

Natural Systems Element

Introduction

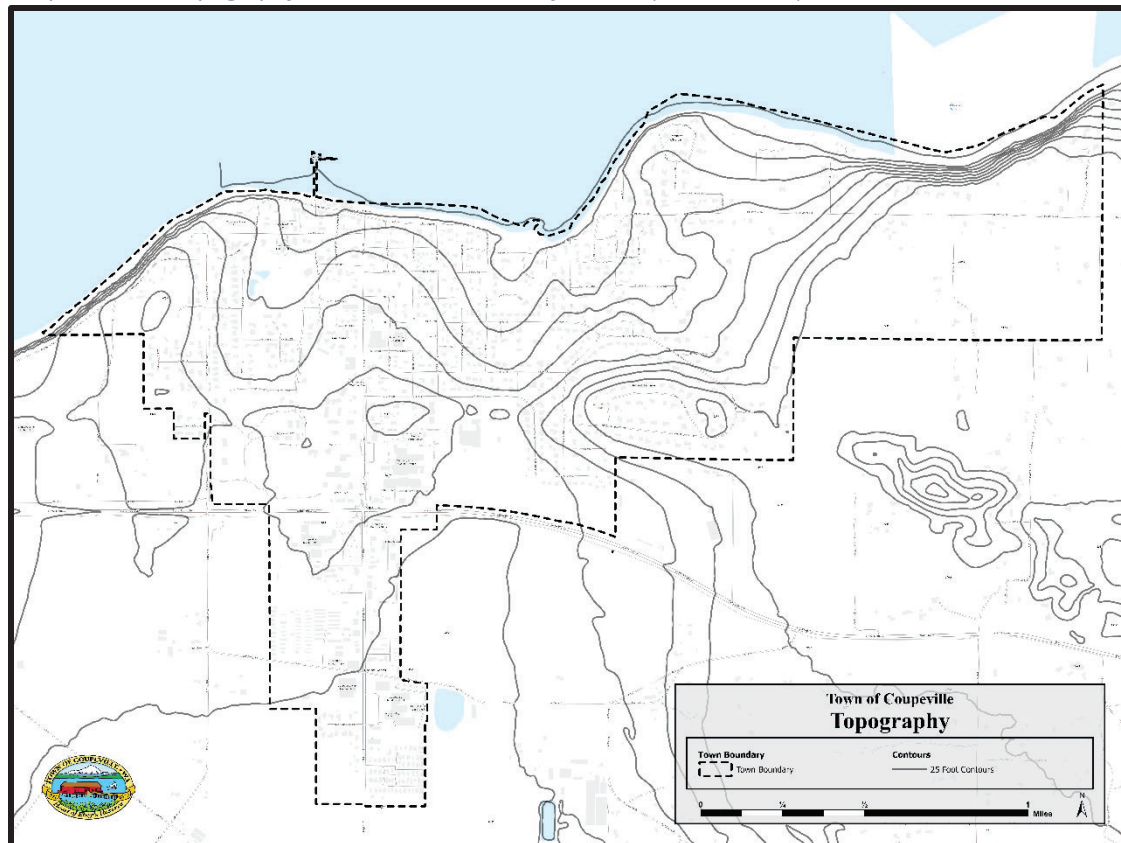
Coupeville is a small town nestled in a spectacular natural setting. In addition to providing aesthetic beauty, the area's natural systems also provide important ecological functions and values. The Natural Systems Element aims to protect these systems while safeguarding people and property from natural hazards.

Penn Cove is an integral component of Coupeville's natural systems. However, Penn Cove and its adjacent shorelands within Town limits are primarily managed under the Town's Shoreline Master Program. Therefore, the Town's Shoreline Master Program, not this Natural Systems Element, sets forth the goals and policies that apply specifically to the shoreline areas.



The central Coupeville waterfront and bluff.

Coupeville area topography, with contour lines every 20 feet (credit: USGS).



Existing Conditions Summary

Coupeville is positioned on and around three hills: one in the northeast end of Town and two in the central portion. In some areas, uplands slope gently to the shoreline. In other areas, uplands meet Penn Cove with a steep slope. South of State Route 20, the south side of Coupeville transitions into the surrounding prairie.

Coupeville has a generally mild marine climate. Skies are partly cloudy or cloudy more than 300 days each year, and southwesterly winds predominate. Coupeville lies in the "rain shadow" of the Olympic Mountains and receives slightly less than 18 inches of precipitation annually, ranging from approximately 11 to 26 inches. Over 70 percent of the precipitation falls between October and April. Groundwater is the only source of the Town's freshwater supply.

Coupeville is classified as being within the "Western Hemlock Vegetative Zone," but logging and burning over the past 150 years have enabled Douglas Fir to replace Western Hemlock as the climax species. Migratory and resident shorebirds and waterfowl are found in large numbers on and near the shoreline. Coupeville also supports a variety of bird species, including songbirds, raptors, and corvids. The waters of Penn Cove contain an abundance of aquatic life, including a diverse and sizeable shellfish population.

Goals and Policies

Goal NS-1: Natural Systems Protection. Manage development to minimize disruption of natural systems, preserve the community's natural aesthetics, and reduce risks to life and property.

- NS-1.1 Consider the potential impacts of climate change in all decisions related to natural systems.
- NS-1.2 Protect and enhance the natural systems of Coupeville by working collaboratively with other governments, organizations, and community members.

The **Olympic Rain Shadow** is an area to the northeast of the Olympic Mountains that experiences significantly drier weather than surrounding locations. Storm systems typically arrive on the Washington coast from the southwest. As the moist air in these systems meets the mountains, it rises, and the moisture gets wrung out. When the air gets to the other side of the mountains it is much drier, resulting in the rain shadow.



Penn Cove beach (photo credit: John Feit).



Starfish (photo credit: Mary Jo Adams).



Whidbey Island shoreline (photo credit: Mary MacPherson).

- NS-1.3 Encourage the reduction in the use of pesticides harmful to the environment. Promote safer alternatives to harmful pesticides to protect the soil, water, and wildlife.
- NS-1.4 Continue encouraging water conservation to protect sole-source groundwater aquifer supplies.
- NS-1.5 Continue implementing low-impact development standards and promoting sustainable development within the Town and Reserve to protect and improve the water quality of Penn Cove, preserve tree cover, and support carbon sequestration.
- NS-1.6 Implement lighting designs, practices, and standards that protect the night sky and reduce the negative impacts of light pollution, such as sky glow, disruption of ecosystems, and energy waste.
- NS-1.7 In collaboration with the Washington Department of Fish and Wildlife, explore measures to minimize conflicts between people and wildlife, particularly deer.



Harmful chemicals are often present in car wash soap.



Deer in Coupeville (photo credit: Mary MacPherson).

Goal NS-2: Green Community. Maintain and enhance Coupeville's status as a green community, one with abundant nature and natural systems that are visible and accessible.

- NS-2.1 Incorporate nature-based design principles to create spaces that connect people with the natural environment.
- NS-2.2 Seek to integrate nature in the places where people live, learn, work, and play to positively affect health and well-being.
- NS-2.3 Invest in nature-based infrastructure as cost-effective, sustainable, long-term solutions to a changing climate and other environmental and social challenges, such as heat waves, water quality and quantity, and stormwater management.
- NS-2.4 Develop wildlife corridors, particularly those linking protected lands and water bodies outside of Coupeville.

Washington Department of Fish and Wildlife's Habitat at Home program helps people learn how they can support wildlife in their own outdoor spaces. You can even get certified and receive a yard sign highlighting your achievement! To get started, visit:

[wdfw.wa.gov/species-habitats/living/habitat-at-home](https://www.wdfw.wa.gov/species-habitats/living/habitat-at-home)

A biophilic community connects the science of biophilia-humans' innate love of nature-and the practice of planning. (definition adapted from Planning for Biophilic Cities, American Planning Association).

- NS-2.5 Consider using vegetated open space corridors as part of an integrated system to absorb and treat stormwater.

Goal NS-3: Tree Canopy and Vegetation. Protect and enhance trees and vegetation to support natural systems and provide additional benefits.

- NS-3.1 Manage tree canopies and vegetation on publicly owned land, such as parks, to provide habitat, reduce wildfire risk, and strengthen green infrastructure.
- NS-3.2 Encourage retention of existing trees and native vegetation in new developments.
- NS-3.3 Prioritize the use of native drought and pest-resistant trees and shrubs, and minimize lawn areas.
- NS-3.4 Periodically review and update the Town's tree protection policies to ensure tree protection goals are being met.
- NS-3.5 Support efforts to control and, where feasible, eradicate invasive plant species.
- NS-3.6 Identify locations within Town limits to install interpretive signs to highlight the importance of urban tree canopy cover.



Trees in a residential neighborhood.



Tree staking.

Goal NS-4: Critical Areas. Protect critical areas designated under the Growth Management Act, and other important ecological systems, to preserve the functions and values of the natural environment and to safeguard the public from hazards to health and safety.

- NS-4.1 Use the best available science when developing policies and development regulations that protect the functions and values of critical areas and other important ecological systems.
- NS-4.2 Give special consideration to conservation or protection measures necessary to preserve or enhance fish habitat.
- NS-4.3 Protect groundwater and surface water resources.

As defined by the Growth Management Act, critical areas include wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geographically hazardous areas.

- NS-4.4 When considering amendments to the Comprehensive Plan, avoid directing new growth to areas with a high probability of conflicts between new development and protecting critical areas.
- NS-4.5 Continue to ensure that development regulations achieve no net loss of critical area functions and values, and where possible, strive for net ecological gain and the restoration of critical area function.
- NS-4.6 The Town should designate critical areas, important habitat, and natural areas using performance standards and maps. Update maps of critical areas as necessary and feasible to provide the most current, accurate, and complete information regarding the location of critical areas.
- NS-4.7 Prioritize restoration and enhancement efforts in locations where priority habitats and species have been identified.
- NS-4.8 Ensure that the most current management recommendations established by the Washington Department of Fish and Wildlife are implemented to protect priority habitats and species when authorized activities are permitted.
- NS-4.9 Identify funding opportunities to establish a monitoring and adaptive management program to evaluate the effectiveness of critical area regulations over time.

As stipulated by the Growth Management Act, the goals and policies of the Town's Shoreline Master Program represent an element of this Comprehensive Plan.

Coupeville's drinking water comes entirely from local groundwater sources. Once groundwater is contaminated, it is difficult, costly, and sometimes impossible to clean up.

Sea level rise is a significant consequence of climate change. The Town has conducted a sea level rise vulnerability assessment to evaluate what areas and assets are most at risk.

<https://townofcoupeville.org/comprehensive-plan-update/sea-level-rise-vulnerability-assessment/>

Goal NS-5: Shorelines. Promote management of Penn Cove and its adjacent shorelands consistent with the Washington State Shoreline Management Act.

- NS-5.1 Use the Town's Shoreline Master Program to provide guidance for management of shorelands within Town limits.
- NS 5.2 Identify and implement strategies to increase the resilience of the shoreline environment to sea-level rise and other climate hazards, while also protecting shoreline ecological functions, allowing water-dependent uses, and providing public access.



Coupeville waterfront (photo credit: John Feit).