

Balanced Cut and Fill Draft Recommendations



Introduction

Title 3 of Metro's Urban Growth Management Functional Plan requires balanced cut and fill in areas within the FEMA 100-year floodplain and the February 1996 flood inundation area to preserve the area's capacity for water flow and flood storage. The City of Portland has adopted a similar regulation to comply with this mandate:

In all Flood Management Areas and Special Flood Hazard Areas of the City not addressed by Section 24.50.060 G, balanced cut and fill shall be required. All fill placed at or below the flood protection elevation shall be balanced with at least an equal amount of soil material removal. Soil material removal shall be within the same flood hazard area identified in Section 24.50.050 A. through I.

- a. Excavation shall not be counted as compensating for fill if such areas will be filled with water in non-storm winter conditions.
- b. Temporary fills permitted during construction shall be removed.

(24.50.060 F 8)

Balanced Cut and Fill Issues

In the North Reach of the Willamette River, the land available to achieve excavation requirements is very limited because of the density of industrial development. River Plan staff has heard from property owners and regulators alike that the current balanced cut and fill regulation is a rigid and stringent standard that can make development very difficult on some sites. The issues that have been identified include:

- **Balanced cut and fill can be an impediment to development in Portland's harbor because:**
 - Property owners have difficulty finding areas to excavate due to the limited amount of uncontaminated, undeveloped land in the North Reach. Historically, development on many sites took place in the floodplain and today, expansions often require filling in the floodplain. Finding an area to cut on an already built-out site can be difficult, particularly when known or suspected contamination must be considered.
 - Balanced cut and fill requirements can create uncertainty about the amount of redevelopable area on sites that are mostly in the floodplain.
- **Cutting and filling below the surface of the water requires "double cutting."** Excavations in areas that normally fill with water do not count, even if the fill is also beneath the water surface. This provision is important because if the excavation is full of water, it is not available to store water in the event of a flood. However, this requirement means that projects that merely move material around below the water surface must find space for additional cutting. This is difficult for bank stabilization work as well as floodplain restoration and enhancement projects.
- **Balanced cut and fill requirements add cost to contaminated site cleanup projects.** Because it is expensive to excavate and properly dispose of contaminated soil and sediment, a common solution is to bring in clean material to cap the contamination and reduce exposure risk. Unfortunately the new material can then trigger the balanced cut and fill requirement, adding to the expense and complexity of the cleanup.
- **Limiting fill in remaining floodplain may have minimal impact on flood rise.** In a large and regulated river system like the Lower Willamette, balanced cut and fill regulations may not provide much flood protection benefit.

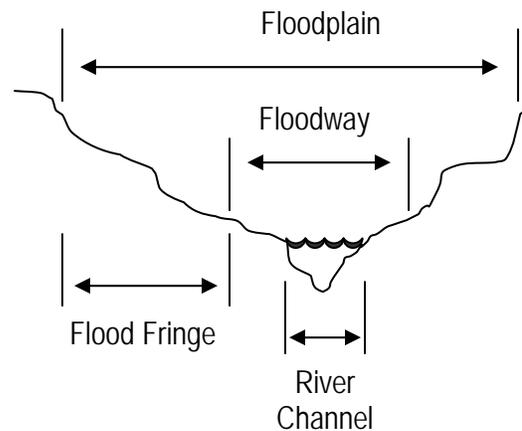
Regulatory Context

State Planning Goal 7, governing areas subject to natural hazards, requires Oregon communities to adopt the minimum National Flood Insurance Program (NFIP) requirements and encourages the adoption of additional flood

protection measures. Metro's Title 3 implements State Goal 7 and requires balanced cut and fill. Portland's balanced cut and fill regulation is very similar to the requirements in Title 3.

Balanced cut and fill regulations go above and beyond Federal Emergency Management Agency (FEMA) requirements for the NFIP. NFIP makes flood insurance available to floodplain property owners in communities that adopt and enforce basic minimum flood protection measures.

NFIP minimum regulations require an analysis for any development in the floodway to show that no rise in the base flood elevation will occur. The floodway is the channel and the part of the adjacent floodplain that must remain unobstructed to allow passage of the base flood¹. Also, anywhere in the 100-year floodplain, development must be elevated or otherwise protected to the base flood level.



Balanced Cut and Fill Benefits

In addition to reducing flood hazard and ensuring compliance with Metro's Title 3, Portland's balanced cut and fill regulation helps reduce flood insurance premiums for property owners through Portland's participation in the Community Rating System (CRS), a voluntary program that gives communities credit for activities that can reduce damage from floods. The City of Portland was recently confirmed as a Class 5 community, which means that flood insurance policy holders will receive a 25% discount on their premiums. The City has earned 2619 credit points, of which 80 points are for its balanced cut and fill regulation.

Some City staff also value the balanced cut and fill regulation because it can provide opportunities to create habitat in riparian areas.

Staff Recommendations

1. Develop an off-site cut and fill bank, perhaps in coordination with a natural resource mitigation bank. Property owners would pay a fee and their cut would be made off-site. This approach resolves many of the issues related to balanced cut and fill in the North Reach. Property owners would be confident of their ability to fully develop sites in the floodplain and in the 1996 inundation area, regardless of site constraints such as space or contamination.
2. Revise the balanced cut and fill regulation to allow excavation below ordinary high water to balance fill below ordinary high water. This amendment would go a long way toward eliminating situations in which double cutting is required.
3. Recommend scoping, securing funding for, and conducting a hydraulic/hydrologic analysis evaluating the potential implications of eliminating balanced cut and fill requirements in the Lower Willamette. The results of such an analysis would spur discussion among City of Portland staff and stakeholders as well as our regional partners.

Comments

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¹ The base flood is the national standard used by all federal agencies for flood-related regulations. The base flood is the flood that has a one-percent chance of occurring in any given year. The base flood is also called the 100-year flood and the one-percent annual chance flood.