WEIRS

General Flow Equation

$$Q = C \times L \times H^{1.5}$$

Q - Discharge

C - constant

L - Width of crest

H - Head

Weir - Vertical Contraction

Flume - Horizontal Contraction

Types of Weirs

1) Rectangular Weirs (Suppressed)

$$Q = 1.84 \times L \times H^{1.5}$$

$Q = m^3/s$

L & H in meters

(Applicable to Drop Structures of W/Cs)

2) Rectangular Weirs (Contracted)

$$Q = 1.84 (L - 0.2H) H^{1.5}$$

Limitations

- **Depth of flow (H) over crest > 0.03 m**
- **Crest of weir above channel bottom > 0.3 m**
- **Width (L) > 0.15 m**
- **D/s FSL > 0.06 m below weir crest**

3) Trapezoidal Weir

$$Q = 1.86 \times L \times H^{1.5}$$

$Q = m^3/s$

L & H in meters

Limitations

- **Weir crest height > 0.3 m**
- **Head 0.06 - 0.6 m**
- **Head / L < 0.5**
- **FSL of D/S should be 0.06 m below the crest of weir**

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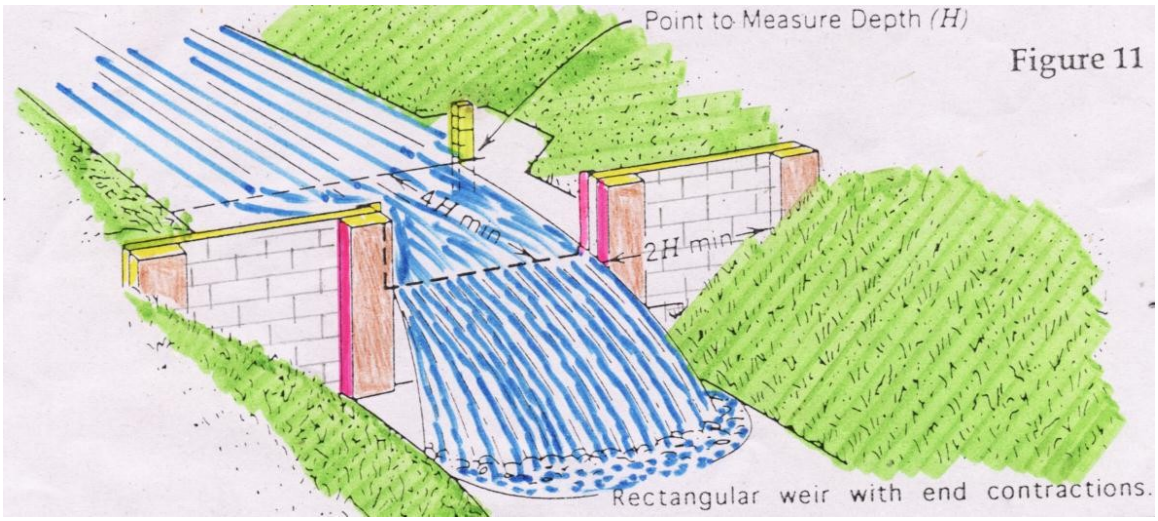
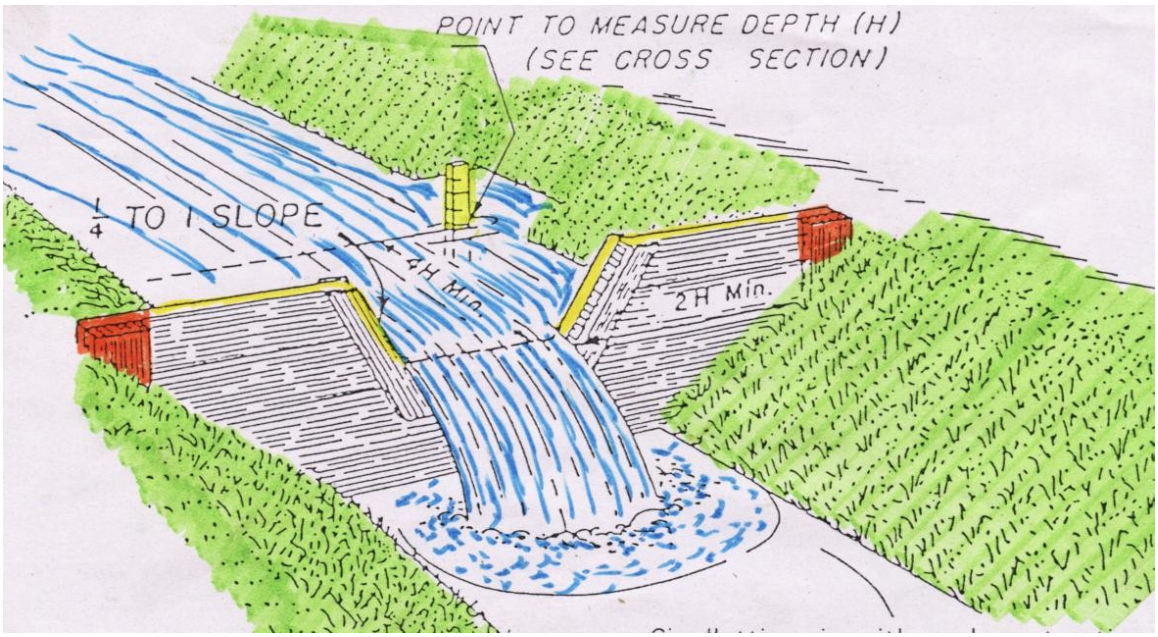

Point to Measure Depth (H)
4H min
2H min
Rectangular weir with end contractions.

Figure 11


POINT TO MEASURE DEPTH (H)
(SEE CROSS SECTION)
1/4 TO 1 SLOPE
4H Min.
2H Min.