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### **WASHINGTON COUNTY**

Dept. of Land Use & Transportation Planning and Development Services Current Planning 155 N. First Ave, Ste 350, MS-13 Hillsboro OR 97124 Ph. (503) 846-5263, Fax (503) 846-2908 http://www.washingtoncountyor.gov

FEES: See current fee schedule for Flood Plain Elevation and site inspection fees.

# DRAINAGE HAZARD AREA INFORMATION REQUEST

Date	e: Tax Lot No	Property Address:
In order to obtain the County benchmark for reference by a surveyor or engineer, please contact the County surveyor at 503-846-8723 or visit <a href="https://webapps.washingtoncountyor.gov/surveyexplorer/">https://webapps.washingtoncountyor.gov/surveyexplorer/</a> . Please email application to cpadmin@washingtoncountyor.gov.		
and stan not	their successors assume the risks and the dards of the Washington County Comm	lain or drainage hazard area must do so with the understanding that they hat the risks cannot be eliminated, even with strict compliance with the nunity Development Code. The elevation information provided herein does ain or drainage hazard areas, or development permitted within, will be free
	s request is for:	I understand that it is my responsibility to determine the exact location of the drainage hazard area inundation based on the
	w Dwelling:	requested information below.
Replacement Dwelling:  Other Construction:  Building Permit No.  Case File No.		PRINTED NAME
		MAILING ADDRESS
		CITY, STATE, ZIP
		PHONE
		EMAIL ADDRESS
		APPLICANT'S SIGNATURE
		Do not mark below line.
	This property is inundated by a Drainage Hazard Area. By ordinance, it is the responsibility of the property owner to determine the elevations and inundation for the 4% annual chance flood (25-year event).	
	This property is not in a Drainage Hazard Area.	
	Findings:	
	☐ DHA previously altered (Casefile	DHA conveyed by Clean Water Services
	☐ DHA source approximately	_ feet vertically and feet horizontally away from project site
☐ Site visit required		
	SITE VISIT NOTES	

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## DRAINAGE HAZARD AREA PROCEDURE

Drainage hazard areas are covered by the Washington County Flood Plain Ordinance and are designated on the Washington County Flood Plain Map Series, which is part of that ordinance. Drainage hazard areas are regulated essentially the same as 100-year flood plain areas with two exceptions:

- 1. They are based on 25-year flood recurrence and
- 2. Rather than the County providing a flood surface elevation, you must work with a consulting engineer to arrive at a surface elevation.

Though there may be other methods of determining the extent of the 25-year flooding, the engineering methodology used most is as follows:

From field surveying, measure several cross-sections of the channel and the area immediately adjacent, and field measure the slope of the channel. Also determine downstream culvert capacities and headwater depths. Using the rational method or some other appropriate method, determine the 25-year expected flow from upstream properties. Using the measured cross-sections and slope and the calculated flow rate, work with Manning's equation to arrive at a depth of flow. The depth of flow added to the elevation of the creek bottom will become the 25-year flood surface elevation. This elevation probably will increase as one moves upstream in the channel. If higher elevations are caused by headwater from downstream and topographic mapping, one may determine what land area will be inundated by the 25-year flood.

The basic intent of the ordinance is to stay away from that inundated area with the proposed development. If development must occur in the inundated area, a flood plain or drainage hazard area alteration process must be used.

The alteration process involves an application, a fee, maps and calculations. In reviewing the proposed alteration, the Land Use and Transportation Department staff looks for several components in a land use review:

- 1. The alteration must comply with the Flood Plain Ordinance.
- 2. If there is a true need for the alteration.
- 3. The proposed channel must be able to pass the 25-year flow.
- 4. If backup results from the alteration, any ponding must all be on property owned by the developer.
- 5. The total flood storage volume on the site must not decrease.
- 6. The property may be filled, but there must be excavation below the flood surface elevation to make up for it.
- 7. The general character of existing contours on the site must be maintained.
- 8. Natural site features, such as vegetation, slope, landform, wildlife, stream channel character, etc., must be maintained.
- 9. Disturbed areas must be reseeded.

The application and appropriate maps, calculations, cross sections, etc. are submitted by an engineer (registered in Oregon) to Current Planning Services of the Land Use & Transportation Department, along with the required fee. The proposal is reviewed by the department with final approval granted by the Land Use & Transportation director.