

Table 2: Embarras River properties used for normalizing the respiration and denitrification time scales.

† Porosity was obtained from Figure 5 in Urumović and Urumović Sr (2014) by considering the referential grain size = D_m . ‡ The hydraulic conductivity was calculated with the Kozeny–Carman equation.

Embarras River Properties	
mean grain size (D_m)	1 mm
stream depth (d)	0.35 m
mean stream Velocity (U_{mean})	0.44 m/s
Dune wavelength (λ)	1 m
Dune height (H)	0.1 m
Dune roughness (H/d)	0.29
Porosity (θ) †	0.32
Hydraulic conductivity (K_c) ‡	$4.4E$ $- 3 \text{ m/s}$