



Fish Community Monitoring



Constructing Engineered Log Jam No. 3

River Restoration Program

The River Restoration Program works with individuals, land managers, local government and industry groups to encourage shared responsibility, stewardship and wise use of water to increase the resilience of river systems. Through these partnerships the river restoration projects focus on improving water flows for fish, restoring river and estuarine habitats, enriching stream productivity, encouraging community participation and facilitating adaptive water management plans that are designed to lessen the impact of climate change.

Project activities enable individuals to recognise that human behaviours threaten their local catchment and then offer strategic support, coordination and resources so that communities may increase river resilience and be the agents of change.

O'CONNELL RIVER, PROSERPINE AREA

Essentially what happens on a riverbank and the land adjoining a waterway directly affects what happens in the river. And if section of a river bank become unstable – that is changing shape, course and dimension over time – production land around the river, as well as the ecosystem health in the river, can be impacted.

Generally a river bank is considered stable if it does not change appreciably over time. Vegetation is known to stabilise stream bank. It does this by armouring the bank, reducing water velocity and increasing the shear strength of the stream bank soil so that soil may resist the forces of the high river flows. It is generally known that removal of large woody debris from a waterway can result in local bank erosion and channel widening.

Over time riparian vegetation has been reduced in areas along the O'Connell River. Some of these reaches are now experiencing bank failure and channel movement that is encroaching on production land, depositing volumes

'A STREAMBANK INSTABILITY SOLUTION IN TROPICAL RIVERS'

of sediment into the watercourse and reducing habitat and water quality for fish communities.

On a long wide unstable reach of the O'Connell River, Reef Catchments is partnering with the Australian Rivers Institute on a project to determine the effectiveness of using innovative engineered log jams as an alternative streambank instability solution.

During four days in September 2012 on a 200m length reach three bank attached deflector log jams were constructed. The structures were locked into the high unstable outside bank to deflect the full shear force of the river flow.

Essentially the structures change the behaviour of the water flow over time creating pools, flow velocity changes, channel re-alignment and recreating diverse instream habitat.

- ### KEY ACHIEVEMENTS
- Engineered log jam demonstration reach
 - Ecological monitoring program
 - Removal of instream barriers
 - Expansion of conservation planning model developed in the Gregory River

- ### FACTS
- Located W of Bloomsbury
 - Flows 50km from Clark-O'Connor Range to estuary at Lethe Brook
 - Priority catchment in the Reef Water Quality Protection Plan
 - Diverse landuses in the catchment
 - Moderate ecosystem health condition
 - Experiences high intense wet season flows
 - Strong community and partner network

