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Backgrounder

Levees and tide gates: a very Acadian way to reclaim rich marshland

French colonists who left Poitou and settled in Port-Royal, Acadia, in the 17th century wasted no time in adapting ancestral techniques of controlling water in an effort to reclaim their land for farming. This marshland along the Baie Française is known today as the Bay of Fundy. The bay, surrounded by almost 31,000 hectares of marsh, has the strongest tides in the world, and over the years those tides have deposited a rich layer of alluvium that in some places is 40 metres deep.

So the Acadians adapted a water control system to prevent the tillable portion of the marshes along the bay and along rivers from being flooded with salt water, an undertaking which earned them the nickname *défricheurs d'eau*, or water clearers. The system was comprised of two main elements: levees and tide gates, known as *aboiteaux*.

These levees, massive embankments ranging in width from two to seven metres at the base and topped by a 60 centimetre-wide path or a roadway, were usually 45 centimetres higher than the high-water line. The slope, as much as 45° above the horizontal, was determined by the volume of water to be held back. Once a small, narrow, deep trench was dug in the middle of the spot where the levee was to be built (so as to anchor the levee in the mud and prevent it from sliding under the force of the tide), the face would be constructed. The walls were built of sod, and the space between the walls, like the body of the levee itself, was filled with clay.

Each *aboiteau* or tide gate was comprised of a square or round sluice made of wood planks or a hollowed-out tree trunk up to 6 metres long and capped by a cribwork made of stakes and branches. Sloped slightly toward the sea or river, the sluice was installed in the bottom of a creek running through the levee and was fitted with a clapper or a valve that cleverly allowed rainwater to run off into the ocean at low tide but prevented salt water from infiltrating into the crops at high tide. If the land had little or no natural slope, a network of canals and trenches was built to carry the water to the creek leading to the sluice.

This system of levees and tide gates helped create a sense of belonging and pride among the Acadian people. Every owner of marshland was expected to help build and maintain the structures, either by working on them directly or contributing money or materials. The community nature of the endeavour was strengthened by the sheer magnitude of the common infrastructures: a levee could be up to 5 kilometres long. The levees protected vast tracts of land, and for that reason especially, people felt bound to preserve them for the benefit of all.

Memramcook is the perfect place to commemorate the *aboiteau* system, because the Acadians still inhabit the area and it is where all the components of a tide gate, including the channel and the structure made of branches, are best preserved. The Memramcook Valley also features both river and ocean tide gates.

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News Release associated with this Backgrounder.

[The Government of Canada recognizes the national historic significance of the Acadian *aboiteau* system](#)

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