California state water control board aims to improve water quality by partnering with IBM

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A new application that enables iPhone users to help monitor water quality and alert authorities to problems, is now available in Apple's App Store. The first state to partner with IBM to use this data to monitor the thousands of miles of creeks and streams in their jurisdiction is California's State Water Control Board.

Developed by IBM Research and available for free at Apple's App Store, Creek Watch is an easy-to-use application that allows community members to snap a photo of a creek or stream and answer three simple questions about the particular waterway. The data is uploaded in real-time to a central database, accessible by water authorities responsible for monitoring local water supplies.

According to the United Nations, contaminated water kills more people than all wars, crimes and terrorism combined; every 20 seconds, an infant dies from polluted water. While most agree that water is among our most precious resources, what many do not realize is that we walk over and drive past our drinking water everyday, making valuable observations about the water's condition as we do so. Creek Watch makes it easy to capture these observations, providing water resource managers with additional insight and data to better ensure a sustainable water supply.

Creek Watch uses a combination of the iPhone's built-in location sensor

and user contributed data to provide information that is valuable for water management analysis – e.g., at what times of the year specific creeks begin to run dry or when the water levels are at capacity.

Contributing water data with IBM's Creek Watch app requires just four easy steps:

· Use the iPhone's built-in camera to snap a photo of a waterway
· Specify the Water Level: Dry, Some or Full
· Specify the Flow Rate: Still, Slow or Fast
· Specify the Trash Level: None, Some or A lot

"Creek Watch lets the average citizen contribute to the health of their water supply – without PhDs, chemistry kits and a lot of time," said Christine Robson, IBM Research. "Harnessing the crowdsourced data movement for a cause people care about is a win-win-win for citizens, local water boards and IBM's desire to solve big data challenges."

In many cases the organizations charged with monitoring local water conditions are over-extended and unable to physically monitor creeks and streams on their own due to the sheer volume of waterways.

"With about 800 miles of creeks in Santa Clara County alone, we need innovative technologies like this one to empower the community to help us continuously improve our [water quality](#) and the environment," said Carol Boland, Watershed Biologist for the City of San Jose. "An amazing characteristic of IBM's Creek Watch app is that it's accessible to anyone that has an [iPhone](#) and doesn't require a huge commitment to do something that will really benefit the creeks."

Capitalizing on the phenomenon of crowdsourcing for data collection, IBM researchers hope that this and other applications will launch a new sense of environmental awareness within the community.

Provided by IBM