



Environment Element

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Environment Element

A Introduction

discussion

Environmental stewardship is a core value of this Plan, and it plays an integral role in guiding how the City accommodates growth and provides services. There are many ways the City can protect and improve the environment while acting in its roles as a large employer, builder, land owner and regulator. For example, the City can lead by its own behavior in delivering services, operating its facilities and managing its land in an environmentally sustainable manner.

When environmental goals compete with other City goals, such as those related to economic development, the City is committed to giving just consideration to the environmental goals to protect the functions that natural systems can perform and to prevent harmful effects on human health. The City will continue to engage the community about ways in which the City can give consideration to the “precautionary principle,” which generally provides:

“Where threats of serious or irreversible harm to people or nature exist, anticipatory action will be taken to prevent damages to human and environmental health, even when full scientific certainty about cause and effect is not available, with the intent of safeguarding the quality of life of current and future generations.”

This element of the Plan contains broad environmental goals and policies. Some of the Plan’s other elements include goals and policies addressing how environmental values specifically relate to the topics covered in those elements. For instance, the Land Use Element includes policies governing development near environmentally critical areas such as wetlands and stream corridors, and the Transportation Element addresses possible environmental impacts and improvements associated with transportation choices.

goal

EG1 Protect and improve the quality and function of the city’s air, land, and water resources because of their relationship to human health, wildlife and the region’s natural heritage.

policy

E1 Explore ways for City actions and decisions to have positive effects on the natural environment and human health, and to avoid or offset potential negative effects, including those caused by private projects permitted by the City.

**B****Relationship to Economic Development****C****Natural Systems Approach**

goal

- EG2** Maintain a healthy natural environment as central to Seattle's economic development and as a competitive advantage in attracting and retaining family-wage jobs and workers.

goal

- EG3** Use natural systems to maintain and enhance environmental quality by having them perform such functions as cleaning air and water, and controlling storm water runoff.

policies

- E2** Incorporate the improvement of the natural environment into the City's planning efforts and capital development projects. For instance, plan for transportation systems that control impacts on air quality and climate-change, as well as on water pollution and the consumption of fossil fuels.
- E3** Promote sustainable management of public and private open spaces and landscaping, such as by preserving or planting native and naturalized vegetation, removing invasive plants, engaging the community in long-term maintenance activities, and using integrated pest management.
- E4** Strive to protect and retain certain trees and groups of trees that enhance Seattle's historical, cultural, environmental and aesthetic character.
- E5** Maintain the health of natural habitats on private property through a combination of education, incentives and development standards that recognize and promote sound practices by private land owners.
- E6** Create partnerships with organizations in the private sector and engage the community to protect and enhance Seattle's urban ecosystems and habitat.
- E7** Control the impacts of noise, odor, and light, litter, graffiti, junk cars, trash, and refuse in order to protect human health and the livability of the urban environment.

policies

- E8** In order to reduce the financial investment in built infrastructure while controlling the environmental impacts that infrastructure can cause, explore opportunities to restore or productively use the functions that a healthy ecosystem can provide in conjunction with, or as a substitute for, built infrastructure.
- E8.1** Use trees, vegetation, amended soil, bioretention, and other green stormwater infrastructure, where feasible, to manage stormwater runoff and reduce the impacts of development.
- E9** Work to achieve a sustainable urban forest that contains a diverse mix of tree species and ages in order to use the forest's abilities to reduce storm water runoff and pollution, absorb air pollutants, provide wildlife habitat, absorb carbon dioxide, provide shade, stabilize soil, and increase property values.
- E10** Strive to increase the amount of permeable surface and remove unnecessary impervious surfaces.

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B-C

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D Aquatic Areas

goals

- EG4** Recognize and enhance the value of Seattle’s aquatic areas, including Puget Sound, the lakes, creeks, rivers, and the associated shorelines for their contributions to the quality of life in Seattle.
- EG5** Pursue the long-term health of Seattle’s creeks, shorelines and other water bodies by taking actions that address flooding, water quality, habitat and barriers to fish passage.
- EG6** Strive to minimize the number and extent of combined sewer overflow events occurring annually in the City.

policies

- E11** Identify long-term goals and develop plans or strategies for improving the environmental quality of each of the city’s aquatic areas, including a long-term plan to restore and sustain Seattle’s creeks. Consider in these plans or strategies the use of incentives, regulations and other opportunities for action to restore and sustain the long-term health of Seattle’s creeks and shorelines.
- E12** Take steps to improve water quality and the health of the city’s aquatic areas, such as by eliminating the use of chemicals that have negative impacts on aquatic or human health, especially on City-owned property or rights-of-way.
- E12.5** Promote the reduction of the amount of pesticides, herbicides, and artificial fertilizers used for urban agriculture within the city.
- E13** Strive to achieve flows in creeks that will support a variety of aquatic life and that will control flooding and property damage caused by unregulated flows.

E14 Promote both public and private opportunities to improve water quality and help store aquatic habitat in the city’s creeks, lakes, rivers and marine waters and their shorelines, so that these habitats are healthy for native wildlife and people.

E Climate Change

discussion

Climate change is a global challenge. The impacts of greenhouse gases, no matter where they are emitted, affect us all. Seattle City government can reduce emissions by coordinating land use with existing and planned transportation systems to reduce car trips and facilitate other transportation choices, by supporting energy conservation and low carbon energy sources, by reducing waste generating, by promoting public education, and by reducing emissions from City government operations.

Seattle is a regional employment center and, as such, is a locus for the generation of greenhouse gas emissions from industry and traffic that are the shared responsibility of the region, state, and nation. By monitoring and responding to emissions within Seattle’s geographic boundaries, Seattle can contribute to regional reduction in greenhouse gases. Some efforts to reduce emissions will be opportunities for innovations that support local jobs.

This Comprehensive Plan addresses the period between 2004 and 2024. Studies prepared by national and international organizations indicate that developed countries must reduce greenhouse gases as much as 80 percent in carbon dioxide equivalents (CO₂e) below 1990 levels by 2050 in order to achieve climate stabilization.

With the City’s long-standing commitment to environmental stewardship and as home to the nation’s first carbon neutral electric utility, Seattle is well positioned to be a leader in emissions reduction. Building on this history of stewardship and leadership, in

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D



2011 the City Council adopted carbon neutrality by 2050 as the City's climate goal.

Meeting targets for reductions in greenhouse gas emissions will require community support and action, political leadership and innovation. Without such leadership and innovation, there is a risk that the City may not continue to make necessary progress in meeting these goals. Seattle can, and should, be in the forefront of developing new economic opportunities in industrial sectors that can positively affect greenhouse gas reduction.

The Urban Village Strategy is a powerful tool for helping to achieve the City's climate goals. Since the transportation sector is the largest single source of greenhouse gas emissions, the Urban Village Strategy's focus on concentrating new housing and jobs near one another and near frequent transit service will reduce reliance on cars and lower the number of vehicle miles driven. This Comprehensive Plan's approach for the City to take a large proportion of the region's growth will also help to reduce the number of long-distance commute trips made and lower per capita emissions across the region.

While concerted efforts to reduce greenhouse gas emissions are critical, historic emissions remain and will continue to affect the global climate. Therefore, in addition to doing its part to reduce the effects of climate change, the City must also prepare for and adapt to the effects of climate change.

E-F

goal

- EG7** Reduce emissions of carbon dioxide and other climate-changing greenhouse gases in Seattle by 30 percent from 1990 levels by 2020, and become carbon neutral by 2050.
- EG7.3** Seattle will act as a regional and national leader by becoming carbon neutral.
- EG7.5** Prepare for and adapt to the likely effects of climate change through the development, ongoing assessment, and implementation of the Climate Action Plan.

Sector	2020 Targets (% reduction compared to 2008)	2030 Targets (% reduction compared to 2008)
Transportation		
Passenger	14% reduction in vehicle miles traveled (VMT) 35% reduction in GHG emissions per mile of Seattle vehicles	20% reduction in VMT 75% reduction in GHG emissions per mile of Seattle vehicles
Freight	25% reduction in GHG emissions per mile of Seattle vehicles	50% reduction in GHG emissions per mile of Seattle vehicles
Buildings		
Residential	8% reduction in energy use	20% reduction in energy use
Commercial	5% reduction in energy use	10% reduction in energy use
Both	15% reduction in tons of carbon dioxide equivalent (CO ₂ e) per billion BTU for residential and commercial buildings combined	25% reduction in tons of CO ₂ e per billion BTU for residential and commercial buildings combined
Waste		
	Increase diversion rate to 69%	Increase diversion rate to over 70%
	50% reduction in methane emissions commitment per ton of waste disposed	50% reduction in methane emissions commitment per ton of waste disposed
TOTAL GHG EMISSION REDUCTION		
	30% reduction in emissions by 2020	58% reduction in emissions by 2030
	87% reduction in emissions by 2050 (% reduction compared to 2008)	

policy

- E15** Work with private and public sector partners to achieve the goal of reducing climate-changing greenhouse gas emissions.
- E15.1** Build infrastructure and provide services for pedestrians, bicycles, electric vehicles and transit to facilitate movement around the city by means other than fossil-fueled automobiles.



- E15.2** Consider innovative measures that would encourage and facilitate use of alternatives to single-occupant vehicles, such as parking maximums for new development, parking taxes or fees.
- E15.3** Continue to recognize the value of planning for transportation facilities at the same time as for the location, type and density of future housing and jobs as a way to reduce the need for future residents and workers to travel by automobile.
- E15.4** Work to reduce greenhouse gas emissions through energy efficiency and low-carbon energy sources in buildings.
- E15.5** For itself and the general public, the City should anticipate the effects of climate change and make plans for adapting to those effects.
- E15.6** Establish energy efficiency standards for new buildings, consistent with applicable law, and encourage existing buildings to also achieve those standards.
- E15.7** Reduce emissions associated with solid waste by reducing the amount of waste generated and by operating efficient collection and disposal systems.
- E15.8** Encourage local food production as a way to decrease the environmental and climate impacts of the food production and distribution systems.

F City Operations

goal

- EG8** Continuously improve the City's environmental performance in its roles as a large employer, builder and maintainer of capital facilities, land owner and regulator to not

only improve the natural environment but also to set an example for others' behavior.

- EG9** Reduce fossil-fuel consumption in constructing new and renovating existing City-owned buildings to one-half the U.S. average for each building type.

policies

- E16** In the operations of City government, strive to reduce the use of resources and toxics, prevent pollution, reuse existing resources such as historic structures, control waste, and protect natural areas and biodiversity. Repairs of City-owned buildings should employ green building practices.
- E17** To improve the City's environmental performance, set targets, use innovative approaches, encourage employees, and coordinate with other government entities.
- E18** Collect data and regularly report on the sustainability measures and numeric goals in this plan to inform and enable citizens and decision-makers to consider alternative policies or programs, where outcomes differ from what was intended. Conduct an inventory of greenhouse gas emissions in Seattle at least every three years. Use data, public input, and approaches developed by other public agencies and private organizations that address sustainability. Consider combining this monitoring activity with the one described in the Urban Village Element of this Plan.

G Source Control

goal

- EG10** Reduce consumption of fossil fuels in all new City government buildings in the following increments (percent reduction from 2007 U.S. average for each building type):

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60% in 2010;
70% in 2015;
80% in 2020;
90% in 2025; and
Carbon Neutral by 2030 (meaning new buildings will use no fossil fuel or greenhouse gas-emitting energy to operate).

- EG11** Make waste reduction, pollution prevention and recycling integral parts of how City government and others in the city conduct their daily business.

policies

- E19** Reduce consumption of resources and promote conservation of energy, water and material resources among all sectors of the community, including City government.
- E20** Consider long-term environmental costs, in City planning, purchasing and operating decisions. For instance, look at all of the environmental impacts caused by materials from their production to disposal.
- E21** Seek to meet greenhouse gas emission goals EG7 - EG10.

H Seattle's Trees

discussion

The existence of tree canopy and significant trees in the city are important to retaining the livability of the City as growth occurs.

The significance of trees is reflected not only in the policies in this Environment Element, but also in the significant number of policies distributed throughout this Plan. The reader may want to see the following related policies: UVG40, LU39, LU40, LU41, LU53.1, LU151, LU165, T13, U10, A-P33, BL-P13, BL-P18, BL-P27, CH/B-P15, ID-P13, GL-P31, G/PR-G3 A, G/PR-P21, G/PR-P33, QA-P1, R-EP1, R-EP4, SLU-P46, and

CR6. Also see the discussion in the Transportation Element, in section E, "Improving the Environment."

policies

- E21** Strive to protect and retain certain trees and groups of trees that enhance Seattle's historical, cultural, environmental and aesthetic character.
- E22** Work to achieve a sustainable urban forest that contains a diverse mix of tree species and ages in order to use the forest's abilities to reduce storm water runoff and pollution, absorb air pollutants, provide wildlife habitat, absorb carbon dioxide, provide shade, stabilize soil, provide food, and increase property values.
- E23** Achieve no net loss of tree canopy coverage, and strive to increase tree canopy coverage to 40 percent, to reduce storm runoff, absorb air pollutants, reduce noise, stabilize soil, provide habitat, and mitigate the heat island effect of developed areas.
- E24** Update the tree canopy inventory in the Urban Forest Management Plan at least every 10 years to measure progress toward the goal of increased canopy coverage.