WHATCOM COUNTY
SHORELINE MANAGEMENT PROGRAM

Best Management Practices

How to Minimize Delays in the Permit Process

1. *What are shoreline development BMPs?*

Best Management Practices (BMPs) for shoreline development are site design strategies, techniques, and technologies that enable you to develop a site with minimal adverse effects on the environment. By employing BMPs, you can reduce the impact that your development will have on water quality, plants, animals, and other resources and minimize exposure to risks such as erosion, flooding, and landslides. BMPs are primarily designed to control the amount and quality of stormwater runoff from developed properties, preserve native shoreline vegetation, minimize fragmentation of habitat, protect sensitive resources such as wetlands, and maintain shoreline views and scenic qualities.

2. *Why do shorelines have special development requirements?*

Shorelines are inherently ecologically valuable because they provide feeding, nesting, breeding, rearing, and migratory habitats for fish and wildlife, they help control and filter surface runoff, they provide a source of sediments that build and maintain beaches and estuaries, and they contribute wood and other organic materials that create complex aquatic habitats and aquatic food webs. Undisturbed and undeveloped shorelines are some of the most ecologically valuable areas, but shorelines that have been altered by past development can also provide important functions depending on their location and position in the landscape.

Some shorelines are subject to significant natural hazards including flooding, migrating channels, erosion, and/or landslides. Understanding and minimizing risks associated with these natural hazards is an essential part of the planning process. Best management practices can help reduce development risks and make your property safer and more sustainable.

Incorporating Best Management Practices into your site design is an important step in meeting the regulatory requirements for shoreline development and will minimize delays in the permit review process.

3. *How can I reduce the impact of my development on the shoreline environment?*

Some of the keys to environmentally sound site design include:

- Limiting vegetation clearing to the minimum area necessary to accommodate the main structure, driveways, and other features;
- Placing structures outside of designated critical areas and buffers and as far back from the shoreline as possible;
- Clustering buildings and other site improvements on the site to minimize the alteration footprint;

- Using native plants as landscaping;
- Leaving as much natural cover as possible and limiting paved or impervious surface to the smallest possible area;
- Taking advantage of natural dispersed drainage pathways to avoid concentrating runoff as it leaves the site;
- Reducing the amount of lawn or other areas that may require chemical maintenance;
- Ensuring that outdoor lighting is directed away from waterways and other sensitive areas; and
- Leaving snags, downed wood, and other potential habitat features in place as long as they don't create a human health or safety hazard.

4. *Where do I start?*

It is important to investigate and examine your property closely so that specific development opportunities and constraints can be identified early on. As an initial step in the development process, and before commencing any development activity, consult the County critical areas and shoreline maps for general information about your property (the maps are available on the County webpage at: http://www.co.whatcom.wa.us/pds/index.jsp. Make a thorough site inspection to assess the condition and quality of the vegetation, look for low, wet areas that may pond water during wet periods, locate steep slopes or bluffs, and look for evidence of soil erosion. These signs indicate that there may be critical areas or ecologically sensitive areas on site that should be protected. You should also consider the environmental features of the surrounding area as they may affect the development potential of your site. If you plan to develop schedule a pre-application conference with the Planning and Development Services Department

Consider hiring a biologist to conduct a site inspection and/or having a geologist provide a site-specific assessment if you live on a steep bluff or in an area prone to erosion, flooding, or other hazards. Ask these professionals to document their findings in writing and help you create a detailed site plan that can be used during permitting. Understanding the site conditions and designing a development that minimizes hazards and avoids impacts to valuable resources is essential for meeting the regulatory requirements and obtaining prompt permit review. It also can reduce the amount and type of compensatory mitigation this is required to offset environmental impacts. This will save time and money and maintain shoreline resources for future generations.

5. *I'm concerned about hazard trees and trees that block my view of the water; what should I do?*

Maintaining shoreline vegetation is an important BMP and shoreline regulations require that existing vegetation within shoreline buffers be maintained; however, there are exceptions for hazardous trees and there are some clearing allowances for views. If you are concerned about hazard trees, consult a certified arborist to examine the tree and assess its health. If the tree is found to be damaged, diseased, or dead and poses a risk to personal property, it may be removed.

The desire to have an unobstructed view of the shoreline can sometimes conflict with best management practices, so it is important to consider the 'viewshed' when designing the site. The shoreline regulations allow limited clearing and pruning to create a view 'window' through the buffer, so it is important to locate structures in places that will allow views with a limited clearing area.

6. How can I protect my property and home from erosion?

Erosion and bank stability are important site design considerations. Too often well-intended erosion control and slope stabilization efforts rely on 'bulkheads' made of riprap, concrete and other hard materials and fail to incorporate vegetation as an essential tool for addressing these concerns. Bulkheads along marine bluffs inhibit or eliminate sources of beach sediment. Beaches in front of armored shorelines can lose fine sediment through the increased wave reflection off of vertical or near vertical walls. Bulkheads on marine shores, lakes, and rivers impact salmon through habitat fragmentation, loss of migratory corridors, and degradation of foraging habitat. Bulkheads can also force young salmon into deeper water, where the risk of predation may be significantly higher.

Stabilization approaches that use vegetation do not have these adverse effects. Vegetation stabilizes slopes through the physical interaction of the foliage and/or root system with the slope, by slowing water movement across/over the slope, and by taking up water from the soil. When properly installed and/or maintained, vegetation can protect slopes by reducing erosion, strengthening soil, and inhibiting landslides which increase slope stability. The shoreline regulations generally require the use of vegetation to manage erosion and protect slopes. These approaches are relatively inexpensive, do not require heavy machinery on the slope, provide wildlife habitat, and can improve the aesthetic quality of the shoreline.

You can also minimize erosion and landslide risks by managing drainage. Surface water often causes severe erosion where pipes are allowed to discharge onto slopes. Over time the water discharging from the pipe erodes vegetation and soil (or rock) until the pipe no longer directly discharges onto the slope. Instead, the water discharges like a waterfall cascading down onto the slope. The farther water falls, the faster it drops and the more energy the water has when it impacts the soil. With more energy the erosion progresses more rapidly until the pipe is undermined leading to retreat or erosion of the top of the slope.

Sheet flow can also lead to substantial erosion. Sheet flow naturally tends to concentrate into small rills and channels of water. Flow concentration occurs more rapidly on bare ground, sloping ground, and where long distances are involved. The small rills and channels can concentrate into larger and larger features if left unattended.

To control drainage patterns and minimize erosion potential, consider the following during the site design process:

- Routing new or existing drainage sources to a natural drainage course, catch basin, pipe, or culvert or other areas that are able to accommodate the flows without causing erosion and/or slope stability problems.
- Minimize/avoid compacting soils around development site.
- Using permeable materials for driveway, parking, or compacted earth areas. These development features reduce stormwater runoff.
- Minimizing cutting or filling and vegetation removal for views and shoreline access.

7. What (else) can I do to speed up the permit review process?

When the Shorelines Administrator receives a permit application or a request for a statement of exemption, s/he will evaluate the proposal against specific criteria and standards in the shoreline management program to determine if your proposal meets the requirements. Knowing what these specific criteria are and clearly demonstrating (with maps and other documentation) that you have met all of them is essential. Proposals that meet all of the buffer and setback requirements and employ appropriate BMPs will be processed relatively quickly. However, if you plan to deviate from any of the regulatory requirements, review of your development proposal may be delayed. As an example, if you reduce or modify the standard shoreline buffer or a critical area buffer, you must demonstrate that doing so will not adversely affect the functions and values of the shoreline or critical area. This may require special analysis or study and the burden of proof is on you.

Here are some tips to help you minimize permit delays:

- Schedule a pre-application meeting with the Planning and Development Services as soon as you begin to plan your development. Check-in throughout the planning process to ask questions and obtain clarifications as needed.
- Carefully study the shoreline management program policies and regulations to ensure you understand the requirements or hire a qualified consultant who has experience permitting the type of development you are proposing.
- Do not commence any clearing, grading or other major site work, until you have obtained the required permits.
- Review background information and maps related to your property and the surrounding area to understand the development opportunities and constraints.
- Talk to adjoining property owners about possible risks, hazards or other factors that could affect site development.
- Consult other agencies such as the County Health Department, the Washington Department of Fish and Wildlife, Washington Department of Ecology, the U.S. Army Corps of Engineers to find out if they require permits and approvals. County staff can help you identify who and where to call.
- Prepare a permit application package with detailed maps and drawings of your site and your plans for development. Provide written documentation that addresses each of the regulatory requirements and double check that all of the pertinent information is included.

8. Are there additional resources to help me plan?

Yes, consult these websites for more information:

Washington Department of Ecology Shorelands Publications - http://www.ecy.wa.gov/programs/sea/publications.htm

Washington Department of Ecology, Vegetation Management Guide for Puget Sound - http://www.ecy.wa.gov/biblio/9331.html

Washington State Office of Regulatory Assistance - http://www.ora.wa.gov/resources/permitting.asp