RP232 Fine-scale water quality monitoring in high priority catchments

About the project

- Agricultural industry stakeholders and landholders have been calling for more intensive monitoring and water quality data for many years. Now with cheaper sensors becoming available, funding was allocated to the Water Quality & Investigations (WQI) team to expand their real-time monitoring network in North Queensland.
- Up to 40 additional nitrate and sediment sensors will be installed at locations throughout the high priority Herbert and Lower Burdekin catchments. These fine-scale monitoring networks are aiming to support community awareness of agricultural losses, water quality issues and improved Paddock to Reef modelling.
- It is important to note that this project is aiming to show water quality on a sub-catchment level only, and that individual farms will not be identifiable.
- Prior to installation, WQI met with a long list of local stakeholders to discuss the intent of the expansion as well as appropriate sensor locations. Stakeholders included Herbert/Burdekin canegrowers associations, BBIFMAC, Lower Herbert Water Management Authority, Lower Burdekin Water, Sunwater, local growers, local councils, James Cook University, etc.

The sites

- https://www.google.com/maps/d/edit?mid=1otVJxGRJrVIOiKtYFeW26e-fCzR65PgM&usp=sharing
- Site types
    - Reference: gives an upstream reference for 'natural'/pre-impact water quality
    - Impact: downstream of urban/agricultural/other impacts
    - End-of-system: gives an overall understanding of that system's contribution
- **Herbert region:** 5/5 reference, 8/8 impact, 4/4 end-of-system
- **Lower Burdekin region:** 1/4 reference, 6/8 impact, 8 end-of-system

What happens to the data?

- Each site is monitoring N-NO3 and Total Suspended Solids (TSS) concentrations as well as water level. In the future, sites will also capture the streamflow which will allow water quality data to be reported as catchment loads or yields.
- The real-time data is now publicly available via the CSIRO 1622™WQ app (1622.farm). Launched in January 2020 the app currently presents N-NO3 sensor data, as well as rainfall and streamflow data, typically within an hour of measurement ('real-time').
- There are no extension resources attached to the RP232 project, rather the intent is that the data is made publicly available and utilised by advisers and growers within existing networks and groups. The WQI Team will be providing periodic reports outlining what the data is showing (trends etc) and present this information in the regions.
- The WQI Team and the OGBR will be organising a meeting in the Lower Burdekin region soon.