On May 9, 2012, UC Berkeley researchers launched a fleet of 100 water quality sensors into Northern California's Sacramento River. Designed to track water contamination, salinity, and levels within the Sacramento-San Joaquin Delta, the sensors were actually floating, tweeting robots, which researchers hoped would gather high-resolution data on contamination and direction in which salt water flowed.

"Responsible stewardship of inland water requires detailed information about the mixing and transport of various constituents in the water itself," says project manager Andrew Tinka. He says that the finalized Floating Sensor Network robots will help accomplish this because they can be rapidly deployed to new locations to track unexpected pollution, a necessity for public safety and planning. This is especially true in areas with a variety of stakeholders, such as the Delta, which is an endangered habitat and a major drinking water and irrigation source.

What is also effective about using social and mobile media technologies like tweeting robots (beyond the cute factor) is that end-users can sometimes participate in and benefit from this information, which can help increase awareness and support.

For example, there is the Sewage Alert Service, whose text messages offer information on 200 beaches in England, and which, according to Drift Surfing, has helped change the behavior of an astounding 94 percent of beachgoers, surfers, and swimmers that subscribe.

Another example is Creek Watch, a crowd-sourcing application for iPods and iPads, which Microsoft developed to gather first-hand observations to share with water control boards.
(Data on water levels, speed, and trash are collected into an observable table to help agencies track pollution, manage water resources, and plan conservation programs.)

Tinka agrees with this modernized way of leveraging social networks and moving beyond static water trackers. "Those of us who love exploring and spending time in the outdoors have a special motivation to see these ecosystems safeguarded and maintained," he says. "Good decisions require good information, and technologies like the FSN can help us make the right choices in the future."

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