The IoT Is Up The Creek

An IoT Solution for Bridge Scour Monitoring

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What is Bridge Scour?

- Over 200 million trips are taken daily across structurally deficient bridges in the 102 largest metropolitan U.S. regions.

- 1-in-9 bridges in the United States are considered structurally deficient.

- Average age of the more than 600,000 bridges is 42 years and 1-in-4 of bridges in the U.S. are over 50 years old.

- Bridge scour has been the leading cause of bridge failures over the past 50 years.


Float-out Device System

Float-out Devices
- Conforms with FCC Regulations
- Transmission Capabilities of 1000 feet
- 20-year lifetime after Installation
- Custom Tilt Sensitive Enable circuitry
- Automatically Shutdown if Inactive
- Wireless Switch for Traveling

Receiver Unit
- Solar and Battery Powered
- 60 Days of System Autonomy from Solar
- LEDs for Visual Indication of Scour
- Cellular Modem Capable
Bridge Scour IoT Enabled

- The current bridge scour monitoring system involves a manually measuring scour around a bridge using a depth stick.
- This manual process is labor intensive, expensive, and slow to report changes in the bridge stability due to flooding conditions.

- By automatically identifying bridges that require inspections, the float-out system reduces maintenance costs and increases reliability of our aging infrastructure.

http://www.wsdot.wa.gov/Bridge/Reporting/ScourRepairs.htm
Questions?