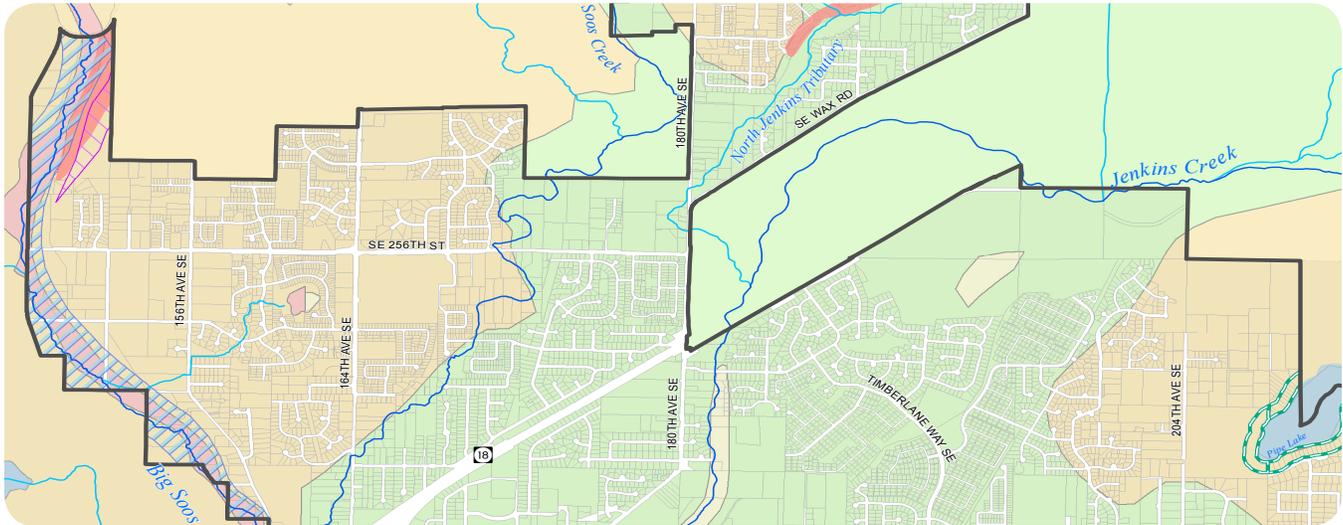


# NATURAL ENVIRONMENT



## WHAT YOU WILL FIND IN THIS CHAPTER

- ▶ A discussion of conditions and trends for Covington's natural environment.
- ▶ Planning efforts under way or needed to benefit or protect the City's natural environment, to ensure a healthy and sustainable community.
- ▶ Goals and policies to guide the protection and management of Covington's natural environment.

## PURPOSE

Covington is committed to the thoughtful, well-planned stewardship of the natural environment, in order to preserve and improve the quality of life for its residents. The natural environment is a complex system of inter-related components including air, water, soils, plants, and animals. All of these systems are affected by human activity. Through thoughtful planning and implementation of local, state, and federal regulations, Covington seeks to accommodate development needed for growth while preserving the natural environment and protecting residents as well as public and private property, from natural hazards.

## NATURAL ENVIRONMENT ISSUES AND TRENDS

### WHAT DOES IT MEAN?

The quality of the natural environment is an important component of our quality of life. The natural environment provides a variety of valuable and beneficial functions, such as contributing to the clean air we breathe and the beauty of our surroundings.

However, the natural environment can also at times pose threats to human safety or property. Examples of such threats include floods and landslides.

As it plans for growth, the City must plan to protect the valuable and beneficial functions of the natural environment, and to eliminate or reduce threats posed by the natural environment.



Western Hemlock

### CONDITIONS AND TRENDS

Within the city's six square miles, Covington has an array of natural environment features; conditions and trends are summarized below. For more detail, please see the Review of Best Available Science prepared for the 2015 update to the Comprehensive Plan and the City of Covington Hazard Mitigation Plan, hereby adopted by reference as amended.

#### *Water and wetlands are all around*

- Covington features several creeks, including Big Soos Creek, Little Soos Creek, Jenkins Creek, Cranmar Creek, and North Jenkins Creek tributary.
- Pipe Lake is the only lake within Covington; however, smaller open water areas occur elsewhere in the city, such as Spring Pond in Jenkins Creek Park.
- Wetlands are generally associated with creeks and Pipe Lake as well as groundwater seeps.
- Critical aquifer recharge areas have been defined in Covington to protect the City of Kent's (e.g. Armstrong Springs) and other special districts' wellhead protection areas that may be susceptible to contamination.

#### *Vegetation is abundant in the City*

- Natural vegetation in Covington consists primarily of second- and third-growth Douglas fir, western hemlock, western red cedar, and vine maple as well as many plant species associated with lowland coniferous forests. Meadows and wetland plant species are also fairly common.



- In a 2012 analysis done as part of the Urban Forestry Strategic Plan, tree cover was approximately 37%. Benefits of maintaining and enhancing a healthy urban forest include: reduced stormwater runoff and erosion; provision of shading and cooling; improved air quality and mitigation of wind effects; provision of wildlife habitat; and increased property values.
- The City has achieved a designation of Tree City USA since 2002. The designation is based on the City “meeting four core standards of sound urban forestry management: maintaining a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry and celebrating Arbor Day.”

*In addition to people, Covington is home to a variety of wildlife*

- Many animals can be found in Covington, including deer, elk, beaver, bald eagle, and great blue heron.
- The city includes habitat types that are known to be used or could be used by species listed as endangered, threatened, or sensitive by the state or federal government, including Chinook salmon and steelhead.
- Continuous wildlife corridors are found along riparian areas.

## **NATURAL ENVIRONMENT REGULATORY AGENCIES**

### **FEDERAL**

- ▶ National Marine Fisheries Service
- ▶ U.S. Army Corps of Engineers
- ▶ U.S. Environmental Protection Agency
- ▶ U.S. Fish and Wildlife Service
- ▶ Federal Emergency Management Agency

### **STATE**

- ▶ Washington Department of Ecology
- ▶ Washington Department of Fish and Wildlife
- ▶ Washington Department of Natural Resources

### **REGIONAL/LOCAL**

- ▶ Puget Sound Clean Air Agency
- ▶ Puget Sound Partnership
- ▶ Puget Sound Regional Council
- ▶ King County

*While providing many benefits, the natural environment also poses threats*

- According to the City of Covington Hazard Mitigation Plan, several natural hazards have some probability of occurring in the city. Natural hazards with high probability include drought, flood, landslides, and severe weather. Natural hazards with medium probability include earthquakes and fires. Natural hazards with low probability include dam failure and volcanic activity.
- Climate change is generally expected to impact the occurrence and severity of natural hazards. Current modeling efforts are unable to assess the likelihood of specific impacts for Covington; however, in the Pacific Northwest, projected changes include a rise in annual average temperature in all seasons and a likely increase in the frequency in extreme heat events, as well as small changes in annual precipitation, with more frequent heavy rainfall events.



Wooded Lands

Source: The Watershed Company

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## OUR NATURAL ENVIRONMENT PLAN

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The City strives to preserve and improve the natural environment by protecting significant trees, limiting impervious surfaces, and promoting low-impact development, energy conservation, mixed-use development, multi-modal transportation options, and other measures. The City's approach to preserving and improving the natural environment includes adopting regulations that require new development to protect the natural environment and that provide incentives for environmental restoration. The City also funds programs and projects that benefit the natural environment.

## CONTINUE TO IMPLEMENT LAWS THAT PROTECT THE NATURAL ENVIRONMENT.

Many laws at the local, state and federal levels influence Covington's management of the natural environment.

Three key local regulatory programs that protect Covington's natural environment are discussed below.

- Washington's Growth Management Act (GMA) sets forth a requirement for local jurisdictions to designate and protect critical areas, which include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish, and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. The City's critical areas regulations, found in Chapter 18.65 of the Covington Municipal Code, aim to protect beneficial functions and protect against hazards.
- Pursuant to the Shoreline Management Act, the City adopted a comprehensive Shoreline Master Program in 2011 to regulate more significant waterbodies. The program regulates Pipe Lake and the lower reaches of Jenkins Creek and Big Soos Creek.
- The City implements a Stormwater Program to help meet federal and state water quality requirements (the National Pollutant Discharge Elimination System or NPDES). This includes measures to promote low-impact development to mimic natural systems.



Covington Park

Source: Black Diamond Now Blog, 2015

## RETAIN AND ENHANCE COVINGTON'S TREE AND VEGETATION COVER.

The City's Urban Forestry Strategic Plan lays out a strategy to retain and enhance tree and vegetation cover on publicly managed properties. The plan proposes the following vision statement: "Covington is dedicated to protect and manage the urban forest in order to preserve and enhance its benefit to the environment and the livability of the community."

## IMPLEMENT AND INCORPORATE THE HAZARD MITIGATION PLAN ACTION ITEMS INTO EXISTING LOCAL PLANS, POLICIES, AND PROGRAMS.

The effectiveness of the Hazard Mitigation Plan depends on its implementation and incorporation of its action items into existing local plans, policies, and programs. Completion of the annual progress report will help the City to evaluate the progress of the plan.

## PROMOTE LOW-IMPACT DEVELOPMENT AND GREEN BUILDING PRACTICES.

Low-Impact Development (LID) focuses on how stormwater enters, is stored, and leaves a site. By mimicking natural systems, LID can help maintain or restore the natural hydrology of watersheds. Site design using LID principles incorporates vegetation and small-scale hydrologic control to capture, treat, and infiltrate stormwater runoff on-site. When implemented throughout the watershed, LID can improve habitat by complementing the regulatory protections afforded to environmentally critical areas. LID techniques applicable to new development or redevelopment include: preserving native vegetation, natural drainages and porous soils; reducing impervious surfaces; diverting runoff from the storm drainage system to on-site infiltration systems; and clustering development.

Green building practices such as Leadership in Energy & Environmental Design (LEED) certification can be used by individuals on a small scale (e.g. home remodel) or on a broader scale (e.g. plat) and are applicable to residential, commercial, industrial, or institutional users. In addition to the environmental benefits, green building and LID practices can also reduce long-term building operating costs, improve indoor health for residents and tenants,



and add value due to consumer demand for energy and resource-efficient buildings.

## AIR QUALITY, NOISE, ENERGY, AND CLIMATE CHANGE.

Many federal, state, regional, and local agencies enact and enforce legislation intended to protect air quality. Air quality in Covington and in much of the Puget Sound area is tied to controlling emissions from all sources, including: internal combustion engines, industrial operations, and indoor and outdoor burning. In the Puget Sound region, vehicle emissions are the primary source of air pollution. Consistent with State goals and funding requirements as well as Countywide Planning Policies, Covington will work collaboratively with other agencies to achieve good air quality and reduce greenhouse gas (GHG) emissions. Local and regional components must be integrated in a comprehensive strategy designed to improve air quality through transportation system improvements, vehicle emissions reductions, and demand management strategies.

Excessive noise is a form of pollution that has direct and harmful effects upon the public's health and welfare and adversely affects the livability, peace, and comfort of neighborhoods and the city as a whole. Noise, like many forms of pollution, is both a local and a regional problem. Noise that originates on residential, commercial, or industrial land within the city is regulated through enforcement of Covington's noise regulations. Because commercial and industrial uses both generate the most noise and are the least sensitive noise receptors, the City's noise regulations are focused on protecting residential neighborhoods from excessive noise that could impact quality of life.

There is a growing awareness of the contributing factors to climate change and an increasing willingness to lower



Big Soos Creek

Source: City of Covington, 2008

### VISION CONNECTION

Unmatched quality of life requires thoughtful, well-planned stewardship of the natural environment. Stewardship of the natural environment is foundational for achieving citywide goals.

GHG emissions and better protect the natural systems that provide valuable ecological services. Significantly reducing GHG emissions over several decades requires a wide range of strategies at the regional and local scale. Efforts discussed above that maintain healthy natural ecosystems, encourage green building practices, and ensure LID are critical to success, but there is more that can be done. Increasing the adoption of cleaner and more renewable sources of energy in our homes and transportation modes has often proven to be more cost effective in the long-term while sparking innovative job markets and contributing significantly to GHG emissions reductions in the short-term. Examples of activities that communities like Covington can undertake that can reduce GHG emissions include, but are not limited to:

- Urban forestry: Increases in temperatures could create heat island effects in the developed areas of the city where there is a significant amount of impervious surface (buildings, streets, and parking lots). This underscores the importance of increasing tree canopy in these areas to help reduce temperatures during the summer months. It has been noted in studies that 100 trees remove 13 tons carbon/year and divert 54,000 gallons of rain. The City's Tree City USA status and the City's Urban Forestry Strategy will help to implement goals to increase and protect the city's tree canopy.
- Promoting carpooling and transit: see the Transportation Element. The City has established multi-modal levels of service to promote alternatives to driving alone.
- Promoting green energy and solarizing: The City implements the State energy code and supports coordinating planning with power utilities. Grants are also available to help promote energy conservation. See conservation policies in the Capital Facilities and Utilities Element.



## NATURAL ENVIRONMENT POLICIES

### *Environmental Quality and Awareness*

- Policy NE-1. Protect the ecological integrity of the natural environment while allowing for compatible growth and development.
- Policy NE-2. Promote conservation of natural resources and the environment in cooperation with schools, business owners, residents, affected jurisdictions, and tribes.
- Policy NE-3. Encourage and support residents, workers, developers, and business owners to take active measures to protect and enhance the city's natural environment. Such measures could include use of environmentally safe vegetation control, non-toxic lawn care, composting and recycling, wetland and stream bank restoration, and use of low-impact development (LID) techniques.
- Policy NE-4. Implement the mitigation actions and maintenance details contained in the most recent version of the adopted Hazard Mitigation Plan.
- Policy NE-5. Maximize retention of a healthy tree cover and native vegetation and encourage restoration, replacement, and enhancement of unhealthy or disturbed trees and vegetation.

### **Urban Forest and Vegetation**

- Policy NE-6. Require protection of significant trees and limit unnecessary disturbance of vegetation, when possible, during all phases of development, and require mitigation as needed, including the appropriate ratio of replacement for trees removed during development.
- Policy NE-7. Require the use of native plants in landscaping, development proposals, and erosion-control projects, and in the restoration of stream banks, lakes, shorelines, and wetlands.
- Policy NE-8. Promote and support a systematic approach to enhancing the city through carefully-planned plantings and ongoing maintenance of street trees, public landscaping, and public open spaces.
- Policy NE-9. Preserve existing natural trees and vegetation on steep hillsides, along stream banks and other habitat areas, and where visual buffers between uses or activities are desirable.

### **Air Quality, Energy, and Climate Change**

- Policy NE-10. Promote regional air quality standards in coordination with the Puget Sound Clean Air Agency and the Puget Sound Regional Council.
- Policy NE-11. Encourage the reduction of greenhouse gases through energy conservation and reduction in vehicle emissions.



Urban Forest in Streetscape

Source: Studio Cascade 2014



Example Solar Panels

Source: PSE 2015

Policy NE-12. Strive to reduce energy consumption in the construction and operation of public facilities, fleet vehicles, and the delivery of services. When possible and fiscally feasible, incorporate innovation related to use of renewable energy resources.

Policy NE-13. Reduce energy consumption and maximize energy efficiency by promoting programs and educational initiatives aimed to “reduce, re-use, and recycle” at individual and community-wide levels.

Policy NE-14. Support the use of renewable resources and improvements in energy efficiency for new and existing development.

### *Water Resources*

Policy NE-15. Work cooperatively with federal and state agencies, other affected jurisdictions, and tribes to implement water quality management strategies and regulations.

Policy NE-16. Comply with and implement the most recently adopted Comprehensive Stormwater Plan. Update and adjust this plan as state and federal regulations change and new information is obtained.

Policy NE-17. Manage land use and stormwater to protect groundwater and surface water quality and quantity.

Policy NE-18. Promote LID techniques as an alternative to standard development practices, and take advantage of natural systems to maintain and enhance environmental quality by



having them perform such functions as cleaning water and controlling stormwater runoff.

Policy NE-19. Regulate development in a manner that maintains the ecological and hydrologic function of water resources based on pre-development quality and quantity measurements.

Policy NE-20. Protect groundwater and aquifer quantity by requiring stormwater disposal methods that infiltrate runoff where favorable subsurface soil conditions permit and by requiring stormwater runoff treatment best management practices for any new development.

Policy NE-21. Incorporate erosion control best management practices and other development controls as necessary to reduce sediment discharge from grading and construction activities to minimal levels.

Policy NE-22. In the Lakepointe Urban Village, transform the existing detention facilities into a unique, publicly accessible community amenity which may continue to serve as a stormwater management facility.

### **General Critical Areas**

Policy NE-23. Include best available science in developing policies and development regulations to protect the functions and values of critical areas and give special consideration to conservation or protection measures



Lakepointe Property Riparian Habitat  
Source: The Watershed Company, 2013



Jenkins Creek Park

Source: City of Covington 2015

necessary to preserve or enhance anadromous fisheries, consistent with the GMA.

Policy NE-24. Use incentive programs, acquisition, appropriate regulations, and other techniques to preserve critical areas as permanent open space where development may pose hazards to health, property, or important ecological functions.

Policy NE-25. Require that prior to any development, critical areas are identified and protected.

Policy NE-26. Minimize tree removal in critical areas and their buffers for the purposes of trails, utility corridors, and similar infrastructure. Apply mitigation sequencing and critical area regulation standards.

Policy NE-27. Ensure the effectiveness of critical area mitigation by requiring adequate critical area studies and mitigation plans, the application of mitigation sequencing, financial assurances from developers to ensure mitigation success, and by improving City oversight of maintenance and monitoring of mitigation sites.

Policy NE-28. Require and enforce mitigation to ensure no net loss of critical area functions, including mitigation designed to replace critical area acreage lost due to development.

Policy NE-29. Support restoration of stream channels and associated wetland and riparian areas to enhance water quality and fish and wildlife



habitat and to mitigate flooding and erosion.

Policy NE-30. Allow public access to wetlands, streams, and lakes for scientific, educational, and recreational use, provided the public access trails are carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.

**Wetlands**

Policy NE-31. Protect wetlands not as isolated units, but as ecosystems, and essential elements of watersheds.

Policy NE-32. Protect areas of native vegetation that connect wetland systems, preferably through incentives and appropriate non-regulatory mechanisms.



Local wild rabbit  
Source: Studio Cascade, 2014

**Critical Aquifer Recharge Areas**

Policy NE-33. Protect the quality and quantity of groundwater used for public water supplies.

**Fish and Wildlife Habitat Conservation Areas**

Policy NE-34. Protect and preserve habitats for species which have been identified as endangered, threatened, or sensitive by the State or federal government.

Policy NE-35. Maintain habitats that support the greatest diversity of fish and wildlife through conservation and enhancement of critical areas.

Policy NE-36. Implement salmon habitat protection and restoration priorities in approved Water

Resource Inventory Area 9 plans.

Policy NE-37. Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross jurisdictional lines.

Policy NE-38. Promote the enhancement or restoration of aquatic areas (e.g. streams, lakes, wetlands) as adjacent development activities occur.

Policy NE-39. Protect wildlife corridors to minimize habitat fragmentation, especially along existing linkages and in patches of native habitat. Improve wildlife habitat, especially in linkages, by enhancing vegetation composition and structure, and incorporating indigenous plant species compatible with the site.



Soos Creek Trail and Open Space  
Source: Studio Cascade 2014

### *Frequently Flooded Areas*

Policy NE-40. Minimize the alteration of natural surface water features that retain or carry floodwaters (e.g. wetlands, floodplains, streams, and lakes), and prevent land alterations that would increase potential flooding.

Policy NE-41. Require mitigation for adverse environmental impacts from engineered flood control measures.



Policy NE-42. Work cooperatively to meet regulatory standards for floodplain development as these standards are updated for consistency with relevant federal requirements including those related to the Endangered Species Act.

### *Geologically Hazardous Areas*

Policy NE-43. Decrease development intensity, site coverage, and vegetation removal as slope increases in order to minimize drainage problems, soil erosion, siltation, and landslides.

Policy NE-44. Minimize soil disturbance and maximize retention and replacement of native vegetative cover for any land uses permitted in Erosion and Landslide Hazard Areas.

Policy NE-45. Encourage special building design and construction measures in areas with severe seismic hazards to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.

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## ACTION PLAN

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The Natural Environment Element is implemented by related elements, plans, regulations and programs, including, but not limited to:

- The Land Use Element, which sets forth the general location and extent of the uses of land.
- The Covington Municipal Code, particularly the Environment and Zoning titles.
- The City's Shoreline Master Program.
- The Hazard Mitigation Plan, which was developed in compliance with the Disaster Mitigation Act to reduce future loss of life and property resulting from disasters.
- The Urban Forestry Strategic Plan, which provides recommendations to guide the community regarding planning, management, and maintenance of trees on publicly managed properties.
- The City's Stormwater Management Plan and federal NPDES Stormwater Permit Program.

See Exhibit NE-1 for actions and responsibilities.



### Exhibit NE-1. Natural Environment Action Plan

Implementation Action	Responsibility
Consider updates to development codes as needed to implement environmental sustainability measures	Community Development Department
Implement and enforce development regulations	Community Development Department
Hazard Mitigation Plan annual progress report	City Council and Public Works Department
Urban Forestry Strategic Plan annual work plans	Tree Team
Stormwater Program implementation including ongoing compliance with federal and state laws such as NPDES	Public Works Department