

Cell phone users to help protect nation's water supply

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SensorCamera4

- MPU6500 Acceleration Sensor
- YAS537 Magnetic Sensor
- MPU6500 Gyroscope Sensor
- LPS25H Barometer Sensor
- TMD49XX Proximity Sensor
- TMD49XX RGB Sensor
- YAS537 Uncalibrated Magnetic Sensor
- SAMSUNG Step Detector Sensor
- SAMSUNG Significant Motion Sensor
- MPU6500 Gyroscope sensor UnCalibrated
- MPL Game Rotation Vector
- MPL Rotation Vector
- SAMSUNG Step Counter Sensor
- Grip Sensor
- TMD49XX RGB IR Sensor
- Interrupt Gyroscope Sensor
- SAMSUNG Tilt Detector
- SAMSUNG Pick Up Gesture
- Screen Orientation Sensor
- Motion Sensor
- Gravity Sensor
- Linear Acceleration Sensor
- Orientation Sensor

CAMERA

VIDEO

The "WatCitSci" app includes sensors that track rising and depleting water resources and a variety of characteristics such as cloudiness and dissolved oxygen concentration. Credit: Sriran Chellappan, Ph.D., Associate Professor, Computer Science and Engineering, University of South Florida

Social media and Smart-phone sensors will soon play a pivotal role in improving the nation's water management system. A new Android cell phone app arms average citizens with sensors that record information on changes to drinking water and water resources.

The Water Citizen Science (WatCitSci) project records pictures and videos to pinpoint the locations of rising and depleting water levels, flash floods and other characteristics such as cloudiness and dissolved oxygen concentration.

Engineers at the University of South Florida in Tampa will use that data and information posted to social media to create algorithms, allowing planners in municipalities, agriculture and other water-intensive sectors to take a more comprehensive approach in addressing challenges to our water supply, especially following hurricanes and other natural disasters.

"The sensing power of smart-phones, and the rich and diverse information on [social media](#) today when harnessed appropriately can enable broad societal benefits, which this project aims to accomplish" said principal investigator Sriran Chellappan, PhD, Associate Professor, Computer Science and Engineering, University of South Florida.

The National Science Foundation-funded project gives researchers and the community a stronger understanding of how water impacts food,

energy and society as a whole. Data necessary in protecting our nation's most important resource.

Provided by University of South Florida

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