

LIQUA-Level

Water Level Monitoring System for Stormwater Infrastructure



LIQUA-Level is a robust water-level measurement system for stormwater infrastructure.

Coupling LIQUA-Level with P4's Rain-mX and Flow-RTC 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
Surface Systems
Below-Ground Systems
Dry (Infiltration) Wells
Data-driven Maintenance
Performance Documentation

10-min. (std)

0.25" resolution



Nationwide cellular connectivity (WiFi option – contact P4)

Water level measurements for:



- StormTrapTM Systems
- ADSTM Systems
- AquaBlockTM and R-TankTM Systems
- Surface Systems
- Dry (Infiltration) Wells
- Any location with vertical space



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



Water-level monitoring system to complement other sensor systems (curated data stream).



LIQUA-Level – Specifications

Communication

- Cat-M1 cellular (4G LTE, 5G)
- Wi-Fi option available (contact P4)

Power

- Voltage 12V DC
- Battery 5,000 mAh NiMH pack (modular)
- No external power required (120V power option)
- · Remote battery health monitoring
- Solar re-charging with remote monitoring

Operating Temperatures & Compliance

Fahrenheit: -30 °F to 120 °F

Celsius: -34 °C to 49 °C

FCC

Begin Monitoring Dec. 17, 2019 775.00 3.0 Finished Grade Elevation 773.00 2.4 Ground Water Elevations Around Detention System 770.00 1.8 Elevation (feet) 765.00 1.2 0.6 Rainfall (P4 Rain mX) 760.00 758.45 0.0 Detention **Detention System Measured** System Invert Water Elevation Elevation (P4 LIQUA-Level) 755.00 9/26/2022 4/14/2023 5/10/2018 6/14/2019 11/26/2018 7/18/2020 10/31/2023 2/31/2019

Installation & Measurement

- During or post-construction installation
- Easy removal and replacement of sensor
- 6" to 120" range (0.25" resolution)

Maintenance (owner performed)

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

User Interface & Data

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

How do you know stormwater has not leaked into your groundwater system?

How do you know your underground detention system has been operating properly over the past four years?

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