

KEEPING BACTERIA BUSY

WE'VE ALL SEEN THE PERPETUALLY DERELICT, undevelopable lot once occupied by a gas station. In fact, there are approximately 30,000 such sites across Western Canada, contaminated with gas, oil and other hydrocarbons. At one in Saskatoon, Federated Co-operatives Limited (FCL) is working with several partners, including Dr. Paolo Mussone, NAIT's Applied Bio/Nanotechnology Industrial Research Chair, to reclaim the land using bacteria that occurs naturally in the soil. Adding low-dose fertilizer to the soil makes the bacteria hungry. When the fertilizer supply is stopped, the hungry bacteria resort to eating the hydrocarbons that contaminate the soil, remediating the site in a few years instead of decades. Mussone and his colleagues at NAIT's Centre for Sensors and System Integration are helping to develop sensors that will monitor progress by measuring soil temperature, pH levels and other indicators of bacterial activity. The results of the work, expected to be complete in September, will be applied to an FCL site in Stony Plain. "The quicker we can get these sites back into productive use the more we can prevent urban sprawl . . . and minimize our larger effect on the environment," says Kris Bradshaw, impacted sites manager with FCL.

— Amanda Stadel

