

Newfoundland
Labrador



Water Resources
Management
Division

Department of
Environment &
Conservation

Mobile Environmental Monitoring Platform

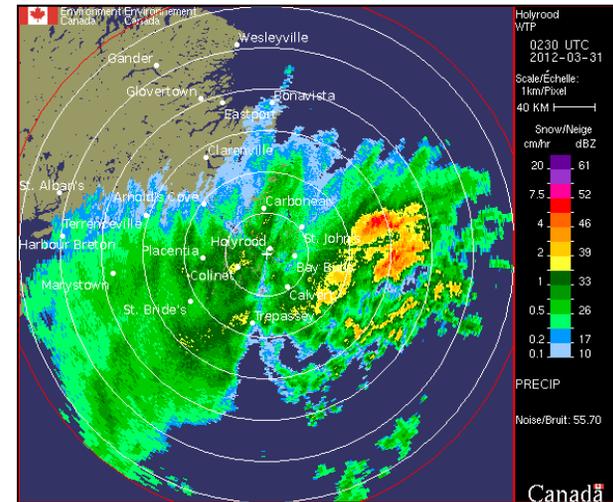
On the road to Environmental
Monitoring...



Long-Term, Proactive Monitoring

■ Climate and Weather

- For daily forecasting and severe weather tracking



■ Hydrometric Gauging

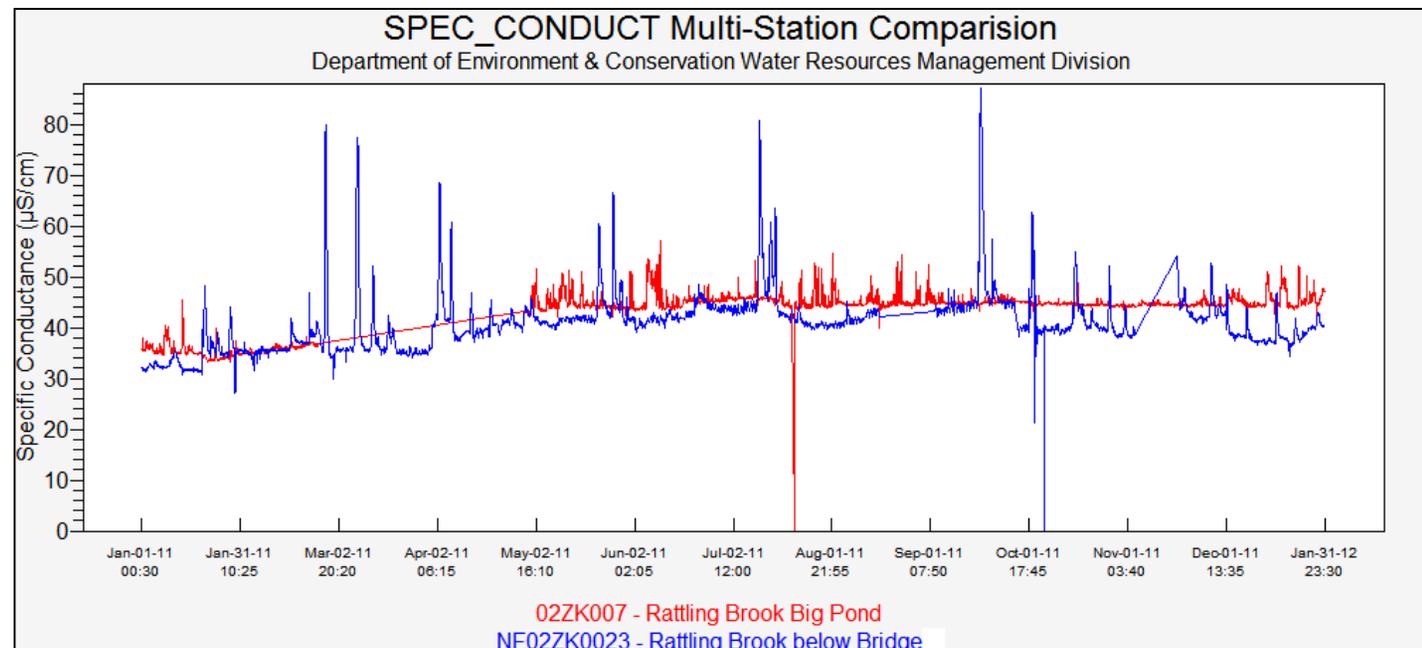
- Sediment transport
- Flood Forecasting





Long-Term, Proactive Monitoring

- **Real-Time Water Quality Monitoring Network**
 - Monitoring and early warning for critical water-quality related events



Long-Term, Proactive Monitoring



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Monitoring Unforeseen Events

- Even with the best-planned monitoring networks, there will be missed events...
 - Floods
 - Spills
 - Accidents





Monitoring Unforeseen Events

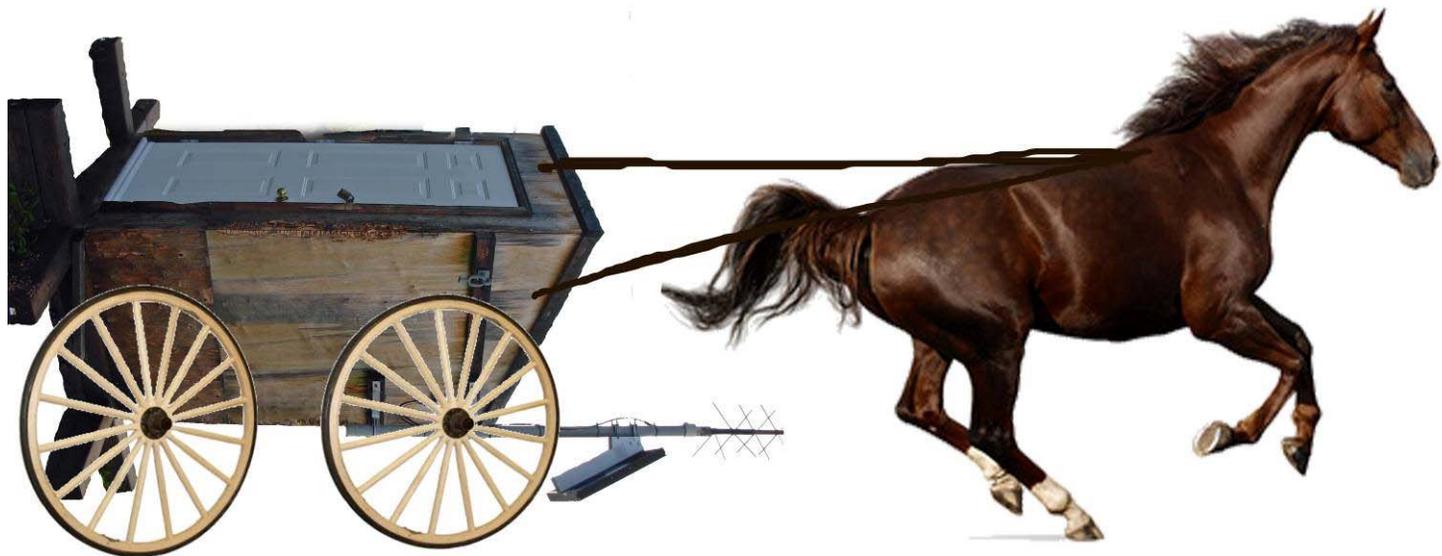
- Very difficult – if not impossible!





Monitoring Unforeseen Events

- You must be proactive to be effectively reactive
 - Establish a mobile monitoring station



An Artist's Conception





Monitoring Unforeseen Events

- Or maybe...

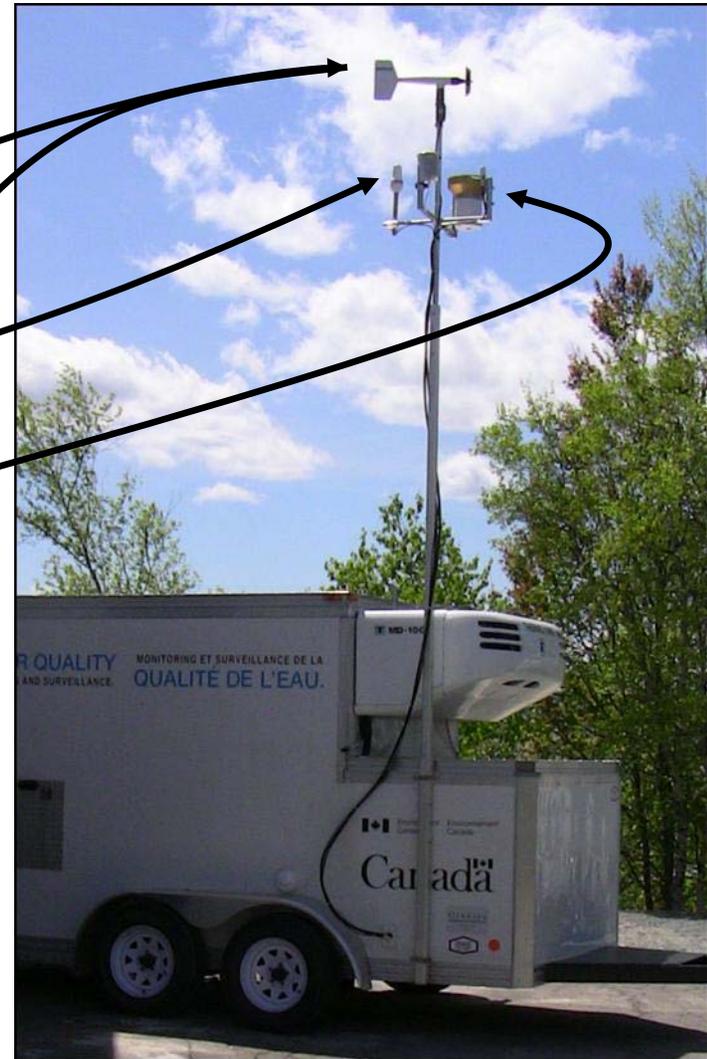




MEMP: Capabilities

■ Weather

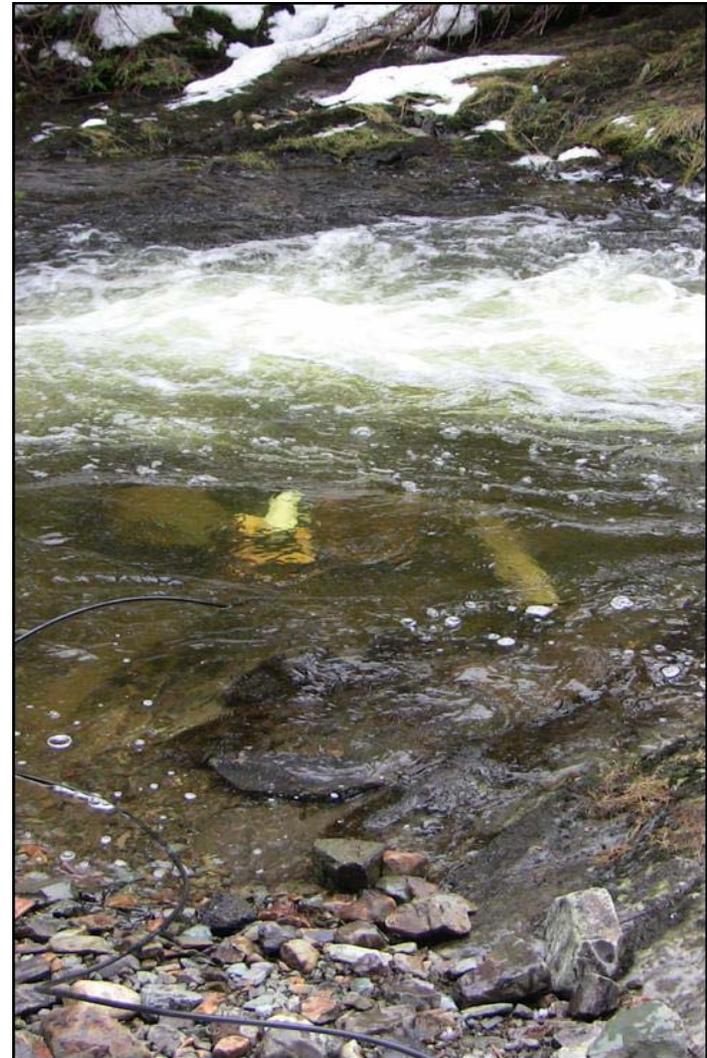
- Wind Speed
- Wind Direction
- Temp/RH
- Precipitation





MEMP: Capabilities

- **Water Quality**
 - Temperature
 - pH
 - Conductivity
 - TDS
 - DO %-Sat
 - DO mg/l
 - Turbidity





MEMP: Capabilities

- **Hydrometrics**
 - Stage level
 - Flow





MEMP: Capabilities

- Other capabilities
 - Autosamplers
 - Temperature control
 - Solar power
 - Several telemetry fallbacks
 - GOES
 - Iridium
 - GSM (cellular)





MEMP: Capabilities

- To come:
 - Webcam
 - Spectro::lyser



Model CCSMPX © 2012 Campbell Scientific (Canada) Corp.



Currently

- Wrapping up the initial deployment
 - In the town of Torbay-
Middle Cove- Outer
Cove.



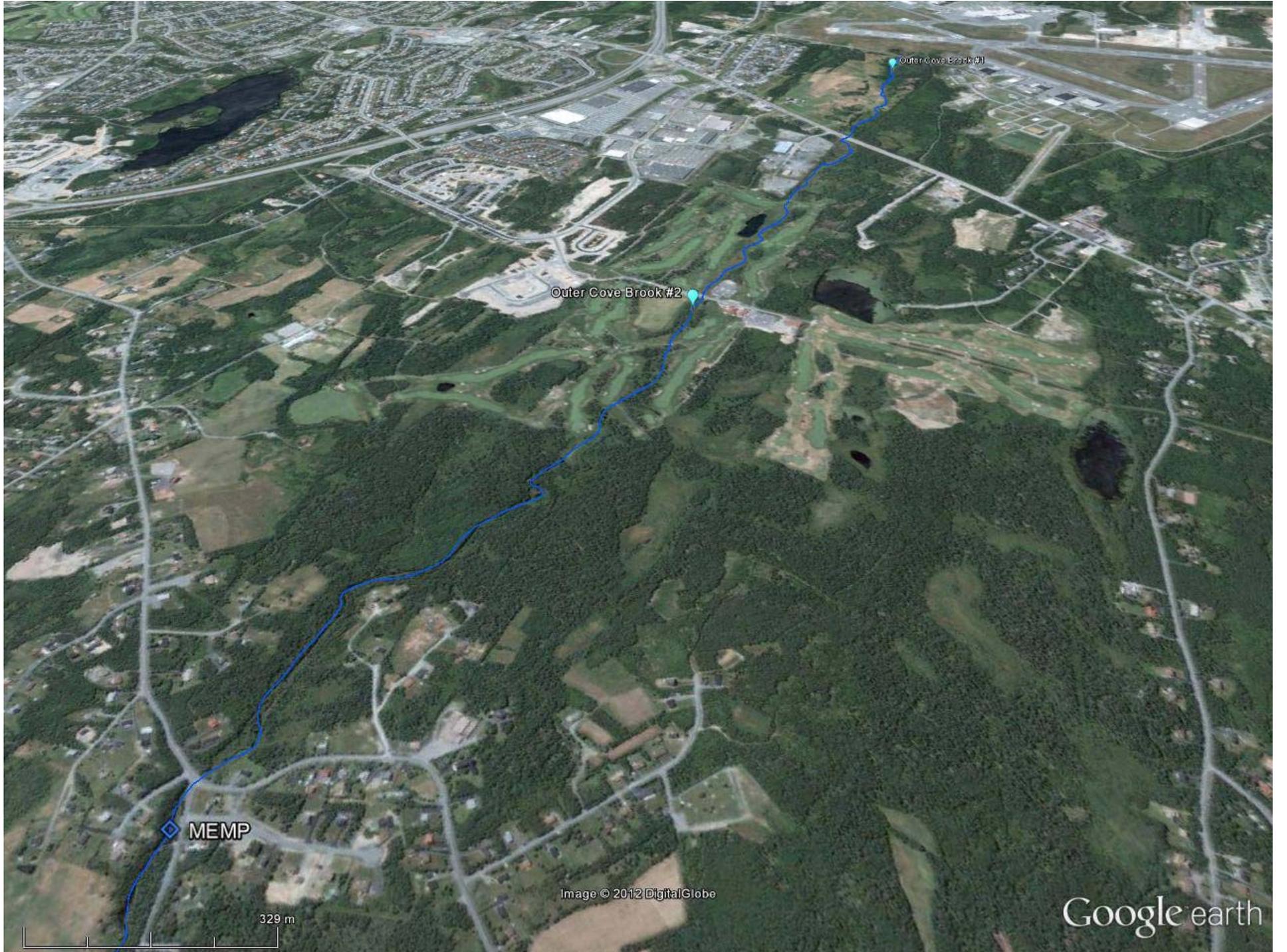


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Google earth



■ **Issues with:**

- Runoff rate
- Infrastructure damage downstream
- Pollution concerns

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Google earth

47°36'58.28" N 52°42'51.49" W elev 105 m

Eye alt 107 m

