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**CITY OF TUKWILA
COMPREHENSIVE LAND USE PLAN
NATURAL ENVIRONMENT CHAPTER
BACKGROUND REPORT**

**2024 GROWTH MANAGEMENT ACT
UPDATE TO THE COMPREHENSIVE PLAN**

Planning Commission Draft

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I INTRODUCTION

This background report for the Natural Environment Element provides a summary of the key regulatory provisions and policies that apply to the management of the natural environment and expands on the discussion of water quality in the Green/Duwamish River, and Tukwila's streams and wetlands.

II ENVIRONMENTALLY CRITICAL AREAS

This Section describes the various regulations and policies that are applicable to critical areas management.

Growth Management Act Requirements

The Washington State Growth Management Act (GMA) requires counties and cities to designate and adopt policies and development regulations to protect critical areas. Under the Act, critical areas are defined as: wetlands; fish and wildlife habitat; aquifer recharge areas (where groundwater is used for potable water supply); frequently flooded areas; and geologically hazardous areas. The application of best available science (BAS) must be considered in adopting regulations to protect the functions of critical areas, giving special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

The Natural Environment Chapter provides the policy direction for the City's Critical Areas Regulations, originally adopted in June 1991 and amended in 2004, 2010, and 2020. It also provides the basis for the critical areas regulations that form part of the Shoreline Master Program.

Tukwila's critical areas regulations are designed to protect wetlands, watercourses, and fish and wildlife habitat areas from impacts, and to require mitigation sequencing for proposed impacts, beginning avoidance. While it is the primary responsibility of property owners to declare Critical Areas, the approximate locations and classifications of these critical areas have been denoted in iMap, and are updated as information is obtained and City resources allow for site assessments.

Under all of the Critical Areas regulations, Tukwila's wetlands have been defined using the State definition [RCW 36.70A.030(48)] and Tukwila's watercourse classifications are consistent with the Washington State Department of Natural Resources (DNR)'s stream typing system. Tukwila has designated and protected several fish and wildlife habitat conservation areas – including Tukwila Pond and several restored habitat areas on the Duwamish River (designated under the Shoreline Master Program). The designated fish and wildlife habitat conservation areas are publicly owned and managed and those in the shoreline jurisdiction have been especially developed for salmonid rearing and resting habitat.

Tukwila's critical areas regulations also define and map geologically hazardous areas and coal mine hazard areas and require geotechnical evaluations and corresponding design requirements to reduce risks created by development in such areas.

Watercourses and wetlands form part of the City's surface water drainage system and provide important flood storage and conveyance functions and are therefore protected under the Critical Area regulations. However, flood management issues on the Green/Duwamish River are dealt with under different regulations and procedures (as described in Section IV). Frequently flooded areas associated with streams are dealt with through the City's Comprehensive Surface Water Management Plan and individual basin plans, which identify problem flooding areas and prioritize action for managing them.

Tukwila does not have aquifers that are used for water supply, therefore, this type of GMA critical area, is not addressed in this Element.

The Growth Management Act also requires the protection of resource lands - those lands that have "long-term commercial significance" for agriculture, fisheries, timber production and mineral extraction. Since Tukwila does not have lands used by resource-based industries, goals and policies for these types of lands are intentionally absent from this chapter. Any areas of the City that may have been in agricultural use in the past have all been designated for future urban uses.

The Growth Management Act allows the use of non-regulatory measures to protect or enhance the functions and values of critical areas. These may include public education, stewardship programs, pursuing grant opportunities, joint planning with other jurisdictions and non-profit organizations, and stream and wetland restoration activities. Tukwila has been employing all of these measures and the updated Chapter contains goals and policies addressing them.

State and Federal Regulations and Guidance for Wetlands

Most wetlands and watercourses are regulated under the federal Clean Water Act, and both the U. S. Environmental Protection Agency (EPA) and the U. S. Army Corps of Engineers (Corps) have regulations related to their management. Permits for filling or dredging "waters of the US" are required by the Corps of Engineers and EPA and the Washington Department of Ecology (Section 401 of the Clean Water Act) have review authority over permits and can require additional conditions on the permit. Mitigation sequencing and compensatory mitigation is required for impacts in order to achieve no net loss of ecological function.

In 2021 the Department of Ecology, Corps and EPA published Guidance on Wetland Mitigation in Washington State, based on BAS, to guide local jurisdictions' decisions on wetland management and mitigation. The Tukwila's Critical Areas Ordinance was updated in 2020, and includes language that adopts Ecology-approved amendments to this guidance. One of the key modifications in Tukwila's regulations was the adoption of state and federal methods used to classify wetlands, which are based on wetland functions. Another key modification was the adoption of mitigation ratios consistent with the guidance, which vary based on the classification of the wetlands and the type of mitigation proposed, requiring a greater amount of mitigation for impacts to higher functioning wetlands. Monitoring and maintenance periods for installed mitigation were also increased to better ensure its success.

In May of 2010, the US Army Corps of Engineers issued a regional supplement to its Wetlands Delineation Manual, which modified the delineation process. Tukwila's Critical Areas regulations require use of these federal requirements for wetland delineations.

The following section is being updated

Off-site mitigation is non-preferred by the City, as adopted goals prioritize preservation of the unique ecological site functions performed by wetlands in Tukwila. Off-site mitigation is only a last resort, with priority for mitigation in the same drainage basin as the proposed impacts, or as most recently codified

by TMC 18.45 Environmentally Critical Areas.

King County County-wide Planning Policies

The update of this chapter is consistent with the King County Countywide Planning Policies related to critical areas. The County policies state that local governments should incorporate environmental protection and restoration efforts into their comprehensive plans to ensure that the quality of the natural environment and its contributions to human health and vitality are sustained now and for future generations. In addition, local governments should coordinate approaches and standards for defining and protecting critical areas, especially where such areas and impacts to them cross jurisdictional boundaries. Also, the County encourages basin-wide approaches to wetland protection, emphasizing preservation and enhancement of the highest quality wetlands and wetland systems.

In 2021, the Countywide Planning Policies were expanded to issues of Climate Change, equity of access to outdoor amenities, environmental pollution, and environmental justice. These priorities have been integrated into the Plan goals and policies.

Tukwila's Critical Areas regulations are consistent with state and federal guidance, which favor preservation of the highest quality wetlands. Tukwila's regulations also allow for a watershed approach to wetland mitigation. The City has designated several publicly-owned wetland systems where mitigation projects could increase wetland functions. This Chapter also contains policies for exploring use of or establishment of in-lieu-fee programs for wetland mitigation.

III ENDANGERED SPECIES AND PRIORITY HABITATS

The Federal government regulates endangered, threatened and sensitive wildlife species under the Endangered Species Act (ESA). Federal agencies involved in implementing the Act are the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service (USFS). Marine mammals are also protected under the Marine Mammal Act.

Tukwila is considering membership in the ESA 4(d) rule group known as the Regional Road Maintenance Program.

The Growth Management Act requires that the Comprehensive Plan contain policies guiding decisions related to anadromous fisheries or fish and wildlife listed under the federal ESA. In Tukwila, Chinook Salmon and Bull Trout in the Green/Duwamish River have been listed as threatened under the ESA. Tukwila's Shoreline Master Program contains specific policies and regulations to protect these species and ensure no net loss of shoreline ecological function. In addition, the Master Program includes a plan to prioritize and direct restoration activities to promote ecological function and restore habitat for salmon and other fish and wildlife along the river. Tukwila is a party to the Water Resource Inventory Area (WRIA) 9 Salmon Habitat Enhancement Plan, along with King County and other local jurisdictions in the watershed. This plan identifies programs and restoration projects to foster recovery of Chinook salmon, which will also benefit bull trout and other fish. Tukwila is actively supporting restoration activities under both this plan and the restoration plan adopted as part of the Shoreline Master Program.

The Washington Department of Fish and Wildlife (WDFW) identifies priority species (which include all listed species under the ESA, as well as species of state significance) and maps their habitats, to provide

guidance to local jurisdictions in considering the impacts of proposed development and in protecting them. WDFW also regulates any work in rivers or streams that requires a Hydraulics Permit Authorization (HPA) and mitigation/restoration to reduce the impacts of the work.

New policies have been incorporated into the Natural Environment Chapter to ensure that all new developments consider potential impacts to fish and wildlife, identify if there are priority species, and aim for state and federal requirements to be met. WDFW Priority Habitats, along with Tribal input, should be considered when making land-use decisions such as allowing impacts, rezones, etc.

IV FLOOD MANAGEMENT

Flood control is regulated and managed by several levels of government:

- The Federal Emergency Management Agency (FEMA) maps flood plains and operates the National Flood Insurance Program (NFIP). In Tukwila, which is an NFIP participating community, this program covers the urban center, part of Tukwila South, a small area just north of Strander and Fort Dent Park.
- The US Army Corps of Engineers permits, certifies and in some cases operates federally-constructed levees for flood control. Tukwila has a federally certified levee on the left bank of the Green River between SR-405 and South 190th.
- The King County Flood Control District is a special purpose government charged with funding, policy development and construction projects to improve flood control structures throughout the County. Tukwila has an interlocal agreement with the Flood Control District for levee maintenance services. Tukwila's Comprehensive Plan includes goals, policies and implementation strategies that are consistent with King County's policies related to flood management:
- The City has responsibility for localized flooding from streams. Flood control projects are identified and prioritized in its Comprehensive Surface Water Plan and individual stream basin plans.

V WATER QUALITY

The Washington Department of Ecology regulates municipal storm sewer systems under both the State Waste Discharge Law (RCW 90.48) and the National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit Phase II for Western Washington. Tukwila regularly reviews and updates its surface water regulations to implement the requirements of the municipal permit, which renews every 5 years. Key features of the new regulations will include requirements to continue to prefer Low Impact Development techniques for managing urban surface water run-off from new development, utilizing best management practices for Operations and Maintenance of all lands owned including turf and landscaped areas, and Business Source Control inspections amongst dozens of other requirements.

The King County County-wide Planning Policies specify establishment of a multi-jurisdictional approach for funding and monitoring water quality, quantity, biological conditions, and outcome measures and for improving the efficiency and effectiveness of monitoring efforts. The Policies also seek to have all jurisdictions collaborate to implement the Puget Sound Water Quality Management Plan, under the management of the Puget Sound Partnership, to restore and protect the biological health and diversity of the Puget Sound basin. The Puget Sound Partnership was created by the Washington State Legislature as the state agency with the responsibility for assuring the preservation and recovery of Puget Sound and the freshwater systems flowing into the Sound. There are two strategic initiatives in the Puget Sound Partnership's 2022-2026 Action Agenda that apply to Tukwila: 1) prevent pollution from urban stormwater runoff; and 2) protect and restore habitat along rivers and streams.

The City participates in the Surface Water Action Monitoring program regionally. Some water quality monitoring has been done in the past on the Green/Duwamish River and King County has a current monitoring program with a station at Fort Dent in Tukwila. The river is considered by regulatory agencies to be impaired for water quality for several contaminants: dissolved oxygen (too low to support fish in some areas), temperature (too high in much of the Lower Green and upper Duwamish to support salmonids) and fecal coliform in some areas.

The 2022 Tukwila Pond Park Master Plan indicates that the City conducted water quality studies in 1995, 2008, and most recently in 2011. The pond suffers from high levels of phosphorus, high water temperatures and low levels of dissolved oxygen, much of it related to its long history as a cattle producing pastureland and some from stormwater runoff that flows into the pond, natural inputs of phosphorous (decayed vegetation and waterfowl feces) and the shallowness of the pond. These factors work together to produce unsightly algae blooms in the late summer months. Some potentially toxic blue-green algae blooms have been observed.

Some periodic water quality monitoring has been done in Tukwila's streams. Past monitoring in Gilliam Creek showed elevated turbidity during storm events and high levels of copper and zinc. Riverton Creek has exhibited high levels of fecal coliform bacteria, phosphorus, turbidity, total suspended solids, and copper. High turbidity and fecal coliform have also been measured in Southgate Creek. High phosphorus and fecal coliform were also measured in Johnson Creek, possibly due to the agricultural activities in the vicinity at the time the water samples were collected.

This Comprehensive Plan is consistent with the strategies of the Countywide policies and the Puget Sound Action Agenda, as it contains goals, policies, and implementation strategies for improving surface

water quality, monitoring water quality and restoring riparian habitat. In addition, the 2020 update of Tukwila's Critical Areas regulations strengthened requirements for protecting and restoring watercourses and their buffers. The Shoreline Chapter also has policies for no net loss of shoreline ecological functions and restoration of riparian habitat on the Green/Duwamish River.

VI AIR QUALITY

The Puget Sound Clean Air Agency regulates emissions and monitors air quality in King and other Puget Sound counties. This agency focuses its efforts on reducing air pollutants that pose the greatest health risks to our region – which include criteria air pollutants, air toxics and greenhouse gases. It requires permits from businesses with regulated air emissions and from construction projects, and regulates open burning and burning in fireplaces and wood stoves. Emissions from vehicles are monitored and controlled by the State Department of Ecology. The agency also has growth management policies for promoting clean air that relate to promoting development policies that improve air quality and address climate change.

King County also has several county-wide policies related to air quality and climate change including policies for reducing green-house gases, directing development to existing urban centers and facilitating modes of transportation other than single-occupancy vehicles. In addition, policies address the need for including environmental justice considerations in land use decisions.

Tukwila, along with all other communities in the region, has experienced the impacts of climate change in the form of reduced air quality from wildfires. Such events have created air quality concerns as harmful chemicals and tiny particles suspended in the air create health issues for the public, especially active children and adults, elderly people, and people with respiratory diseases (e.g., asthma). During these periods of smoke exposure, the City follows the guidance of regional, state, and national health, emergency management, and air quality partners in providing public education and community response options.

Tukwila benefits from the significant transportation corridors within the City that support commerce, however those corridors and their associated uses can have an impact on the community health. Major roads extending through the City include Washington 599, and Washington 518, as well as Interstates 5 and 405. A study completed by the Puget Sound Clean Air Agency (PSCAA) documented air quality in proximity to major roadways by placing measuring stations throughout King, Pierce, Snohomish, and Kitsap counties. That analysis identified the "Tukwila/Allentown" area being the most-impacted of the "Highly Impacted Communities", and the "Tukwila/Kent" region being third worst. Much of this impact comes from diesel pollution, as well as industrial source pollution.

HIGHLY IMPACTED COMMUNITIES		
Rank	Score	Community
1	20.7	Tukwila/Allentown
2	19.5	South Tacoma
3	19.3	Tukwila/Kent (Midway)
4	19.0	Tacoma South End
5	18.7	Greater Duwamish
6	18.5*	Algona/Auburn
6	18.5*	Des Moines
6	18.5*	International District
6	18.5*	SeaTac
10	18.3	South Everett
11	18.2	Southeast Seattle
12	17.7*	Parkland
12	17.7*	Kent
12	17.7*	Central District
15	16.8	Downtown Everett
16	16.3*	Lynnwood
16	16.3*	Northgate

Source: Park, Tania Tam, Puget Sound Clean Air Agency, “Highly Impacted Communities: PS Clean Air Committee Recommendations”, September 14, 2014.

The City has a role in improving air quality through the environmental review process for new development projects. It also manages a commute trip reduction program for businesses, which indirectly contributes to improving air quality by reducing the number of vehicle trips. Further, the City can implement energy efficiency strategies in its buildings and City vehicles. These air-quality and climate change issues are addressed in the transportation, land use, and utilities chapters of the Comprehensive Plan.

VII TREES/URBAN FORESTRY REGULATIONS

In 2008 the State Legislature passed the Evergreen Communities Act, which requires that local jurisdictions develop urban forestry management programs in order to be eligible for state funding and provides technical assistance to local communities in developing and implementing the plans. The Act is not currently in force, because no funding was appropriated to carry it out, however the requirements may be enforced in the future.

The Washington Department of Natural Resources (DNR), through its Urban Forestry Program, provides education, technical assistance and some funding to local jurisdictions for urban forestry management. Funding supports such efforts as tree inventories, urban canopy studies, urban forestry plans, and on-the-ground projects. If the Evergreen Communities Act were implemented in the future, DNR would have an important technical role in assisting communities in complying with its requirements.

Planning and management of the urban forest in Tukwila is a shared responsibility between the Department of Community Development (tree removal permits, critical areas protection, shoreline

vegetation protection and restoration), Parks and Recreation (trees and natural areas in parks), Public Works (trees and natural areas on public rights-of-way and public property), and property owners (trees and natural areas on private property).

Tukwila has been a “Tree City, USA”, certified by the National Arbor Day Foundation, since 2002 and has tree protection and replacement regulations for all properties, including critical areas and the Green/Duwamish River shoreline. Tukwila’s landscape code also requires tree planting and retention for most new development.

New goals and policies are included in the Natural Environment Chapter of the Comprehensive Plan to formalize and augment Tukwila’s current tree management efforts.