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## Plumbing Sensor That Listens For Leaks Can Preempt Emergencies, Conserve Water

By Heather L. Whitley

People waste it and fight over it, while globally more than 840 million still struggle to even get access to it.



BluView detects when these signals fluctuate and alerts homeowners of potential leaks via their smartphones. ISTOCK

In the United States, 40 of the country's 50 states are expected to suffer water shortages by 2023. Meanwhile, household leaks are wasting 900 billion gallons of water annually nationwide.

That's the bad news. The good news is that entrepreneurs like Emilio Vargas II, president and CEO of San Diego-based [Intellecty, Inc.](#), are developing new smart home technologies to monitor, manage and reduce water use.

"Our thought was to come out with a product that was environmentally friendly and environmentally conscious," Vargas explained. "It would help people change their behaviors by providing them with real-time data on how much water they are using, wasting or consuming."

### **Getting A Clear View**

By the end of 2016, Intellecty had developed its first prototype of [BluView](#), a sensor that fits onto a water pipe. The system's water manager continuously measures and monitors water flow based on the sounds and energy signals that are created when water moves through pipes and faucets.

BluView detects when these signals fluctuate and alerts homeowners of potential leaks via their smartphones. The sensor is like having a video camera all around the home to guard against intruders.

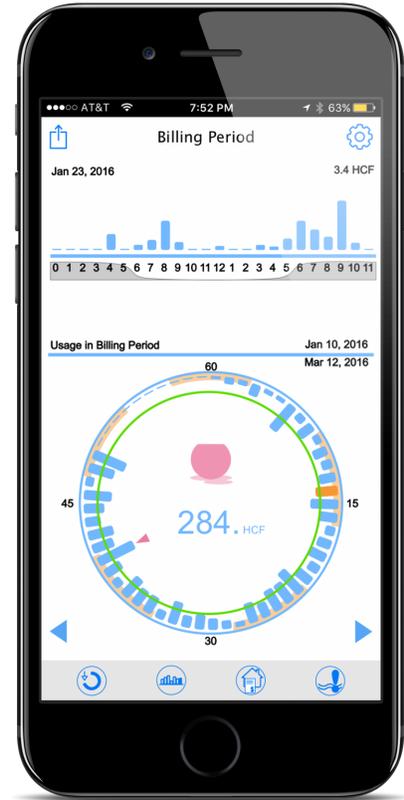
“We’re watching every single corner of your plumbing for a leak,” Vargas said.

Confident in the product’s abilities, Intellecty launched a campaign for BluView on Kickstarter. Although the company fell short of meeting its financial goals, Vargas said the online platform provided some useful insight. “We learned so much from all the people who were asking us questions about our product,” Vargas recalled. “The overwhelming interest was, ‘You guys can find a leak, and now you’re going to tell me I have a leak. Why can’t you just add something to turn off the water?’”

Based on that feedback, the Intellecty team went back to the drawing board and added a motorized water valve to the

BluView system, which allows customers to remotely turn off their water from their smartphones if a leak is detected. Early testing has proved successful, and Vargas said the updated product is expected to go to market early next year.

In addition to protecting against leaks, BluView addresses the larger issue of water management and conservation, Vargas noted. The real-time data



The BluView app that’s being developed by Intellecty would allow users to compare water use to conservation goals.  
BLUVIEW

provided to homeowners quantifies water-use patterns, so they can adjust their habits and reduce consumption.

“I think that’s a much bigger benefit for our country and globally,” he said.

### **Tech As Part Of The Team**

Staying on task and managing the development of a new product would not be possible without technology, according to Vargas. From basic communication and collaboration tools to cloud-based, computer-aided design platforms, these programs allow Intellecty to run efficiently and effectively, he said.

“We have one person working about 80 miles away out of his home office,” Vargas said. “And when he designs stuff, we can see it almost instantaneously on our end as if we were looking over his shoulder.”

To track the development cycle of BluView, Intellecty uses product roadmap software that Vargas said is the perfect way to capture and prioritize customer requests and comments.

“It really does save time. It improves communication. It creates a record and really keeps us organized,” he said. “And I think it really has allowed us to do a lot of stuff with fewer people. So, it actually becomes part of our team.”

Intellecty has been accepted to three incubators that focus on water conservation, blue technology and smart home solutions. Vargas said the exposure has garnered interest in Intellecty's technology from city governments and water utilities as well as businesses in which water plays an integral role, such as breweries and bottling companies.

But no matter where the company's path may lead, Vargas said he will continue to embrace new software and technologies that will boost the efficiency of his small business.