

Environmental Quality and Stewardship

Goal 4.1 The City's air, land and water resources are restored and protected for future generations.

Comment [NG1]: Replaces current Goal 4.1

Policy 4.1.1 Anticipate the effects of climate change by keeping abreast of current scientific data and plan for adapting City regulations and internal procedures, as needed.

Policy 4.1.2 Collaborate with Federal and State fish and wildlife agencies to identify priority species (endangered, threatened, sensitive, and candidate species) and priority habitats to determine appropriate protection and wildlife access measures.

Policy 4.1.3 Identify impacts to wildlife from new development and ensure protection of existing priority wildlife habitat, including Osprey and Bald Eagle nests and Chinook and Bull Trout habitat, when issuing permits for development.

Policy 4.1.4 Assist applicants in complying with Federal and State wildlife and endangered species regulations for all public and private sector projects.

Policy 4.1.5 Develop and implement ~~Explore~~ programs that encourage to provide incentives and education to Tukwila residents and businesses to take active use measures to protect and enhance ~~improve environmental quality, Tukwila's natural environment. Such measures could include the use of~~ ~~such as~~ low impact development techniques, natural streambank restoration, non-toxic lawn care, composting, and recycling.

Comment [SW2]: Revisions per Committee member written edit suggestions

Goal 4.2 An educated public that understands the importance of protecting sensitive areas, wildlife and fish habitat in the City's natural areas, wetlands, watercourses and the Green/Duwamish River and assists in their stewardship.

Policy 4.2.1 Expand free or low cost educational programs and materials for the community about the multiple benefits of the City's sensitive areas, flood plains, the urban forest, and wildlife habitat and on individual responsibilities for their stewardship.

Comment [NG3]: Modified from policy 4.4.1

Policy 4.2.2 Provide individualized education and technical support to residential property owners and general guidance to businesses regarding environmental stewardship.

Policy 4.2.3 Continue to support community-oriented wildlife educational programs such as the Tukwila Backyard Wildlife Program.

Comment [NG4]: Formerly an implementation strategy. Policy expanded to include possible other wildlife programs in the future.

Comment [SW5]: Staff suggests this change to allow more flexibility

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

Goal 4.3 Increased number of Tukwila residents trained as environmental stewards and actively participating in environmental restoration and maintenance.

Policy 4.3.1 Sponsor joint City and citizen cleanup and restoration projects and expand the citizen volunteer base in Tukwila for restoration and maintenance of the City's natural areas.

Comment [NG6]: Formerly part of policy 4.4.1

Policy 4.3.2 Collaborate with environmental organizations and businesses to support recruiting and training of environmental stewards, identify restoration projects, and provide logistical support for their work.

Environmental Quality and Stewardship Implementation Strategies

- Assign responsibilities for tracking climate change issues and develop recommendations for new City management policies, as needed.
- Update and expand the City's website to post information on environmental stewardship, green building techniques and standards, recycling and re-use of construction waste, low impact development techniques, and other related topics. Distribute such information to applicants and contractors during permit reviews.
- Continue to make available brochures on environmentally friendly lawn care, recycling and other environmental stewardship information at special events, at the Tukwila Community Center, City Hall, and expand them to other appropriate locations as funding permits.
- Identify future City projects where green construction and low impact development techniques can be employed to demonstrate them to the community.
- Develop and mail topic-specific fact sheets to property owners on environmental stewardship in a variety of languages.
- Publish articles on environmental stewardship in the Tukwila Reporter and/or Hazelnut.
- Team with other environmental organizations such as Forterra, Earth Corps, and the Washington Native Plant Society to train environmental stewards, help recruit and manage volunteers and carry out environmental restoration projects.
- Engage youth and school groups in restoration projects.
- Seek grants to fund publications, volunteer environmental restoration projects and citizen stewardship training.
- Maintain contact with Washington Department of Fish and Wildlife and the federal resource agencies to stay up to date on wildlife management policies, permit requirements and requirements for preparing biological assessments.

Water Resources

(A statement will be inserted in the narrative portion of this section explaining that the Green Duwamish Shoreline goals and policies are found in the Shoreline Chapter of the Comprehensive Plan.)

Overall Water Resources Goal 4.4 Water resources that function as a healthy, integrated system; provide a long-term public benefit from enhanced environmental quality; and have the potential to reduce public infrastructure costs.

Comment [NG7]: Modified from Goal 4.5

Wetlands/Watercourses/Fish and Wildlife Habitat

Goal 4.5 Vital and self-sustaining fish and wildlife habitat areas that also provide, where appropriate, opportunities for recreational and educational uses.

Comment [NG8]: Modified from Goal 4.2

Policy 4.4.1 Restore watershed function through sensitive area restoration projects on publicly owned lands and by working with property owners to restore/improve sensitive areas on private property.

Comment [NG9]: Modified from policy 4.1.3

Policy 4.5.2 Recognize, protect and enhance the value of watercourse and river riparian zones and other natural areas as wildlife corridors.

Policy 4.5.3 Develop best management practices for surface water drainage and street maintenance activities to avoid ~~disturbing or destroying~~ ~~eliminating~~ native riparian vegetation. Where riparian vegetation is disturbed through maintenance activities, restore vegetation with native species.

Comment [SW10]: Change suggested by Committee member

Policy 4.5.4 Identify staff and financial support for restoration projects, wherever feasible to enhance salmonid habitat in watercourses, wetlands and the Green/Duwamish River, including projects identified in the Shoreline Master Program Habitat Restoration Program and the Water Resource Inventory Area 9 Salmon Habitat Plan.

Policy 4.5.5 Prohibit piping of watercourses except where unavoidable for access purposes. Where feasible and practical to create healthy riparian habitat, encourage removal of piped sections of watercourses as part of new or redevelopment and public projects.

Comment [NG11]: Modified from policy 4.1.3

Policy 4.5.6 Prohibit creation of new fish barriers and, where possible, eliminate existing barriers ~~(as identified in the Surface Water Comprehensive Plan)~~ to fish passage through implementation of capital improvement projects and by providing incentives to private sector development.

Comment [NG12]: Modified from policy 4.1.3 combining SAO regulations and CIP/ grants.

Comment [P13]: Deleted since the Surface Water Management Plan is identified in the accompanying implementation strategy.

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

Goal 4.6 Watercourses and their buffers, wetlands and wetland buffers protected from encroachment and degradation and improved through mitigation, enhancement and restoration projects.

Policy 4.6.1 Regulate land use and development, using Best Available Science, to protect and improve natural vegetation and hydrology in order to prevent significant erosion, sedimentation, or degradation of areas of potential geologic instability, wetlands, watercourses, fish and wildlife habitat areas and their associated buffers.

Comment [NG14]: Modified from Policy 4.1.1 and based on SAO regulations.

Policy 4.6.2 Ensure mitigation sequencing is applied to avoid or minimize impacts to sensitive areas.

Policy 4.6.3 - Require and enforce mitigation in order to ensure no net loss of sensitive area functions ~~as well as mitigation and~~ designed to replace sensitive area acreage, ~~and/or restore or enhance sensitive area functions~~ lost due to development.

Comment [NG15]: Modified from policy 4.1.6, provides policy basis for SAO regulations.

Comment [SW16]: Change suggested to make sentence more readable

Policy 4.6.4 Ensure the effectiveness of sensitive area mitigation by requiring adequate sensitive area studies and mitigation plans, the application of mitigation sequencing ~~to reduce potential adverse impacts to sensitive areas~~, financial assurances from project proponents to ensure mitigation ~~success implementation and maintenance~~, and by improving City oversight of maintenance and monitoring of mitigation sites.

Comment [NG17]: Modified from policy 4.1.5, provides policy basis for SAO regulations.

Comment [SW18]: Modifications based on Committee member input and to make policy more concise.

Policy 4.6.5 Allow off-site wetland mitigation only when there is greater functional benefit, no significant adverse impact to the adjacent property, and no significant adverse impact to existing wetlands or watercourses. Preference ~~for mitigation sites~~ shall be given first ~~for mitigation sites~~ within Tukwila's portion of the Green-Duwamish watershed, ~~followed by sites and then~~ elsewhere in the watershed.

Comment [NG19]: Modified from policy 4.1.8, provides policy basis for SAO regulations.

Comment [SW20]: Clarify preference hierarchy and clean up language

Policy 4.6.6 ~~Consider~~**Explore** allowing payment into an in-lieu fee program for mitigation ~~outside of Tukwila~~ where ecological benefits of such actions will be significantly greater than mitigation locations in the City

Comment [SW21]: Substituting more active verb

Comment [NG22]: Would require a change to SAO regulations.

Policy 4.6.7 ~~Consider~~**Explore developing** ~~creation of a City~~ in-lieu fee program ~~in the City~~ for future wetland mitigation or collaborate with King County to establish in-lieu fee sites in Tukwila for wetland restoration projects, including projects along the Green/Duwamish River shoreline.

Comment [NG23]: Would require a change to SAO regulations.

Policy 4.6.8 ~~In collaboration with other agencies, Do~~ develop a program ~~in collaboration with other agencies~~ to provide guidance to property owners interested in using their property for sensitive area mitigation or shoreline mitigation.

Comment [SW24]: Change suggested by Committee member

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

Wetlands/Watercourses/Fish and Wildlife Habitat Implementation Strategies

- Continue implementation of the Sensitive Areas Regulations and improve tracking and monitoring, and develop other mechanisms to improve compliance with maintenance requirements. Update the regulations as necessary to ensure they reflect current Best Available Science.
- Develop guidelines and provide training to surface water and street maintenance staff in best management practices for work in sensitive areas.
- Continue to periodically offer special workshops or classes for property owners on sensitive areas stewardship, regulations, stream bank enhancement and other related topics.
- Publish articles on sensitive areas stewardship in the Tukwila Reporter and/or Hazelnut.
- Encourage off-site wetland mitigation and offer assistance to property owners interested in providing mitigation sites, where appropriate.
- Evaluate opportunities and Federal and State requirements for in-lieu fee wetland mitigation programs, and discuss options for using County-designated sites in Tukwila. Provide recommendations to decision-makers.
- Continue implementation of the Surface Water Management Plan and individual watercourse Basin Plans to remove identified fish barriers during surface water and street maintenance and upgrade projects, where possible.
- Continue to coordinate with the Department of Fish and Wildlife and the Tribes regarding projects that impact fish and the design of watercourse restoration projects.

Water Quality/Quantity

Goal 4.7 The water quality in Tukwila's wetlands, watercourses, fish and wildlife habitat areas and the Green/Duwamish River is improved over time.

Comment [NG25]: Clarification that improvement not expected to be immediate or measurable

Policy 4.7.1 Improve surface water management and ensure provision of water quality treatment where required.

Policy 4.7.2 Prevent and reduce streambank and channel erosion and sedimentation of water resources through implementation of surface water and land clearing regulations and inspections.

Policy 4.7.3 Initiate educational and management programs to reduce the use of chemicals having with negative impacts on the environment or human health. Prohibit the application of pesticides (insecticides, herbicides, fungicides, algaeicides, rodenticides, etc.) to surface water systems or their buffers unless warranted to protect

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

ecological functions of the system, and inform applicators about State pesticide licensing regulations.

Policy 4.7.4 To protect water quality, Promote natural yard care and proper waste management by Tukwila residents and businesses to protect water quality through educational programs and publicity.

Policy 4.7.5 Continue City monitoring for illicit surface water discharges and ensure that action is taken to eliminate any such discharges.

Comment [NG26]: Modified from policy 4.1.4, provides policy basis for Surface water regulations.

Policy 4.7.6 Retrofit existing City surface stormwater systems, including ditches conveying stormwater, to improve the water quality of stormwater discharges where there are significant water quality benefits.

Comment [P27]: Corrected terminology to match City's Surface Water Regulations

Goal 4.8 Surface stormwater generated by from urban development that does not exceed pre-development discharge rates.

Comment [NG28]: Clarification of intent of goal.

Policy 4.8.1 Demonstrate implementation of low-impact development techniques through grant-funded public projects and encourage the use of such techniques for stormwater management in new and existing development. Where feasible, incorporate such techniques into City capital facilities projects.

Note: Low impact development techniques will be required by Washington State Department of Ecology in 2015 – narrative following this policy will acknowledge this upcoming requirement – until required, the City will encourage the use of LID techniques and use public projects and workshops to demonstrate LID techniques.

Policy 4.8.2 Require that all proposed development identify hydrologic features both on-and off-site that could be impacted by the project. Evaluate project impacts on on-site and off-site watercourses, wetlands, drainage features and springs to avoid adverse impacts to existing sensitive area hydrology.

Policy 4.8.3 Continue inspection programs to ensure proper maintenance of surface water management systems.

Water Quality and Quantity Implementation Strategies

- Implement water quality monitoring, as required under the City's new National Pollutant Discharge System permit and develop action plans for identifying and eliminating sources of pollution when problems are identified.
- Provide training and written information on low-impact development techniques to developers, contractors, City staff and City officials.

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

- Develop mechanisms to improve the frequency of surface water facility inspections and increase enforcement.
- Set up internal procedures for evaluating development projects to ensure no adverse impacts to wetland or stream hydrology.
- Publish articles on environmental stewardship and water quality protection in the Tukwila Reporter and/or Hazelnut.

Flood Control

Note to Committee: two policies related to flood control have been moved from the Utilities Chapter to the Natural Environment because flood control is not a utility function and the policies seemed to be more appropriately located here. After further staff review of the two policies, they appeared to partially duplicate policies that already existed in the Natural Environment Chapter. As a result, staff took key elements of the two policies and integrated them into either Goal 4.9 or policies 4.9.3 and 4.9.6.

Goal 4.9: The natural flood attenuation functions of wetlands, floodplains and floodways are protected and severe flooding is reduced to help prevent damage to life, property and public safety.

Comment [P29]: Modified to add language from policy moved from Utilities Chapter.

Proposed Policies:

Policy 4.9.1 Restrict or prohibit development that could create a danger to health, safety and property due to potential erosion or flood hazards.

Policy 4.9.2 Minimize the alteration of surface water features that retain or carry floodwaters (such as wetlands, natural flood plains) and prevent land alterations that would increase potential flooding.

Policy 4.9.3 Prevent or reduce flooding that adversely affects public health, safety and general welfare and protect against flood damage, by complying with current federal regulations.

Comment [P30]: Modified to add language from a policy moved from the current Utilities Chapter

Policy 4.9.5 Minimize adverse impacts to water resources by using bioengineering and natural solutions for bank stabilization or flood control projects, wherever feasible.

Policy 4.9.6 Require mitigation to reduce adverse environmental impacts from engineered flood control measures on a case-by-case basis.

Comment [P31]: Modified to add language from policy moved from Utilities Chapter.

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~~4.9.7 Prevent or reduce flooding that adversely affects public health, safety and general welfare.~~

Comment [CL32]: This policy moved from the Utilities Chapter – key elements of policy incorporated policy 4.9.3 above.

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Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

~~Policy 4.9.8 Seek to reduce and do not increase the risk of severe flooding experienced by existing public and private developments.~~

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Comment [CL33]: Key component of this policy incorporated in Goal 4.9 above.

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Flood Control Implementation Strategies:

- Regulate uses, development and redevelopment, including essential facilities, in flood plains.
- Prevent cumulative effects of obstructions in a flood zone by restricting development and other actions to zero increase in flood elevation.
- Require flood proofing or elevation of structures above the base flood elevation when built in a flood zone.
- Encourage the use of Low-Impact Development for surface water management from new development or redevelopment, where appropriate.
- Prohibit placement of structures or fill in the floodplain that would cause an increase in the elevation of the “zero rise” floodway.
- Develop regulations and guidelines to compensate for floodplain fill with equivalent excavation.
- Increase City staff expertise in bioengineering techniques for bank stabilization.

Earth Resources

Goal 4.10: Potential impacts and liabilities associated with development in areas of potential geologic instability and coal mine hazard areas are minimized, erosion is prevented and natural surface water features are protected from loss, disruption or channelization.

Policy 4.10.1 Require geotechnical studies for any development proposal on slopes over 15% to ensure that design takes into account geologic characteristics, surface and groundwater, and the presence of trees and native vegetation and their role in slope stabilization.

Policy 4.10.2 On-geologically hazardous areas steep slopes, require areas where vegetation must remain undisturbed, land disturbance minimized and cut and fill construction limited to protect slope stability on sites cleared for development. Require significant replanting upon completion of development.

Policy 4.10.3 Require setbacks for buildings and other infrastructure where needed from the top and/or toe of steep slopes to reduce risks of slope failure and risks to public safety.

Natural Environment Chapter: Revised Goals and Policies from 1/23/13 Meeting

Policy 4.10.4 Require the use of and where warranted, written erosion and sediment control plans to minimize erosion during and after construction activities on steep slopes or other erosion-prone areas.

Policy 4.10.5 Incorporate information from geotechnical reports and documented landslide and erosion-prone areas into the City's GIS data.

Policy 4.10.6 Ensure that proposed development projects in mapped coal mine hazard areas adequately consider and mitigate for possible risks.

Earth Resources Implementation Strategies

- Modify requirements for geotechnical evaluations under the Sensitive Areas Regulations to expand the assessment of trees' function in slope stability.
- Review and possibly revise how steep slopes are defined in the SAO.
- Ensure that erosion control plans are adequate and that erosion control measures are implemented through inspections conducted as part of land clearing permits and NPDES permits.
- Update the City's GIS system to reflect data submitted in geotechnical studies.

Archaeological, Paleontological, and Culturally Significant Resources

The goals and policies related to archaeological, paleontological and culturally significant resources have been moved to Chapter 1 and combined with Historical Preservation. The following text will be added to the Natural Environment chapter narrative:

"The protection of archaeological, paleontological and culturally significant resources crosses several Comprehensive Plan topic categories – these areas can be viewed as environmentally sensitive but the City's Parks and Open Space Plan also includes a number of goals or policies on natural areas and historical resources (including archaeological resources). For the purposes of the Comprehensive Plan, these topics will be addressed in Chapter 1, Community Image."