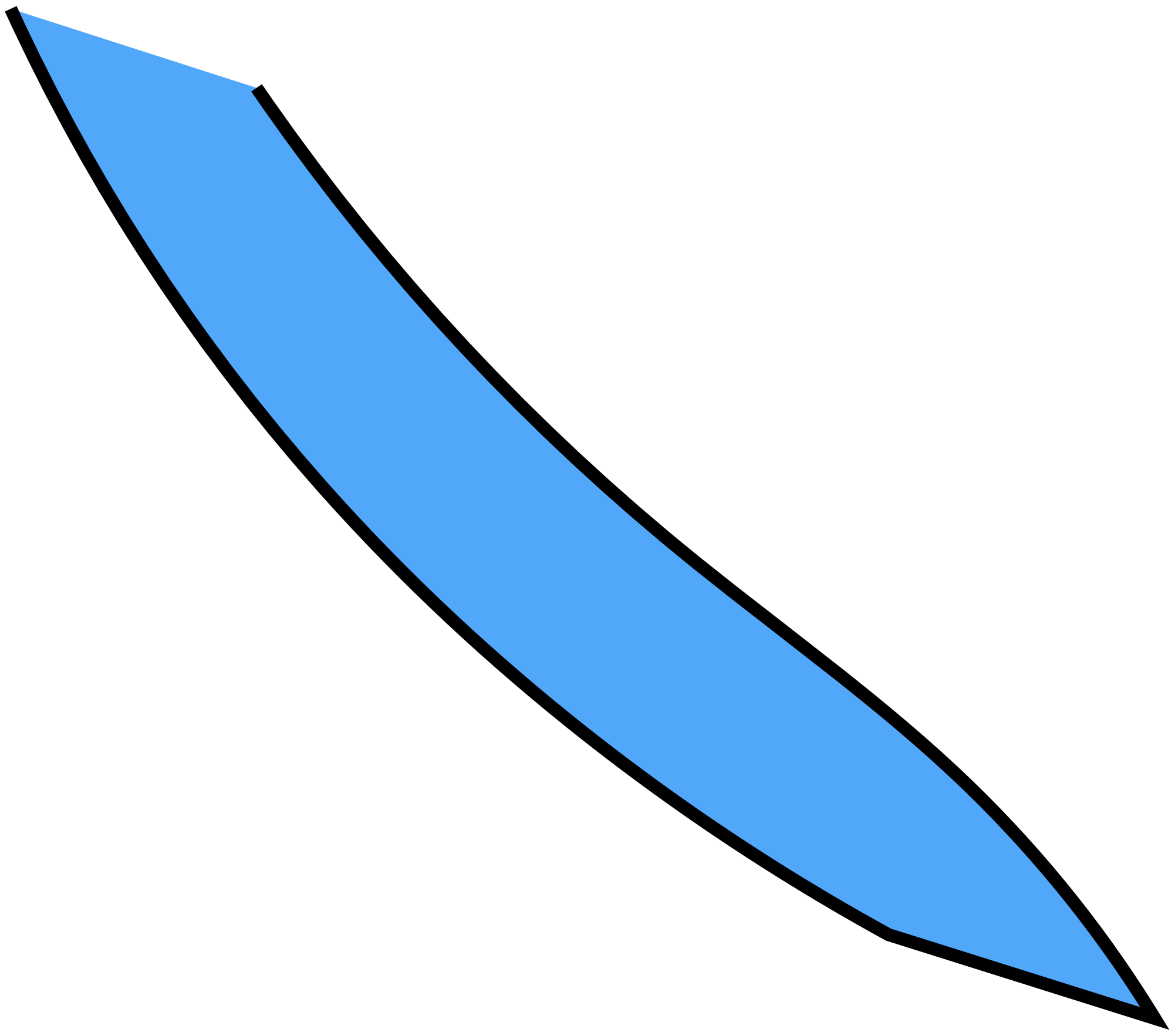

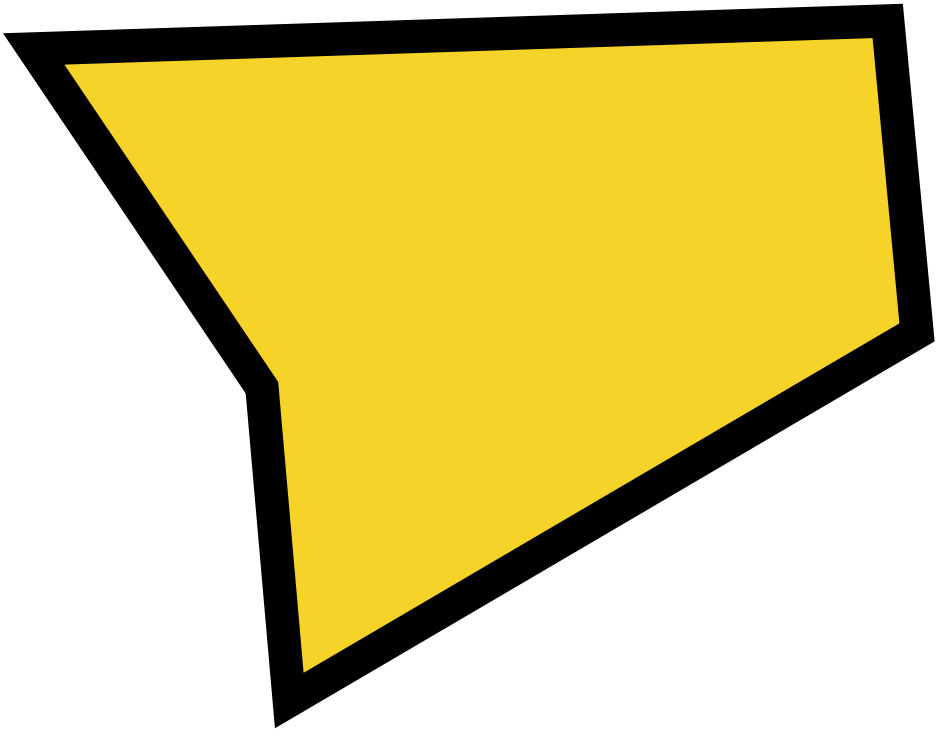

Longshore transport

CERC formula

transport coef. (0.4 sand)

breaking wave angle

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other formula:

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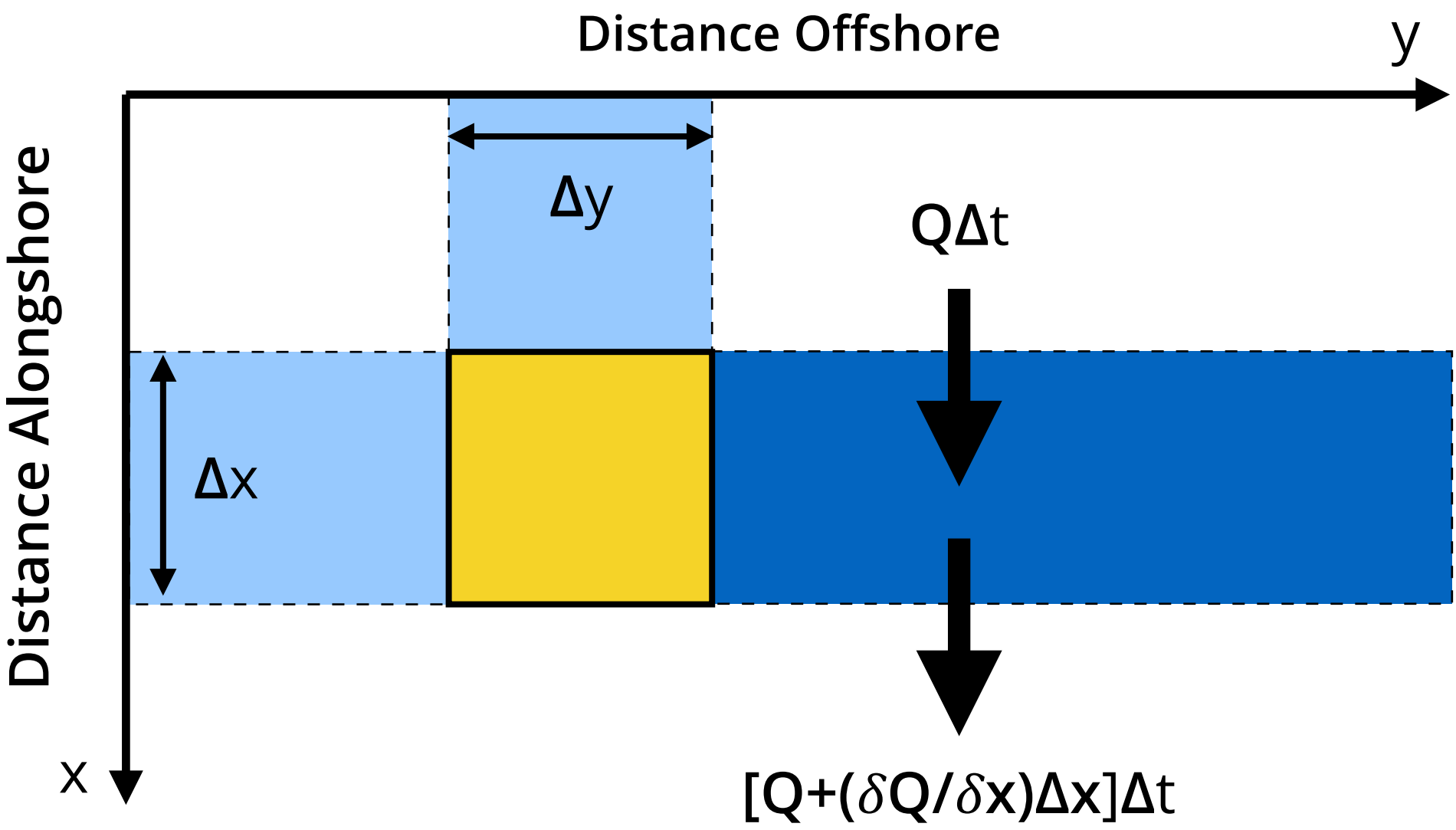
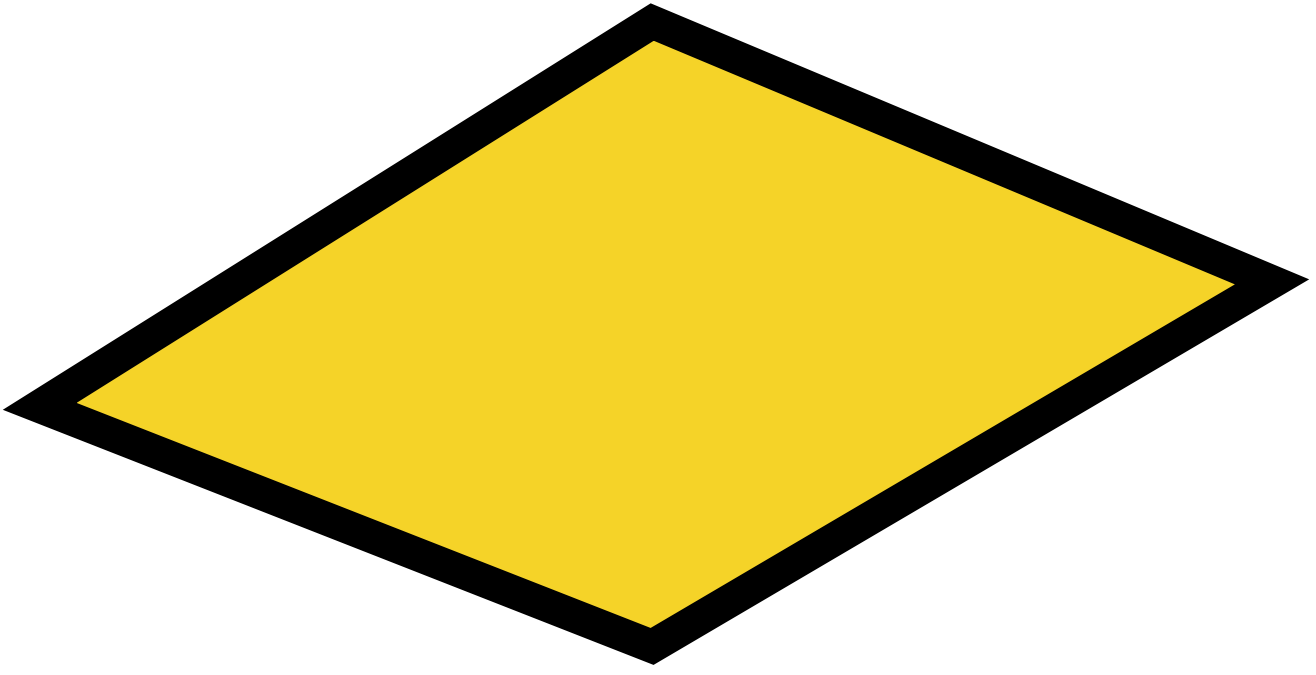
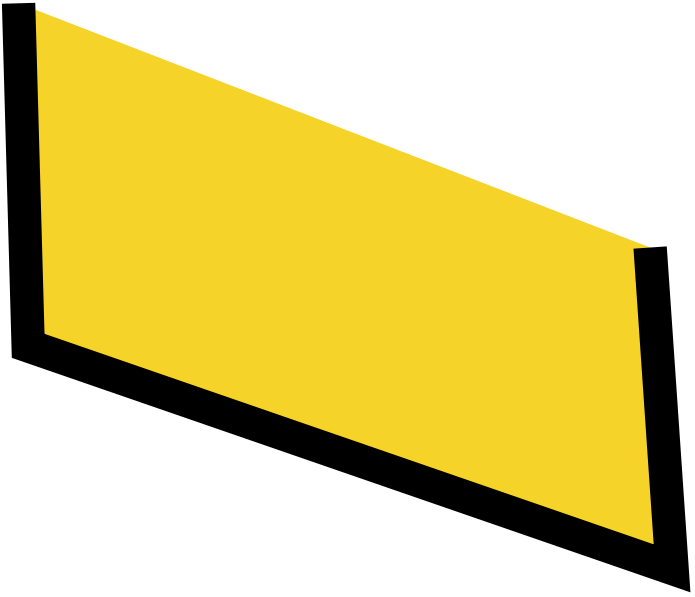
Conservation of mass implies:

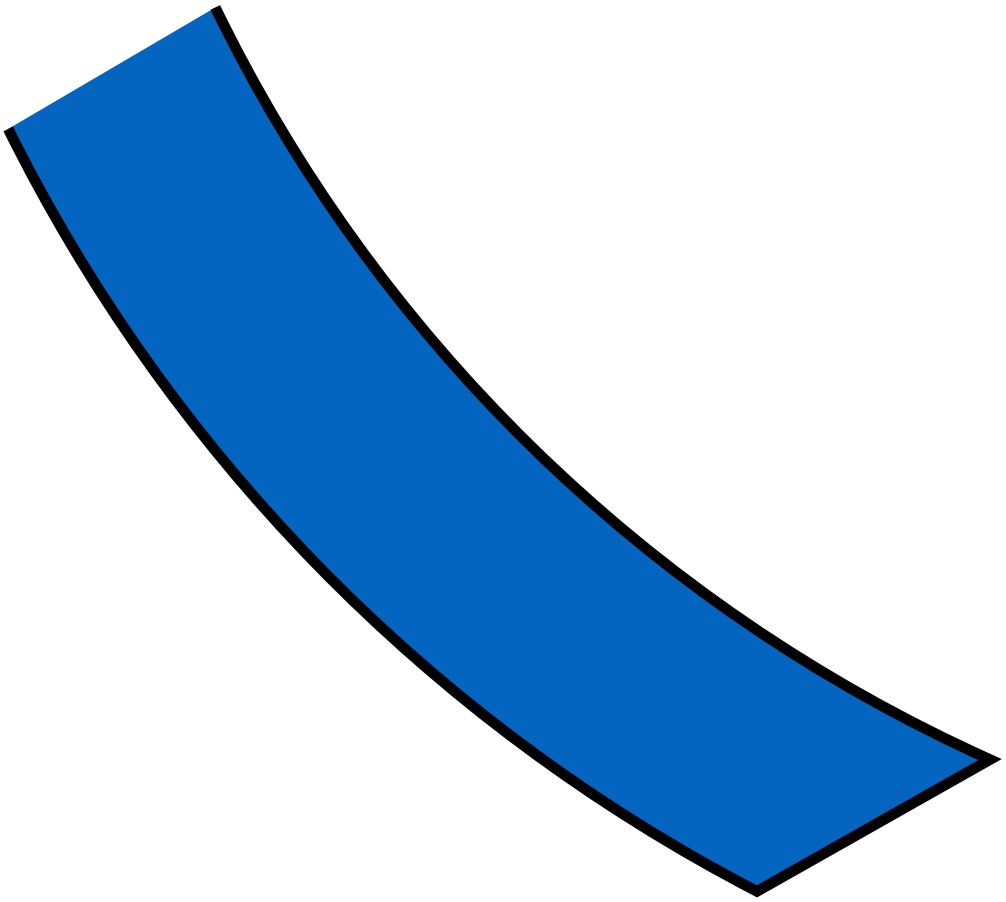
Hanson, Hans (2016)

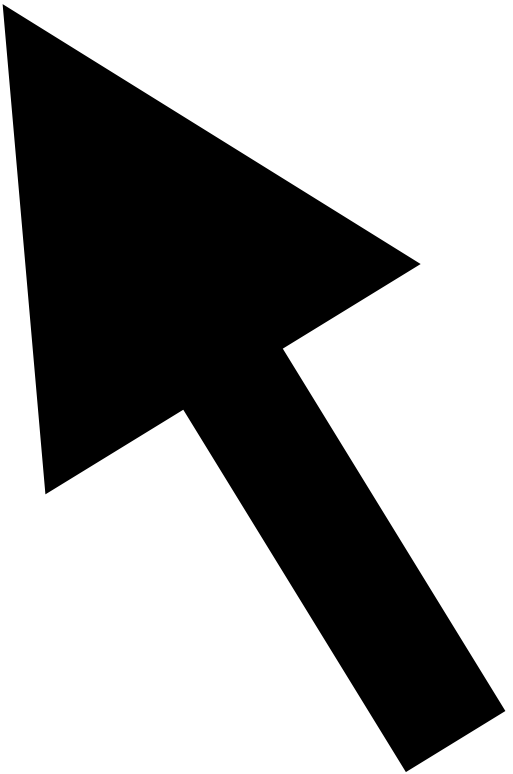
1-line model

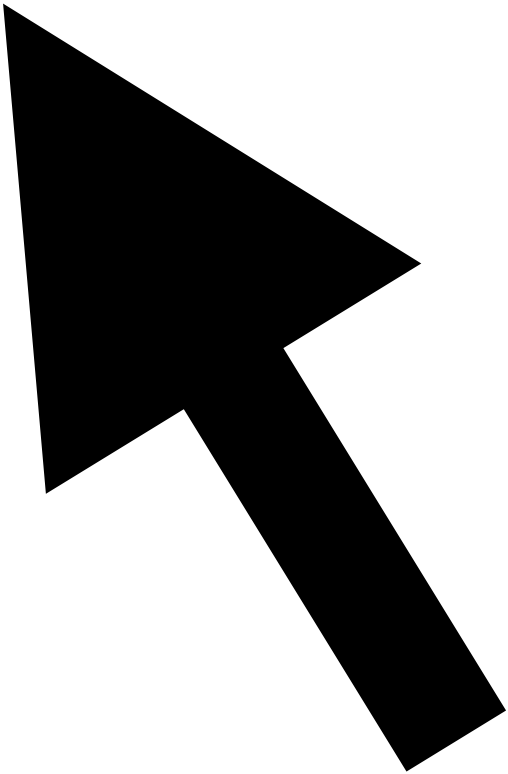

Distance Offshore
y
Distance Alongshore
x
Δy
Δx
QΔt
[Q+(δQ/δx)Δx]Δt

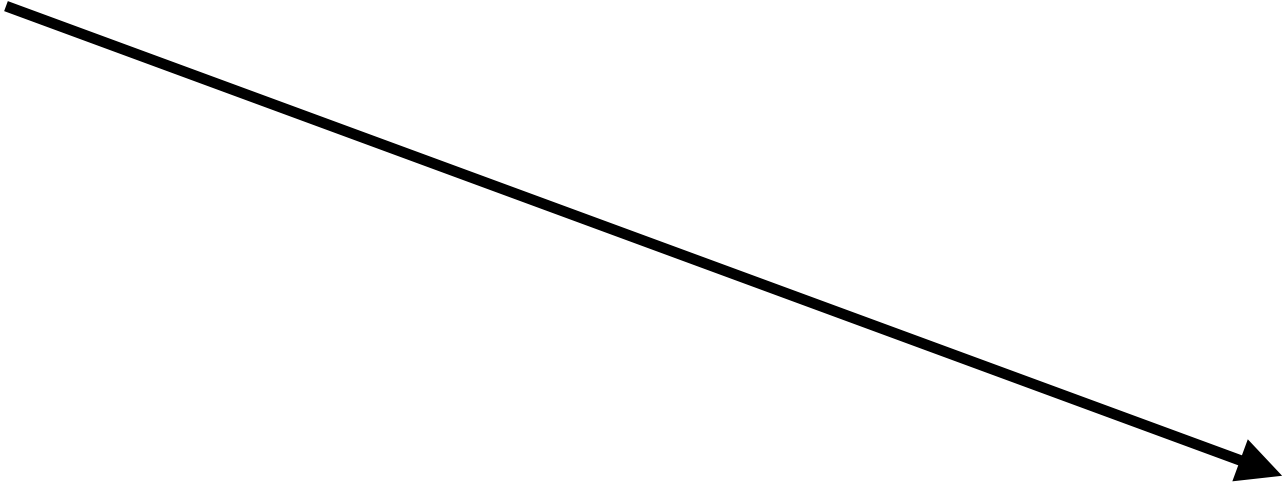


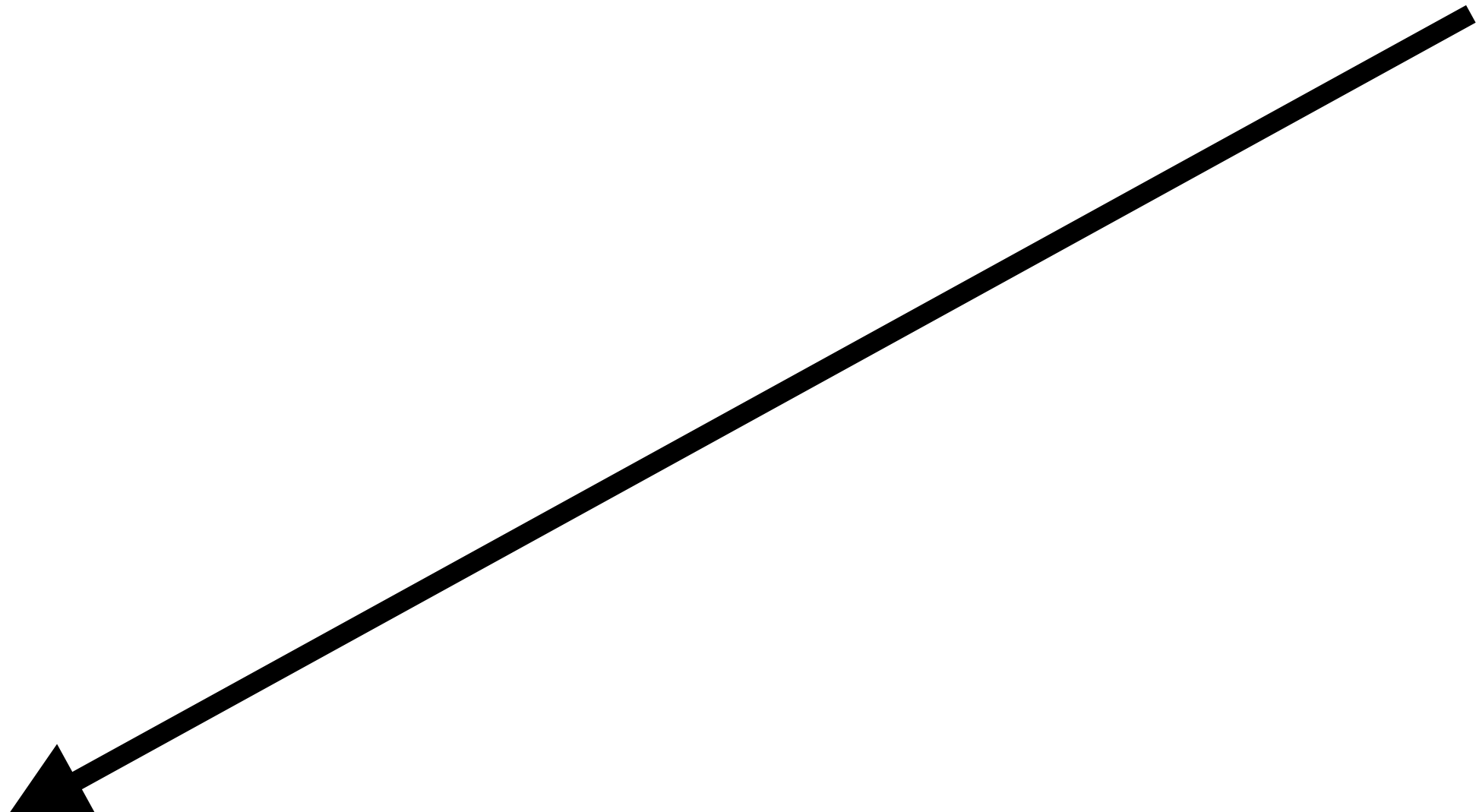


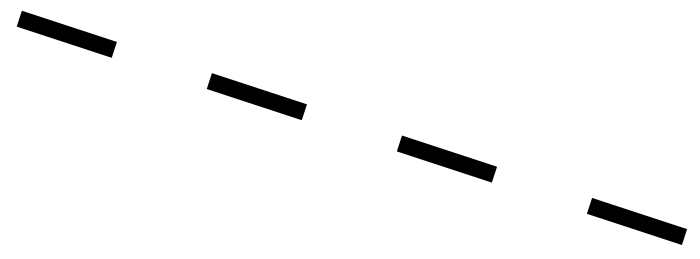


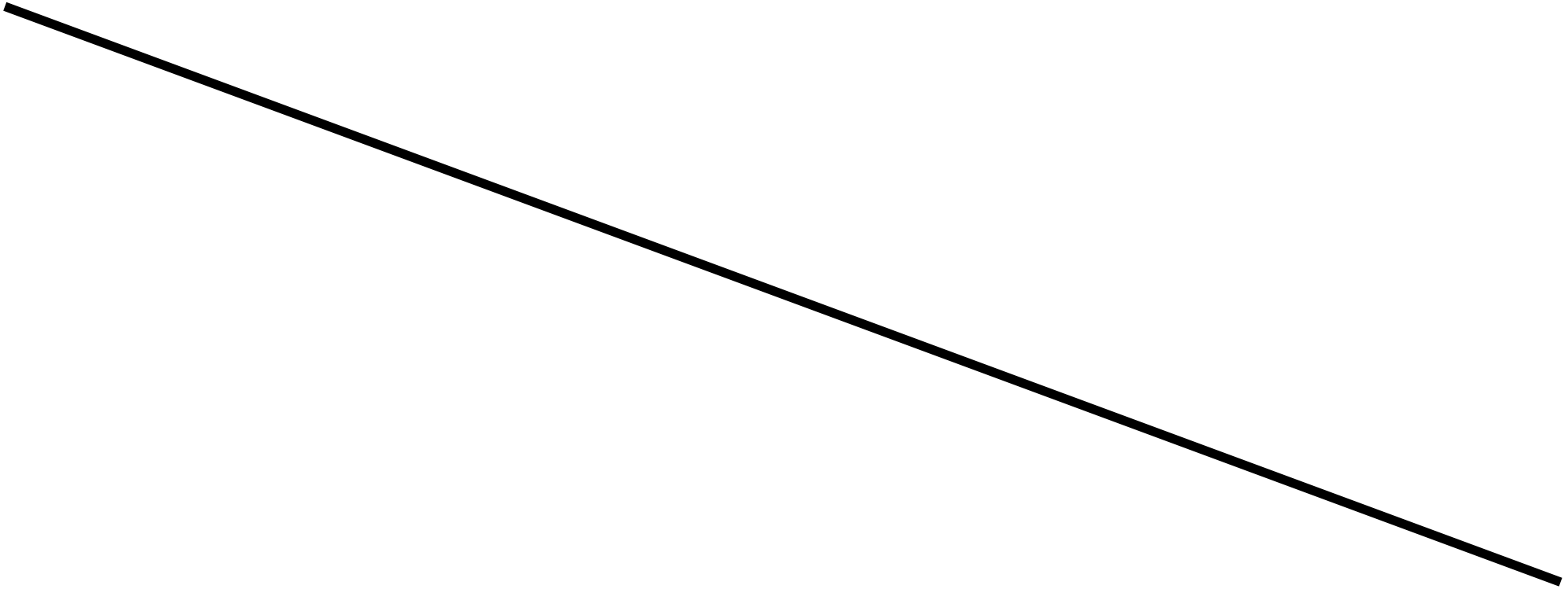


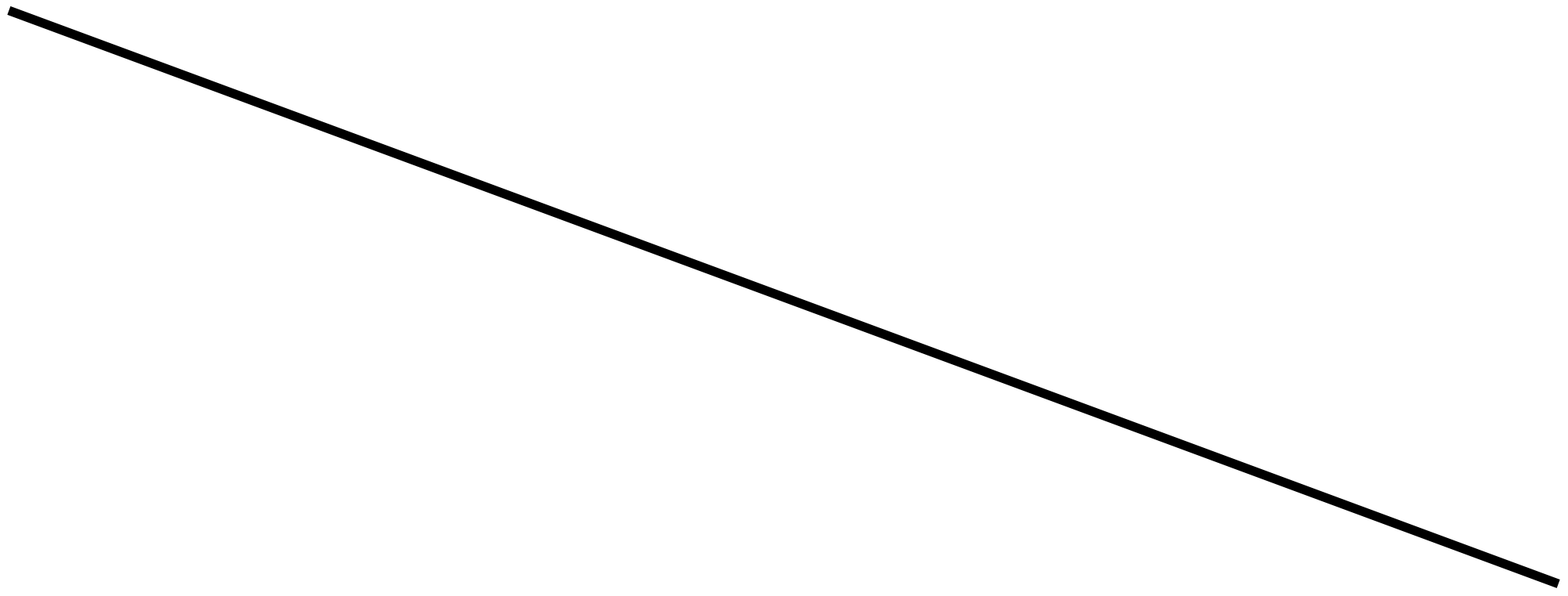


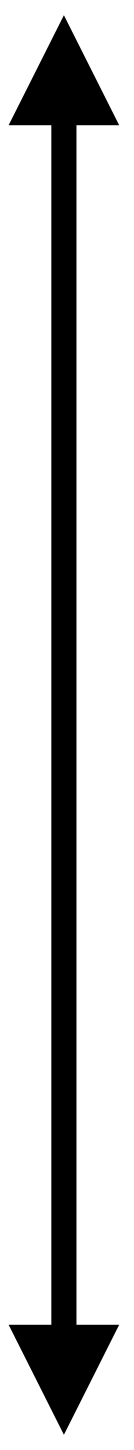


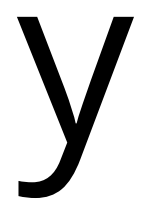


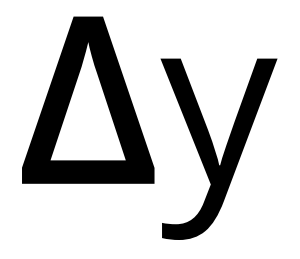




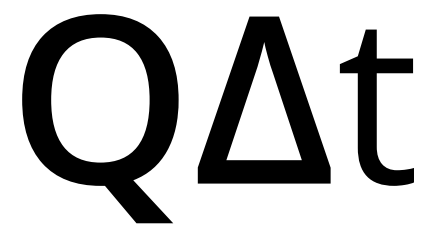


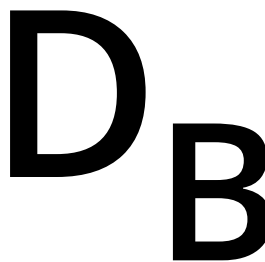



y


Δy

$$[Q+(\delta Q/\delta x)\Delta x]\Delta t$$

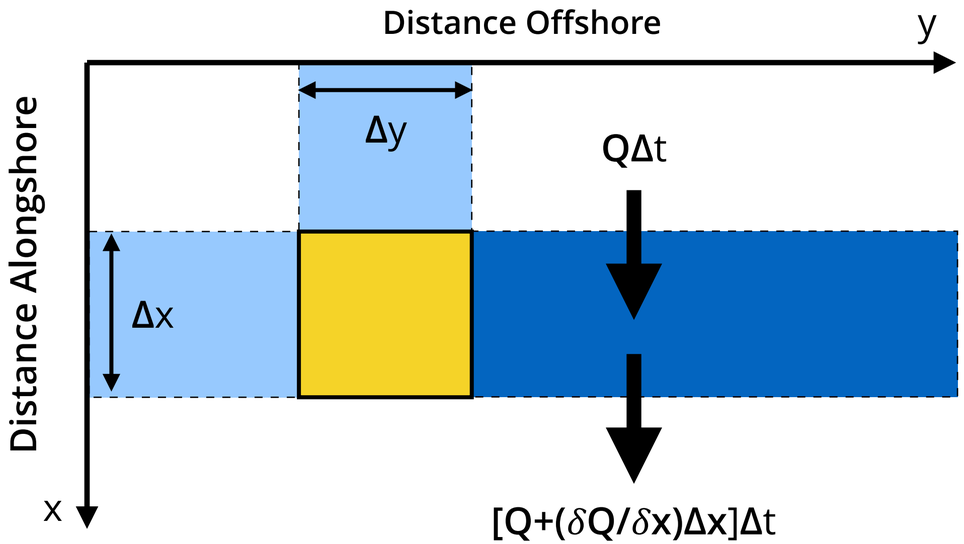

QΔt

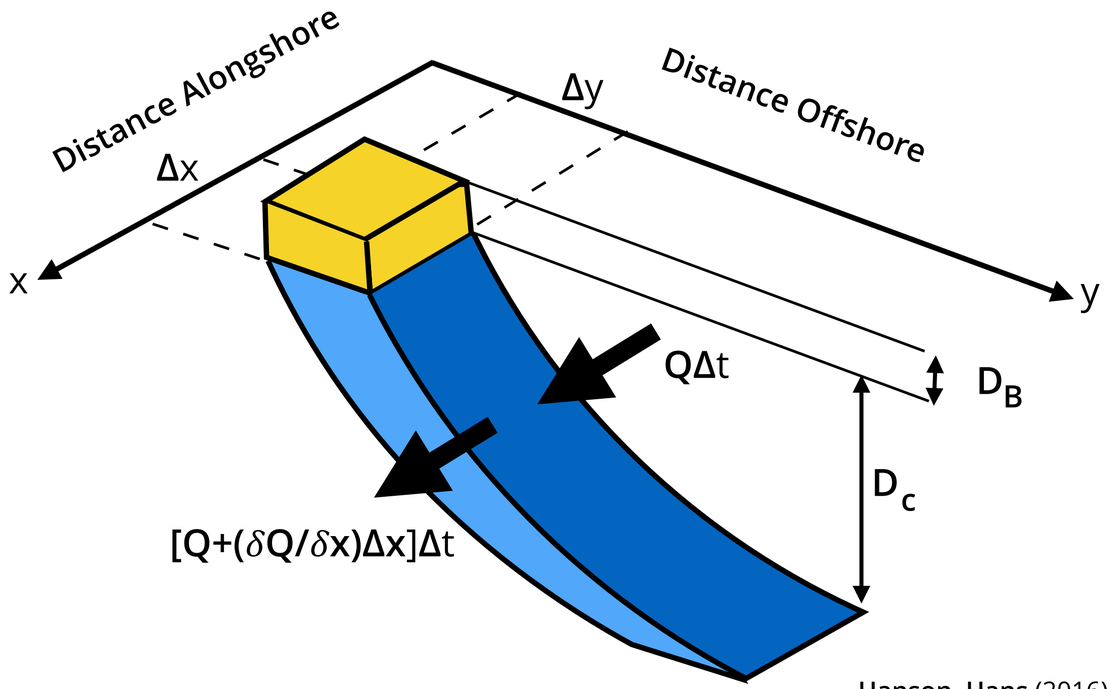

D
B

D_C

$$\frac{\Delta y}{\Delta t} + \frac{1}{D_B + D_C} \frac{\Delta Q}{\Delta X} = 0$$

1-line model





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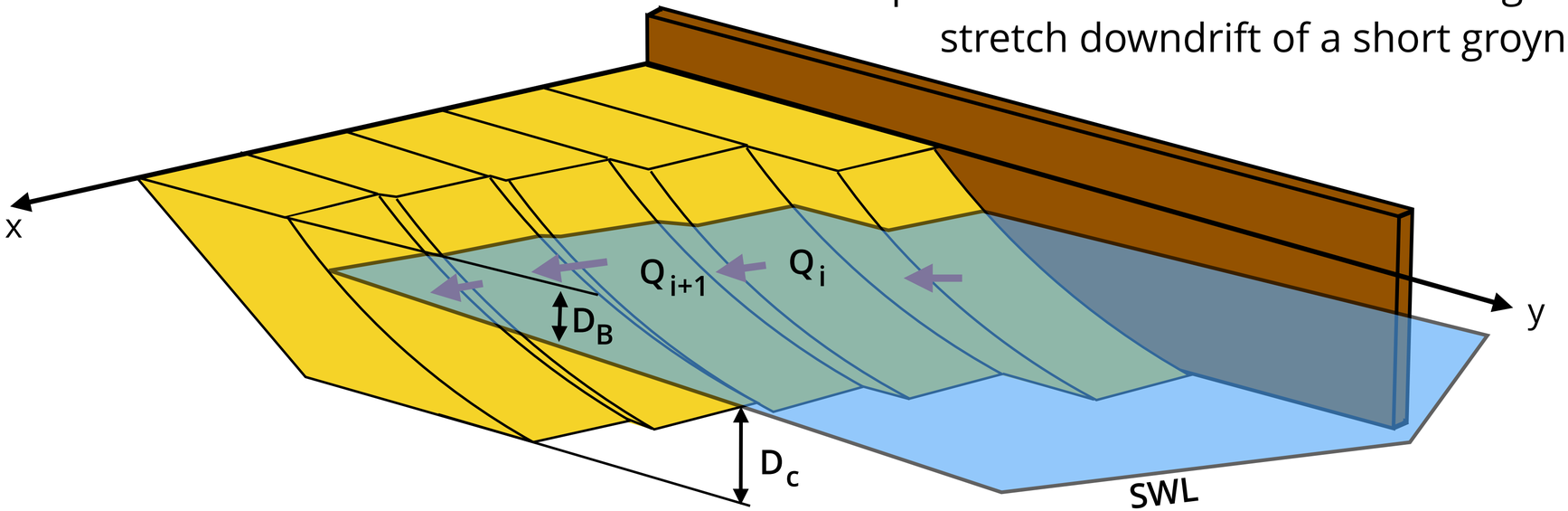
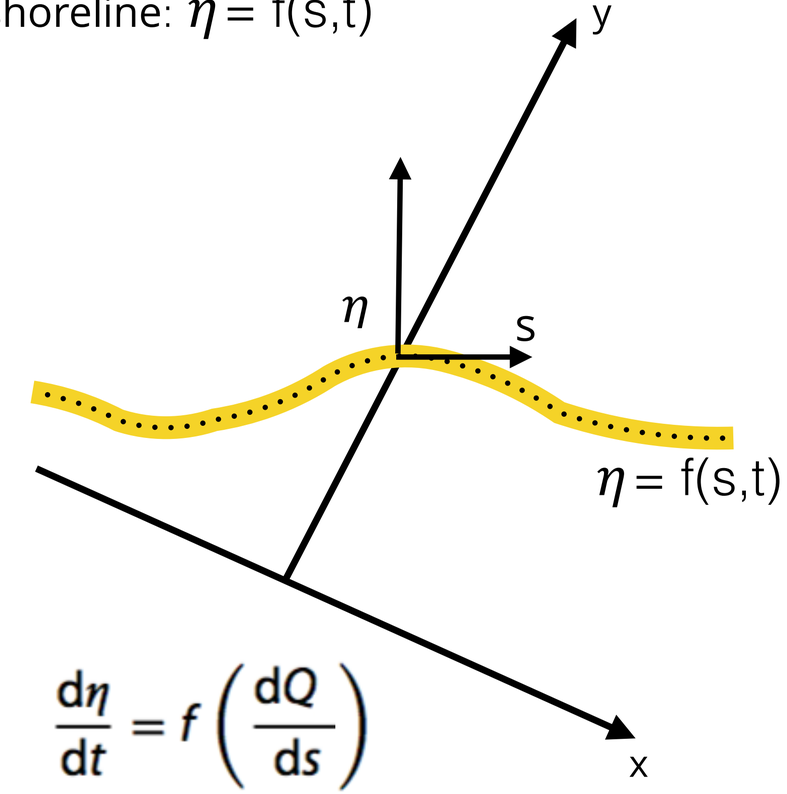
1-line model

Representation of several cells along a coastal stretch downdrift of a short groyne.



Hanson, Hans (2016)

shoreline: $\eta = f(s,t)$



$$\frac{d\eta}{dt} = f\left(\frac{dQ}{ds}\right)$$