Roadways around the globe periodically experience tidal or flash flooding that can wreak havoc on traffic flow, causing backups and a myriad of related problems. These conditions require manpower and resources to combat the resulting issues. Traditional methods of traffic control under these circumstances include the use of emergency personnel and vehicles, as well as municipal manpower to deploy temporary barricades and signage to prevent drivers from navigating into potential peril. This costs agencies precious time and resources that could be utilized elsewhere in times of crises.

MUTCD Section 2C.01.01 states:
“Warning signs call attention to unexpected conditions on or adjacent to a highway, street, or private roads open to public travel and to situations that might not be readily apparent to road users. Warning signs alert road users to conditions that might call for a reduction of speed or an action in the interest of safety and efficient traffic operations.”

Traffic & Parking Control Company’s dynamic Flooded Road Warning System (FRWS) is an option for locations that frequently flood. The system employs a combination of water detection, solar, wireless and LED technologies to alert motorists approaching water-covered roads. When the system’s sensor detects water rising to an unsafe level, TAPCO’s BlinkerSign® LEDs instantly begin to flash. The LEDs warn approaching drivers that the road ahead is flooded, allowing them to change their course. This can help to prevent stall-outs and traffic back-ups that cause crashes, injuries and even fatalities.

Second-place winner of the ATSSA 2013 Innovation Award, TAPCO’s FRWS have been installed in low-lying areas and underpasses that are prone to frequent flash floods, and in coastal areas that experience salt water flooding due to storm tides and/or high winds. Since these systems are solar-powered...
they will remain active and continue to flash their warning, even during power outages caused by storms. They can be located in remote areas where it would be complicated and cost-prohibitive to install grid-powered systems.

BlinkerSign LED signs are linked together by wireless radio frequency transceivers so that all signs in the FRWS are activated and flash simultaneously when the sensor detects floodwater. Further upstream (up the road, that is), optional advance warning BlinkerSign LED signs can flash in sync, ideally prior to a turn-around, exit, or intersection so that drivers can re-route more readily.

Developed more than a dozen years ago, BlinkerSign LED signs are engineered and built to withstand harsh conditions. They meet the specifications in the MUTCD: per Section 2A.07 each BlinkerSign’s matching yellow LEDs flash simultaneously when activated, sixty times per minute, increasing the sign’s conspicuity by illuminating the sign border. The added conspicuity is especially beneficial during inclement weather that often coincides with flooding, as storms can reduce the visibility and effectiveness of traditional signage.

BlinkerSign LED signs feature super-bright Day-Viz® (Daylight-Visible) LEDs controlled by AutoBright™ circuitry, which monitors ambient light levels and adjusts the LED output accordingly. Thus the LEDs are brightest in full sunlight and, as light levels decline due to cloud cover or darkness, their output is reduced so that the sign legend remains legible. This is crucial so drivers can comprehend the sign’s message under all light conditions.
Flooded Road Dynamic Warning Systems . . .

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MUTCD Section 2C.03 discusses the Design of Warning Signs. 2C.03.04 states:
“Word message warning signs other than those provided in this Manual may be developed and installed by State and local highway agencies.”

The standard W8-18 ‘ROAD MAY FLOOD’ legend is more suited to a temporary condition, more appropriate for a static sign. With an FRWS the use of the words ‘WHEN FLASHING’ should be included on the sign or plaque to communicate the present condition. When paired with dynamic flashing LEDs, ‘ROAD FLOODED WHEN FLASHING TURN AROUND’ and ‘HIGH WATER DO NOT ENTER WHEN FLASHING’ legends positively indicate and convey the presence of floodwater to maximize driver compliance.

MUTCD Section 2A.06 discusses the Design of Signs. 2A.06.04 states:
“The basic requirements of a sign are that it be legible to those for whom it is intended and that it be understandable in time to permit a proper response. Desirable attributes include:
A. High visibility by day and night; and
B. High legibility (adequately sized letters, symbols, or arrows, and a short legend for quick comprehension by a road user approaching a sign)."

The main objective in determining a FWRS sign legend is to convey a clear, concise message to effectively warn drivers of the flood so they can safely and promptly redirect toward an alternate route. For example, advance BlinkerSign LED sign/plaque legend(s) should include ‘WHEN FLASHING’ with some combination of ‘ROAD FLOODED’, ‘HIGH WATER’, ‘XXX FEET’, ‘X/X MI’, ‘AHEAD’, ‘TURN AROUND’, or other appropriate descriptive wording.

Alternately, traffic authorities can manually activate the BlinkerSign LED Signs with secure devices including keys, fobs and switches. TAPCO also offers BlinkLink™, a cloud-based app for remote, real-time monitoring of ITS devices. Users can program text alerts and/or email alerts to notify designated authorities on their web-enabled devices when rising water has triggered the system. The BlinkLink app also allows the user to activate field devices remotely from a web-enabled computer, laptop or smartphone, which could be utilized for pre-emptive advance warning of severe storms, tsunamis or other emergency events.

For more information on Flooded Road Warning Systems and other solar LED traffic safety technologies, log on to tapconet.com or contact TAPCO toll-free at 800-236-0112.

Fire Alarm Notebook . . .

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I hope these comments will prove helpful to you in the public warehouse’s quest to remain a good citizen of its community and to also be a good steward of the finances that sources have provided the public warehouse complex during these stressful economic times.

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