



**Flood Control**  
& Water Conservation District

## **FREQUENTLY ASKED QUESTIONS**

**Draft**

## **DEFINITIONS OF TERMS**

**Last Revised July 2, 2008**

**Introduction:**

The following questions have been organized in the categories below. We have attempted to group the questions from more general to more specific/technical in nature. Each group of questions is in a different file. You should go to the file that appears to relate best to your question.

**Frequently Asked Questions for:**

- [Drainage, Watershed and Water Quality](#)
- [Property Owners Near Creeks](#)
- [Developers and Engineers](#)  
and
- [Definitions of Terms](#)

If you have questions that you cannot find in this document, please call the Flood Control District at (925) 313-2000 and ask for the Flood Control. Someone will do their best to address your question.

**Contra Costa County Flood Control and  
Water Conservation District<sup>1</sup>**

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<sup>1</sup> The Flood Control District is in the County Public Works Building

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## GENERAL TERMS

Term	Definition
BioEngineering	Using natural materials such as plants, plant cuttings, logs, and/or tree stumps to stabilize a creek bank or bed instead of using manmade materials such as concrete, steel or rocks.
Creek - Improved	
Creek - Natural	
Culvert	A circular or rectangle cross section conduit that is used to allow stormwater to flow under a road or other physical land feature.
Diversion	The taking or directing water from one a stream, drainage system to another. This can occur when a development site is graded so that the stormwater falling on part of the project site drains to a different stream or drainage system than it did before the project was built. County Ordinance generally do not allow diversions.
Drainage Area - Formed	
Drainage Area - Unformed	
Drainage Facility or Drainage System	A manmade feature intended to collect/direct/convey rain or stormwater. This includes swales, ditches, pipes, culverts, drainage inlets (catch basins), manholes, detention basins, reservoirs, and curb and gutter. Maurice Shiu
Drainage Zone	
FEMA	Federal Emergency Management Agency – The federal agency manages the flood insurance program and responds to various emergencies throughout the country.

<b>Term</b>	<b>Definition</b>
Flood Plain	<p>Natural – The flood plain is the area that naturally floods when big storms occur. The creeks average storm flows form defined beds and banks of a channel. When large events occur, and the creek cannot convey all of the flows, flows escape and flood overland. This flooded area is known as the flood plain.</p> <p>FEMA – The flood plain in FEMA’s languages is the area flooded during the base flood event. The base flood event is typically the 1 percent annual chance flood (100-year flood). The area that is flooded is determined from hydrology and hydraulic engineering studies and is plotted on a Flood Insurance Rate Map. FEMA provides an insurance program for structures in the floodplain.</p> <p>County – The floodplain from the County perspective is the same as the FEMA floodplain. The County has a Floodplain ordinance that defines what design features and criteria a structure in the floodplain must be designed with.</p>
Fluvial Geomorphology	<p>This title comes from the words: water (fluvial), earth (geo) change (morphology) and is the area of science that studies how water changes the earth. In the context of drainage, <i>fluvial geomorphology</i> relates to the natural or man induced changes in a creek or stream over time relative to sediment size and quantity and the seasonal changes in the flow of water in the creek. This area of science is used to try to understand why a creek bank failed, or to predict what will happen to other parts of a creek if a certain part or reach of a stream is modified. It is also the basis for understanding the natural functioning of creeks, how they form their low-flow (bank full) channels as well as their floodplains.</p>
Impervious surface	<p>A manmade surface treatment that impedes rain water from infiltrating into the ground. Examples are: Asphalt pavement (also known as AC or asphalt concrete), concrete pavement (such as used for sidewalks and driveways, patios, sports courts), roof tops, compacted rock driveways.</p>
Rainfall intensity	<p>This is the measure of how “hard” it rained. Rainfall intensity is reported in inches of rain fall per hour, or inches/hour (in/hr).</p>

<b>Term</b>	<b>Definition</b>
Return Period	<p>This term is a reference to statistics that describe how rare or frequent a storms' intensity is. Common terms such as "100-year storm" are used to describe a return period. A term such as "100-year storm" can be misleading. Some people take it to mean that the rainfall amount or creek flood level will only occur once every 100 years. However, the term really means that statistically, a certain storm event has a 1 in 100, or 1 percent (1%), probability of occurring EVERY year and that storm event could be experienced more than once in any given year.</p> <p>The most up-to-date way to refer to these storms it to use the phrase "percent annual chance". An example would be "the 1 percent annual chance storm" for what used to be called the 100-year storm.</p> <p>Other return periods such as 5-year, 10-year, 25-year, and 50-year storms are also commonly used. These refer respectively to the 20%, 10%, 4%, and 2% annual chance storms. The percentages are probabilities of those levels of storms occurring EVERY year. The percent probability is calculated by dividing 1 by the return period.</p>
Underground Facility	A pipe or culvert that conveys or store storm water under the ground.
Watershed	The land area that drains water to a particular stream, river, or lake. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map, often a ridge. Large watersheds, like the Sacramento River basin contain thousands of smaller watersheds.

## LAND RIGHT TERMS

Term	Definition
Access Easement	This is like a drainage easement (see below) but is only for access, not for construction of any improvements.
Dedicated Easement	An easement given to a public agency or other party by identifying it on the subdivision's final map or through a Offer of Dedication that is filed with the County Recorder. The dedication of an easement must be followed by an Acceptance before the easement transfer is complete. Years can pass between the time the easement is dedicated and the dedication is accepted.
Drainage Easement or Storm Drain Easement (SDE)	This is usually a strip of land set aside for use for public storm drainage purposes. The easement is created to protect the use of the property from encroachments such as a home addition, grading for a pool, planting of trees or other activities that would diminish the functionality of the drainage feature or ability to maintain it. Please check with the Permit Center [Bob Hendry at (925) 335-1375] before planning or doing any work in a drainage easement.
Floating Access Easement	This is like an Access Easement (see above) but is not for a specific strip of land over a property. Such an easement is appropriate if the access is over a parcel of land that is actively used for storage of materials where the materials are frequently moved around. This allows the owner of the property more freedom of use of the property while allowing the easement holder access through it.
Flood Control Easement	This is like a Drainage Easement or Access Easement (see above) but is for the Flood Control District access, not for construction of any improvements.
Flood Control Right-of-Way	This is an area of land that has been transferred to a public entity for a "corridor" used for roads, creeks, or utilities. In the case of the Flood Control District, these are lands acquired by or dedicated to the District for use in providing a facility that will convey drainage and flood flows or to provide access to those facilities for maintenance.
Flowage Easement	This is like an access or drainage easement and is normally used to allow the Flood Control District to maintain a drainage facility to ensure floodwaters can flow through it. It does not obligate the District to maintain the earthen channel, drainage facility, bridge or other structure that may be in the Flowage Easement.

<b>Term</b>	<b>Definition</b>
Grant Deed of Development Rights	A property owner can grant development rights over a piece of land to a second party. This is usually done so that the second party has the ability to keep the property owner from developing until a certain condition has been met. Sometimes a lot will be created by a subdivision but the developer will not want to develop a lot right away and so does not want to pay the development fee until later. The Flood Control District allows the granting development rights over such a commercial lot to allow the fees to be paid at a later date but also to ensure that there is a way to force the developer or subsequent property owner to pay the fees when development occurs.
Offer of Dedication	This is a legal document through which a property owner offers to transfer some land right to another entity. The other entity must officially accept the Offer of Dedication to enjoy the use of the land covered by the offer. The offer is normally irrevocable, in that the offerer cannot take back what was offered. The receiver of the offer can rescind the offer and if they do, the land right goes back to the property from which it was offered.
Private Access Easement	This is like an Access Easement but is between private property owners.
Private Drainage Easement or Private Storm Drain Easement (PSDE):	This is like a Drainage easement but is between property owners. Facilities in a private storm drain easement will not be maintained but a public entity. However, in Contra Costa County, a Drainage Permit is still required to modify the drainage facilities in a Private Drainage Easement.
Right-of-Way	Typically, this refers specifically to a strip of land over which facilities such as roads, highways, railroads, drainage systems, power lines and other utilities are built. In this typical sense, the right-of-way is like a piece of property owned by the agency or utility. It is also used to describe the legal right to pass over property owned by another a property by right such as an easement and sometimes an agreement party.



<b>Term</b>	<b>Definition</b>
Separate Instrument	<p>In real estate language, an “instrument” is a land transfer document. A Grant Deed, a Final Map, and a Parcel Map are all instruments. The term “separate instrument” is used when a land right is to be given to an entity besides the County or City and is shown on a Final Map or Parcel Map. Because the maps can only transfer land rights (rights-of-way, easements, offers of dedication, etc.) to the County or City they are signed by, land rights to others must be processed “separately” in a Grant Deed or Offer of Dedication. Land rights cannot be transferred to the Flood Control District via a Final Map or Parcel Map because the District does not approve or sign the maps. Because of this, a separate instrument is required to transfer land rights to the Flood Control District.</p>

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