The role of riverine bed roughness, egg pocket location, and egg pocket permeability on salmonid redd-induced hyporheic flows

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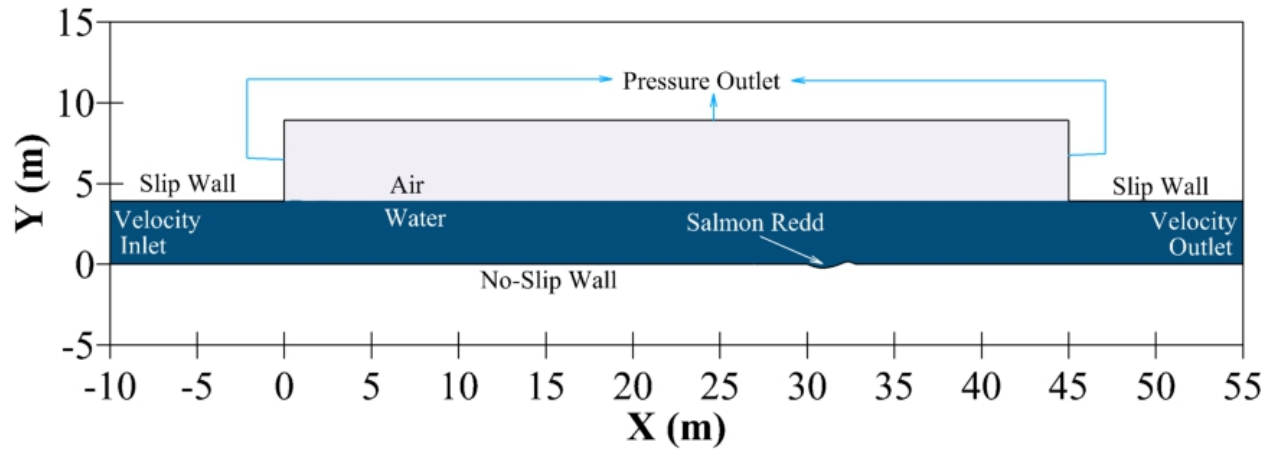
   Amsterdam, the Netherlands

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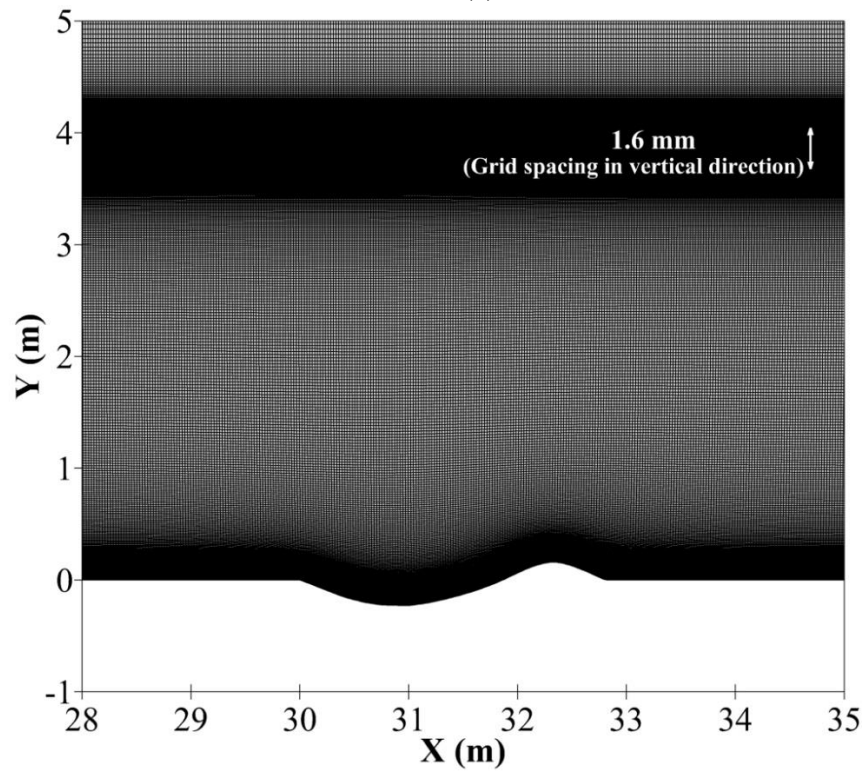
Contents of this file

Figures S1 to S3

Introduction

This supporting information presents additional figures that reinforce the main article, offering further details to substantiate our explanations in the paper.

(a)

(b)

Figure S1: Simulation domain design: (a) surface flow domain with air (colored in grey) and water (colored in blue) along with the boundary conditions, and (b) Zoomed-in section near the redd showing the mesh.
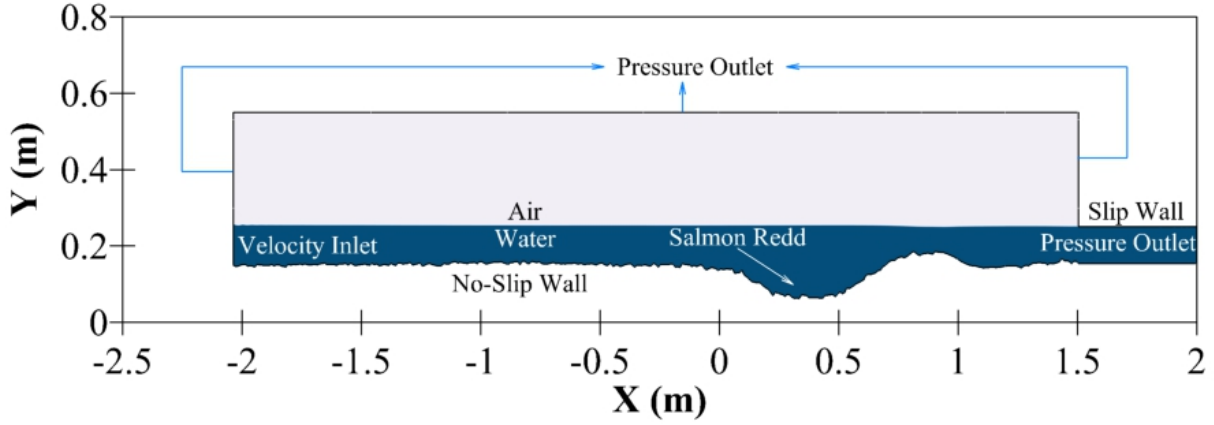
Figure S2: Similar to figure 4a in the paper, but with the complete simulation domain, illustrating air (colored in grey) and water (colored in blue) along with the boundary conditions.
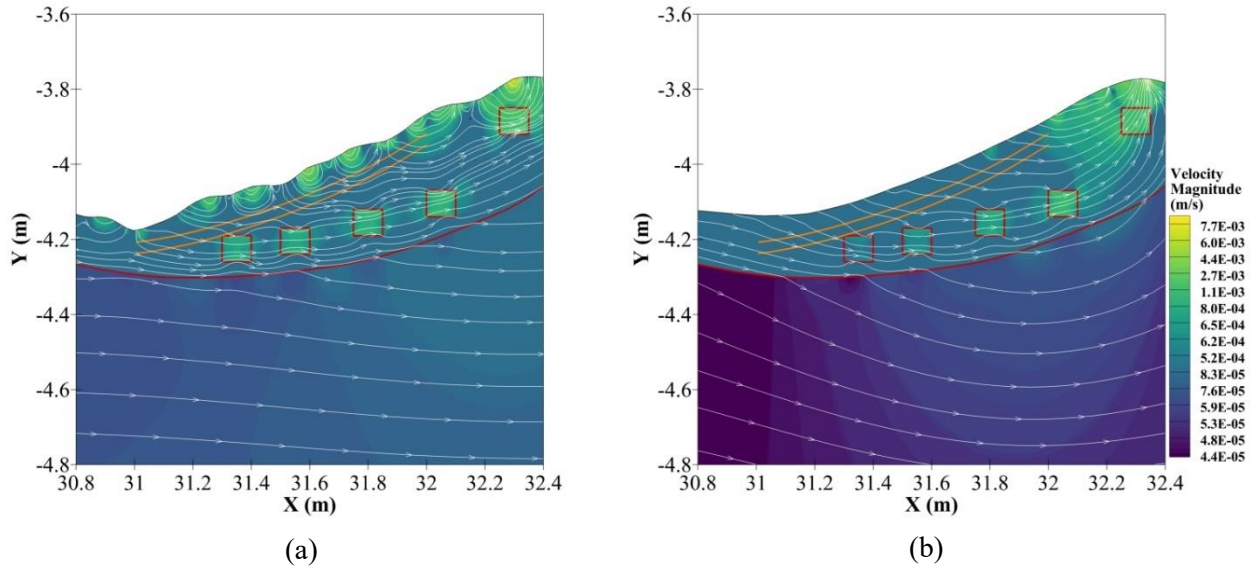

(a)

(b)

Figure S3: Subsurface flow characteristics for redds with the roughness of σ_E =13.3 mm. (a) R_1 and (b) R_2 with five egg pockets situated inside the redds. The orange curves indicate the locations at which downwelling fluxes are extracted at 2 times (top) and 3 times the D_{50} of a 3 cm rough waterbed. Flow is from left to right.