



# DO TREES IN RAPID CREEK CONTRIBUTE TO FLOODING?

**RAPID CREEK LANDCARE GROUP, SEPTEMBER 2013**

Found in Darwin's northern suburbs, Rapid Creek and its catchment form the only significant freshwater system in Darwin's urban area and it is a valuable environmental and community asset. The Rapid Creek Landcare Group's members look after Rapid Creek through regular working bees, by promoting awareness about the creek and by advocating for better management throughout the catchment.

## **BACKGROUND**

On Monday 23 September members of the Rapid Creek Landcare Group noticed about 100 trees at Rapid Creek marked with pink paint. It appeared that all trees in the monsoon forest channel between McMillans Road and Trower Road were painted. Many trees had large pink crosses on them, some smaller trees had pink dots, some had the word PRUNE written next to a line around a branch, and others had the words PRUNE ALL written. Young trees, mature trees, live trees and dead trees were all painted. The trees are part of the important monsoon forest that lines Rapid Creek.

By Tuesday members were concerned enough to start investigating, it was revealed that Department of Infrastructure staff had done the painting. It also appeared that the rationale was to remove the marked trees for the purposes of flood mitigation. Approaches to the Minister for Infrastructure were referred to the Minister for Lands, Planning and the Environment. To ensure the message was being heard by the NT Government, members sent messages of concern to both relevant ministers.



## DATA COLLECTION???

On Wednesday 25 September the Minister for Infrastructure (Minister Styles) gave a media release stating that:

*the Northern Territory Government was taking a scientific approach to the investigation of flood mitigation at Rapid Creek ... a number of trees along Rapid Creek had been marked ... as part of a survey to gather information to assist in developing a flood mitigation strategy for Rapid Creek ... We are currently collecting data to ensure we have an evidence based policy and this information gathered will then form part of the flood mitigation report which will be available towards the end of the year... Once this report is released, we will hold an extensive community consultation before the plan is finalised.*

We seriously question how these pink crosses, dots and words can be interpreted as 'data collection':

- What is the rationale and methodology behind the survey?
- Why only survey this section of the creek?
- Why use the words PRUNE and PRUNE ALL?
- Why use such an invasive method as paint instead of flagging tape or GPS points?



## TREES AND FLOODING

Some houses near Rapid Creek in Millner were flooded during Cyclone Carlos in February 2011. The NT Government has committed to investigating options to reduce flooding in this area. This recent investigation into trees in the creek corridor is part of their response to this issue.

The stream gauge on Rapid Creek downstream of McMillans Road recorded a peak height of 3.74 metres during Cyclone Carlos; the highest peak recorded before this was 3.67 metres in March 1977 (Saunders *et al.* 2013). There is a flood mitigation weir on Defence and Airport land that controls flow from the large upper catchment of Rapid Creek, including Marrara Swamp. It was constructed in 1985. On the night the houses flooded the water came up over the banks of the weir, effectively negating its flood mitigating effect. We have not been able to establish if this has ever happened before.

**This was an extreme weather event estimated to be a 1:140 year flood!**



*Photos taken on the morning of Cyclone Carlos on 16/2/2011; the left photo shows the bank of the flood mitigation weir with debris demonstrating the water had come over the top; the right photo shows the creek channel coming through the weir (NB the flood peak had occurred the previous night)*

There is no evidence that vegetation at Rapid Creek is contributing to flooding, or that removing the vegetation would reduce flooding, in fact removing vegetation will destabilise the banks and increase erosion and siltation in the creek. The following is a quote from NRETAS (2009):

### ***Flood mitigation***

*Native vegetation slows flows of water and encourages infiltration rather than rapid runoff and reduces sedimentation of channels ... Together, well managed catchments and healthy rivers reduce the frequency and severity of extreme flood events that might otherwise threaten life and property.*

When the floodwaters get down to the Millner area they hit the banks of the Trower Road bridge. This bridge is effectively a culvert in a bank, it acts like a dam and holds water back. It is possible that this ponding is the main contributor to flooding in the area. Major engineering works have been suggested to solve the problem but it is uncertain whether anything would effectively mitigate flooding events of this magnitude. It is also likely that flooding will increase as development continues throughout the catchment and areas of natural vegetation are converted to hard surfaces.

Changes in the building regulations in the 1980's require all structures to be built at least 300mm above the 1:100 flood line. Any construction since then that does not meet that requirement is illegal.

It is understood that a comprehensive flood report, based upon the best available science and flood modelling information, was commissioned by the NT Government in 2012. The Government has been reticent to release this report, despite claiming that they want to base their decisions on science. It is also understood that the report, like all good scientific reports, has recommendations and costings for various mitigation strategies, so why is it not being released?

## RAPID CREEK CATCHMENT ADVISORY COMMITTEE

Interestingly, on Tuesday 24 September, the Minister for Land Resource Management wrote to members of the Rapid Creek Catchment Advisory Committee (RCCAC) telling them that he had decided to conclude the functions of the Committee.

The RCCAC was established as a Water Advisory Committee under the *Water Act* in 1996 by the Minister for Lands, Planning and Environment (Minister Reed). From 1997 until early last year it met regularly and was well attended by its members who represented community, industry and government stakeholders in the catchment.

At the time of writing the NT Government website documents the RCCAC, its terms of reference and annual reports and states 'The Committee members are committed to improving the cooperative management of the catchment and advise the Territory Government on policy for management of the natural resources of the catchment'.

The RCCAC worked hard with the community to establish the 100 metre wide conservation zoned corridor along the section of Rapid Creek where the trees were painted with pink marks. The RCCAC lobbied the Government for better management within the corridor and after some years of negotiation the Government acquired all the land within the conservation zone on the Jingili side of the Creek. They handed the land over to the then Darwin City Council and provided funds for its rehabilitation. The City of Darwin continue to maintain the conservation zone for the benefit of the community.

The Rapid Creek Landcare Group had been trying to establish the status of the RCCAC since it stopped meeting in 2012. It is bizarre that just as the Government needs to consult the community to discuss flood mitigation for this section of Rapid Creek they decide to disband the RCCAC.



The screenshot shows the NT Government website for the Department of Land Resource Management. The page title is "Rapid Creek Catchment Advisory Committee". The main content area contains the following text:

Found in Darwin's northern suburbs, Rapid Creek drains a catchment of nearly 30 square kilometres. The creek and its catchment form the only significant freshwater system in Darwin's urban area and hence it is a valuable community asset. Increasing development in the catchment has necessitated closer management to ensure the protection of remnant vegetation and in particular the creek amenity and its water quality.

In 1984 the Darwin City Council and Greening Australia NT developed the Rapid Creek Management Plan. The plan proposed a range of strategies for implementation. The most fundamental requirement was to set up a management structure to coordinate implementation of the plan. In response to the plan the Minister for Lands, Planning and Environment offered to set up a catchment management committee for Rapid Creek in 1996.

The Rapid Creek Catchment Advisory Committee (RCCAC) was formally established through the *Water Act* in 1996. The Committee members are committed to improving the cooperative management of the catchment and advise the Territory Government on policy for management of the natural resources of the catchment.

The RCCAC is responsible to the Controller of Water Resources who in turn is accountable to the Territory Government. The RCCAC reports to the Territory Government through the Controller by Annual Reporting and more frequently as significant milestones are achieved.

*Rapid Creek Catchment Advisory Committee information on NT Government website 25/9/2013*

## REFERENCES

Department of Natural Resources, Environment, The Arts and Sport (NRETAS). 2009. *Living Rivers: Sustaining landscapes, livelihoods and lifestyles*. Northern Territory Government, Darwin.

Saunders P, S Ruscheinsky & L Rajaratnam. 2013. *Identifying Flood Risk for Rapid Creek*. Floodplain Management Association Conference May 2013.

**We call on the NT Government to stop wasting taxpayers' money investigating vegetation removal as an option to mitigate flooding at Rapid Creek**

## PUBLIC MEETING

**Tuesday 1st October @ 5.30 pm**

**At footbridge across Rapid Creek  
next to the Water Gardens**

**Minister Styles has been invited to speak**

**COME AND FIND OUT MORE  
& SHOW YOUR SUPPORT FOR OUR  
SPECIAL CREEK**

