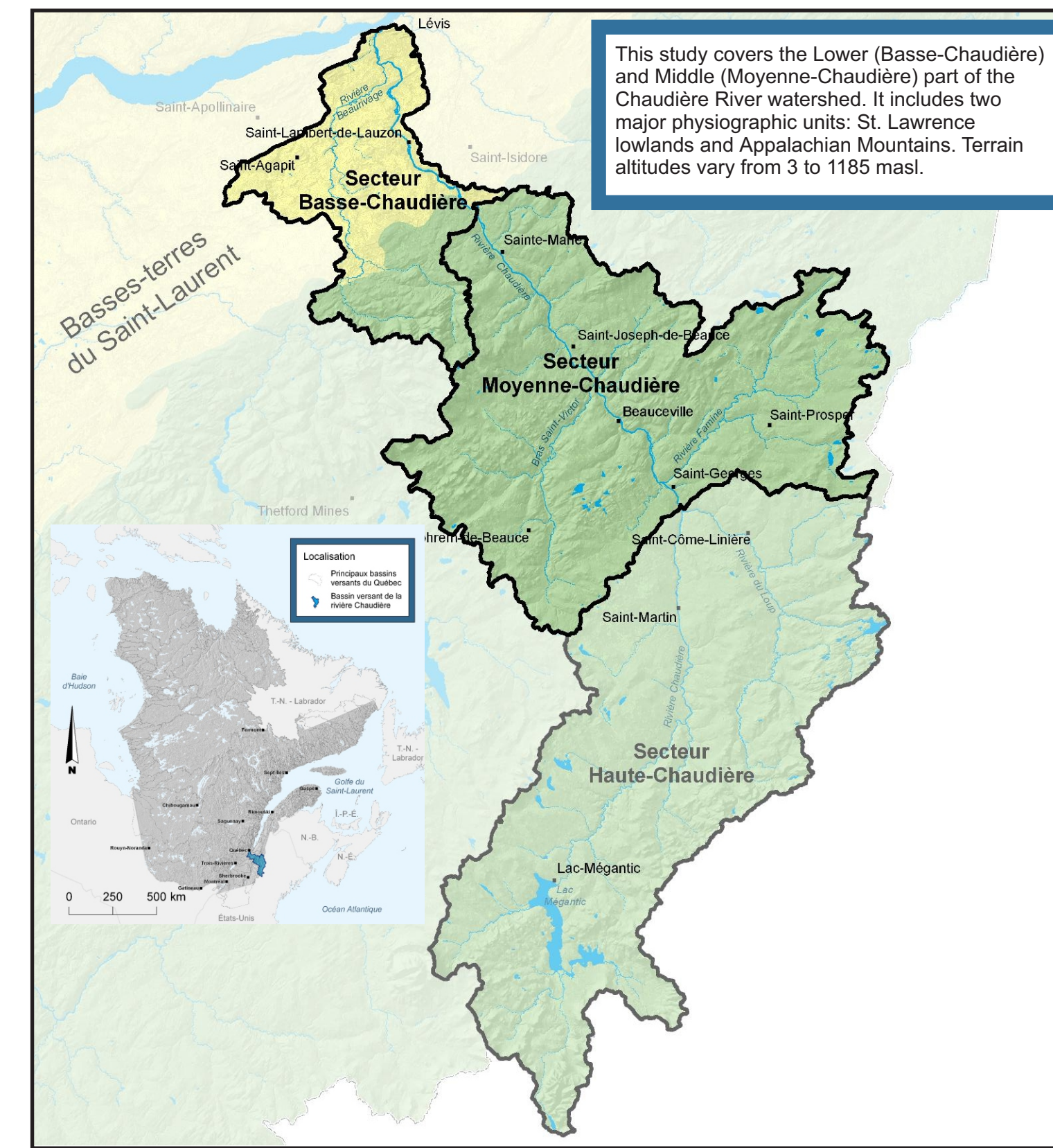


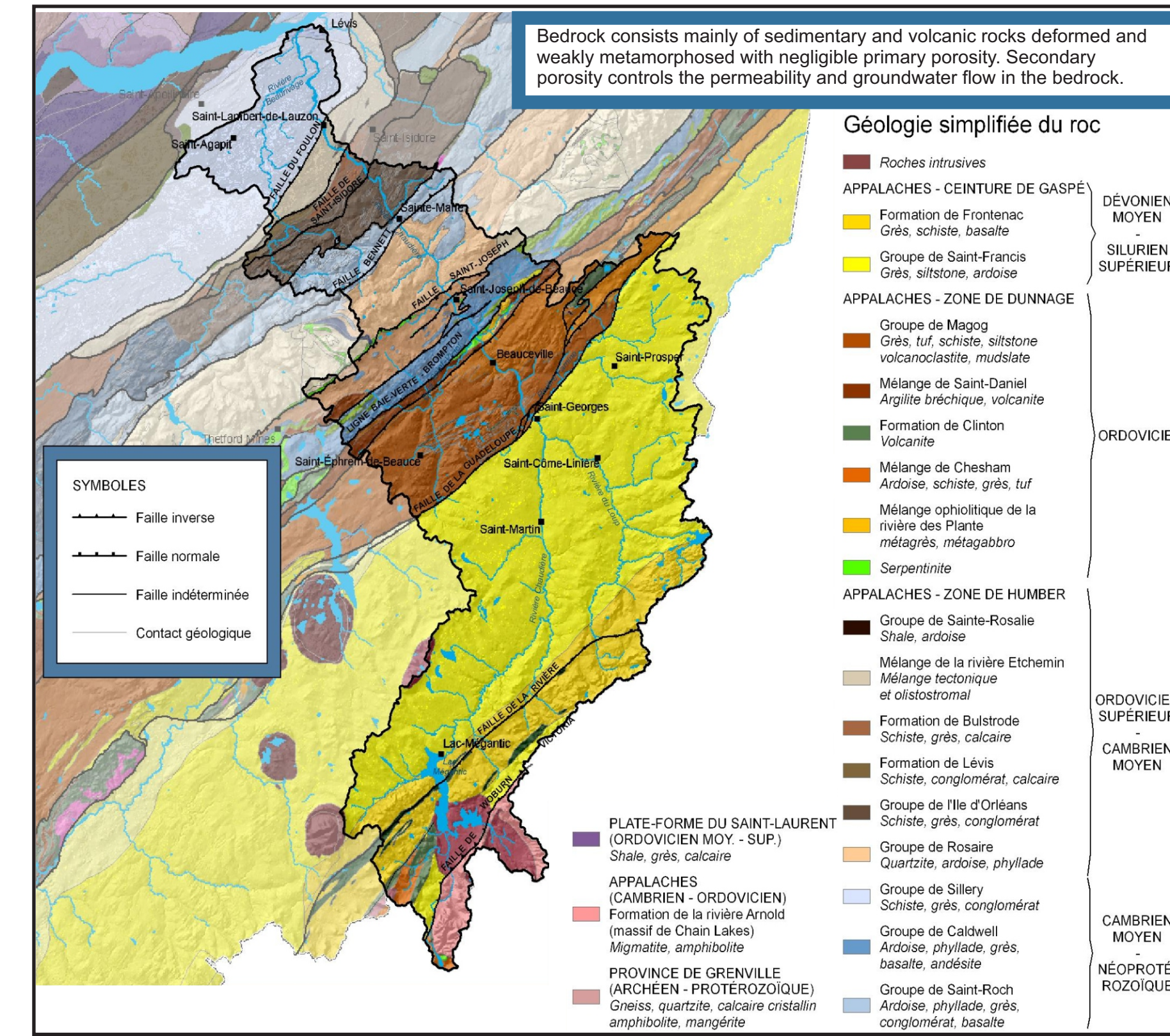
## ABSTRACT

Located south of Quebec City, the Chaudière River Watershed encompasses an area of 6700 km<sup>2</sup>, from the American border to the St. Lawrence River. It is mainly agricultural region where approximately 65% of the population relies on groundwater for its main source of water. The regional aquifer consists of fractured rocks of the Appalachian province and sparse coarse surficial sediments. This poster presents results of a regional hydrogeological study focusing on the development of a conceptual model for the regional groundwater flow. Estimated average recharge rates is 64 mm for fractured bedrock and 273 mm for coarse sediments. Over 600 measurements of groundwater levels show a close correlation with topography. The mean hydraulic conductivity of the bedrock is relatively low ( $K=1 \times 10^{-7}$  m/s), suggesting mainly local groundwater flow. Chemical analyses of 155 groundwater samples show that groundwater is of good quality relative to the drinking water standards.

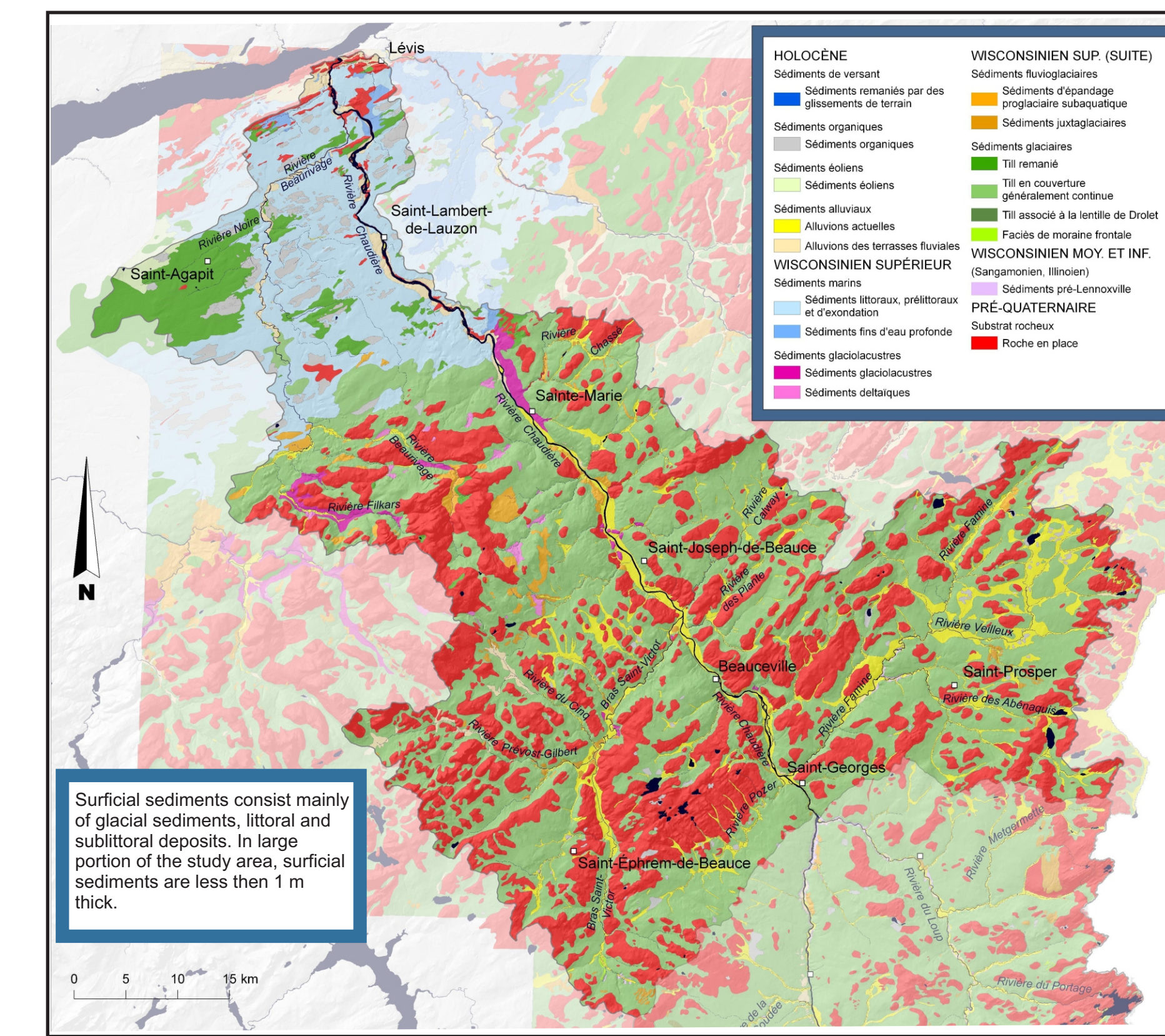
## Study area



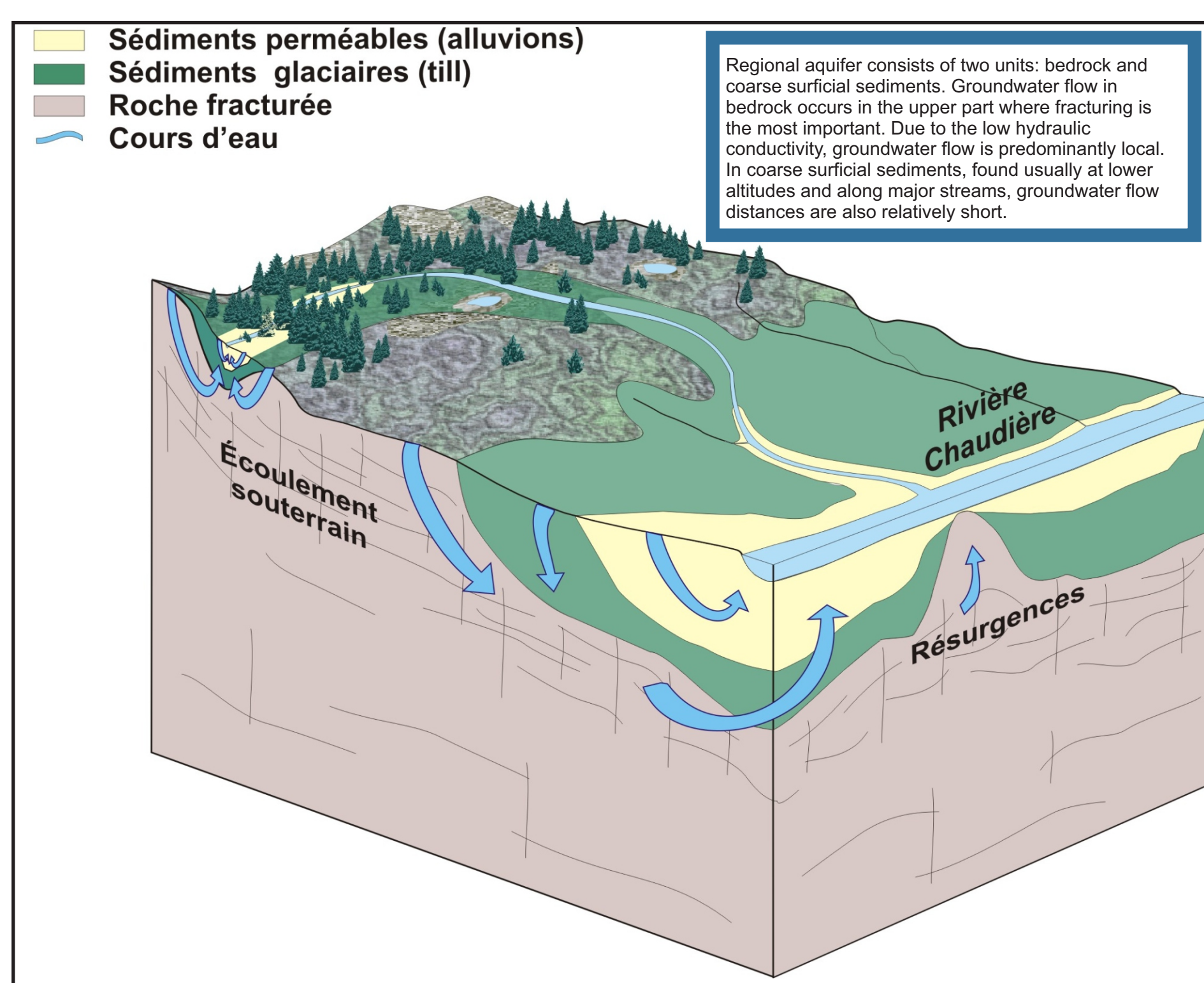
## Bedrock geology



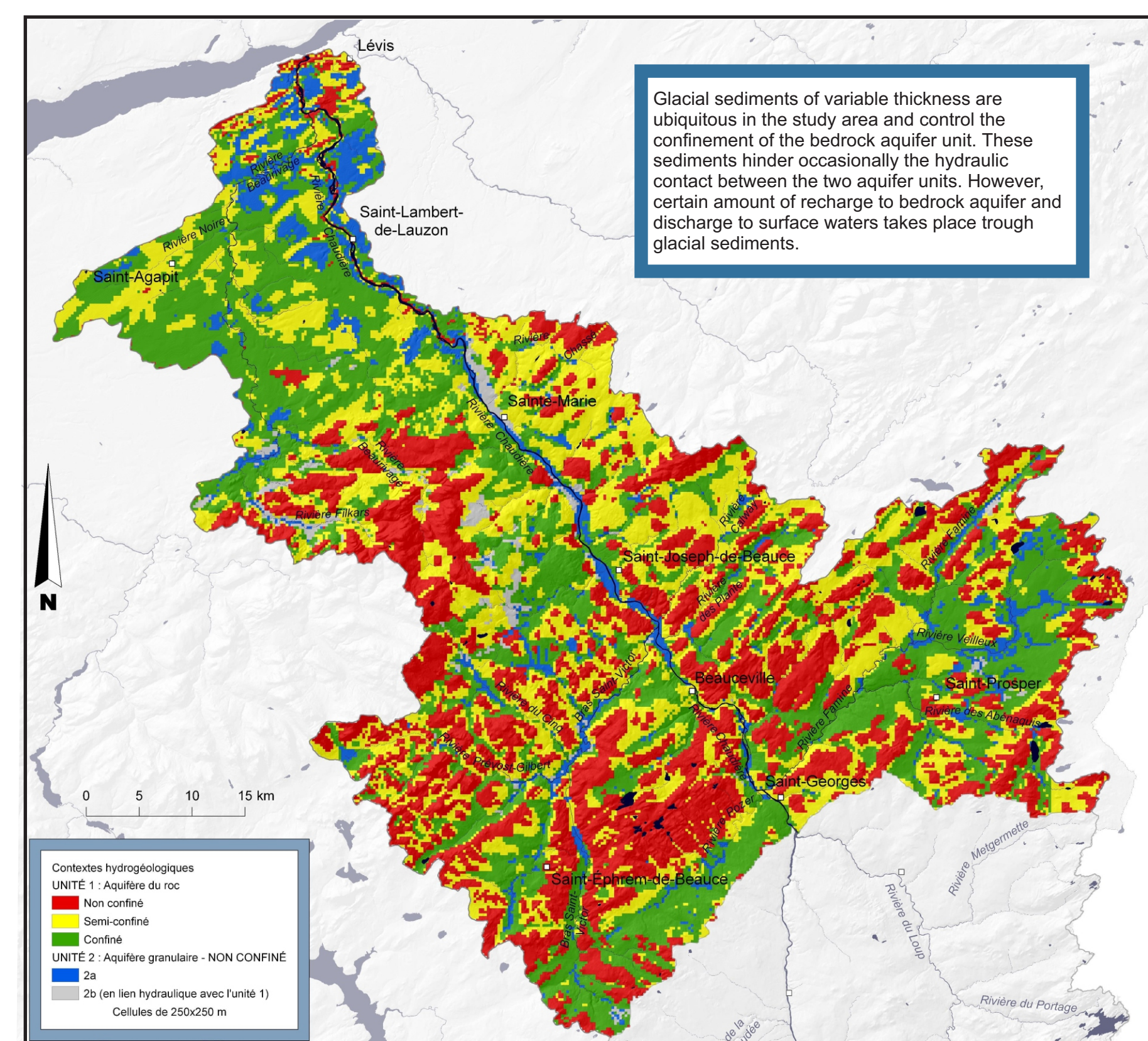
## Surficial geology



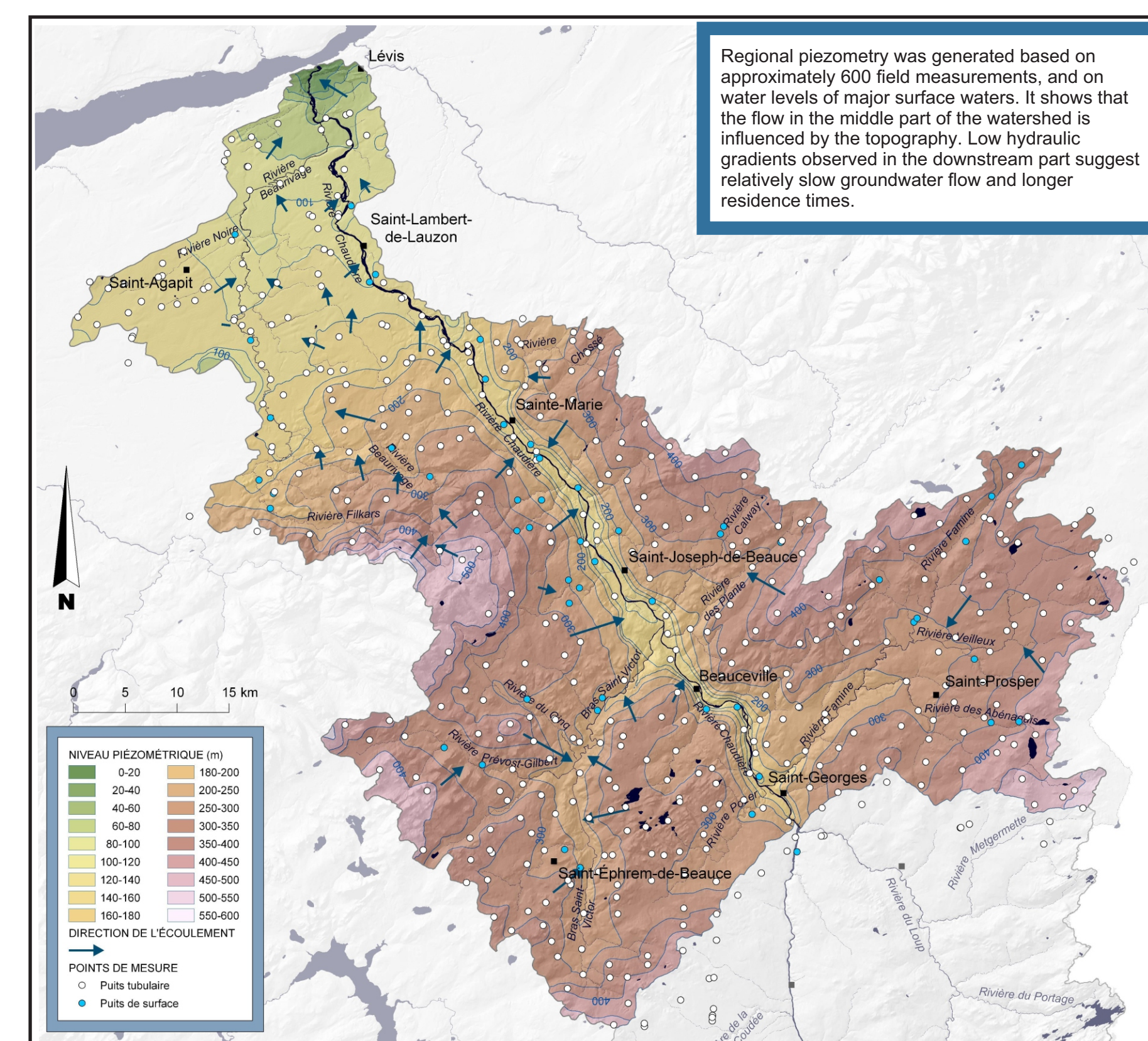
## Conceptual flow model



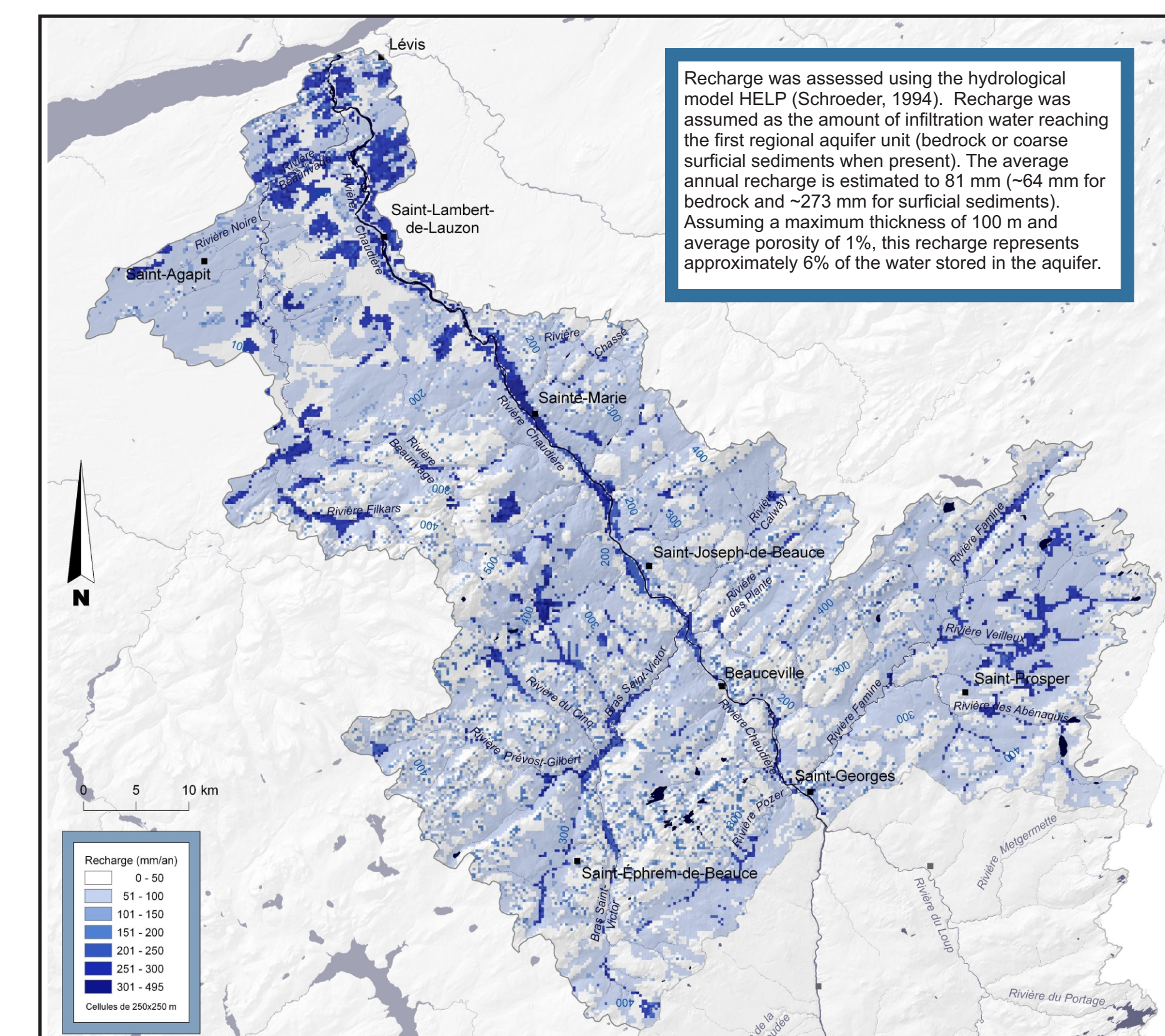
## Hydrogeological context



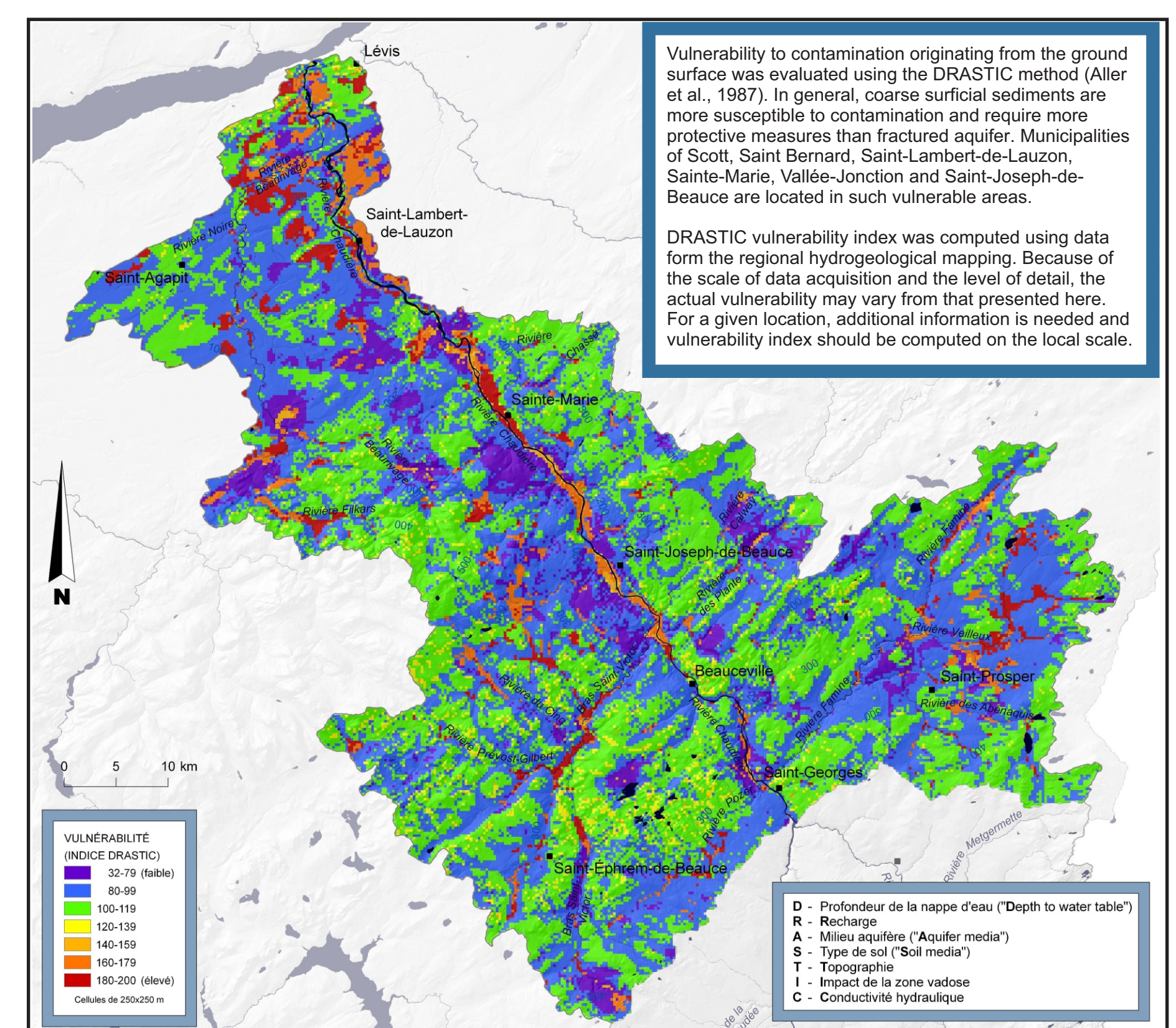
## Piezometry



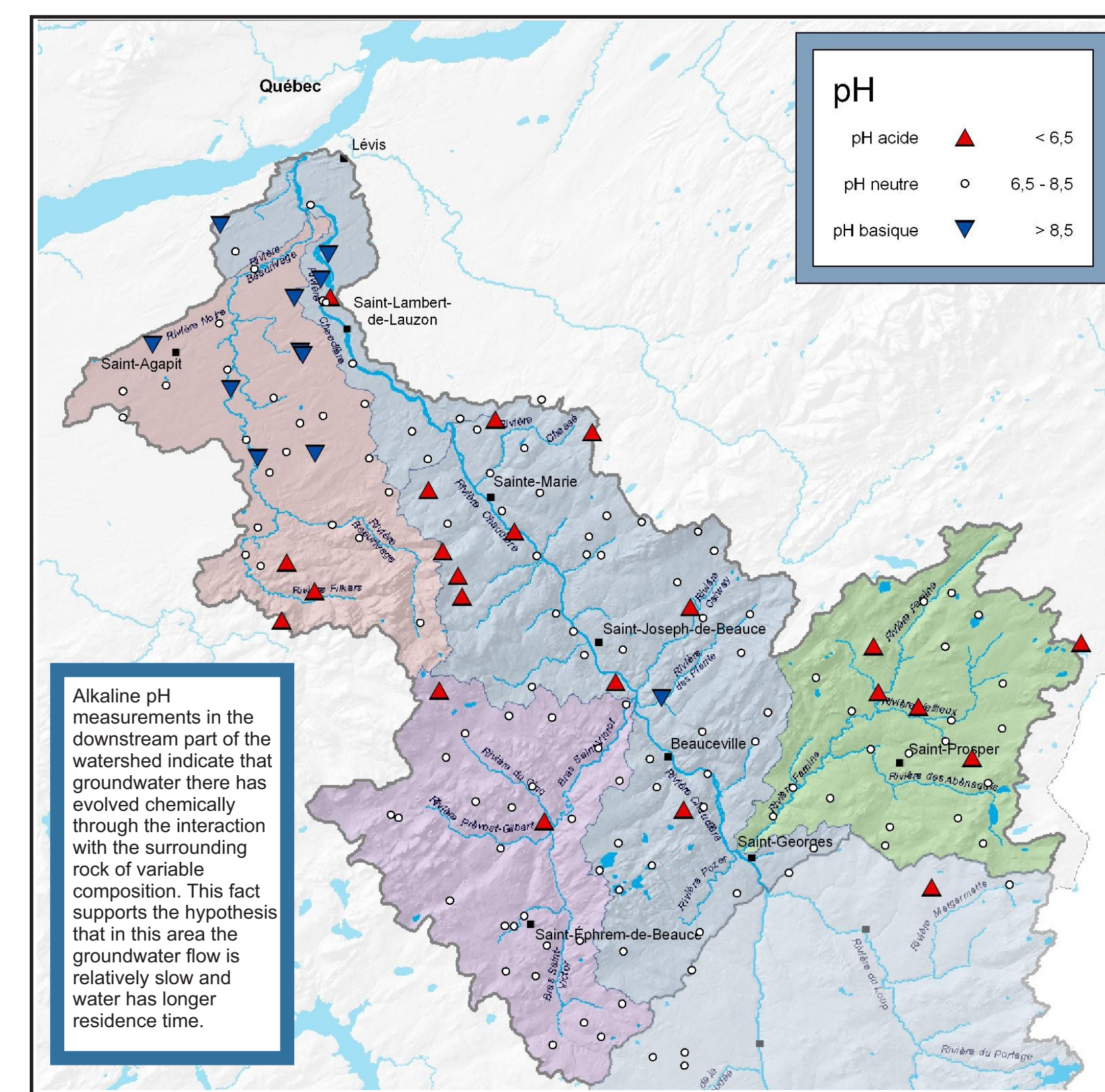
## Recharge



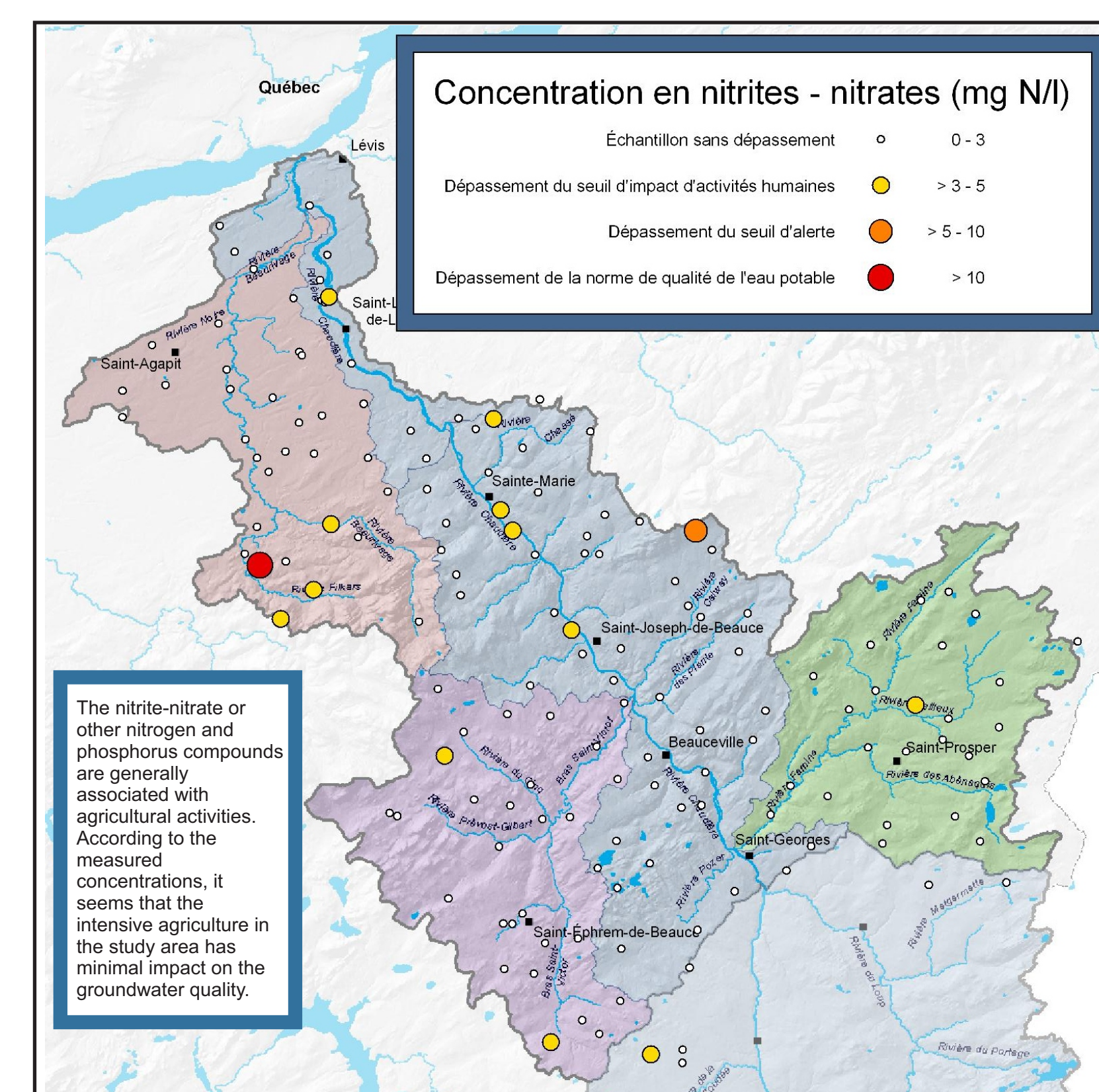
## Vulnerability



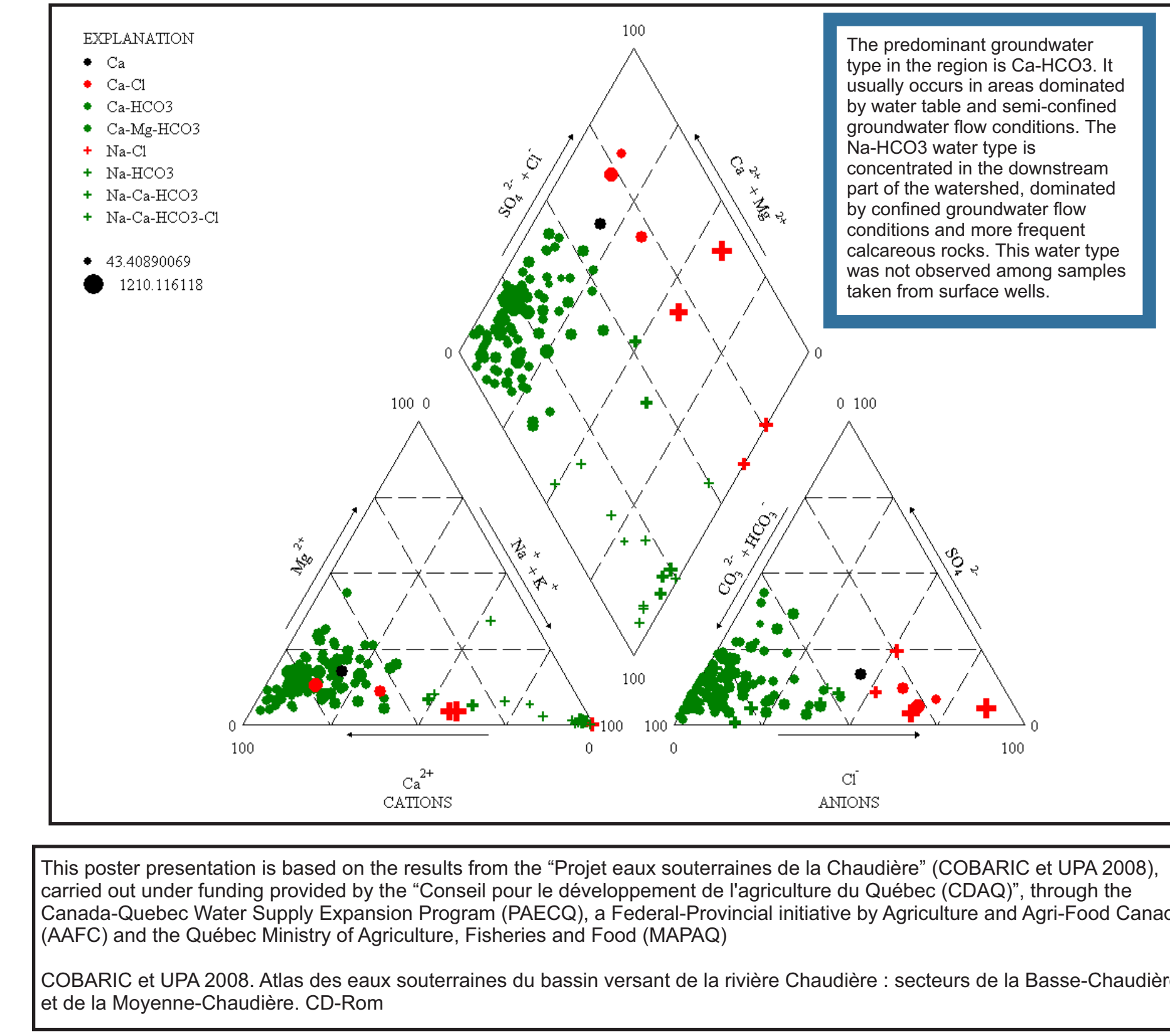
## Groundwater chemistry-pH



## Groundwater chemistry-NO<sub>2</sub>-NO<sub>3</sub>



## Groundwater type



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<sup>2</sup> TCS&T/AECOM, Montréal, Québec  
<sup>3</sup> Québec Ministry of Environment, Québec, Québec  
<sup>4</sup> Université du Québec en Abitibi-Témiscamique, Amos, Québec  
<sup>5</sup> Watershed Conservation Authority, Sainte-Marie, Québec

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