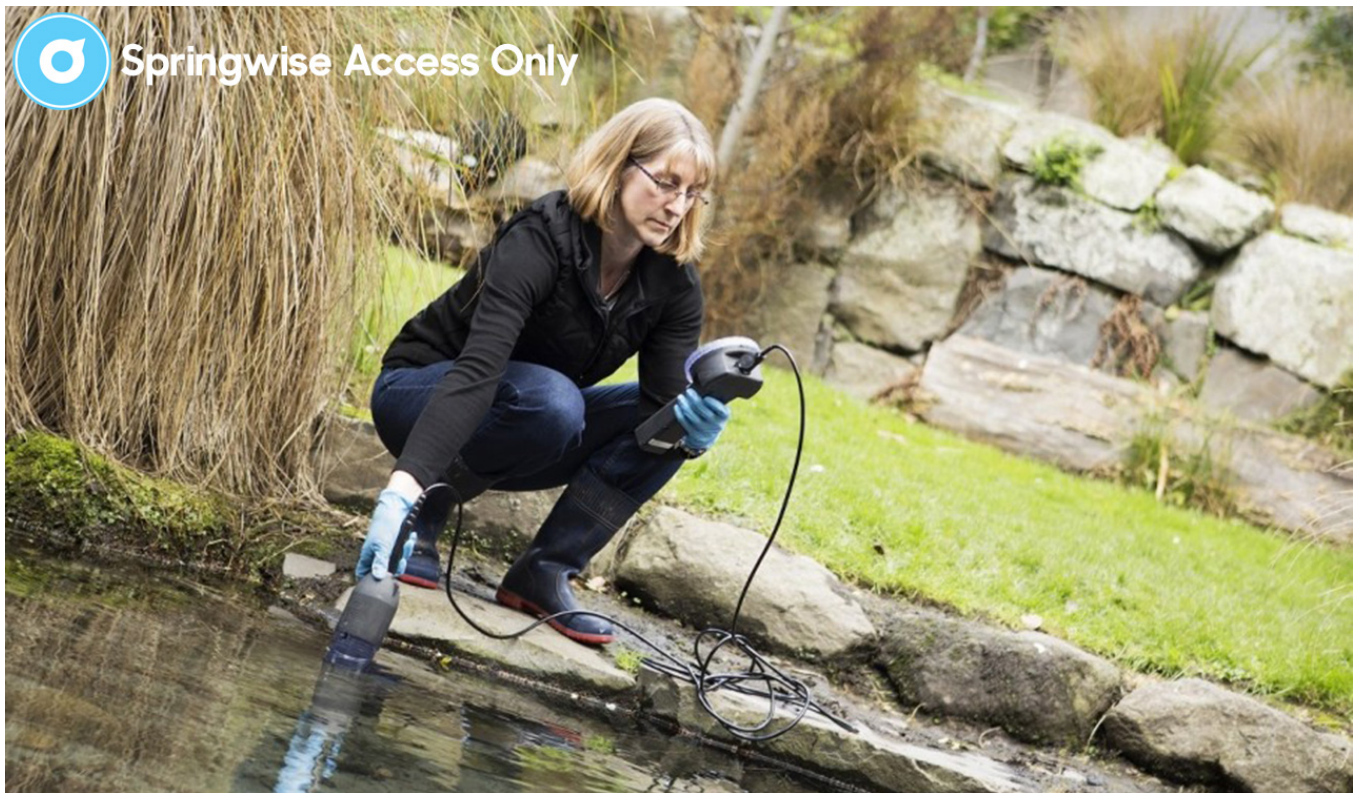


Synthetic DNA traces water contamination sources



Current methods for tracking water contamination are relatively limited in scope and speed, and can be toxic to animals if applied in high enough concentrations. Scientists at New Zealand's Institute of Environmental Science and Research ([ESR](#)) have found a way to swiftly identify the path of contaminated water, as well as the source. Non-toxic and relatively inexpensive to produce, synthetic DNA tracers can be applied to multiple bodies of water.

Easy to detect in tests, the team developed two types of tracer – one for surface and waste waters and one for subsurface water. In cases of public health emergencies, the tracers could be applied to multiple locations and tracked concurrently, making finding the source of the contamination a much quicker task. Future use of the tracers could include expansion into other industries, such as medicine, food security and forensic analysis.

Water security is a worldwide problem, with solutions ranging from [solar panels that produce drinking water](#) to [waste-based products helping farmers survive drought](#). How could some of these solutions be scaled up and adapted for use in smart cities?

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