

Drainage Design Guide  
Chapter 2: Hydrology

Subarea	Main channel length (ft)	Length of secondary tributaries (ft)	Road length (ft)	Length of channel improved (ft)	Length of channel lined (ft)	Length of storm drains (ft)	Length of curb & gutter (ft)
Upper	2500	5180	2850	460	0	1345	690
Middle	3800	3940	4700	2020	1770	2330	3020
Lower	3000	2160	5610	1720	1570	1510	3180

The BDF is determined as follows:

Channel Improvements

Upper third: 460 ft have been straightened and deepened  
 $460/2,500 < 50\%$  Code = 0  
 Middle third: 2,020 ft have been straightened and deepened  
 $2,020/3,800 > 50\%$  Code = 1  
 Lower third: 1,720 ft have been straightened and deepened  
 $1,720/3,000 > 50\%$  Code = 1

Channel Linings

Upper third: 0 ft have been lined  
 $0/2,500 < 50\%$  Code = 0  
 Middle third: 1,770 ft have been lined  
 $1,770/3,800 < 50\%$  Code = 0  
 Lower third: 1,570 ft have been lined  
 $1,570/3,000 > 50\%$  Code = 1

Storm Drains on Secondary Tributaries

Upper third: 1,345 ft have been converted to storm drains  
 $1,345/5,180 < 50\%$  Code = 0  
 Middle third: 2,330 ft have been converted to storm drains  
 $2,330/3,940 > 50\%$  Code = 1  
 Lower third: 1,510 ft have been converted to storm drains  
 $1,510/2,160 > 50\%$  Code = 1

Curb and Gutter Streets

Upper third: 690 ft of curb and gutter street  
 $690/2,850 < 50\%$  Code = 0  
 Middle third: 3,020 ft of curb and gutter street  
 $3,020/4,700 > 50\%$  Code = 1  
 Lower third: 3,180 ft of curb and gutter street  
 $3,180/5,610 > 50\%$  Code = 1

**Total BDF = 7**