



Positive Outcomes for Water Quality and River Health

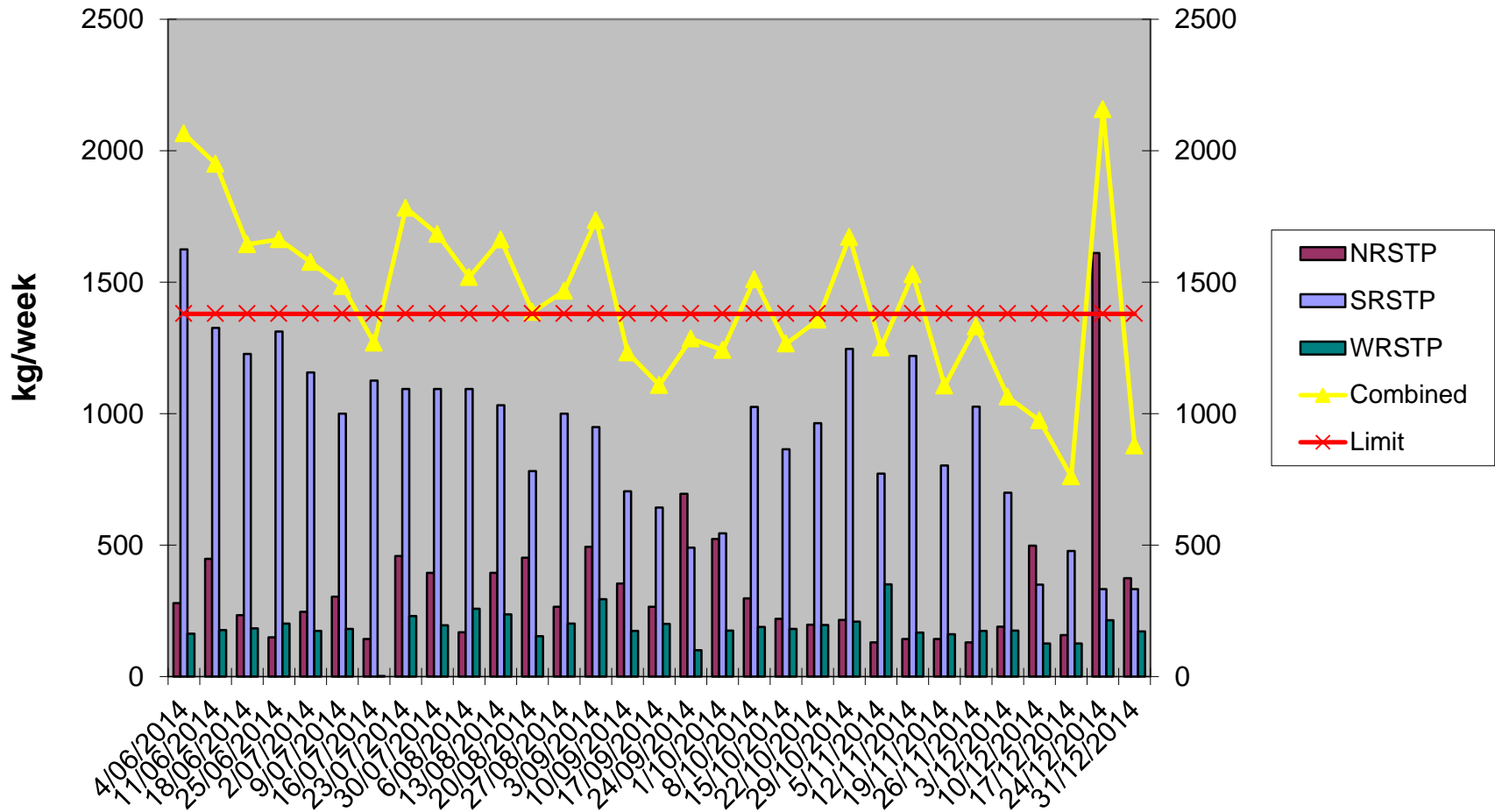
Projects and partnerships

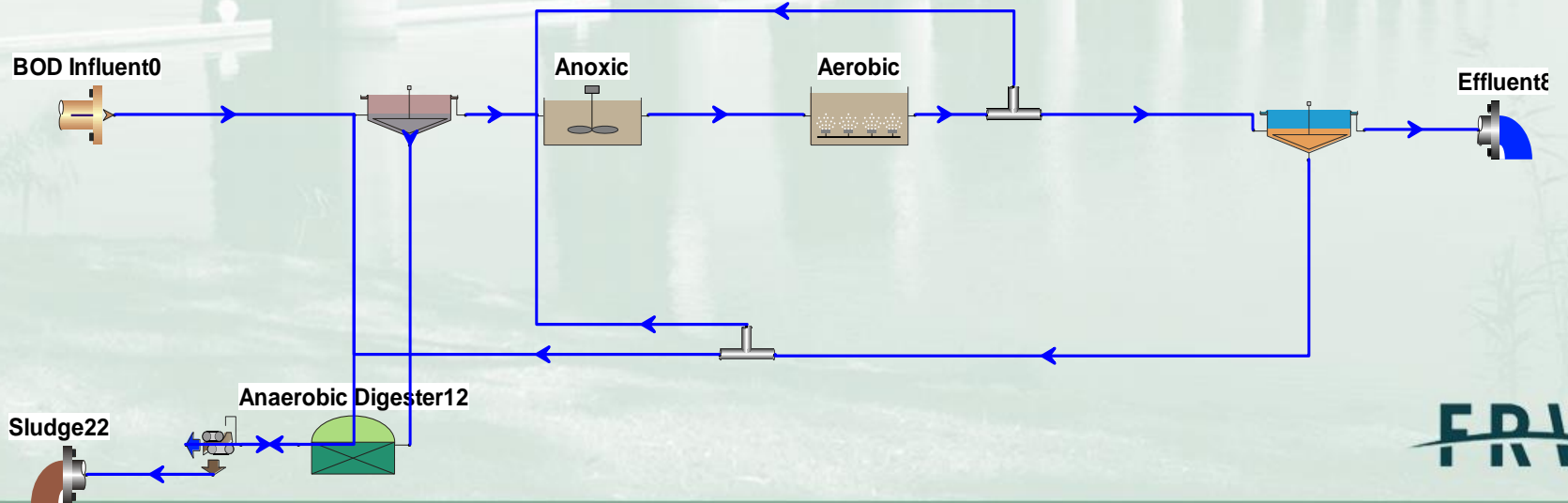
STP Upgrade Project

- R'ton STPs share a consolidated Environmental Authority based on 100% discharge to Fitzroy River estuary
- Receiving environment (i.e. water or land) determines the stringency of discharge quality limits in order to protect the environment
- Discharge limits for water always more stringent
- But more lenient limits for the nutrient rich Fitzroy estuary
- Sufficient distance away from Great Barrier Reef

R'ton STPs Performance

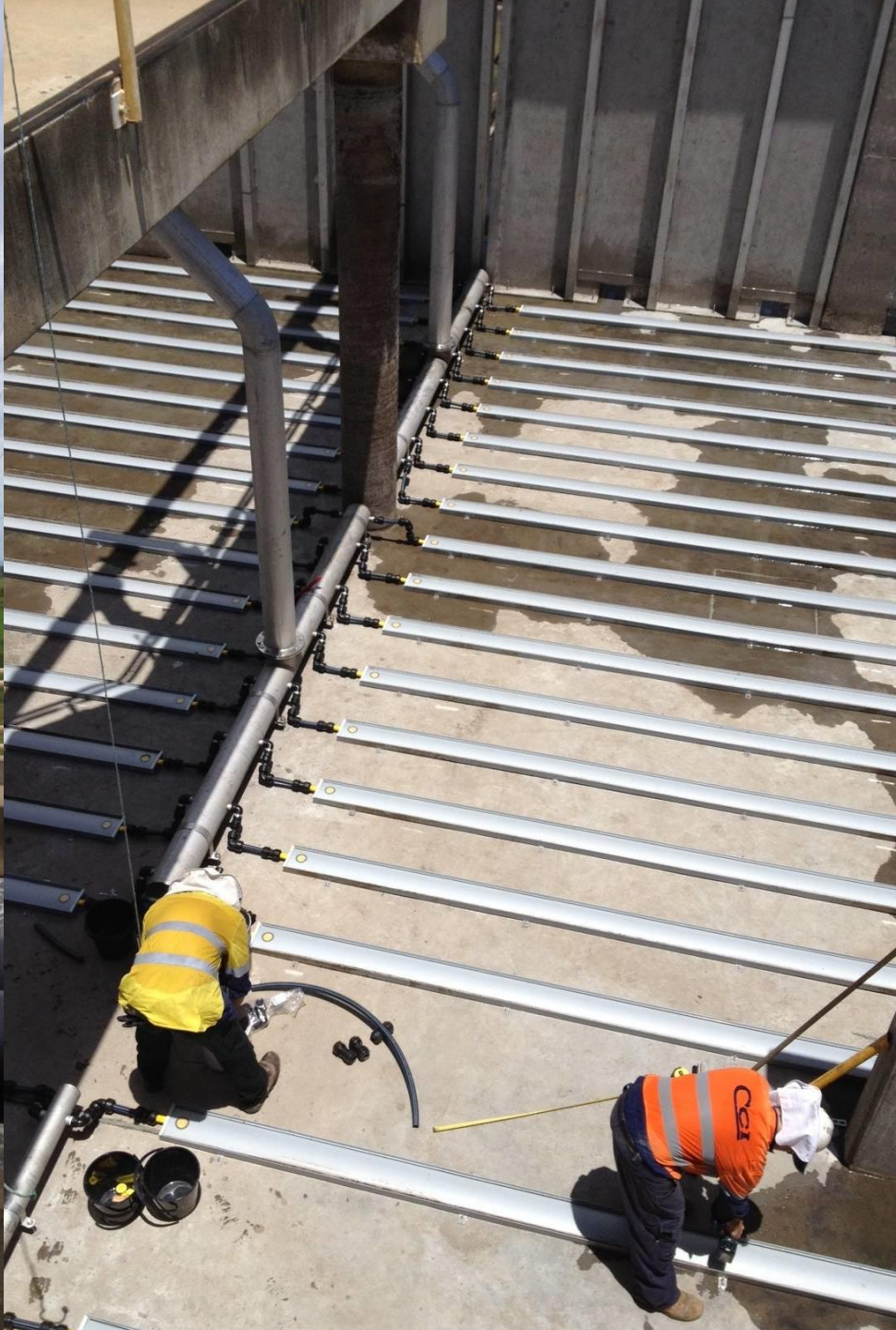
Comparison of Nitrogen Loads









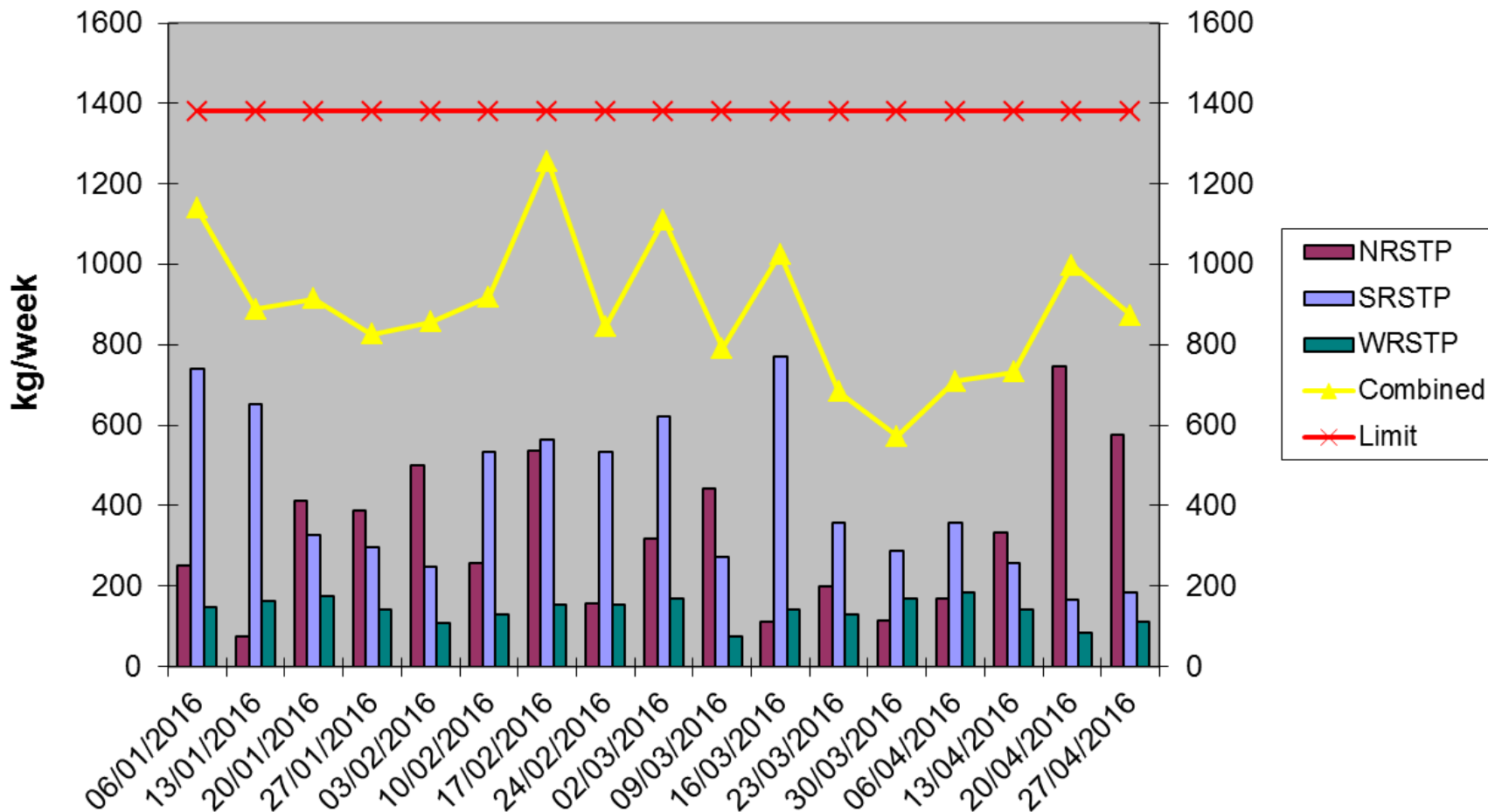






Improved Performance

Comparison of Nitrogen Loads



Outcomes

STP Upgrade Successful

- \$1.1 million capital investment
- Improved aeration for improved nitrogen removal
- Increased capacity for additional 15,000 EP

Water Quality Outcomes

- Up to 1,000 kg per week less Total N discharged
- 2014 first 20 weeks - 26.7 tonnes of N discharged
- 2016 first 20 weeks - 19.5 tonnes of N discharged
- 27% reduction in Total N discharged
- >90% reduction in $\text{NH}_3\text{-N}$!
- Great outcome for the river and fish health.

New Barrage Fish Ladder

Barrage Barrier to Fish Passage

- Existing fish ladder not very effective
- Excessive flow velocity excluded small fish
- Limited effectiveness for fish passage at the Barrage

Partnership with Fitzroy Basin Association

- Total project cost ~ \$500,000 (Reef Programme, RRC)
- Design by Australian Fish Passage Services
- Construction by Busby Contracting

Outcomes

- Greatly increased fish passage (up to 400 per min)
- Juvenile fish passing
- Increased effective tidal range





More Partnerships...

- CSIRO Real-time WQ Monitoring Trailer
- DSITI GBR Loads Monitoring Program
- Next ???

A long bridge with many concrete pillars spans across a body of water. The bridge is supported by numerous vertical concrete columns. The water is calm, and the sky is clear. The text "The End." is overlaid in the center of the image.

The End.