P4 Infrastructure, Inc.

AVFM

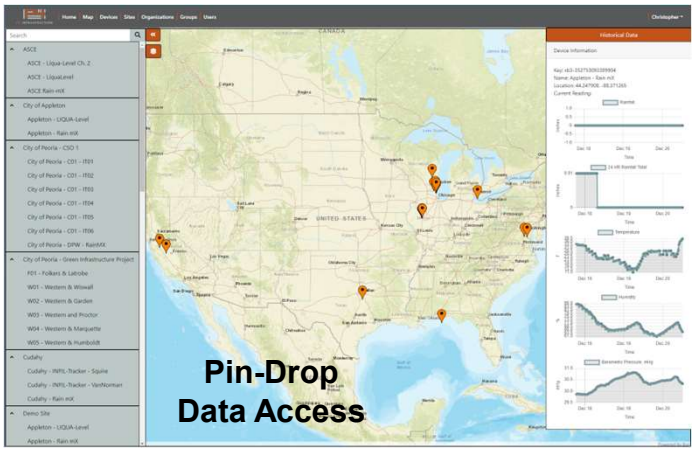
Area-Velocity Flow Monitoring System for Stormwater Infrastructure

AVFM is a robust and configurable area-velocity flow monitoring system for stormwater infrastructure.

Coupling AVFM with P4's Rain-mX system creates a stormwater infrastructure monitoring and performance documentation system.

Battery health and (solar) re-charging cycles are documented and displayed.

Wireless data transmission.



Applications & Value

Open channel flow

Velocity

Depth

Volume

Performance documentation

Data Sampling & Resolution

Variable or Fixed (10-min std)

Velocity: 0.1 ft/s to 20 ft/s

Level ranges: 1" to 180"

Nationwide cellular connectivity (LoRa and WiFi possible)

Flow level & velocity measurements for:

- Round pipe systems
- Trapezoidal channel systems
- Elliptical pipe systems
- Other custom open channels
- Non-pressurized flow

Browser-based dashboard (viewing and data download). Advanced notice of potential problems. Data visualization. Data-driven maintenance notification.

Flow monitoring system to complement other sensor systems (synchronized data)

AVFM – Specifications

Communication

- Cat-M1 cellular (2G, 3G, 4G LTE compatible)
- Wi-Fi option
- Long Range WAN (LoRa) option

Installation & Accuracy

- Post-construction installation
- Easy removal and replacement of sensor
- Level: +/- 0.25% of reading (or +/- 0.08”)
- Velocity: +/- 2% of reading (or +/- 0.04 ft/s)
- Round, rect., trapezoid, or elliptical shapes

Power

- Voltage – 12V DC
- Battery – deep cycle, AGM, 100Ah (modular)
- No external power required
- Remote battery health monitoring
- Solar re-charging with remote monitoring

Maintenance

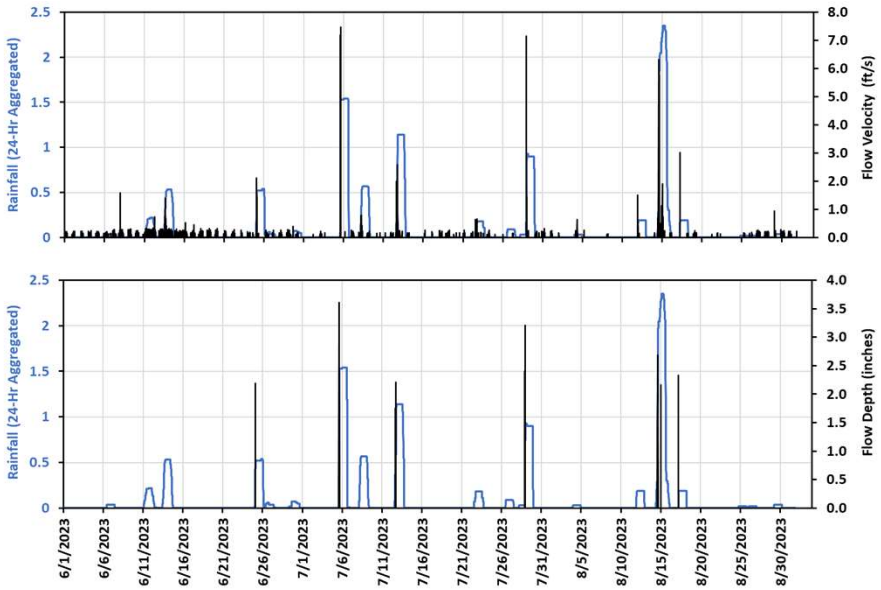
- Modular system (sensors, computer, battery)
- Remote battery health monitoring
- Solar panel cleaning (every 6 months – location dependent)
- Float (sensor) inspection – data driven

Operating Temperatures & Compliance

- Fahrenheit: -4 °F to 140 °F (discharge)
- Celsius: -20 °C to 60 °C (discharge)
- FCC and RoHS

User Interface & Data

- Browser-based access & display
- CSV downloading
- Mobile via iOS and Android
- 90%+ data reliability



How do you know the volume and rate stormwater runoff entering and exiting your below-ground detention system?

How do you know stormwater runoff is exiting your biofiltration system?

AVFM