

Urban Sprawl in North America: Where Will It End?

5.1 Introduction

Would you be surprised if you brought a picnic to a place called Hickory Woods, and there were no woods? Or if you took a drive to Partridge Farms, and there were no farms? What if you went for a walk through the Meadowlands and discovered that there were no meadows?

You might be confused at first. Then you would see what these places had in common: houses—lots and lots of houses. Hickory Woods, Partridge Farms, and the Meadowlands are all housing developments. Across North America, housing developments have been named after the types of land that were cleared in order to build new homes.

For many decades, urban development in the United States and Canada has been moving out from cities to **suburbs**. A suburb is an area of housing built at the edge of a city. Developers create suburbs by buying up farmland or forested areas outside a city. They replace this open space with mile upon mile of housing tracts, shopping centers, and office parks. Often the only way to get from place to place in a suburban area is by car on traffic-clogged roads.

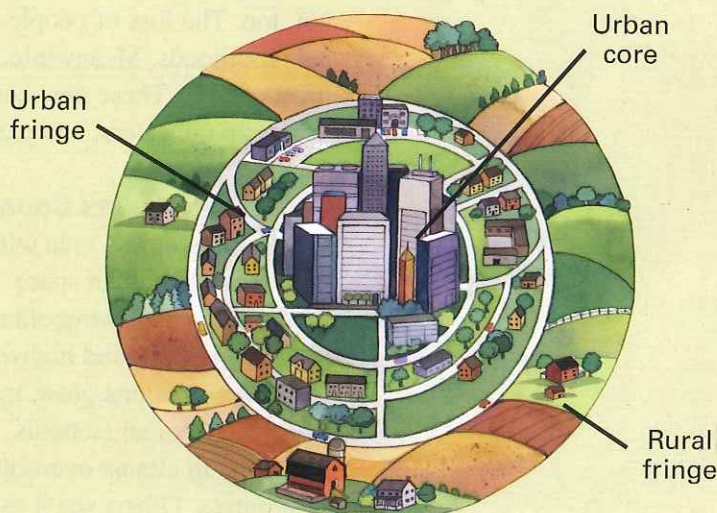
The rapid and often poorly planned spread of cities and suburbs is known as **urban sprawl**. In this chapter, you will learn why urban sprawl happens. You will see how it affects people and the environment. And you will find out how people in three North American cities have dealt with it.

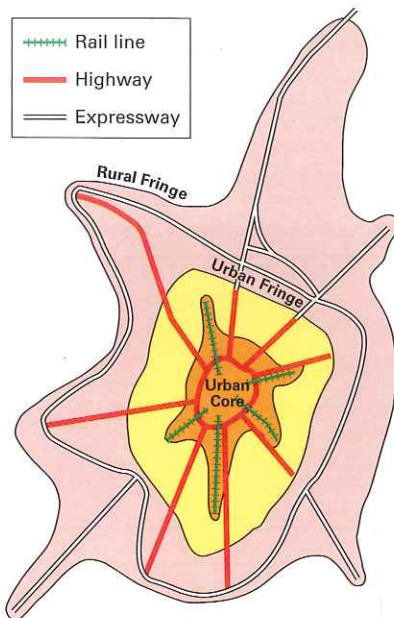
Essential Question

How does urban sprawl affect people and the planet?

Most cities begin as a small, compact urban core, as shown in the center ring of this diagram. As more people move to the city, development pushes outward to form an urban fringe. Beyond this is an area of rural, or open, land. This is called the rural fringe. Keep this diagram in mind as you try to answer the Essential Question.

Graphic Organizer





Stages of Urban Growth

This diagram shows how a city becomes a sprawling metropolitan area. The old “walking city” lies at the center. Over time, this urban core expands along rail lines and highways. The result is an urban fringe. Later growth pushes development out into the rural fringe.

5.2 The Geographic Setting

“Welcome to LA!” say signs in the Los Angeles International Airport. Most people seeing these signs are visitors. They have come to Los Angeles for business or to see the sights. But some are people who have come to stay. The LA **metropolitan area** is growing by more than 200,000 new residents a year. A metropolitan area is a major city and its surrounding suburbs.

Today 8 out of 10 people in the United States and Canada live in a metropolitan area. In the United States, New York City ranks first with more than 20 million people. In Canada, Toronto leads the way with more than 5 million residents. These two metropolitan areas have followed a similar pattern of growth.

The Old Walking City: The Urban Core The oldest Canadian and American cities were founded during colonial times. At that time, cities had to be small enough for people to get around on foot or by horse. Homes and workplaces were in one small area. Today that old “walking city” is a city’s **urban core**. People often think of this urban core as their city’s “downtown” or business district.

By the 1890s, many cities were bursting at their seams with people. Around that time, electric streetcars and commuter rail lines were developed. People began to build homes near these rail lines. They took trains or streetcars into the city center to work and shop. As a result, the urban core began to bulge outward along rail lines.

Suburbs Around the City: The Urban Fringe By the 1920s, cars were becoming part of American life. No longer did city dwellers have to live near a rail line to get to their jobs. They could buy a car and commute.

As cars became common, people began to build new housing areas farther away from the old urban core. In time, suburbs ringed most cities. These suburbs formed a new **urban fringe**.

As people moved out of the urban core, some businesses moved out, too. The loss of people and businesses led to decay in older city neighborhoods. Meanwhile, people in the suburbs built their own town centers. These new communities were complete with shops, businesses, theaters, and parks.

Where City Meets Country: The Rural Fringe Beyond the urban fringe lies an area with fewer people. Here, small towns mix with farms and open space. These less-developed areas form a **rural fringe** around a metropolitan area. This rural fringe is connected to the city by roads and highways.

As populations grow, more and more of the rural fringe is developed. New homes, schools, shopping centers, and business parks seem to spring up almost overnight. Some people see this growth as a sign of progress. Others see it as harmful urban sprawl. In this chapter, you will explore both points of view.

► Geotermms

metropolitan area a major population center made up of a large city and the smaller suburbs and towns that surround it

rural fringe the small towns, farms, and open spaces that lie just beyond a city's suburbs

suburb a developed area at the edge of a city that is mainly homes. Many suburbs also have stores and businesses.

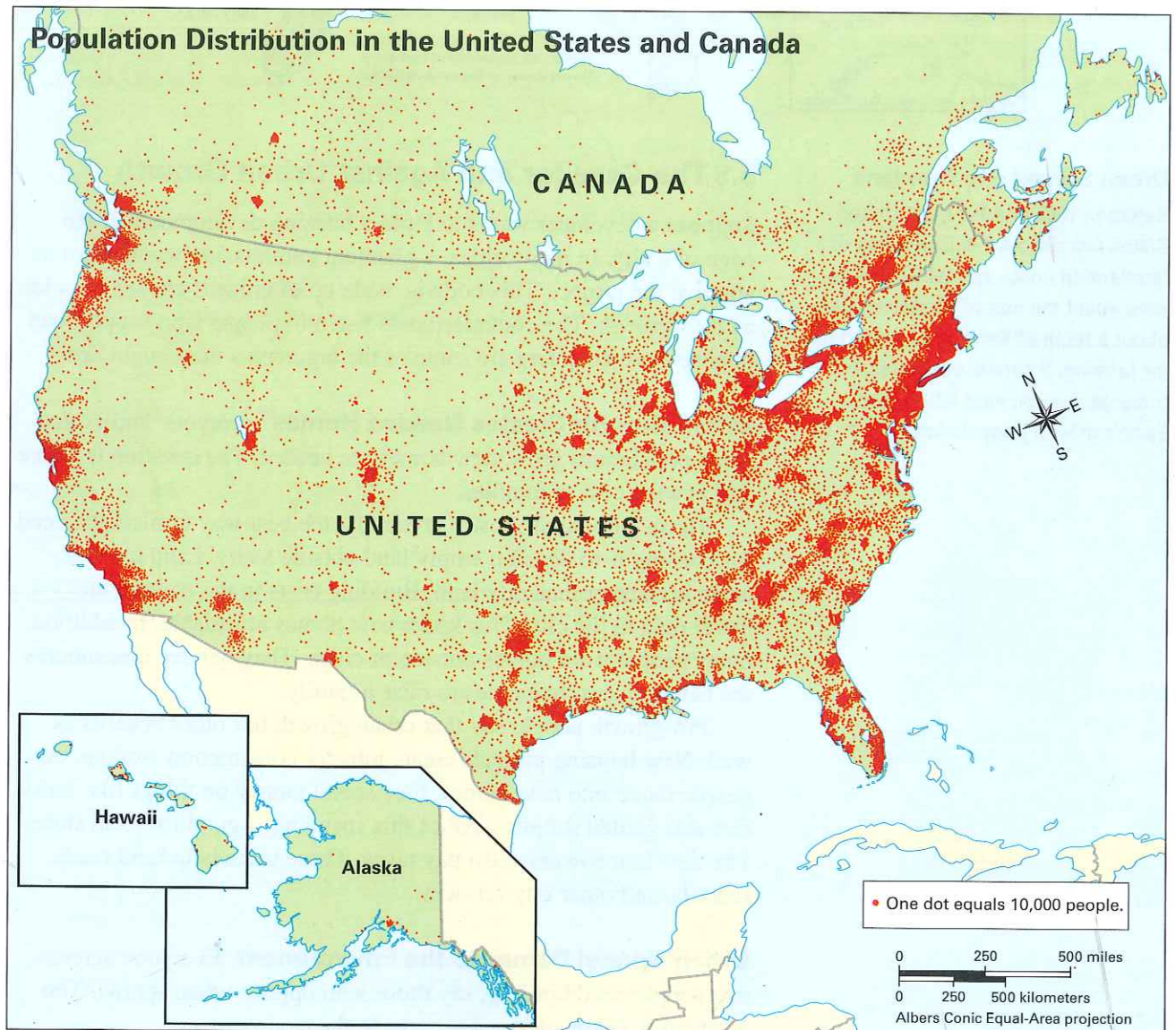
urban core the older part of a big city. Often the urban core serves as the downtown or central business district of a city.

urban fringe the ring of small towns and suburbs that surround a big city

urban sprawl the rapid, often poorly planned spread of development from an urban area outward into rural areas

Urban Sprawl in Two Countries

Metropolitan areas are found across the United States and Canada. Most people in both countries now live in cities and suburbs. As urban areas grow, they tend to sprawl outward.



U.S. Farmland Converted to Developed Land, 1982–1997



Urban Sprawl and Farmland

Between 1982 and 1997, the United States lost almost 7 million acres of farmland to urban sprawl. This is an area about the size of Maryland. Only about a tenth of Earth's land is suitable for farming. If sprawl continues, will there be enough land left to feed Earth's growing population?

5.3 The Case for and Against Urban Growth

Suppose a developer wants to build a housing development at the edge of a city. In many cities, a planning commission would need to approve the project. This body is made up of citizens chosen to guide a city's growth. The commissioners listen to people who support and oppose a project. Here are some of the arguments they might hear.

Urban Growth Creates Needed Homes Everyone knows that when populations grow, new homes are needed. The question is where and at what cost to families.

Those who favor growth argue that the best way to meet the need for housing is to develop empty land outside a city. Land in rural areas is cheaper than city land. Building costs in the country are lower than in the city. This keeps new homes affordable. In addition, many people want homes outside of cities. They believe that suburbs are better places than cities to raise a family.

Pro-growth people say that urban growth has other benefits as well. New housing projects create jobs for construction workers. As people move into new homes, they spend money on things like furniture and garden supplies. All of this spending is good for local stores. The new homeowners also pay taxes. These taxes help fund roads, schools, and other city services.

Urban Sprawl Damages the Environment Everyone agrees that people need housing, say those who oppose urban sprawl. The question is where and at what cost to the environment.

These people argue that the worst way to meet the need for housing is to develop open spaces outside a city. Open spaces are not empty land. They are **habitats** for plants and animals. When land is developed, that habitat is lost and with it the wildlife that lived there. The National Wildlife Foundation warns that more than a thousand animal and plant species are in danger of dying out because of habitat loss to urban sprawl.

Anti-sprawl people say that urban sprawl creates other problems as well. When housing is spread out, people rely on cars for transportation. This creates traffic jams and air **pollution**. Urban sprawl can also hurt people living in small towns. They often see their taxes go up when nearby land is developed. The extra tax money is needed to pay for roads, schools, and other services required when a small town suddenly grows.

5.4 Portland, Oregon, 1973

The Willamette Valley in Oregon is 120 miles long and 25 to 40 miles wide. The valley has Oregon's richest farmland. More than 170 crops are grown there. Orchards produce pears, plums, apples, and nuts. Fields of sweet corn and green beans mix with colorful flowerbeds and vineyards. The Willamette Valley is not all farmland, though. Oregon's largest city, Portland, is located at its northern edge.

Growth Threatens the Willamette Valley Portland is known as the "City of Roses." Fragrant rose bushes fill its parks and gardens. Still, Portland is very much a big city. It has a downtown and many businesses. Its attractions include colleges, museums, and shopping areas. And, like all big cities, Portland has a lot of people.

It was Portland's growing population that first began to worry people in the 1960s and 1970s. They feared that urban sprawl would soon gobble up the farms and forests of the Willamette Valley.

A Difficult Decision: How Best to Grow? In 1973, Governor Tom McCall called on the state legislature to deal with this issue. "We are in dire need of a state land-use policy," McCall said. Oregon lawmakers agreed. But they weren't sure how best to control urban growth.

There were many options the lawmakers might have considered. One might have been to allow growth to continue, but with a condition. For each acre of land that was developed, they would require that another acre be set aside to be preserved as open space.

A second option might have been to create firm boundaries around cities. Once this was done, no new development would be allowed outside these boundaries.

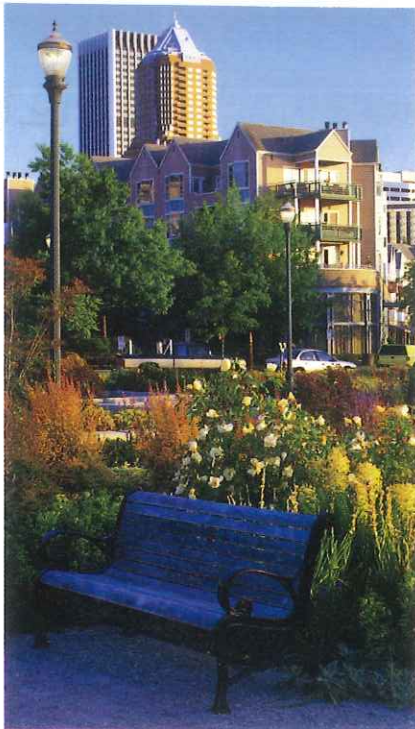
A third option was to ban all development in some rural areas, such as the Willamette Valley. Growth could be allowed in other areas that did not seem so valuable.

Whatever lawmakers decided, one thing was clear. Their actions would affect the future of Oregon's people and its environment.



Portland's Natural Setting

The city of Portland lies at the north end of the Willamette Valley. In the distance you can see Mt. Hood. As Portland grew in the 1960s and 1970s, its urban fringe gave way to housing. People began to fear that the rest of the valley would soon be paved with homes and shopping malls.

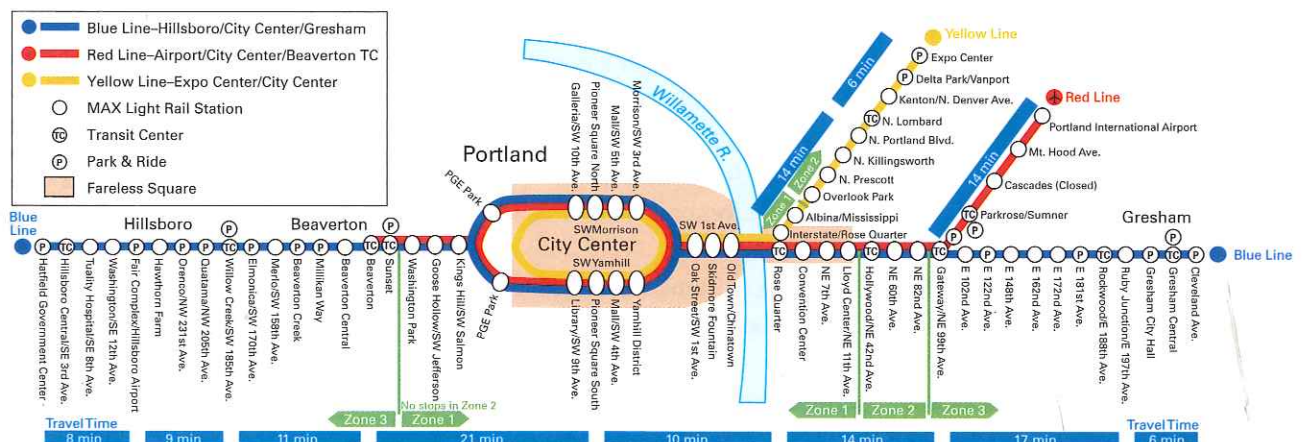


Smart Growth in Portland

Portland is known for its smart growth policies. One of these policies calls for mixed-use developments like those shown here overlooking South Waterfront Park. Mixed use combines housing and business in one area.

Getting Around on MAX

Portland's light rail system is called the Metropolitan Area Express, or MAX. In 1986, MAX had 15 miles of track. By 2005, it had 44 miles of track. MAX connects downtown Portland to three suburbs and Portland's airport.



5.5 Portland Plans for Smart Growth

In 1973, Oregon became the first state to create a set of **land use** planning laws. These laws promote an approach to land use planning known as *smart growth*. The basic idea of smart growth is to control sprawl by making better use of land that has already been developed.

Urban Growth Boundaries Limit Sprawl Smart growth in Oregon began with a law creating **urban growth boundaries**. An urban growth boundary is a legal border. It separates urban land from rural land. New development is allowed inside the growth boundary. But it is not allowed on rural land outside the boundary.

An urban growth boundary was drawn around the Portland metropolitan area. It included not only the city of Portland, but also several suburbs. To control growth inside this boundary, voters created a new regional government called Metro. Its main job is to plan growth inside the growth boundary.

Mixed Use Helps Portland to Grow Up, Not Out Oregon's land use planning laws have worked well. Today, Portland is a compact city with controlled growth. Its downtown area is friendly to pedestrians. It has hundreds of beautiful parks and open spaces. It also has a well-planned **public transit system**. Its buses and streetcars make it easy to get around without a car.

These improvements have attracted many new residents to Portland. To provide housing for more people, the city is developing up, not out. Older, run-down neighborhoods have been revived with new **mixed-use developments**. This is development that combines housing and businesses in one area. For example, a building might have shops and offices on the ground floor and apartments above.

Supporters of mixed-use development argue that it encourages people to live, work, and shop in one neighborhood. People can walk to jobs or shops instead of driving. This reduces traffic and air pollution. Opponents, however, argue that mixed-use development limits the kind of new homes that can be built. For people who want a big house on a large lot, a city apartment over a business is not their dream home.



5.6 Toronto, Ontario, 1999

Toronto, Ontario, is Canada's largest metropolitan area. It is also its main business center. Toronto leads Canadian cities in printing and publishing. Television and movie production are important as well. With more than 5.5 million people, the city has been growing for decades. For a time, it managed this growth by stretching up. But Toronto soon began to sprawl out.

Urban Sprawl in Toronto

Toronto has been growing at a rapid pace for many years. By the late 1990s, urban sprawl stretched for miles and miles beyond the city limits.

Building Up and Filling In Limits Sprawl Toronto has a long history. It began as a fur-trading post. In the 1800s, it became a factory town. Later still it developed into a banking center. But by the 1960s, its urban core was run down. Something had to be done to keep the downtown alive.

In 1965, Toronto announced a plan to renew its urban core. The plan encouraged **infill** over sprawl. Infill involves filling in empty or run-down parts of a city with new development. Building an apartment high-rise on an empty lot is an example of infill. So is building a shopping mall on the site of an old amusement park.

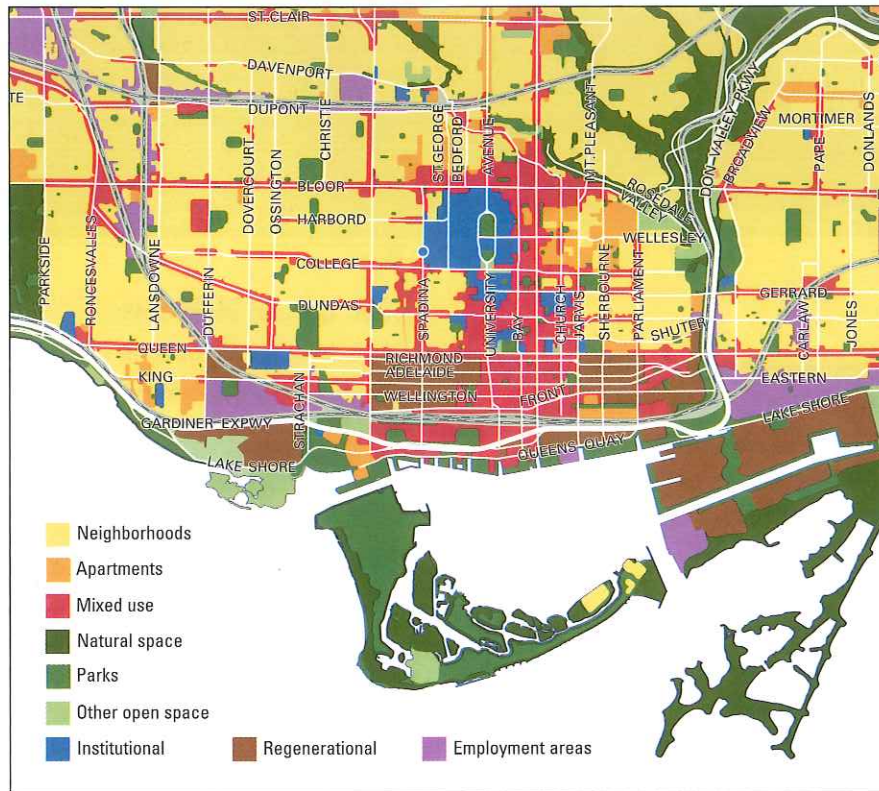
During the 1960s and 1970s, Toronto rebuilt its urban core. The new buildings included some of the world's tallest skyscrapers. These towers had offices, shops, museums, parking, and housing.

Rapid Growth on Toronto's Rural Fringe Toronto kept growing in the 1980s and 1990s. But instead of building up, it began to spread out. Urban sprawl took over farmland, forests, and wetlands. Traffic clogged suburban highways. Air pollution increased. Traffic and air quality both got worse as the years went by.

By 1999, officials in Toronto knew they had to do something to control sprawl. There were many ideas they considered. One was to reduce sprawl by encouraging smart growth ideas like mixed-use development. Another idea was to ban all growth in rural areas. A third was to allow a lot of growth in part of the city while limiting it in the rest. Whatever was decided would shape Toronto's future.

5.7 Toronto Plans for 30 Years of Growth

On May 27, 2002, the mayor of Toronto gave a speech about urban growth. "Toronto is a great city, and we want it to stay that way," he said. "Where we go from here depends on all of us." He then introduced a document known as the Official Plan. It contained a plan for controlling Toronto's growth for the next 30 years.



Future Land Use in Toronto

Toronto's Official Plan includes a map showing how land is to be used in the city. This part of the map shows the downtown area bordering Lake Ontario. Development will be limited in neighborhoods marked in yellow and orange. Mixed use is encouraged in red areas. Parks and open space are shown in green. The brown areas near the waterfront are marked for redevelopment.

In the remaining 75 percent of the city, development is to be limited. This area includes the city's residential neighborhoods. It also includes waterways, parks, and open space.

The Official Plan also lays out what kind of growth Toronto should encourage. New developments are to be mainly infill and mixed-use projects. Such projects will bring new homes, shops, and businesses into the urban core.

Concerns About Infill Supporters of the Official Plan believe it offers a sensible approach to controlling sprawl. But while infill sounds like a good idea, not everyone supports it. Developers raise concerns about its hidden costs. Such costs include the extra time and money needed to clean up abandoned sites. This work must be done before new development can begin. If a site is polluted with toxic chemicals, these costs can rise very quickly.

People living in neighborhoods marked for growth raise a different concern about infill. They worry that building new developments on empty lots will make the urban core more crowded.

Planning for Future Growth

The Official Plan took three years to complete. The effort was led by Toronto's city council. The council heard ideas from people across the city. It also got advice from land use experts. The result was a plan that allows some growth in some places.

The Official Plan allows growth to continue in 25 percent of the city. Most areas targeted for growth are in the urban core. They include the old downtown and the waterfront area on Lake Ontario. Growth is also allowed in four "centers" in outlying parts of the city. Public transportation is to be expanded to link these growth areas together.



5.8 Atlanta, Georgia, 1998

In 1996, Atlanta, Georgia, hosted the summer Olympic Games. People came from around the world to watch the events. They filled hotels and restaurants. They cheered the athletes in new stadiums and arenas. Few visitors, however, traveled outside the city. Only those who did could see why Atlanta has been called “the fastest-spreading human settlement in history.”

Rapid Growth Leads to Traffic Jams During the 1990s, the Atlanta metropolitan area boomed. Atlanta led the nation in new jobs, homes, and highways. It also led the nation in urban sprawl. Hundreds of acres of forest were cleared each week to make room for new residents. Without controls on development, housing tracts pushed deep into the rural fringe.

The people who bought these new homes relied on cars to get around. Atlanta’s commuters drove more miles every day than drivers anywhere else in the world. If you added up all the miles that Atlanta commuters drove in just one day, they would stretch all the way to the sun. There were traffic jams night and day.

Air Pollution Threatens Highway Funds All those cars on Atlanta’s roads also led to air pollution. The air became so polluted that it caused asthma attacks and other health problems.

Atlanta’s dirty air also violated the Clean Air Act. This is a federal, or national, law that sets limits on air pollution. In 1998, the federal government ordered Atlanta to meet the law’s clean air standards. If it did not, Atlanta would lose federal highway funds. These are funds the federal government gives to cities to improve roads.

Atlanta had to make a decision. One option was to do nothing to control growth. This would mean giving up federal highway funds. Another was to continue growing but to create a regional transportation system. Such a system could cut pollution by getting people out of their cars. A third option was to limit sprawl in some areas while requiring mixed-use development in others. Over time, this option could also reduce car trips and air pollution.

Atlanta’s Crowded Roads

Traffic jams are a daily event in the Atlanta area. All of this driving creates major air pollution problems. In 1998, 13 counties in the Atlanta region failed to meet the Clean Air Act. A plan was needed to cut pollution in the entire metropolitan area.

5.9 Atlanta Fights Pollution with Public Transit

In 1998, Roy Barnes was elected governor of Georgia. In his campaign, he promised to do something about the problems caused by sprawl. He made it clear, though, that he was not an enemy of development. "I'm no tree hugger," he said. "I'm a businessman who thinks you can't let your prosperity slip through your fingers."

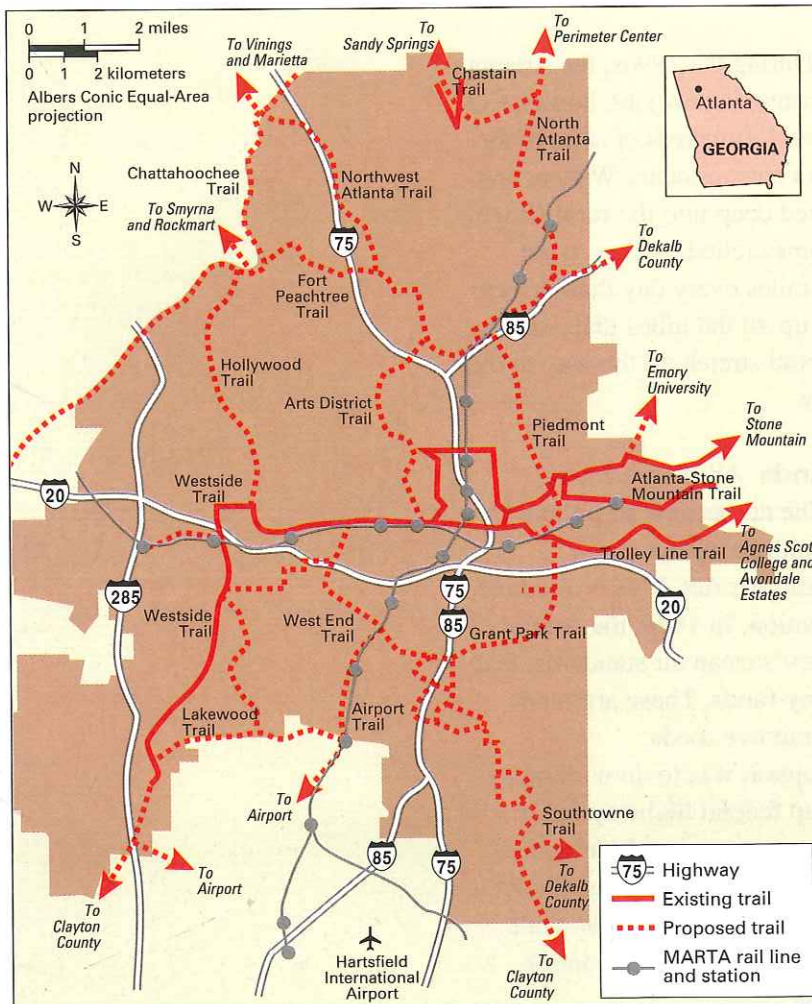
A Regional Transportation Authority Is Born Governor Barnes wanted Atlanta to continue to grow. At the same time, he wanted to meet Clean Air Act standards. And so he focused on **public transit**.

Under Barnes' leadership, the state created the Georgia Regional Transportation Authority. This agency had three goals: First, reduce traffic jams. Second, reduce air pollution caused by cars. Third, reduce poorly planned development.

The Georgia Regional Transportation Authority works with other government agencies to get people out of their cars. One approach has been to promote mixed-use development. As you read, in mixed-use neighborhoods, people can walk to shops and jobs. Another has been to encourage people to walk or bike instead of drive. New bike trails and walking paths have been built.

Rails and Trails in Atlanta

Rather than slowing growth, Atlanta is trying to reduce air pollution with a better transit system. This map shows major rail lines. It also shows existing and future hiking and biking trails. As more people use rails and trails, traffic jams should decrease.



In addition, the region's public transit system had been expanded. The Metropolitan Atlanta Rapid Transit Authority (MARTA) is a system of trains and bus lines. It serves the entire Atlanta region. New rail lines have been built. A regional subway system has been expanded. New buses and bus routes have been added. The new buses don't pollute the air as much as older ones.

Atlanta Continues to Grow

The growth of public transit has helped Atlanta meet federal air-quality standards. But it has not slowed growth.

Urban sprawl remains a hot issue. Many people think the region should do more to control sprawl. Others say that Atlanta is doing just fine. They point out that there is new mixed-use development for those who want it. But they also think that people who want to buy new houses on the rural fringe should be allowed to do so.

5.10 Beginning to Think Globally

In this chapter, you learned about urban sprawl. You learned that cities grow outward. They expand from the urban core to the urban fringe to the rural fringe. You visited three metropolitan areas in the United States and Canada. And you saw how those areas are trying to deal with growth.

Cities Continue to Sprawl The United States and Canada are still growing. As their populations increase, so does their need for housing. Even though sprawl isn't good for the environment, development continues to push into the rural fringe.

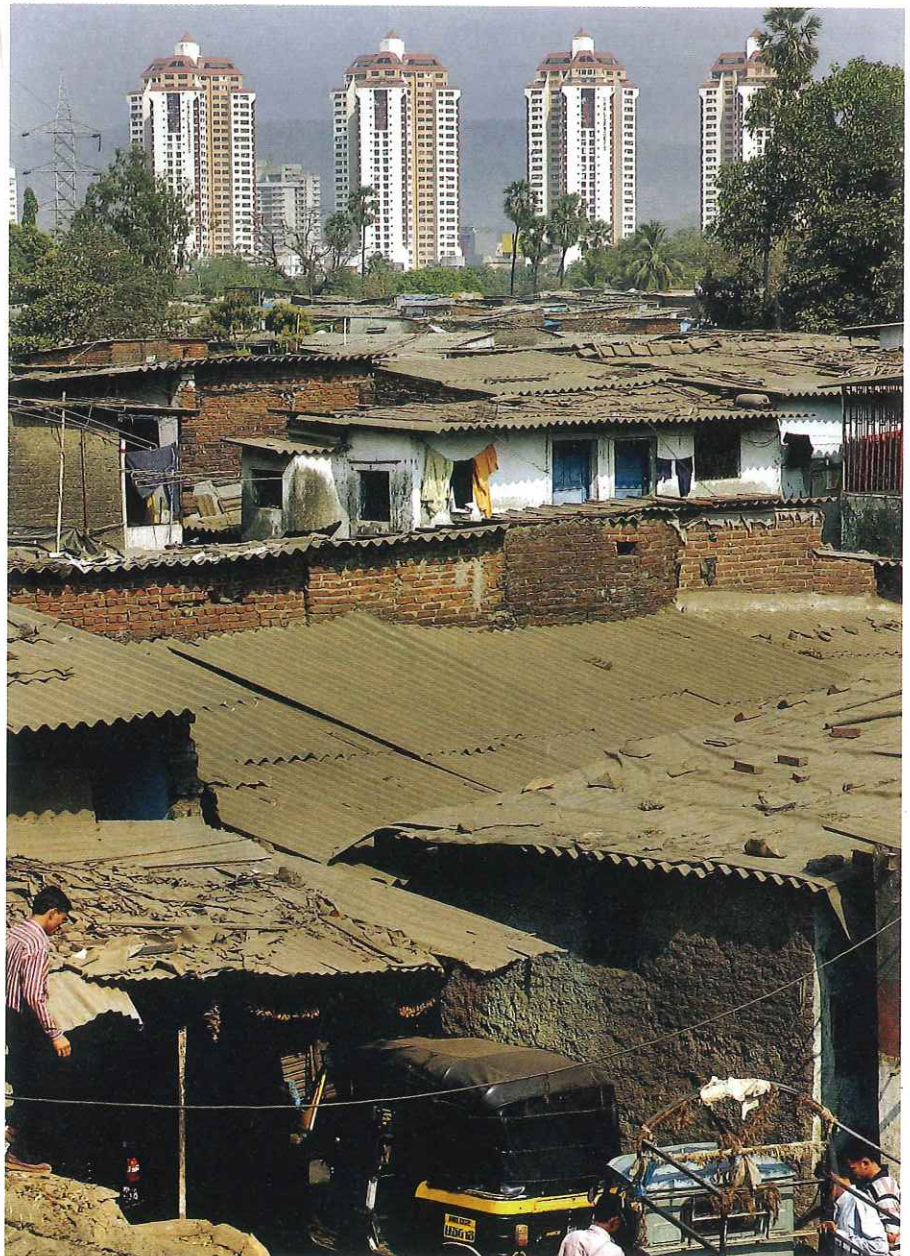
As you have seen, there are many reasons why sprawl continues. Land and building costs are cheaper in the rural fringe than in the urban core. Some people prefer suburban homes to city apartments. Others don't like laws that limit where people could choose to live.

Sprawl Is a Worldwide Problem Cities around the world are struggling with urban sprawl. The Indian city of Mumbai (formerly known as Bombay) is a good example. In 1950, Mumbai had barely 3 million people. By 1995, the city had grown to more than 14 million. All those people could no longer fit into the old urban core. By 2015, Mumbai's population is expected to rise to 22 million. The only way it will be able to house so many people is by sprawling outward.

Mumbai is not alone. Over the last century, the percentage of people living in urban areas has risen rapidly. In 1900, about 14 percent of people worldwide lived in cities. By 2000, almost 47 percent were in urban areas. That's nearly half of the world's people! Think about this as you look at the map of urban areas around the world in the next section.

Urban Sprawl in India

Urban sprawl looks different in different parts of the world. In the urban fringe of Mumbai, India, new high rises have sprung up to house the wealthy. Nearby are shantytowns where poor people live.



5.11 Global Connections

This map shows metropolitan areas around the world. Cities with more than 5 million people are marked with large black dots. The bar graph shows how the populations of six cities have grown over time.

Why might some regions have more metropolitan areas than others? Wealthy regions tend to have more large cities than poor ones. That's because most jobs in wealthy countries are found in cities. **Climate, landforms, and vegetation zones** also play a role. There aren't many big cities in extremely cold or arid regions. Nor are there many urban areas in mountains or rainforests.

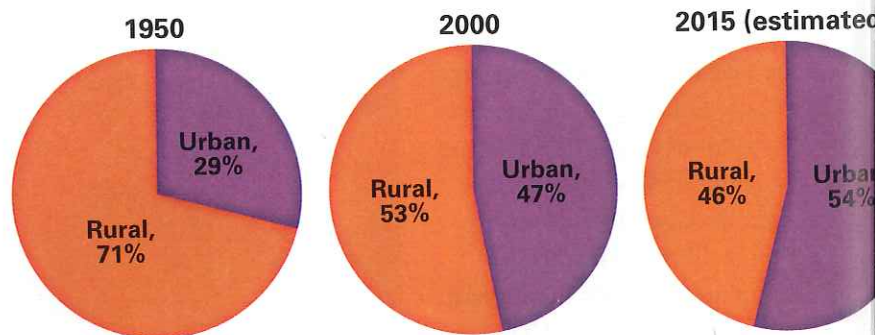
Why are there so many cities with more than 5 million people in Asia? The simple answer is this: Asia has more people than any other continent. More than 3 billion people live in Asia. Together, China and India are home to 4 out of 10 of the world's people. Also, the economies of many Asian countries are changing. They are shifting from farming to manufacturing and trade. Such **economic activity** generally takes place in urban settings. As a result, metropolitan areas are growing rapidly in Asia.

What special problems might urban sprawl create for poor countries? Poor countries often have little control over how their cities grow. People moving to a city simply build homes wherever they find space. The governments of such countries lack money to provide growing cities with basic services. These services include clean water, paved roads, electricity, sewers, medical care, and schools.

Urban Populations Around the World

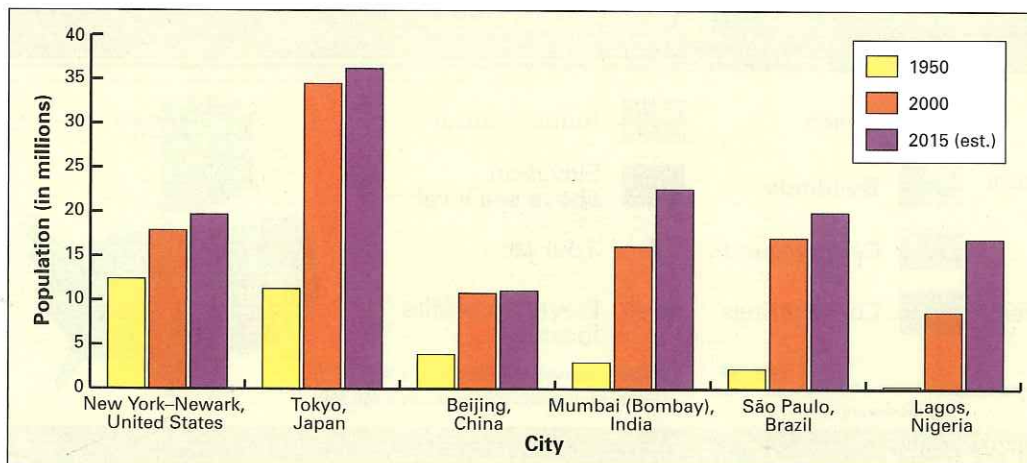


Urban and Rural World Populations





Populations in Six World Cities



Source: United Nations Population Division, "World Population Prospects: The 2004 Revision Population Database," esa.un.org/unpp/.

Topography of Grand Canyon National Park (detail)

