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Environmental Health

## Urbanization in Seattle

### Introduction:

Since the 1950s, Seattle has been through many changes and growth in population and sustainability. Seattle is now the 20<sup>th</sup> biggest city in United States. The population is a little over 650,000 and is expected to increase 120,000 residents and 115,000 jobs by 2035 (Seattle.gov, 2015). The urban component of Seattle, which has been growing, is planning to capitalize on growth. The policy goal is to manage Seattle in the next 20 years, focusing on protecting the natural environment, maintaining transportation, housing and open space, reducing urban sprawl and address global environmental challenges. The four issues that I will be covering are Water, Climate Change, Parks and Open Spaces, as well as Housing and Employment.

The Seattle Comprehensive Plan 2015 includes goals and policies intended to guide the city in a positive growth manner while connecting to the core values and quality of life overall. Seattle has beauty and diversity of the natural environment throughout the city. Due to expansion, Seattle could run into serious problems with air pollution and greenhouse gases. This will affect ecosystems and changes in the environment drastically. Paying close attention to the fundamentals to reach the city's goals and policies is important.

Environmental quality is a main component the City has to strive to.

Maintaining and acknowledging the necessities for a healthy natural environment will result in improving the quality of the local and global environments. This would make for a much sustainable living. Sustainable living to me means acting as a role model to the people around my community and me. Using more natural resources that is not only beneficial to me but overall earth it itself because citizens that live in the city will accommodate to the healthy benefits of the economy. Overall, Seattleites will recognize the natural resources, which will improve quality of life in Seattle.

***Water:***

The city's aquatic and marine resources have seen a decrease over the past 150 years of urban growth. Lack of natural connection to the water is rising due to modification requiring us to be resilience and innovated. Seattle policies to improve these issues are controlling floods, support variety of aquatic life and limit the use of chemicals that have negative impact. This includes how we use our land, how we design our buildings, and how we get around significantly. Focusing on expanding less and building up in the city would lower the impacts and the amount of energy we use and greenhouse emissions we produce. (Seattle.gov, 2015)

Water enhances the quality of life for the people, fish, birds, and other wildlife that live here. There are many species of salmon that live in this area, including the threatened Chinook salmon. We have a variety of water dependent species. The city is very influenced by water so it is necessary to seek in cleaning up existing contaminated areas like Puget Sound, Lake Washington, Lake Union, Urban creeks, and small lakes.

Seattle is 146 miles of shoreline, 90% of it has been modified and lacks natural connections to the water. Limiting the use of chemicals that have negative impacts such as oil and garbage on aquatic or human health, especially in properties in which the public is exposed. This could help achieve and manage reduce stormwater inflows to support a variety of the marine life.

The major waterways contribute to water oriented business and recreational opportunities. We have to take notice that if we want to continue to enjoy and experience nature close to home, we have to protect and improve the water quality. Water is important and Seattle has some of the best water quality and quantity in the country today because we chose a high altitude source, which means gravity, instead of an expensive pumping system, to bring us water. A healthy water system is essential, policies are improving the health of the forest so there is less runoff, making the water clearer and requiring less treatment. The Environmental Protection Agency is involved with every customer sharing information about what they're doing regarding the water we drink every day. (Mayor Murray, Seattle, 2015)

Our main sources of pollution in Puget Sound and other waterways are fossil fuel production, stormwater runoff, sewage, and industrial agriculture. Our number one pollution is stormwater runoff. Rain collects a lot as it runs down to the waterways. Rain washes chemicals, fertilizers, oil, auto fluids, and collects litter from roads and sidewalks directly towards waterways. Stormwater doesn't go through any type of treatment it is highly toxic and usually can kill fish less than three hours. Individuals have to share

knowledge of the overwhelming ways that pollute our waters. Joining a volunteer cleanup or boat control will also benefit the issues. ( PugetSoundKeeper, 2015)

Contaminated storm water carries on to the fish in local waters, which contains high amounts of mercury, and some salmon are dying before they can reach Puget Sound streams to spawn. Seattle Comprehensive goal is to foster healthy aquatic systems, including Puget Sound, the lakes, creeks, rivers, and the associated shorelines, to provide a high quality of life in Seattle for all its residents and valuable habitat for fish and wildlife.

These aquatic environments have amazing vitality and with proper maintenance these species could potentially become an even greater asset to Seattle. Seattle's comprehensive plan aim to promote quality wildlife habitat in waterways by protecting spawning grounds, river mouths and improving fish passageways. To do so is enhancing and recognizing the value of Seattle's aquatic areas. Also promoting the long-term health of water and taking action towards today's and tomorrow's issues. As well as, reduce storm water inflowing in sewers to prevent overflowing and treating storm water through good management practices.

### ***Climate Change:***

The main motivation is to beautify the city in order to increase the City appeal, if we can be patient the rewards will be there. One of the City's goals is to reducing emissions of carbon dioxide and other climate changing greenhouse gases in Seattle by 30 percent from 1990 to 2020, and become carbon neutral by 2050. (Seattle.Gov 2015) To become more aware Seattle has to promote public education. Since cars and trucks

are the largest sources of greenhouse gas emissions the focus is to create more jobs that are near one another and are near frequent transit services. This will hopefully reduce motorized vehicle use in the city. Although, pollution is an unwelcome component, its affects from the past is still lingering from decades ago depending on how strong the pollution is. It can take years or even decades to clean up and even cost millions, but this would lower the continuation of the amount to pollution in the city overall.

Lowering the demand for vehicle trips and transportation promotes improvements that will make walking, biking more viable options for people. Carpooling and riding public transportations would also help contain the growing air and water pollution in the city. Emissions from the past decades and ongoing emissions will continue to affect the global climate. Seattle has strategies for the significant changes happening in the Pacific Northwest, which is temperature, precipitation, and sea level. These are growing issues in Seattle and there are strategies to respond to them. One of the strategies that Seattle has chosen to lower emissions is providing better access to public transportation, such as the light rail.

For example, expanding transit, walking, bicycling and services to provide safe and an environmentally for effective options to get around. Meeting the growing demand for homes and businesses that are pedestrian friendly neighborhoods where people can walk will produce low to zero emissions. Today, Seattle includes beautiful landscapes, fresh and great food and an in exceptional location.

Hundreds of thousands of people depend on city transportation to access jobs, school, services, community facilities, and to deliver freight and goods. The number of people depending it will continue to grow in the next 20 years as the city and region expands. The transportation system will look very different in 2035 than it does in 2015. The light rail will be expanding through the city and providing connections to Bellevue, Redmond, Shoreline, and Lynnwood.

Public transportation, bicycling and walking reduces collisions, stress, noise, and air pollution and at the same time improves overall health, affordability, social contact, and economic vitality. Road transportation is Seattle's largest source of greenhouse gas emission. Providing an environment friendly transportation can promote healthy communities that will protect and improve Seattle's environmental quality. (Seattle.gov, 2015)

Seattle's trees, vegetation, and soil make up an important system that manages water run off, clean air, mitigates climate change emissions and impacts. Without these natural resources we cannot contain clean air or water, the wildlife and their habitats. Overtime, the region will change but it is important that we maintain and keep our resources. Otherwise without preparation for these changes, these events will significantly impact the economy and structure.

Ways in which we can maintain a sustainable environment is to increase citywide trees overtime and create a healthy ecosystem that would be taken care of by the city. Promoting the care of trees that enhance Seattle's historical, cultural and recreational character would help enable healthier environmental actions moving forward. The

residents will have access to nature and will create a healthy ecosystem that is valued and cared for by the City and all Seattleites. It would also provide a lush landscaping view, in my opinion. Promoting sustainable management of public and private open spaces, trees, and vegetation by preserving or planting, removing invasive plants to improve soil to meet the needs of engaging the community in a all year round long term stewardship activities to keep the city clean and maintained.

Using trees, vegetation, green roofs and amended soil to meet drainage needs would reduce the impacts of development because you would then consume less energy and preserve resources by minimizing the usage of energy. Overall, fostering healthy trees, vegetation, and soils would improve the human health, provide wildlife habitats and reduce drainage costs. Green roofs are essential because they absorb heat and reduce energy applying to cooling and heating. It will highly benefit Seattle since stormwater run off is an issue, Green roofs reduce and slow down storm water run off and filter pollutants from rainfall.

### ***Housing:***

These past few years Seattle has seen a growth in the housing units in the city due to the massive demand. With more people moving into the city, property values will increase, buildings and homes will continue to be replaced with new or more expensive ones. Therefore, businesses and long time residents will have trouble meeting the needs to remain in the neighborhood. . Seattle government goals are to provide better economic opportunities, ensure affordable and equal access to housing. Seattle

Comprehensive plan is to have equal access to housing, adding 70,000 new housing units by 2035. (Seattle.gov, 2015)

Recognizing the housing affordability is key, right now even middle-income class is having troubles staying in Seattle. If Seattle government can provision to affordable housing to low-income households it can help increase access to education, employment, and social opportunities, support creation of a more inclusive city. It will also reduce displacement from a neighborhood or from the city.

Promoting and supporting programs that involve financial strategies to provide homeownership opportunities for low-, moderate-, and middle-income households to give them a better path to wealth accumulation. Giving advance opportunities for households of all income levels to live in Seattle affordably will increase diversity and employment opportunities. This is an important strategy for the City.

Securing businesses will create jobs for better opportunities and social equity. Which will ensure that all people have fair and equal access to housing in Seattle. And to promote to housing practices for protected classes through fair housing education and enforcements. In Seattle, the demand for housing will continue to increase. So providing more housing can help slow the city's increasing unaffordability. Accommodating to the growth must be done to stabilize the population in communities.

### ***Parks and Greenspace:***

Every city has its own parks and random open spaces. These places contribute to the city life and the environmental health of the economy's vitality. Open spaces could

provide wildlife and vegetation habitat that may no longer be in the city. The city park and recreation areas include gardens, and community centers.

These areas provide opportunities for residents and visitors to relax, or meet with friends and neighbors. There are extensive systems and gardens throughout the city offering gardening spaces for people to grow their own crops such as fruits, vegetables, and flowers. There are many benefits to private open spaces in the city that provide light, air, and breathing room that pleases everyone in the city. Maintenance and development of the city parks is an asset, in 2014 voters in Seattle approved the formation of the Seattle Park District, which is why a tax authority was established, and funding source was beneficial. The city using these funds improve and maintaining the city parks.

The Parks Development Plan addresses that having specific goals for new parks and open space would increase activity for all people to play, learn, contemplate, and build community. Distributing community centers, athletic fields, and playgrounds gives the public realistic use of space. This action will result in healthy places for children and adults to be active. Making use of the open space easy access to transit, bicycle and on foot will protect the natural environment and provide light, air, and visual relief within the built environment.

The parks plan aims to build a community that offers welcoming accessible, and affordable recreation that has fun and safe water throughout a diverse age, backgrounds, and interest. It could lead to partnerships with organizations that include race and Social Justice as fundamentals. So to maintain long-term vitality of parks, there

needs to be regular maintenance as needs. Using open space both inside and outside urban villages could supply more jobs, housing, and green streets. Look at innovating ways to approach construction to limit water and energy use and maximize environmental sustainability.

Protecting habitat and wildlife areas through education, interpretation, and wildlife management programs. Maintaining parks and special places to take advantage of unique natural and cultural features in the city to preserve and remake the environment into a joyful serenity. A key component to making the city more delightful scenery is major attractions. Facilities that offer natural and cultural attractions would only enhance and bring people from across the region.

### ***Environmental Justice:***

Enhancing and recognizing the environmental issues in Seattle would be beneficial in the long run. Climate Change is a global challenge each region contributes to. For instance, the COP 21 in Paris was a successful event. It brought awareness to the world and they want achieve universal goals on climate changing, with an aim of keeping global warming below 2' C. The impacts of the environment not only affects us but wildlife as well. No matter where they are, the government has to recognize the ways to reduce emissions and plan systems to support energy conservation and low carbon energy sources. (Cop21parisorg, 2016)

Identifying long-term goals and developing strategies for improving the environment can restore our habitat. Taking steps and recognizing the value of each step to improve the quality and the health of the city can eliminate negative impacts.

Concentrating on global climate change is critical, Seattle must continue their strategies to be prepared for and adapt to the effects of climate change.

One of the ways is to reduce consumption of resources and promote conservation of energy, water and material resources. Another Seattle goal is to be aware of the effects of climate change and make plans for adapting to those effects.

Encouraging communities, the city government and businesses to improve the city's environmental performance by setting targets, use innovative approaches. An Example would be taking notice of neighborhoods needs, identifying opportunities areas, and using resources wisely. Policies have to be intact to reach goals for Seattle to continue to benefit the pros of the city. Mayor Murray addressed that is more than an economic or environmental challenge. "Fundamentally it is an issue of social justice. If we are leaving people behind, we are not succeeding." (Office of mayor, 2016)

The beauty and diversity of the natural environment in and around Seattle is one of the characteristics that bring out Seattle from other cities around the world. This comprehensive plan for Seattle has long terms that depend on health and wealth the city will strive towards. We must all act as one and remember we are role models for each other.

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