



### Flood Inundation Mapping and Alert Network (FIMAN)

<https://fiman.nc.gov/fiman/>



## Demos of Equipment and Technical Procedures Lighting Talks

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# Overview of Sensor(s)

**DPS** Emergency Management  
NC DEPARTMENT OF PUBLIC SAFETY

## Gauge Types

- Non-Contact
  - RADAR
  - Ultrasonic
- Submersible Pressure Transducer (PT)



# Overview of Sensor(s)

## Gauge Types Cont.

- Traditional
  - RADAR
  - Ultrasonic
  - PT
- Require heavy duty mounts/structures
- Maintenance requirements/ability for end user
- More Survivable
- More Visible
- All types of telemetry



# Overview of Sensor(s)



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## Gauge Types

- “Low Cost”
  - RADAR
  - Ultrasonic
  - PT
- Relatively easy to install
- Minimum maintenance for end user
- Less ‘visible’
- Cellular telemetry most common



Water Levels in the Southeast  
June 13-15, 2023



# Overview of Sensor(s)

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## Gauge Telemetry

- GOES
- Cellular
- VHF



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# Overview of Sensor(s)



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## Rain Gauges

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# Overview of Sensor(s)

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## Rain Gauges



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# Sensor Choice



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## Site Selection

- Impact to transportation/infrastructure
- Flooding history
- Hydraulics
- Visibility/accessibility
- Coverage
- What do I want from a gauge here?
- What type of gauge will need to be installed?



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# Accuracy

- Radar
  - Obstructions
- Ultrasonic
  - Obstructions
  - Debris in sensor cone
- Pressure Transducer
  - Debris
  - Sediment
  - Calibration

