

## **BULKHEADS**

### **INTRODUCTION**

Bulkheads or seawalls are structures erected parallel to and near the high water mark for the purpose of protecting adjacent uplands from the action of waves or currents. Bulkheads are constructed of steel, timber or concrete piling, and may be either of solid or open-piling construction. For ocean exposed locations, bulkheads do not provide a long lived permanent solution, because eventually a more substantial wall is required as the beach continues to recede and layer waves reach the structure.

While bulkheads and seawalls may protect the uplands, they do not protect the adjacent beaches, and in many cases, are actually detrimental to the beaches by speeding up the erosion of the sand in front of the structures. In general, alternative methods of shoreline stabilization, such as soil bioengineering, are preferable to bulkheads on streams, lake and beaches.

The following policies and regulations apply to the construction of bulkheads and seawalls designed to protect the immediate upland area. Proposals for landfill must comply with the policies and regulations for that specific activity.

### **POLICIES**

1. Permit the construction of bulkheads only when other methods of shoreline protection are not feasible.
2. Locate and construct bulkheads and seawalls in a manner which will not result in adverse effects on nearby beaches and will minimize alterations of the natural shoreline.
3. Locate, design and construct bulkheads and seawalls in such a way as to minimize damage to fish and shellfish habitats.
4. Minimize the effect of a proposed bulkhead on public access to publicly owned shorelines.
5. When possible, design bulkheads and seawalls to blend in with the surroundings and to not detract from the aesthetic qualities of the shoreline.
6. Permit the construction of bulkheads only where they provide protection to upland areas or facilities, not for the indirect purpose of creating land by filling behind the bulkhead, except as covered in the use activities pertaining to landfill.
7. Restrict bulkheads on feeder bluffs except where danger to existing development exists.

## **REGULATIONS**

### ***General***

1. Bulkheads shall be allowed only when other methods of shoreline protection are not feasible and when evidence is presented that one of the following conditions exists:
  - a. Serious erosion is threatening an established use on the subject property;
  - b. A bulkhead is necessary to stabilize an existing beach condition;
  - c. A bulkhead is the preferred method of stabilizing a landfill allowed by this program.
  - d. There is a demonstrated need in connection with water dependent or water related commerce and industry inappropriate environments.
2. Bulkheads will not be permitted in conjunction with new projects when other design alternatives, not requiring the use of bulkheads, are practicable.
3. Applications for bulkheads shall include the following (at a minimum):
  - a. Type of construction;
  - b. Elevation of the toe and crest of the bulkhead with respect to water levels.
  - c. Purpose of bulkhead;
  - d. Direction of net longshore drift (when appropriate);
  - e. Normal, low and high water elevations (when appropriate).
4. Bulkheads on Class I marine beaches (as defined in the Snohomish. Co. Shoreline Inventory Summary) shall be located at least 20 feet landward of the ordinary high water mark.
5. Bulkheading of marine feeder bluffs shall be prohibited EXCEPT where such bulkheading is necessary to protect existing development.
6. Bulkheads shall conform to all design and other legal requirements of the State Hydraulics Code and Hydraulic Project Approval.
7. The cumulative effects of multiple requests for bulkheads along segments of shoreline shall be evaluated by County staff and if necessary mitigated according to the provisions of the State Environmental Policy Act.

### **Natural Environment**

1. Bulkheads are not permitted in the Natural Environment.

### **Conservancy Environment**

1. Bulkheads are not permitted in the Conservancy Environment on lakes and rivers.
2. Bulkheads are permitted in the Conservancy Environment on marine shorelines subject to the General Regulations.

### **Rural Environment**

1. Bulkheads are permitted in the Rural Environment subject to the General Regulations.

### **Suburban Environment**

1. Bulkheads are permitted in the Suburban Environment subject to the General Regulations.

### **Urban Environment**

1. Bulkheads are permitted in the Urban Environment subject to the General Regulations