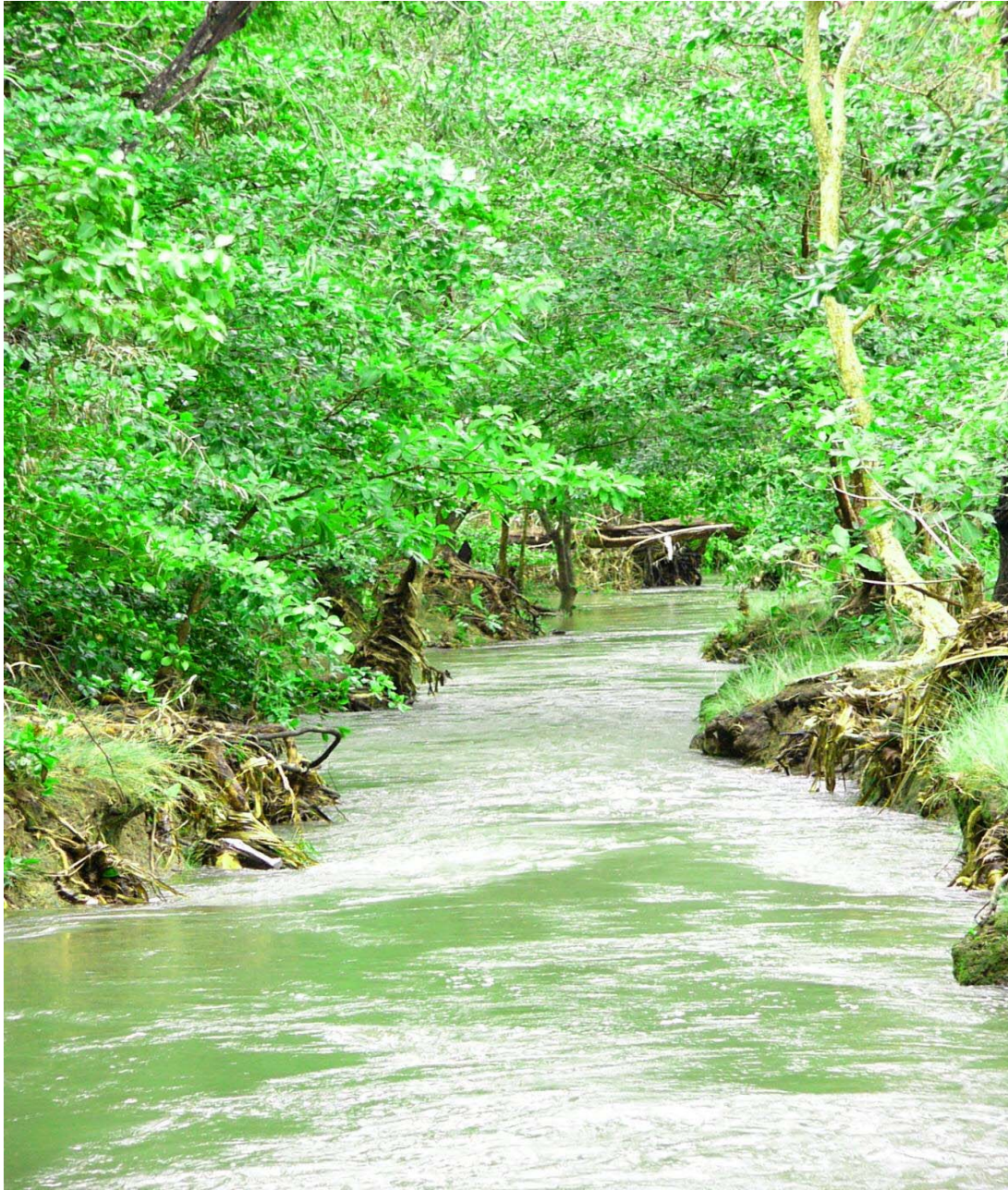


# **Rapid Creek Catchment Advisory Committee**



## **Annual Report 2002 - 2004**



**Northern Territory Government**

Department of Infrastructure, Planning and Environment

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## BACKGROUND

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 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 1994 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. The Rapid Creek Catchment Advisory Committee was established through the Water Act in 1996. The Committee considers and advises on policy for management of the natural resources of the catchment.

The Rapid Creek Catchment Advisory Committee advises the Controller of Water Resources who in turn is accountable to the Minister for Lands and Planning. The Committee is required to report at least annually to the Minister and more frequently at significant milestones.

This is the sixth Annual Report.



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## MEMBERSHIP

- |     |   |                         |
|-----|---|-------------------------|
| 1.  | Officer Commanding, Defence Northern Region   | Commonwealth Government |
| 2.  | The General Manager, Darwin International Airport   | Industry                |
| 3.  | His Right Worshipful the Lord Mayor of Darwin   | Local Government        |
| 4.  | The President, Larrakia Association   | Community               |
| 5.  | The Chancellor, Charles Darwin University   | Industry                |
| 6.  | The Chairperson, Greening Australia NT  | Community               |
| 7.  | The Chairperson, Rapid Creek Landcare Group   | Community               |
| 8.  | Representative Land Administration Division, Department of Infrastructure, Planning and Environment | NT Government           |
| 9.  | Member of Legislative Assembly  | Community               |
| 10. | Representative Parks and Wildlife Commission  | NT Government           |
| 11. | Representative Controller of Water Resources Department of Infrastructure, Planning and Environment | NT Government           |

The Committee is chaired by Mathew Bonson MLA for Millner. Dr Graeme Suckling, Executive Officer Greening Australia NT resigned as Chairman of the RCCAC on the September 2003.

## MANAGEMENT PLAN AND REPORTING FRAMEWORK

The *Rapid Creek Management Plan* (1994) is the Committee's working document. This is called the Management Plan throughout this report.

This is the last Annual Report which will be presented in the current format. The Committee has resolved that future Annual Reports will address the Reporting Framework adopted in November 2004.

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## TERMS OF REFERENCE

Using the Rapid Creek Management Plan as a reference that will be continually revised and updated, the Committee will consider and advise on policy and procedures and promote community awareness and research in the catchment.

Terms of Reference	Reported Under	Page
1. Progressively review the Rapid Creek Management Plan	Planning Issues Addressed: <ul style="list-style-type: none"><li>• Management Plan and Reporting Framework</li></ul>	4
2. Through advice, coordination and initiatives implement the Management Plan maximising stakeholder involvement (seeking funding and implementing works)	<ul style="list-style-type: none"><li>• Activities within the catchment</li></ul>	7
3. Advocate the catchment values to the community	Education and Awareness: <ul style="list-style-type: none"><li>• Access and Interpretation</li><li>• Website</li></ul>	14 14
4. Provide advice as appropriate on land use in the catchment	<ul style="list-style-type: none"><li>• Activities within the catchment</li></ul> Catchment Issues Addressed: <ul style="list-style-type: none"><li>• Illegal Dumping</li><li>• Container Deposit Legislation</li><li>• O3 Creek Corridor status</li><li>• Itinerants and Illegal camping</li></ul>	7  15 15 15 16
5. Promote research on processes, which affect catchment values. Collect and review relevant research and surveys carried out or affecting the catchment	<ul style="list-style-type: none"><li>• Activities within the catchment</li></ul>	7

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## MEETINGS AND ATTENDANCE

The Committee met five times during 2002/2004 period.

ORGANISATION	MEMBER/DELEGATE	MEETING
Defence	Tony Law	1
	Robyn Mauer	1
Darwin International Airport	Dan Richards	3
	Ian Kew	3
	Merilynn Barnes	1
Darwin City Council	Dave Perry	3
	Chris Tilley	3
Larrakia Association	Donna Jackson	1
	Greg Constantine	1
NT University	Hugh Clelland	1
	Kelly Mae Walters	1
Greening Australia	Graeme Suckling	3
	Liza Schenkel	2
Rapid Creek Landcare Group	Lesley Alford	4
Member of Legislative Assembly	Chris Burns	2
	Mathew Bonson	2
Department of Infrastructure Planning and Environment	Simon Townsend	2
	Joanne Manson	1
Parks and Wildlife Commission	Dal Hartley	3
Minutes / Correspondence / Coordination	Steve Popple	5

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## **ACTIVITIES WITHIN THE CATCHMENT**

### **Darwin City Council**

Councils' involvement in maintenance has continued at a level similar to previous years. Areas of particular involvement continue to be adjacent to the Jingili Watergardens and along the Charles Eaton Drive section of the creek corridor.

Council continues to be actively involved in the implementation of the fire management regime outlined in the Rapid Creek Plan of Management for maintenance of the Rapid Creek corridor.

The Parks section at Council has continued its close working relationship with the Rapid Creek Landcare group by assisting in landcare projects when resources are available. This is generally via "in-kind" assistance through supply and delivery of woodchip mulch to landcare sites, support for working days with machinery/site preparation etc and other assistance as requested. Landcare support activities are viewed as an important function of Park's operation and outcomes are valued by Council staff.

A widening of the creek corridor has commenced behind the properties along the Freshwater Rd side of the creek. This will continue as properties along this stretch are subdivided and will see the width of the creek corridor vary from between 20 and 40 metres. Additional vegetation maintenance has commenced this period, and funds are being sought to recognise the increasing maintenance requirement in this area in subsequent years. Last financial year Council engaged Greening Australia to undertake a spraying program to control weed growth along Charles Eaton Drive which has significantly reduced the weed patterns this year. Greening Australia has also commenced a weed control program on the Henry Wrigley Drive side of Rapid Creek for a width of 50 metres to allow for future revegetation programs. The O3 zone adjacent to the Freshwater Road side of the creek is also having a weed control management program applied.

### **Greening Australia NT**

The role of Greening Australia has continued to be mainly advisory, providing support, and assistance to Darwin City Council, Rapid Creek Landcare Group, Darwin International Airport and the Department of Defence on various environmental issues.

During the year Greening Australia assisted the Rapid Creek Landcare Group with an Envirofund submission and Darwin International Airport was successful in obtaining a Green Corps team for 6 months. Greening Australia also provided on ground assistance in partnership with the Parks and Wildlife Commission to Darwin City Council and Land Administration DIPE to implement the control burning program.

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Greening Australia also provided native trees and shrubs for use by Rapid Creek Landcare group, Darwin International Airport and Green Corps. Greening Australia's contracts team have also conducted weed control works along the creek corridor on a fee for service basis for Darwin City Council.



*Green Corp team members, Darwin International Airport and Greening Australia staff at tree planting to consolidate upper Rapid Creek corridor.*

## **Parks and Wildlife Commission**

Parks and Wildlife have continued the mowing and slashing grass on the Casuarina Coastal Reserve side of Rapid Creek. The visitor facilities of the bike path, rotunda and beach access walks have been maintained and repaired where necessary. New signage was installed in this area as part of the overall "new signs" program for Casuarina Coastal Reserve. These new signs consisted of directional signs, and dog control signs.

Trees have been planted along the beach dunes at the mouth of Rapid Creek in an effort to revegetate this degraded section of dune. Unfortunately fires have been lit every year and some trees have been killed and have had to be replaced. In 2002/03 the fires were the result of revenge from an itinerant who had been prosecuted. In 2003/04 the fires were the result of campers lighting fires and these fires escaping.



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Firebreaks have been put in and grass cleared from around the small trees but this only reduces the damage caused.

Caltrop (*Tribulus cistoides*) has been controlled in the open area near the mouth of Rapid Creek effectively in the past two years and the program is now in a maintenance phase. Caltrop is controlled by hand removal on the dunes while herbicide mixture has been used in the open space area. Coffee Bush is a concern and it is planned to start a program of removing this weed once funds are available. Coffee Bush has been successfully dealt with in other areas of Casuarina Coastal Reserve and the protocol to remove the plant is now established. The work will be done in conjunction with the Charles Darwin University in areas where both organisations have an interest.

## **Defence**

### **Summary of Environmental Programs**

The Department of Defence has implemented a number of environmental programs within RAAF Base Darwin since 1998. The following core programs are implemented each financial year (FY);

- Weed Management (implemented in 1998);
- Fire Management (implemented in 2000), and;
- Surface Water Quality Monitoring (implemented in 2000)

The initial implementation of the weed and fire management programs included the development of management plans for each program and the delineation of specific management areas (Ref Figure 1). These management areas continue to be used to implement and monitor the progress of each financial year's programs.

Comprehensive data including GIS layers is collected as part of both programs. The data is used to monitor the progress of each year's program and will be used in the future to undertake long term trend analysis of each program and associated environmental impacts (positive and negative).

The initial water quality monitoring program was implemented in FY00/01 and included the development of a monitoring manual. Sampling occurs at permanent water quality monitoring sites (ref fig 1). Unfortunately sampling of some sites have been missed in the past due to changes in contractors.

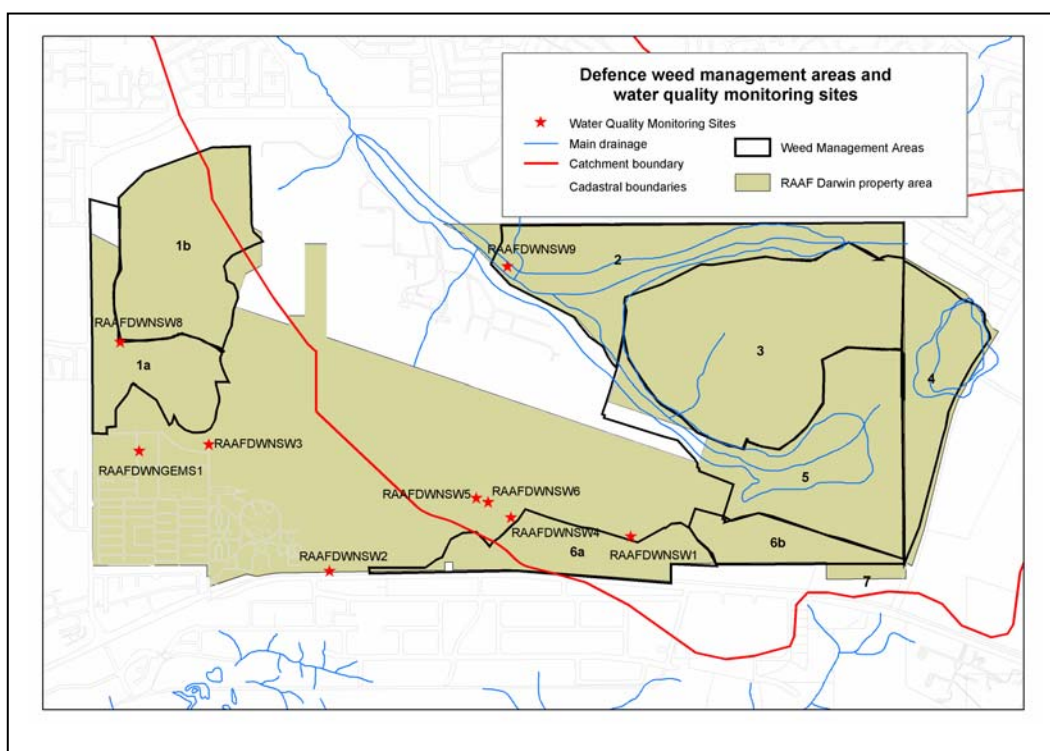


FIG 1

## Weed Management

Weed management within the base is implemented with treatment of weed species within each management area on a priority species basis. Treatment data and records of species treated are collected per management area as part of each financial years program.

Specialist Consulting Services are the current Defence subcontractors responsible for weed management within RAAF base Darwin. Priority weeds treated in FY03/04 have been classified as follows:

- Mimosa (*Mimosa pigra*)
- Annual Mission grass (*Deenanth pedicillatum*)
- Gamba grass (*Andropogon gayanus*)
- Snakeweed (*Stachytarpheta jamaicensis*)
- Coffee bush (*Leucaena leucocephala*)
- Calopo (*Calopogonium mucunoides*)
- Sida (*Sida acuta*)

Deenanth grass (*Pennisetum pedicillatum*) was also treated as a priority weed as this species often grows with Mission grass and Gamba grass. Guinea grass (*Panicum maximum*) and Itch grass (*Rottboellia cochinchinensis*) was also controlled where they occurred with *Pennisetum spp.* or where it posed a fire danger.

Access to some areas for weed control is difficult due to prolonged waterlogging during the wet and this hampers effective control in some areas.

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## **Fire Management**

Approximately 298 hectares of RAAF Base Darwin was subject to prescribed dry season burning in 2003/2004 compared to 295 hectares during the 2002/2003 program. Additionally 66 hectares were subject to wet season burning to reduce the incidence of highly flammable grasses particularly annual Sorghum grasses in the following year. Overall the fire program has achieved a good mixture of wet and dry season burns which have reduced fuel loads, reduced the likelihood and severity of wildfire, protected infrastructure and maintained a rotational mosaic burn pattern.

## **Water Quality Monitoring**

Results from the 2002/2003 and 2003/2004 program and report indicated that water quality is good for all water entering Rapid Creek.

Turbidity results are high at those sampling sites where run-off flows through open, essentially unlined channels. Sediment transported in run-off at these sites is probably dominated by internal erosion of these channels.

Minor petroleum hydrocarbon concentrations were detected at several sites. These concentrations pose minimal risk to the receiving water environment but reaffirm the need for continued monitoring. Slightly elevated levels of Zinc (above ANZECC guidelines) were found at sample site 8 in FY02/03. However, in FY03/04 no heavy metals concentrations exceeded the ANZECC Guideline concentrations for protection of aquatic ecosystems.

## **Other activities and non-core programs**

Defence has undertaken a number of other environmental programs/projects which include:

- Emergency Spill Response Training – approximately 60 personnel including those dealing with fuel farms, refuelling and fuel handling underwent training;
- Contaminated Site Assessment – Phase 1 assessment complete; Phase 2 (sampling) due FY05/06;
- Heritage Management Plan (HMP) – HMP completed for RAAF Base Darwin and contains a paragraph recognising the significance of the catchment to the Darwin Community.
- Best practice guidelines for construction – All construction related projects require environmental clearance from CSI NT/K Environmental Services (Dept. Of Defence). Applications are lodged with Environmental Services who review each proposal and issue an Environmental Clearance Certificate. This certificate outlines mitigation measures that are to be undertaken during construction to reduce potential environmental impacts.

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## **Darwin International Airport**

During the 2002-2004 period, the Darwin International Airport (DIA) has continued to actively manage environmental issues relating to the creek. In 2003 two oil water interceptor units were installed on the DIA General Aviation Aprons to intercept and direct to sewer, water from first flush and aircraft washing on this apron area. As a result of this project all Regular Public Transport and General Aviation aprons on DIA now have interceptors in place. The airport has continued monthly monitoring of physical parameters and quarterly monitoring of chemical parameters in Rapid Creek and the main drainage lines from the airport.

During the early stages of development of the new Darwin Airport Resort adjacent to the Rapid Creek corridor, DIA and the developer worked with RCCAC to ensure impact on the creek corridor is managed and the species selection for the interface between the hotel and creek area is appropriate. DIA has an ongoing annual erosion works program to try and manage erosion on the airport and the resultant sediment load to Rapid Creek. This program has been directed towards repairing weak points in the airport drainage network as well as vegetating and stabilising bare areas. This project will finish in early 2005.

DIA has continued to maintain and develop our relationship with the Larrakia Nation to carry out land management activities and litter removal throughout the airports portion of the Rapid creek corridor. This program has provided employment and training outcomes while assisting with the management of environmental issues within the Rapid Creek corridor. In 2004 DIA was a host organisation for a Green Corps team of 7 young Territorians who trained and worked over a six month period to develop a public access pathway on land adjacent the Rapid creek wetland.

As part of the development of a new Airport Environment Strategy DIA had external consultants conduct flora and fauna studies across its site. Results from these studies have lead to the creation of a 13 hectare environment reserve to be connected to Rapid Creek via a vegetated corridor. DIA has continued to implement an ongoing program of weed control and fire management throughout its bushland areas. A great deal of success has been achieved through this program as weed infestations in key areas have been significantly reduced.



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## **Charles Darwin University**

Grounds Staff at Charles Darwin University have undertaken an evaluation of the extent of Coffee bush infestations adjoining Rapid Creek and have identified priority areas for action. Action taken includes cut-stump treatment, spraying of regrowth and germinants plus revegetation and mulching in select areas. They have continued to undertake erosion repairs to the banks to prevent further sedimentation.

Conservation and Land Management students conducted a small revegetation project adjoining Rapid Creek which the Ground Staff will continue to maintain. It is anticipated this will be a basis for future student involvement in environmental restoration projects.

## **Rapid Creek Landcare Group**

The Rapid Creek Landcare group in association with Greening Australia has continued its involvement in the rehabilitation of the riparian vegetation between Trower Road and McMillans Road. The group holds monthly working bees, which include activities such as weed control, rubbish, removal, tree planting and seed collection. The Growing Trees at Home group propagates plants that are then used for revegetation during the wet season. The group hosts the annual Clean Up Australia day activity and removes large amounts of waterborne rubbish at the end of the wet season. Darwin City Council has provided practical support for the group through deliveries of mulch and spraying of weeds.

Rapid Creek Landcare group has continued to lobby to have the 03 corridor behind Freshwater Road placed in public ownership and appropriately rehabilitated.

## **Larrakia Nation**

The Larrakia developed and launched Saltwater Park which provides a base for its training activities, as well as a nursery and landscape contracting business. It is planned that this area will be developed as a cultural precinct. The Larrakia Work for the Dole team undertook staking of trees at Yankee Ponds and seed collection of species suitable for replanting. The Larrakia are concerned about the issue of itinerants continuing to cause problems by not respecting country and are working closely with the NT government to develop strategies and alternatives.

## **Department Infrastructure, Planning and Environment**

Maintenance expenditure by Land Administration for the period 2002/2004 within the Rapid Creek corridor was \$44,499. The Land Administration section is continuing to maintain firebreaks and conduct hazard reduction slashing in accordance with the Fire Management Plan produced by Greening Australia NT. The problem of illegal dumping has been addressed by improving fencing, signage and enforcement particularly in the upper catchment. Rehabilitation of areas previously used as dumping sites has commenced.

The Conservation and Natural Resources division continues to provide administrative support to the RCCAC and assists in the coordination of activities by land managers and supports the activities of Rapid Creek Landcare group throughout the catchment.

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## EDUCATION AND AWARENESS

### Access and Interpretation

The RCCAC inspected the walking path constructed by the Green Corp team hosted by Darwin International Airport to improve access to part of the upper creek corridor. The committee continues to work closely with all land managers to investigate and develop options for improved public access without compromising the environmental values of Rapid creek.

### Website

The Department of Infrastructure, Planning and Environments Web site on the internet contains information about the Rapid Creek Catchment Advisory Committee including the Rapid Creek Plan of Management, all RCCAC Annual Reports and the Rapid Creek Water quality reports. The Web site can be found at <http://www.ipe.nt.gov.au/whatwedo/landcare/rapidck/rccac/index.html>



*Progress has been made on formalising the 03 corridor between the Water Gardens and McMillans Road to improve public access.*

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## **CATCHMENT ISSUES ADDRESSED**

### **Illegal Dumping**

The RCCAC was concerned about the amount of illegal dumping occurring within the upper catchment of the creek. The materials dumped were typically builder's rubble, spoil and concrete. The RCCAC wrote to the Minister for Lands and Planning requesting that fencing and signposting of vacant crown land be improved. Through the erection of fencing, signage and improved enforcement, the Land Administration branch of the Department of Infrastructure, Planning and Environment has greatly reduced the incidences of illegal dumping within the upper catchment.

### **Container Deposit Legislation**

The RCCAC received a presentation about the results of a mangrove litter survey partly undertaken in the Rapid Creek mangroves. The survey showed that aluminium cans and plastic bottles were the most common items found and that these items were remaining trapped and accumulating within the mangrove forests.

The RCCAC resolved that an effective way of reducing the impact of beverage containers on the environment would be the introduction of a suitable container deposit scheme within the Northern Territory. The RCCAC wrote to the Minister for Lands and Planning and the Keep Australia Beautiful Council supporting the introduction of such a scheme.

### **O3 Creek Corridor Status**

The Rapid Creek Catchment Advisory Committee has continued to lobby for the increased maintenance and improvement of public access along the O3 corridor. The Minister for Infrastructure, Planning and Environment advised the RCCAC that the government was committed to the reinstatement of the original O3 corridor. The RCCAC has continued to pursue the issue of rehabilitation of the corridor, including the removal of fill, weed control and revegetation as part of the corridor process.

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## Northern Territory Landcare Awards

The RCCAC entered the Community Catchment Management category of the 2003 NT Landcare Awards. The RCCAC received a Highly Commended Award at the awards ceremony at Parliament House.



*Left to right Graeme Suckling, Peter O'Hagan, Minister Chris Burns, David Griffiths, Steve Popple, Libby Benson receiving Highly Commended Award at 2003 NT Landcare Awards.*

## Itinerants and Illegal camping.

The RCCAC discussed at length the ongoing issue of the impact of illegal camping on the health of the Rapid Creek environment. Key stakeholders such as Darwin City Council, Larrakia Nation, Darwin International Airport, Parks & Wildlife and Land Administration shared their concerns and strategies to reduce this negative impact. The RCCAC wrote to all Top End communities requesting their assistance in helping reducing the incidences of illegal camping through spreading the message that camping along Rapid Creek is causing a great deal of damage, leading to increased management costs as well as the risk of serious degradation of this important asset to Darwin's people. The Northern Territory governments *Return to Country* project also contributed to helping reduce this problem. Ongoing management and education is still needed to minimise this impact on the Rapid Creek environment.



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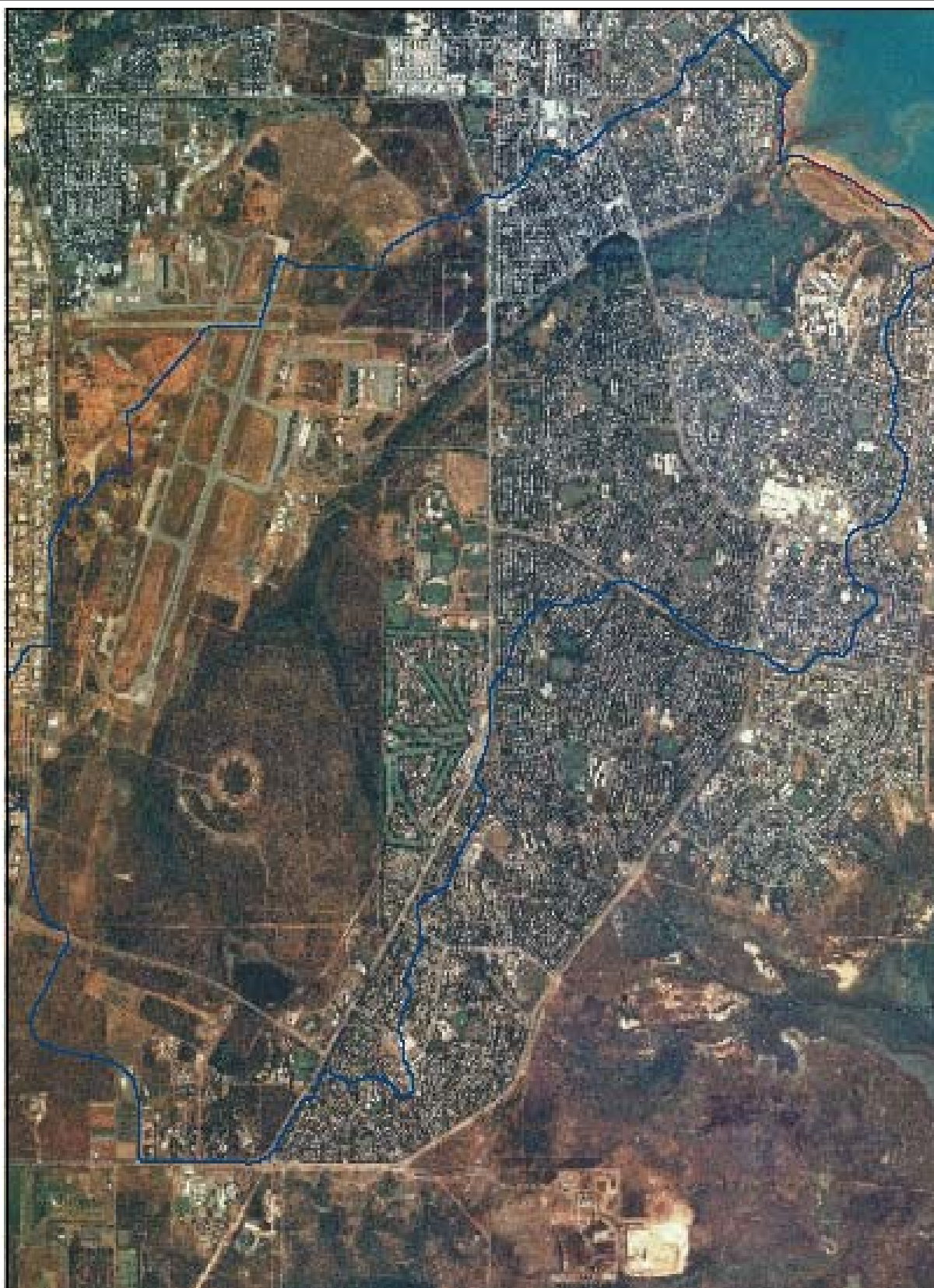
## APPENDIX

### Correspondence

- *Thank you letter to Libby Benson 26/09/02*
- *Letter to Minister re Boulter Road rezoning 26/09/02*
- *Letter to Keep Australia Beautiful re container deposit legislation 7/10/02*
- *Letter to Minister re container deposit legislation 2/10/02*
- *Welcome letter to Mathew Bonson 17/02/03*
- *Letter to all RCCAC members re catchment strategies 17/05/03*
- *Letter to Land Administration DIPE re membership 17/05/03*
- *Letter to Top End communities re illegal camping 23/05/03*
- *Letter to Defence re membership 23/05/03*
- *Letter of support for Larrakia Landcare project 4/06/03*
- *Letter of support for Urban Landcare Green Corp project 31/07/03*
- *Letter to Minister re potential lead contamination 19/03/04*
- *Letter to Minister re weed management of O3 corridor 19/03/04*
- *Letter to Minister re appointment of water monitoring representative 19/03/04*
- *Letter of support to Landcare Council of NT re water quality project*



*Rapid Creek mouth at Nightcliff. The creek is approximately 9.8 kilometres in length and drains a catchment of approximately 28 km<sup>2</sup>*



*Rapid Creek aerial view, catchment boundaries are outlined in blue*

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## **Progress on Catchment Issues at a Glance**

**1997**

- **Rapid Creek Catchment Advisory Committee first meeting held 11 June 1997**
- **31 January 2000 Beneficial Uses of the freshwater reaches of Rapid Creek formally declared.**
- **23 February 2000 Rapid Creek Planning Concepts and Land Use Objectives 2000 formally declared.**
- **Rapid Creek Catchment Fire Management Plan produced March 2000. Rapid Creek Catchment Revegetation Strategy Report produced. Rapid Creek Catchment Weed Management Plan produced April 2000. Rapid Creek Revised Management Plan reprinted April 2000.**
- **Rapid Creek Access and Signage Master Plan presented to Minister Lands Planning and Environment, representatives Parks and Wildlife Commission and endorsed by Darwin City Council.**
- **Rapid Creek Natural Heritage Trust funded Integrated Management Project successfully completed June 2000.**
- **Cycle path constructed from McMillans Road to Red Footbridge in Water Gardens March 2001.**
- **Membership of RCCAC extended to include representative from Parks and Wildlife Commission.**
- **Membership of RCCAC extended to include representative from Land Administration, DIPE.**
- **Review of Rapid Creek Plan of Management Strategies commenced**
- **Negotiations with private landowners commence on land acquisition within the 03 corridor**
- **Membership of RCCAC extended to include representative from Water Resources, DIPE**

**2004**