

## FLOOD EMERGENCY RESPONSE PROJECT NICOLET, QUEBEC, CANADA

### Longitudinal Protection

#### Problem

In spring 2019 vast areas in eastern Ontario, southern Quebec and New Brunswick experienced exceptional flooding due to a combination of events such as heavy rains, melting snow and sudden temperature increase.

Just two years earlier, in 2017, a similar flood affected the same areas along the Ottawa River causing severe infrastructure and private properties damage. Unfortunately, the number of flood-related disasters has been growing in the past years and it does not seem to slow down. For this reason, Canadian public agencies are funding projects to implement long-term flood mitigation measures and flood emergency response plans that include ready-to-use solutions that can be quickly deployed to protect assets and lives.

After the 2017-flood, Nicolet, a small town along the St. Lawrence River in the province of Quebec, realized that every year the risk of flooding for certain areas has been increasing due to climate change therefore decided to proactively purchase in advance a product that can be reused.

#### Solution

In May 2019, before the flood reached its peak, the city was able to create flood control barriers using FlexMac DT in multiple strategic locations to protect residential areas.

The installation only required 4-5 people and was carried out very fast thanks to the fact that the product is a 5m long pre-assembled multicellular structure that is very light and flexible. Multiple units were connected simply using pins and filled with soil to create a 1m high long barrier. An impermeable liner was used to wrap the system and decrease the permeability. The barrier was very effective in containing the flood and preventing debris to invade the roads.

Once the water levels went back to normal the FlexMac DT units were lifted, dropping off the soil from the open bottom, folded up and stocked in a warehouse, ready to be deployed for the next flood.

**Client:** TOWN OF NICOLET

#### Products used (Qty.)

- FlexMac DT 35- 5m x1m x1m

**Date of construction:** 05/2019 - 05/2019



FlexMac DT installation



Filling with soil



During the flood



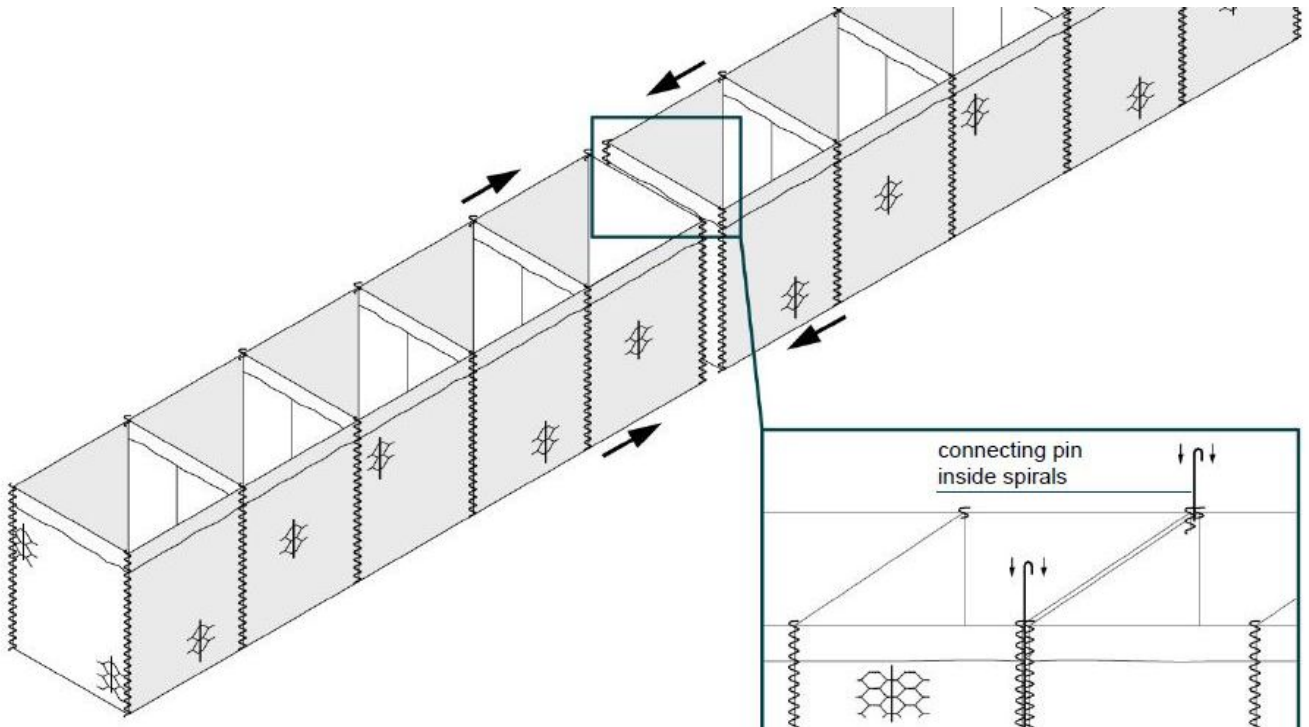
High water level and debris during the flood



Debris deposit after the flood



FlexMac DT unit lifting operation



FlexMac DT unit connection

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