



# 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** Where there would be measurable benefits to people or wildlife, place priority on solving drainage problems, such as flooding and frequent reliance on the combined sewer overflow system, with natural drainage system approaches and by restoring watershed elements such as forest, wetlands, and natural channels.
- 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.
- E9.5** Strive to achieve no net loss of tree canopy coverage starting in 2008, and strive to increase tree canopy coverage by 1 percent per year up to a total of 40 percent, to reduce storm runoff, absorb air pollutants, reduce noise, stabilize soil, provide habitat, and mitigate the heat island effect of developed areas.

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B-C

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- E10** Strive to increase the amount of permeable surface and vegetative cover in the city in order to mitigate the heat island effect of developed areas, control storm water flows and reduce pollution.
- E10.1** Update the 2000 tree canopy inventory in the Urban Forest Management Plan every 10 years to measure progress toward the goal of increased canopy coverage.

**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.
- 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 and the human factors that contribute to it are not confined to jurisdictional boundaries. Nevertheless, Seattle City government can contribute to reductions of those factors through public education, regulation, 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 seeking to respond to emissions within Seattle's geographic boundaries, Seattle can contribute to regional reduction in greenhouse gases.

This Comprehensive Plan addresses the period between 2004 and 2024. The greenhouse gas emission goals below are set to correspond to a 50-year goal consistent with studies prepared by national and



international organizations. These studies indicate that developed countries must reduce greenhouse gases as much as 80 percent in carbon dioxide equivalents (CO<sub>2</sub>e) below 1990 levels by 2050 in order to achieve climate stabilization.

Meeting targets for reductions in greenhouse gas emissions will require political consensus and technology innovation. Without such consensus 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.

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.

**goal**

**EG7** To control the impact of climate change globally and locally, reduce emissions of carbon dioxide and other climate-changing greenhouse gases in Seattle by 30 percent from 1990 levels by 2024, and by 80 percent from 1990 levels by 2050.

**EG7.5** Be prepared for the likely effects of climate change.

**policy**

**E15** Work with private and public sector partners in seeking to achieve goal EG7 for reducing climate-changing greenhouse gas emissions from private and public sources to control the impacts of global warming on the city's water supply, electrical energy supply, ecosystems, public health, and economy. Work to establish a standard for greenhouse gas emissions for privately owned 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.

**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):

- 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, and increase property values.

**E23** Strive to achieve no net loss of tree canopy coverage starting in 2008, and strive to increase tree canopy coverage by 1 percent per year up to a total of 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 2000 tree canopy inventory in the Urban Forest Management Plan every 10 years to measure progress toward the goal of increased canopy coverage.

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