

SHORELINE STABILIZATION AND FLOOD PROTECTION

INTRODUCTION

Flood protection and streamway modifications are those activities occurring within the streamway and wetland areas which are designed to reduce overbank flow of high waters and stabilize eroding streambanks. Reduction of flood damage, bank stabilization to reduce sedimentation, and protection of property from erosion are normally achieved through watershed and flood plain management and by structural works. Such measures are often complementary to one another and several measures together may be necessary to achieve the desired end. Unless carefully designed and located, structural measures can have potentially adverse impacts.

POLICIES

1. Locate, design and construct bank stabilization or flood protection measures so as to avoid channelization, protect adjacent property from adverse effects and to protect the natural character of the streamway.
2. Place all flood protection measures such as dikes and levees landward of the principal streamway, including associated swamps and marshes directly interrelated and interdependent with the stream proper.
3. Recognize and protect the integrity of a water body's hydraulic system when planning for and designing shoreline stabilization and flood protection measures.
4. All shoreline stabilization and flood protection measures, including repair and maintenance, should conform to standards set forth in county and/or state approved flood plain management plans, when available.

REGULATIONS

General

1. All shoreline stabilization and flood protection measures shall be designed and constructed so that downstream banks will not be adversely affected. Shoreline stabilization measures, including riprap, shall be designed and constructed in a manner consistent with Soil Conservation Service, Corps of Engineers, the State Hydraulics Code and Hydraulic Project approval, and the Washington State Department of Fisheries and/or other engineering and design specifications deemed appropriate by the County Department of Public Works, and said designs shall be reviewed and confirmed by the Department of Public Works as being consistent therewith.
2. Shoreline stabilization and flood protection measures shall not be designed and constructed in such a manner as to result in channelization of normal stream flows or undermining of existing structures or streambanks.
3. Within the discretion of the permit granting authority, and considering the reasonableness of the conditions and the technological state of the art, applications for shoreline stabilization and flood protection measures shall include the following (at a minimum):
 - a. Purpose of project;
 - b. Hydraulic characteristics of river within one-half mile on each side of proposed project;

- c. Existing shoreline stabilization and flood protection devices within one-half mile on each side of proposed project;
 - d. Construction material and methods;
 - e. Resultant hydraulic characteristics of river.
4. Non-structural control solutions shall be preferred over structural flood protection devices and shall be used wherever possible. Non-structural controls include such actions as prohibiting or limiting development in areas that are historically flooded or have a high risk of streambank instability; floodproofing existing structures; and limiting increases in peak flow runoff from new upland development.
5. Shoreline stabilization and flood protection measures shall be compatible with on-going shore processes and shall be constructed in a manner as to prevent the loss of in-channel habitat. Soil bioengineering methods shall be the preferred method of bank protection. Use of bank hardening methods, such as riprapping, concrete walls, or extensive revetments, shall only be allowed when the applicant demonstrates that soil bioengineering will not be effective. All stabilization and protection works shall include revegetation in their design and implementation.
6. Flood control diking shall be landward of the floodway of the base (100-year frequency) flood and any marshes or swamps directly interrelated and interdependent with the river. (Sec. 5 of Ord. 84-015 adopted 2-27-84; Sec. 1 of Ord. 83-059 adopted June 1, 1983)
7. Shoreline stabilization measures are allowed in floodways and density fringe areas of the base (100-year frequency) flood only when their purpose is to protect existing development, Agricultural Land of Primary importance (as defined in the Agricultural Preservation Plan, 1982), Riverway Commercial Farmland (as defined in the Interim Agricultural Conservation Plan, 1992), or to prevent serious impairment of channel function. Provided, that where the detailed information referenced in regulation #3 above is not required due to waiver or exemption from a permit, stabilization measures shall be reviewed and approved by the County Engineer, with said approval to confirm that measures mitigate or avoid the potential for adverse impacts to adjacent shoreline consistent with regulation #1 above. Provided further, that vegetative and/or other non-structural shoreline stabilization measures may be used in hydraulic floodways for any purpose otherwise consistent with the Master Program, the Shoreline Management Act and its administrative guidelines. (Sec. 5 of Ord. 84-015 adopted 2-27-84; Sec. 1 of Ord. 83-059 adopted June 1, 1983)
8. Streambank vegetation shall be preserved to the maximum extent feasible consistent with safe construction requirements.
9. Disturbed areas, cut-and-fill slopes and backfill areas shall be revegetated by introducing suitable native plant species that are appropriate for the soil and hydrological conditions. Revegetation shall be designed, installed and maintained in a manner consistent with Soil Conservation Service, Corps of Engineers, and/or other engineering and design specifications deemed appropriate by the County Engineer (Sec. 1 of Ord. 83-059 adopted June 1, 1983)
10. Flood protection measures shall be planned, constructed and maintained in accordance with a county and/or state approved flood plain management plan, when available, and in accordance with the National Flood Insurance Program and the County Flood Hazard Ordinance, SCC 27.

Natural Environment

1. Shoreline stabilization and flood protection measures are not permitted in the Natural Environment EXCEPT as may be necessary to protect existing development and only when their construction would not destroy the viability of the Natural Environment.

Conservancy Environment

1. Shoreline stabilization and flood protection measures are permitted in the Conservancy Environment subject to the General Regulations.

Rural Environment

1. Shoreline stabilization and flood protection measures are permitted in the Rural Environment subject to the General Regulations.

Suburban Environment

1. Shoreline stabilization and flood protection measures are permitted in the Suburban Environment subject to the General Regulations.

Urban Environment

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