

TITLE: Data presented in the paper "Turbulence-mediated facilitation of resource uptake in patchy stream networks" (Limnology and Oceanography 2018)

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#### Figure 1 Vegetation structure.csv

Description of biomass and canopy architecture for the transplanted patches of *Callitriche* and *Groenlandia*.

Distance : Distance (in m) within the patch from its leading edge  
LowerCanopyHeight : Lower height of the overhanging plant canopy (in m), if applicable  
UpperCanopyHeight : Upper height of the plant canopy (in m)  
Biomass\_gDWm-2 : Mean vegetation biomass (g DW m<sup>-2</sup>) used in the transplanted patches of *Callitriche* and *Groenlandia*  
Species : Species considered in the study

#### Figure 2 3 5 Uptake vs hydrodynamics.csv

Dataset including NH<sub>4</sub><sup>+</sup> uptake rates (μmol g<sup>-1</sup> (DM) h<sup>-1</sup>) for individuals of *Callitriche* and *Groenlandia* per location (averaged over the two replicate runs) and measurements of hydrodynamic parameters.

Species : Species used in the incubation experiment  
UptakeRate : NH<sub>4</sub><sup>+</sup> Uptake rate (μmol g<sup>-1</sup> (DM) h<sup>-1</sup>)  
U : Depth-averaged flow velocity (m s<sup>-1</sup>)  
Q : Volumetric flow rate within the canopy (m<sup>3</sup> s<sup>-1</sup>)  
TotalFlowEnergy : Total Flow Kinetic Energy within the canopy (m<sup>2</sup> s<sup>-2</sup>)  
CanopyHeight : Height of the vegetation canopy (cm) in the measurement location  
CanopyTKE : Turbulent Kinetic Energy within the canopy (m<sup>2</sup> s<sup>-2</sup>)  
ReynoldsStress : Reynolds stress (Pa) at the top of the canopy  
Configuration : Spatial configuration of the two macrophyte patches in the flume

#### Figure 4 Uptake rates.csv

Dataset of NH<sub>4</sub><sup>+</sup> uptake rates (μmol g<sup>-1</sup> (DM) h<sup>-1</sup>) for individuals of *Callitriche* and *Groenlandia* in the replicate incubation experiments for each of the four vegetation spatial configurations.

SampleID : Individual identification code for the plant sample  
UptakeRate : NH<sub>4</sub><sup>+</sup> uptake rate (μmol g<sup>-1</sup> (DM) h<sup>-1</sup>)  
Species : Species used in the incubation experiment  
Configuration : Spatial configuration of the two macrophyte patches in the flume  
Replicate : Replicate incubation for each configuration  
StreamwisePosition : Plant sample position within the patch (streamwise direction)  
SpanwisePosition : Plant sample position within the patch (spanwise direction)