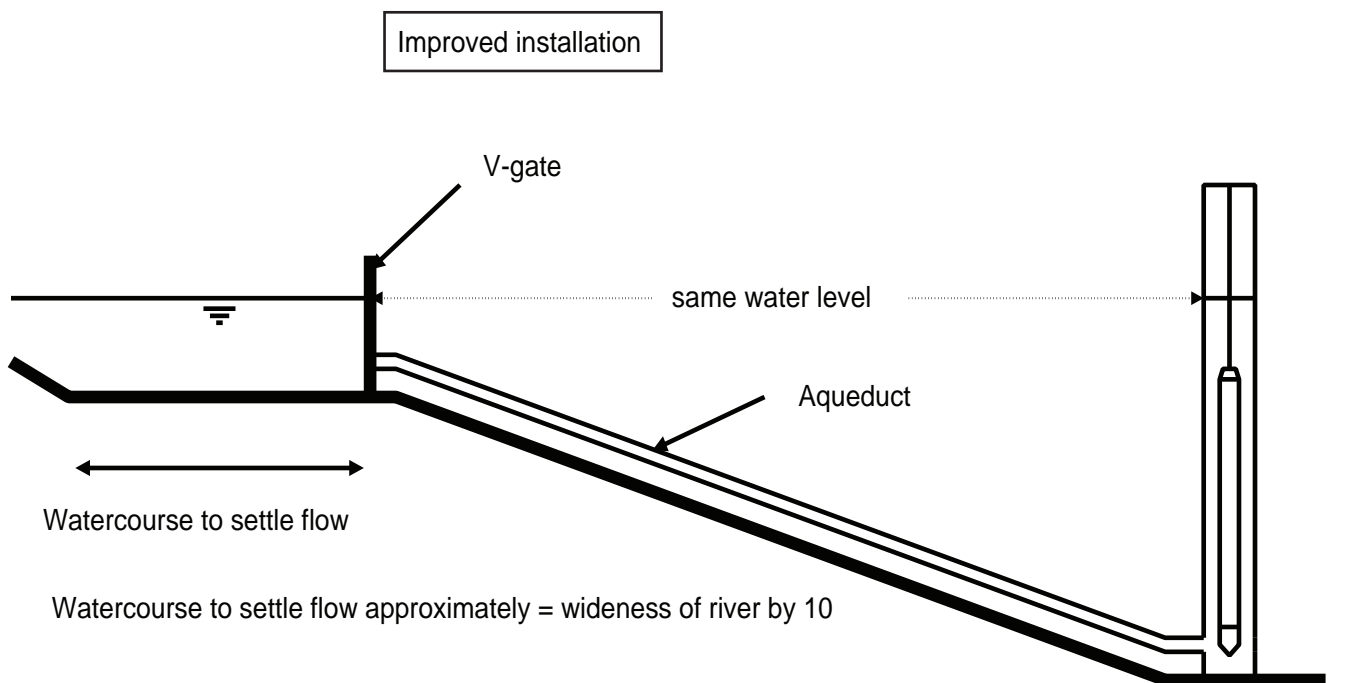
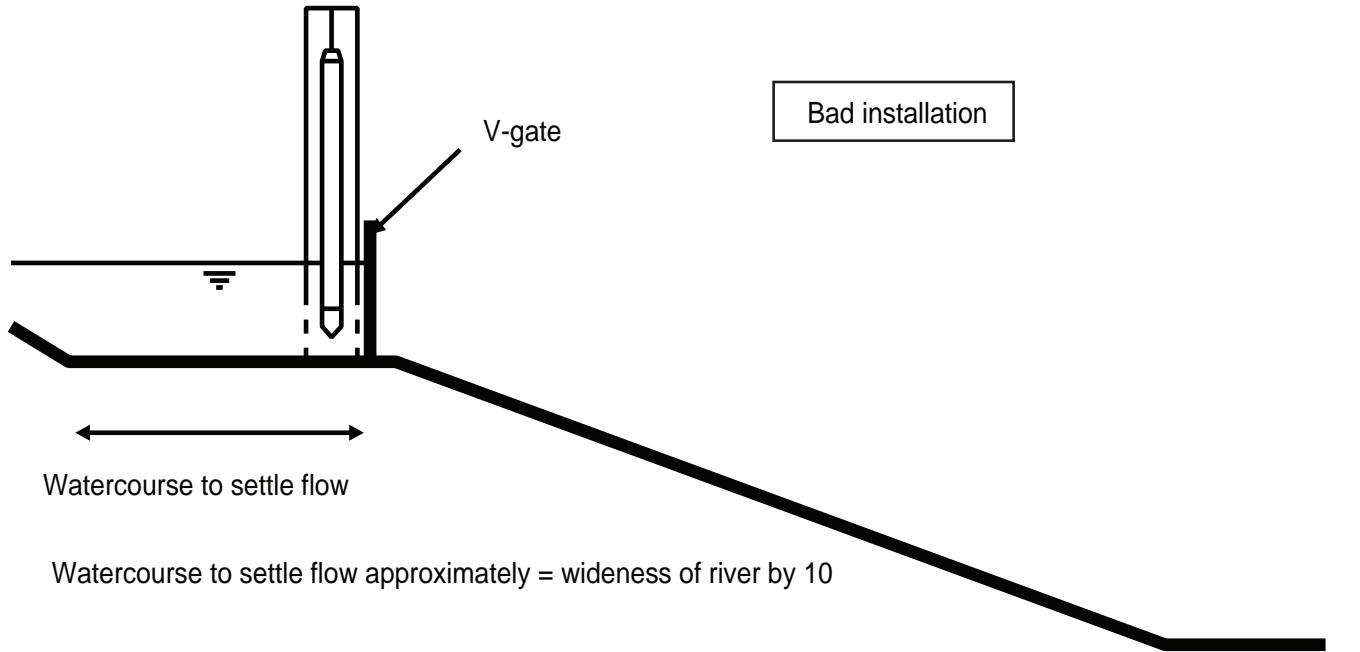




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Installation for measure flow in a river

by Mr. Yasunori Hara, Asahi Geo Survey

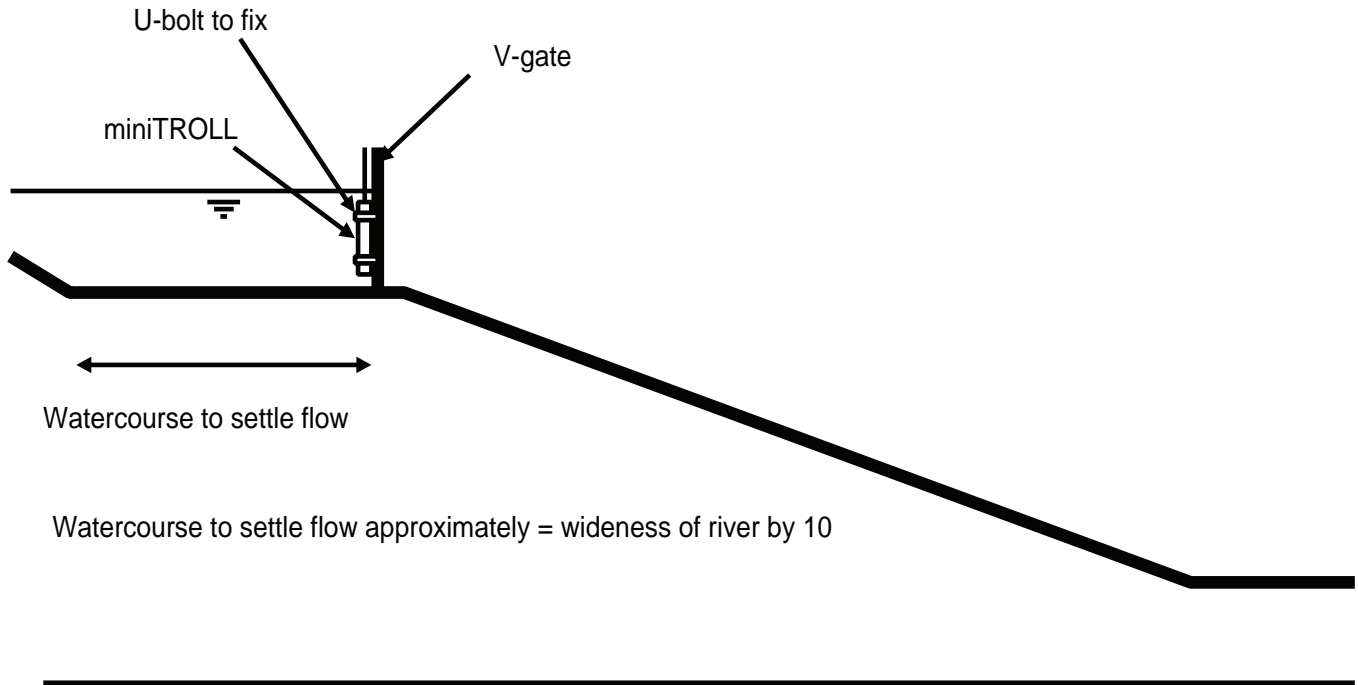




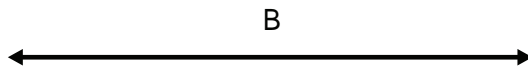
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Installation using a miniTROLL

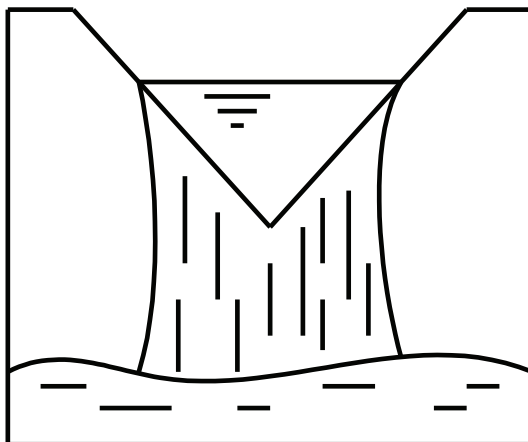
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flow $Q = KH^{5/2}$ m³/min



$K = 81.2 + 0.24/H + (8.4 + 12/D^{1/2}) * (H/B - 0.09)^2$



Application

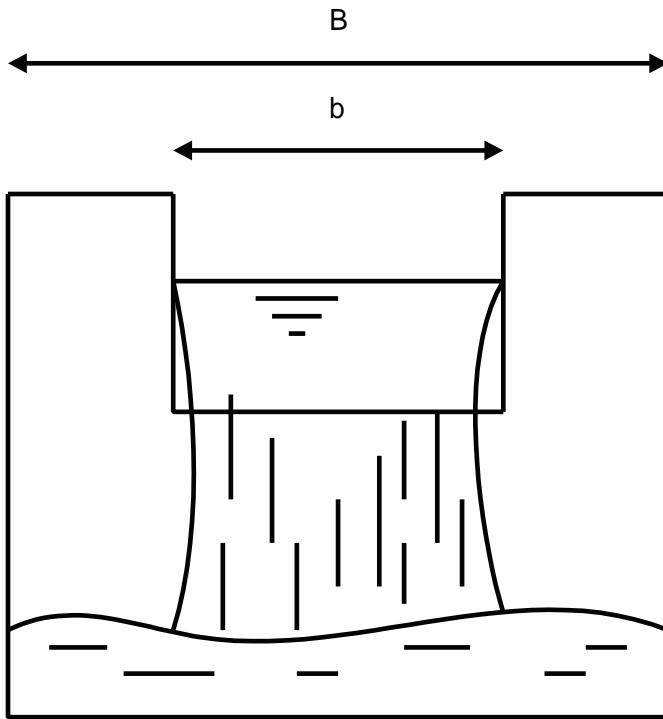
- B=0.5 - 1.2m
- D=0.1 - 0.75m
- H=0.07 - 0.26m
- $H \leq B/3$



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Four-sided gate for wide rivers

by Mr. Yasunori Hara, Asahi Geo Survey



$$Q = Kb(H^{3/2}) \text{ m}^3/\text{min}$$

$$K = 107.1 + 0.177/H + 14.2H/D - 25.7((B-b)H/BD)^{1/2} + 2.04(B/D)^{1/2}$$

Application

$B = 0.5 - 6.3\text{m}$

$b = 0.15 - 5\text{m}$

$D = 0.15 - 3.5\text{m}$

$bD/B^2 \geq 0.06$

$H = 0.03 - 0.45(b^{1/2})\text{m}$