

Dramatically reducing Cost, Time and Logistics effort

“The most effective Emergency Management activities are proactive prevention and mitigation measures.”

“The return-on-investment for these activities,...would generate savings of \$6 for every \$1 invested in prevention.”

Source: EMERGENCY MANAGEMENT STRATEGY FOR CANADA: TOWARD A RESILIENT 2030 - Public Safety Canada 2019

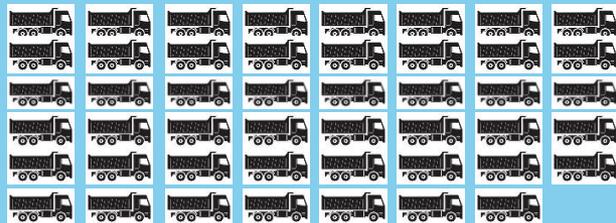
CUMULATIVE COST SAVINGS OVER MULTIPLE FLOOD EVENTS (100m x 0.75m protective wall)		
	10,150 Sandbags - Cumulative total*	14 x FDS2 barriers - Cumulative total**
2 events	\$107,558	\$81,459
% saving		24%
3 events	\$161,337	\$84,344
% saving		48%
4 events	\$215,116	\$87,229
% saving		59%

* Costs include: Materials, sand, labour, transport, sand removal (toxic waste disposal costs not included)

** Costs include: Set up, tear down, transport, cleaning and stowing

Data sources include: US Army Corps of Engineers< North Dakota University, local supplier quotes

Transport requirements

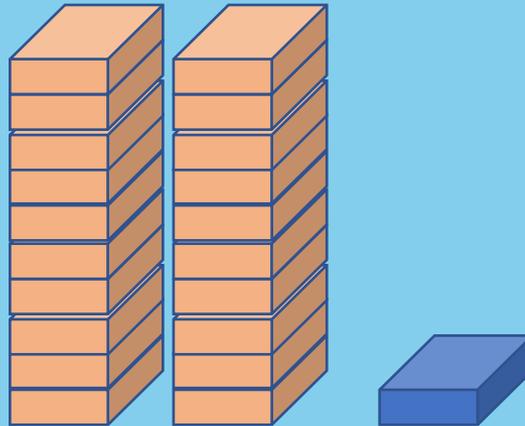


Sandbags – 47 x Dump Truck loads for set up
164 x Dump Truck loads for tear down
GHG emission – 0.6 tons CO2/km



FDS - 7 x Pick Up Trucks for set up and tear down
GHG emissions – 0.001 tons CO2/km

Storage space required



Sandbags – 428.6 cu.m.

FDS – 21 cu.m.

Set Up and Tear down time (team of 6 people)

	Sandbags	FDS 2
Set Up	180 hours*	8 hours
Tear Down	5 hours (using MHE)	8 hours**
Total	185 hours	16 hours

* Includes filling 10,150 sandbags

** Includes cleaning and stowing

Significantly reduced costs, greatly increased protection, faster recovery, time after time