# HOW VIRGINIA REGULATIONS AFFECT THE VALUES OF ONE PMF

TAC Meeting July 13, 2006

#### FACTORS TO CALCULATE PROBABLE MAXIMUM FLOOD (PMF)

	DESIGN VARIABLE
INCHES PER HOUR OF RAIN	PMP VALUES
FALLS ON WATERSHED AREA AND FLOWS INTO DAM RESERVOIR	TERRAIN TYPE AND SLOPE
FLOWS OUT OF SPILLWAY	SPILLWAY DESIGN
RESERVOIR RISES WHEN FLOW IN > FLOW OUT	MAXIMUM CAPACITY

#### **TYPICAL RAINFALL VALUES FOR LOCATION IN VIRGINIA**

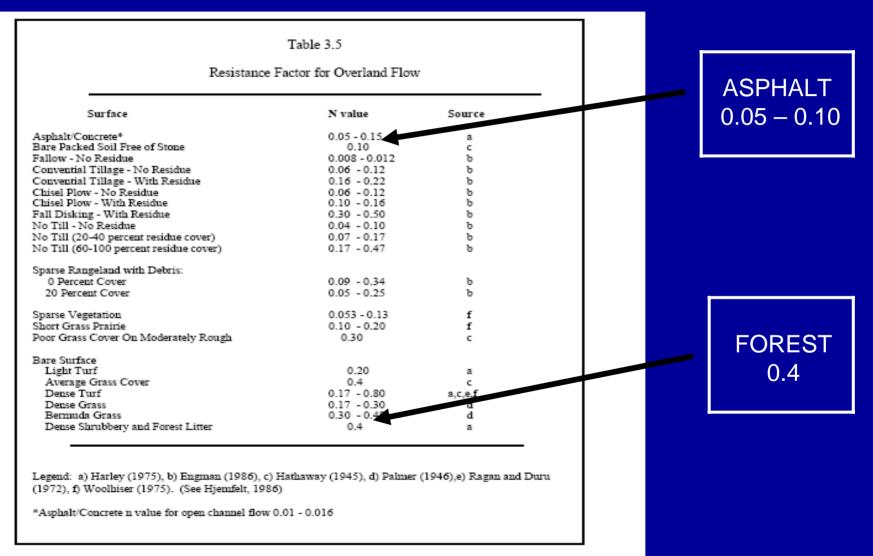
Hydrometeorological Design Studies Center, NOAA National Weather Service

Precipitation Frequency Estimates (inches), Upper bound of the 90 % confidence interval 1 of 161 sites in VA , http://hdsc.nws.noaa.gov/hdsc/pfds/orb/va\_pfds.html

ARI AVERAGE RECURRENCE INTERVAL IN YEARS	60min	6 hr	24 hr	48 hr	72 hr	96 hr
2	1.6	2.6	3.6	4.2		4.7
100	3.5	6.1	9.4	10.6		11.7
1000	4.7	8.9	15.3	16.8		18.5
PMP	10.6*	28.0	38.0	41.0	43.0	

PMP - PROBABLE MAXIMUM PRECIPITATION (ORIGINALLY MAXIMUM POSSIBLE PRECIPITATION), ALL SEASON 10 MI 2

## WATERSHED TERRAIN TYPE



### **DRAINAGE BASIN CHARACTERISTICS**

## 4VAC50-20-240C

"The drainage area shall be determined. Present, Projected and potential future land-use conditions shall be considered in determining the runoff characteristics of the drainage area. The most severe of these conditions shall be included in the design calculations which shall be submitted as part of the design report."

## DRAINAGE BASIN CHARACTERISTICS Proposed Draft

#### 4VAC50-20-240C

"The drainage area shall be determined. Present and planned landuse conditions shall be considered in determining the runoff characteristics of the drainage area. The most severe of these conditions shall be included in the design calculations which shall be submitted as part of the design report."