TRACOM INC.
770.664.6513 (V) 770.664.6565 (F)

Weir / Flume Discharge Equations
Q= gpm H=feet

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FLUME	SIZE	EQUATION	
Parshall Montana	1"	Q=0.338*H^1.550	*
	2"	Q=303.4*H^1.550	*
	3"	Q=445.2*H^1.547	*
	6"	Q=924.5*H^1.580	*
	9"	Q=1378*H^1.530	
	12"	Q=1795*H^1.522	
	18"	Q=2693*H^1.538	
	24"	Q=3950*H^1.550	
	36"	Q=5386*H^1.566	
	48"	Q=7181*H^1.578	
	60"	Q=7181*H^1.578	
	72"	Q=10770*H^1.595	*
	96"	Q=14360*H^1.607	
	120"	Q=17670*H^1.600	
	144"	Q=20980*H^1.600	
Cutthroat	18" L X 1" W	Q=224.9*H^2.00	
	18" L X 2" W	Q=457.7*H^2.00	
	18" L X 4" W	Q=931.5*H^2.00	
	18" L X 8" W	Q=1896*H^2.00	
	36" L X 2" W	Q=321.9*H^1.84	
	36" L x 4" W	Q=655*H^1.84	
	36" L x 8" W	Q=1333*H^1.84	
	36" L x 16" W	Q=2712*H^1.84	
	54" L x 3" W	Q=431.3*H^1.72	
	54" L x 6" W	Q=877.8*H^1.72	
	54" L x 12" W	Q=1786*H^1.72	
	54" L x 24" W	Q=3635*H^1.72	
	108" L x 12" W	Q=1571*H^1.56	
	108" L x 24" W	Q=3197*H^1.56	
	108" L x 48" W	Q=6505*H^1.56	
	108" L x 72" W	Q=9857*H^1.56	
Palmer-Bowlus	6"	Q=978.38*H^1.9	
	8"	Q=1162.39*H^1.9	
	10"	Q=1328.45*H^1.9	
	12"	Q=1485.53*H^1.9	
	15"	Q=1700.95*H^1.9	
	18"	Q=1898.42*H^1.9	
	24"	Q=2257.46*H^1.9	
	30"	Q=2580.6*H^1.9	
	48"	Q=3419.86*H^1.9	
RBC	50mm	Q=634.10*H^1.81888	*
	75mm	Q=896.21*H^1.83717	*
	100mm	Q=1053.02*H^1.83585	*
	150mm	Q=1655.08*H^1.82972	*
	200mm	Q=1674.79*H^1.83281	*
Trapezoidal	Small 60° V	Q=695.37*H^2.57998	*
	Large 60° V	Q=695.87*H^2.58058	*
	Extra Large 60°V	Q=663.33*H^2.55542	*
	2" 45° WSC	Q=1490.0*H^2.32	
	12" 45° SRCRC	Q=1763.8*H^2.29	

FLUME	SIZE	EQUATION	
HS-Type	0.4'	Q=294.50*H^2.23815	*
	0.6'	Q=322.569*H^2.2405	*
	0.8'	Q=345.10*H^2.23173	*
	1.0'	Q=366.13*H^2.22258	*
H-Type	0.5'	Q=767.5*H^2.31	
	0.75'	Q=830.3*H^2.31	
	1.0'	Q=875.2&H^2.31	
	1.5'	Q=947.0*H^2.31	
	2.0'	Q=1000.8*H^2.31	
	3.0'	Q=1081.6*H^2.31	
	4.5'	Q=1166.9*H^2.31	
HL-Type	4.5'	Q=1156.46&H^2.31716	*

WEIR	SIZE	EQUATION
V-Notch	22 1/2° V	Q=223.1*H^2.5
	30° V	Q=303.4*H^2.5
	45° V	Q=464.5*H^2.5
	60° V	Q=647.6*H^2.5
	90° V	Q=1122*H^2.5
	120° V	Q=1943*H^2.5
Rectangular w/End Contractions	1.0'	Q=1495*(1.0-0.2)H^1.5
	1.5'	Q=1495*(1.5-0.2)H^1.5
	2.0'	Q=1495*(2.0-0.2)H^1.5
	2.5'	Q=1495*(2.5-0.2)H^1.5
	3.0'	Q=1495*(3.0-0.2)H^1.5
	4.0'	Q=1495*(4.0-0.2)H^1.5
	5.0'	Q=1495*(5.0-0.2)H^1.5
	6.0'	Q=1495*(6.0-0.2)H^1.5
	8.0'	Q=1495*(8.0-0.2)H^1.5
	10.0'	Q=1495*(10.0-0.2)H^1.5
Rectangular w/out End Contractions	1.0'	Q=1495*H^1.5
	1.5'	Q=1495*H^1.5
	2.0'	Q=1495*H^1.5
	2.5'	Q=1495*H^1.5
	3.0'	Q=1495*H^1.5
	4.0'	Q=1495*H^1.5
	5.0'	Q=1495*H^1.5
	6.0'	Q=1495*H^1.5
	8.0'	Q=1495*H^1.5
	10.0'	Q=1495*H^1.5
Cipolletti	1.0'	Q=1511*H^1.5
	1.5'	Q=2267*H^1.5
	2.0'	Q=3022*H^1.5
	2.5'	Q=3778*H^1.5
	3.0'	Q=4533*H^1.5
	4.0'	Q=6044*H^1.5
	5.0'	Q=7556*H^1.5
	6.0'	Q=9067*H^1.5
	8.0'	Q=12090*H^1.5
	10.0'	Q=15110*H^1.5

The above equations are best fit equations and may deviate from the published discharge table of the flume or weir.

*Calculated using Find_K&N v0.2, 1992.