reform offers the promise of sustainability and environmental protection. To address the issues outlined in Part III, reforms must prioritize a few key objectives:



Reduce car dependence and the length of car trips



Put new housing where there is already existing infrastructure



Shrink the footprint of our paved surfaces

Since its founding, DesegregateCT has championed statewide reforms that accomplish each of these goals.

First, DesegregateCT advocates for transit-oriented communities in Connecticut's 40 transit towns. Legalizing multifamily housing near transit results in dramatically lower car usage, increases use of public transit, and produces housing that consumes less energy than single-family homes. Recognizing their twin environmental and economic benefits, Massachusetts has legalized these types of communities. At a minimum, Connecticut should follow suit – or, ideally, push even further – in clearing barriers to housing near transit.

Second, DesegregateCT supports legalizing more homes in existing residential areas. While towns throughout Connecticut voice support for “infill development” in their plans of conservation and development, large lot sizes and bans on multifamily housing make this goal impossible to achieve. Alleviating these barriers channels development to existing residential areas – improving walkability and reducing development pressure on undeveloped land. Capping minimum lot sizes and/or requiring municipalities to allow at least eight homes per acre in residential areas connected to public water and sewer – while exempting environmentally-sensitive lands – offers a concrete, achievable mechanism for securing sustainable development in line with widely shared goals.

Finally, DesegregateCT promotes the elimination of regulations that entrench car reliance and expand impervious surfaces. Foremost among these are parking minimums. Some municipalities, like Hartford and Bridgeport, have led the way by eliminating parking requirements entirely. And HB 6107, passed during the 2021 legislative session, established that towns can no longer require more than one parking space per studio or one-bedroom apartment or two spaces for an apartment with two or more bedrooms. The legislature should build on this foundation by eliminating residential parking requirements entirely in areas near transit and by removing localities’ ability to opt out of statutory limits on parking requirements.

V CONCLUSION

The specters of climate change, air pollution, and water pollution threaten our natural landscape, along with the health of Connecticut residents. Tackling these challenges requires a multi-pronged approach that extends far beyond land use policy. But land use cannot be ignored.

Connecticut cannot achieve its environmental goals if it does not take on zoning-enforced sprawl.

The state legislature took modest steps in the right direction by passing a package of zoning reforms in 2021. Legalizing accessory apartments, capping parking requirements, eliminating town-wide caps on multifamily housing, barring non-health-related minimum unit sizes, establishing the Commission on Connecticut's Future – each one of these initiatives relieves constraints on the development of more efficient, sustainable housing.

Still, much more ambitious reform is needed to take on zoning-enforced sprawl. Connecticut's existing land use laws ensure environmental destruction, demanding immediate action.

By legalizing transit-oriented communities; capping minimum lot size requirements in certain residential areas; and eliminating environmentally destructive regulations, the state legislature can take immediate steps to combat zoning-enforced sprawl and achieve a big win for Connecticut's environment.



Our "Be the Change" Playbooks, online at www.desegregatect.org/be-the-change, are a great place to start your advocacy journey. Please check them out and be in touch!



www.desegregatect.org