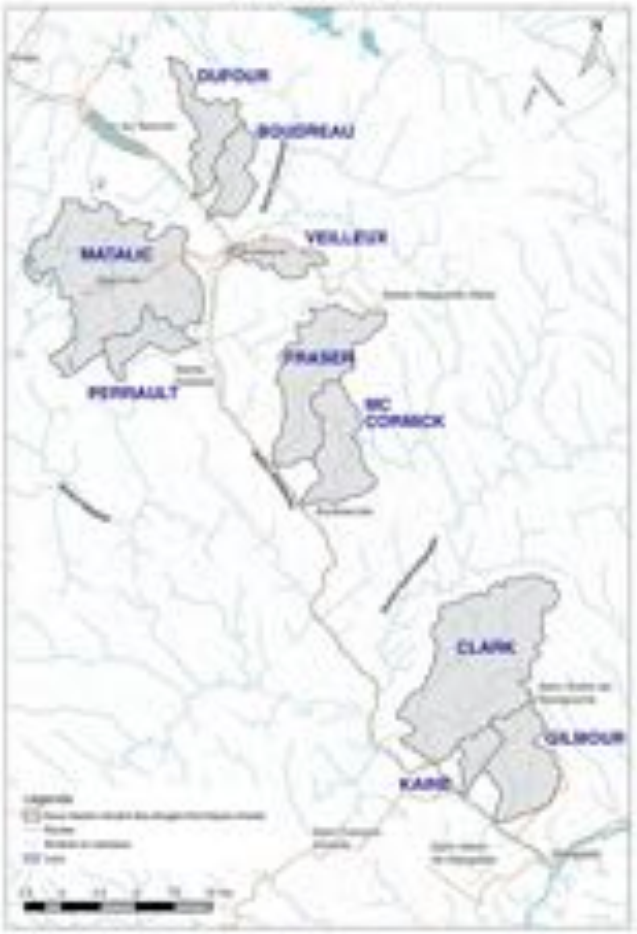
Mapping and Protecting Thermal Refuges

The Mavic 2 Pro drone flew over the Dufour stream near Causapscal photographing this thermal refuge. The Dufour stream is one of ten prioritized thermal refuges being studied by the Gespe'gewaq Mi'gmaq Resource Council (GMRC) and the Organisme de bassin versant Matapedia-Restigouche (OBVMR) in 2019 and 2020. Thermal refuges are cold water streams flowing into the main river, providing Atlantic salmon with areas of refuge during periods of high heat, allowing salmon to thermoregulate.

As climate change continues to have an impact on Atlantic salmon by causing more severe droughts and higher water temperatures for extended periods of time, thermal refuges are becoming increasingly important. Atlantic salmon are cold blooded species and their internal temperature is the same as the river temperature. Temperatures above 20 degrees Celsius cause heat stress and increased mortality rates in salmon.

The research project started in June of 2019 with local groups partnering to map and protect thermal refuges on the Matapedia River: GMRC, OBVMR, Listuguj Fisheries, Restigouche River Watershed Management Council, and the corporation de Gestion des Rivieres Matapedia et Patapedia (CGRMP). The project is being funded by the Atlantic Salmon Conservation Foundation (ASCF).

Carte des sous bassins versants des refuges thermiques choisis



A database has been put together for the entire Restigouche River Watershed and each refuge has been identified and classified into categories based on the type of refuge. The Matapedia River is one of the most productive rivers in the Restigouche watershed and there are 660 thermal refuges in the Matapedia watershed alone. 30 of those thermal refuges were of interest, however we prioritized efforts on 10 of the larger refuges.

As these groups work to protect these ten streams, meetings will be held with landowners to discuss land use and how they can protect these streams. The project will end in December of 2020.