



Northern
Territory
Government



Giwining / Flora River Nature Park

Joint Management Plan June 2011



PARKS AND WILDLIFE COMMISSION OF THE NORTHERN TERRITORY

Giwining / Flora River Nature Park Joint Management Plan
Parks and Wildlife Service of the Northern Territory,
Department of Natural Resources, Environment, the Arts and Sport
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KATHERINE, NT, 0851

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Cover artwork depicting the Giwining / Flora River creation story by Haddrick Harney and Bill Yidumduma Harney © 2007

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Acknowledgements

This Plan is the result of extensive consultation between the Traditional Owners of Giwining / Flora River Nature Park and Parks and Wildlife Service Rangers, Planning and Joint Management staff. Northern Land Council (NLC) staff assisted the joint management partners and provided valued input into the Plan's preparation.

A Message from the Traditional Owners

We, the Traditional Owners of Flora River, know this place as Giwining.

We have come to be together with Parks and Wildlife Service for the joint management of this place. We have been working to manage this place with Parks and Wildlife Service for a long time and have a good relationship. We have set up a committee to talk about joint management, so all of us can speak together for the Park, agree how to run it and make rules. We want visitors to be safe and enjoy the Park and to understand and respect our culture.

“We made this Plan all together.”

Yibulyawan and Wunggayjawun

Giwining



The next generation of Traditional Owners learn about wildlife surveying from Park Rangers.

Vision for the Park

“Joint management means making a plan, making decisions together, and managing the Park together”

The Parks and Wildlife Service of the Northern Territory and the Wardaman Traditional Owners of the Flora River area will work closely together in a spirit of cooperation and respect so that the partnership benefits and grows. The joint management partners will work together to:

- Exchange knowledge and skills to look after this country and culture
- Manage the Park so that Wardaman culture is always respected
- Provide a safe place for visitors to enjoy
- Help visitors understand and protect the cultural, natural and historical values of the Park
- Teach and share knowledge and culture for generations to come
- Provide opportunities for Traditional Owners to gain social and economic benefit from the Park

The Traditional Owners and the Parks and Wildlife Service

Vision Statement in Wardaman

Parks and Wildlife Service of the Northern Territory ngarrug-mulu Traditional Owner ngadjingiyan-mulu dan-gu laglan Giwining. Ngadjingiwe-mulu mijamet partner-warang:

- Madin-gu ngorlogba Traditional Owner dan-mulu madin-mulu yawudjingiyan yibam-warang ngorlogba ngadjingiwe dan-gu laglan.
- Danani Park ngarrugu ngadjingiwe-mulu yanima madin-gu ngarrugu marluluga mulurru-mulu Wardaman-wunba.
- Danani laglan yilgbayi yajingin wuman laglan wurrugu tourist-mulu wayi yawudjangayan ledba-wu.
- Ngadjingiyan-mulu ngorlogba-warra madin ngarrgiyan tourism-gu yilama-gan. Ngarrugu yawudjingiyan ngorlogba dan-gu laglan-gu Giwining-gu.
- Mijamet-mulu ngadjingiyan mernden yibiyen ngorlogba ngadjingiyan-mulu wurren-mulu dan gu laglan ledba yawudjingiyan wurrugu.
- Traditional Owner-mulu yawurrdagbarlayan yilama-gan danani training yawudjingiyan ngorlogba yiwarna-gari-mulu yawurrgayan-mulu laglaya warrba yawudjingiyan dan-gu laglan-gu Giwining-gu.

Wardaman-mulu Parks and Wildlife Service yawudjingiyan ledba danani laglan yilama-gan mijamet ngarrgiyan ngarrugu nunguru in respect yanima partnership wuman laglan ngarrmarnbuyan mijamet ngadjingiyan ledba yajingiyan yijad.

(Source: Jessie Brown and Colleen McQuay, Diwurruwurru-jaru Aboriginal Corporation, 2007).

How this Plan was Developed

This is the second management plan and the first Joint Management Plan to be prepared for Giwining / Flora River Nature Park under the *Territory Parks and Wildlife Conservation Act*. This Plan was prepared by the Parks and Wildlife Service (PWS) and the Wardaman Aboriginal Traditional Owner's for the Park, with assistance from the Northern Land Council (NLC) as well as input from the broader community.

Planning for formal joint management of the Park began with a series of meetings between Traditional Owners, PWS staff and NLC staff in 2005. Traditional Owners and Park staff have discussed how to work together to manage the Park at Giwining Joint Management Committee meetings and on country camps over the past five years. In 2010, a draft of this Plan was reviewed and approved by the partners before being released for public comment. This plan is the culmination of many hours of hard work and negotiation by the partners to establish an effective and appropriate way to look after this Park.



Traditional Owners, Parks and Wildlife Service staff and Northern Land Council staff meet to work on the Draft Plan (2005).

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Introduction

Giwining / Flora River Nature Park is located 122 kilometres by road south-west of Katherine. With an area of 7 824 hectares, the Park is long and narrow; not more than four kilometres wide at any point. The Park's main feature is a 25 kilometre section of the Flora River, its levee banks and associated native vegetation, including attractive riparian forest and palm stands. The Flora River is a perennial watercourse fed from numerous springs, some of which are hot springs. It rises near the headwaters of the Fitzmaurice and Fish Rivers and then flows northeast through grassy plains and open woodland to the Katherine River, which it joins to form the Daly River.

Access to the Park is via the Victoria Highway and the 36 kilometre Giwining (Flora) Road. Aroona and Scott Creek Stations border the Park on the west and east respectively. Wardaman Aboriginal land, owned by the Yubulyawun Aboriginal Land Trust and Djarrung Aboriginal Corporation, borders the Park on the north and southwest (Map 1, page 3).

Joint management brings a new perspective on caring for the Park. While Traditional Owners appreciate the natural beauty of the Park's landscape, their connection with it differs from that of non-Aboriginal people. For Traditional Owners, culture, land, water and wildlife are all connected. To them, this landscape is the result of the actions of ancestral beings (Buwarraja) during creation times. The landscape is infused with the presence of the Dreamings, and so must be respected and cared for, and celebrated as part of a living culture.

Note: Italicised statements throughout this Plan are quotes from Traditional Owners and Parks and Wildlife Service staff made during the preparation of this Plan.

Key Values and Purpose

The Park protects 25 kilometres of the highly-scenic Flora River, and a small section of adjacent land.

Natural Values

The Flora River is the Park's main conservation asset, a significant and representative example of a tropical riverine environment conserved within the Territory parks system. The river corridor and islands in the river support near pristine tropical riparian forest.

Limestone underlies the Park and the Flora River. Tufa formations are created where the river flows over numerous waterfalls and cascades, the result of precipitation of calcium carbonate from the spring waters. The tufa formations are fossil-rich and contain gastropod (snail) and lamellibranch (mollusc) remains of scientific interest.

This is one of the few Park's in Australia where the Pig-nosed Turtle (*Carettochelys insculpta*), which is an unusual, large freshwater turtle whose Australian stronghold is within the Daly River System, is conserved. Significant species recorded include Freshwater Sawfish (*Pristis microdon*) and Merten's Water Monitor (*Varanus mertensi*), with the vulnerable Purple-crowned Fairy-wren (*Malurus coronatus coronatus*), sighted once but not recorded recently. The herb *Polygala wightiana* is endemic to the Park.

Cultural Values

The Wardaman People who are the Traditional Owners of the Park know the river as Giwining. They have a rich cultural heritage and a long and continuing association with the

Flora River area. There are many sites of significance to the Wardaman People within the Park, some of which are registered under the *Northern Territory Aboriginal Sacred Sites Act*. There are also archaeological sites in the Park, protected under the *Northern Territory Heritage Conservation Act*.

Stories and traditions, sacred sites and related Dreamings represent significant cultural values. Traditional Owners' connection with land and water involves a complex set of traditional rights, benefits, obligations and responsibilities. Some of these traditions can be shared publicly and provide insight into the connections between the land and its people. This knowledge is intrinsically valuable and includes knowledge of plants and animals and land management.

Visitor Values

The Flora River is highly scenic with braided channels, deep pools, intriguing tufa formations and dense riparian vegetation. Opportunities for bushwalks, boating, fishing and photography are in a largely natural environment. Part of the Park's appeal is the opportunity to camp in a remote and quiet setting with few other visitors. Cultural tourism is an undeveloped opportunity for Traditional Owners.

Purpose of the Park

Giwining / Flora River Nature Park will be managed to retain its natural character and maintain its heritage and resources. The Park will provide opportunities for visitors to enjoy the landscape and wildlife and at the same time learn about its cultural and natural heritage. Wardaman knowledge and values will be protected and integrated into management of the Park.

Objectives of the Plan

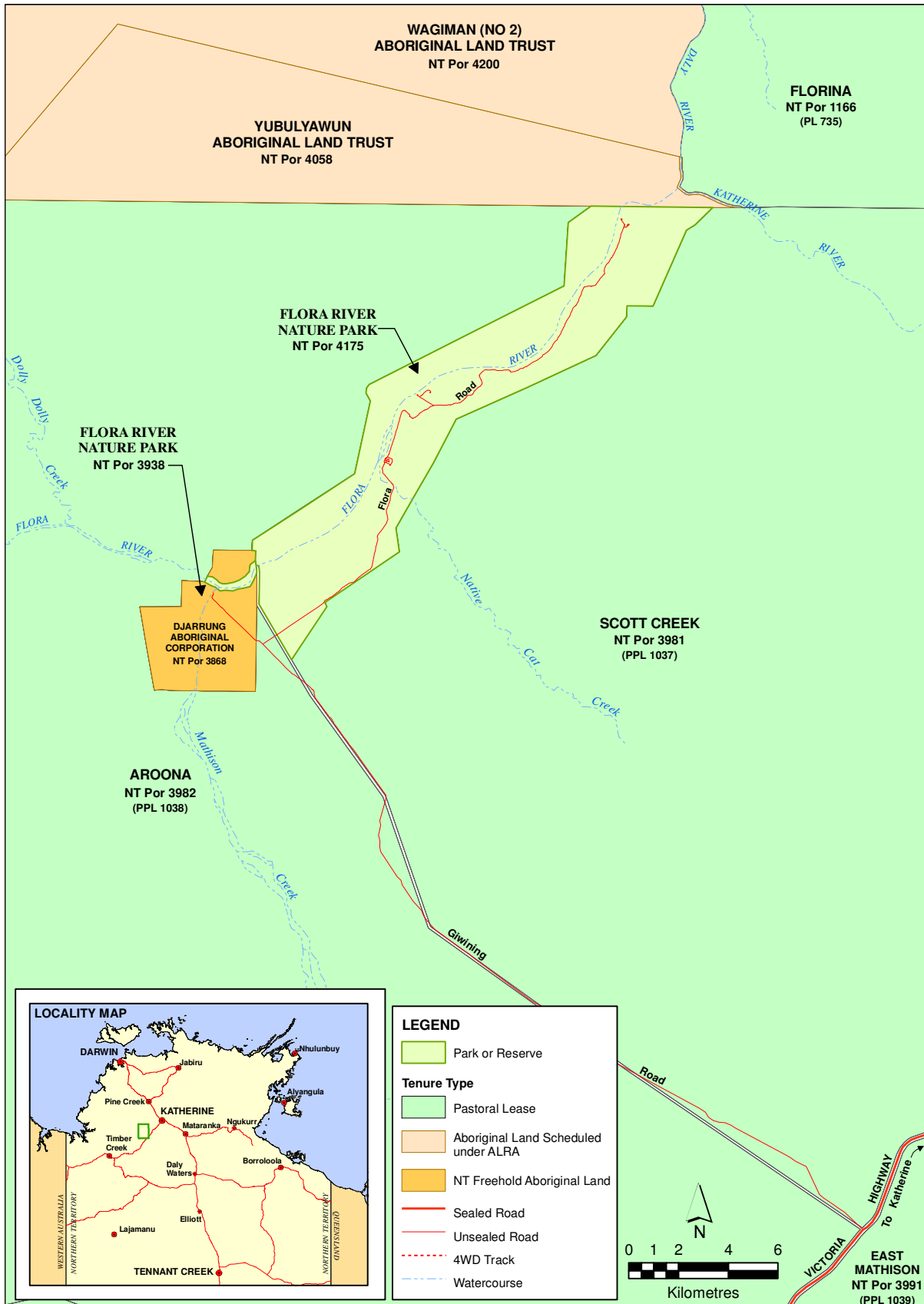
This Plan has been written for the joint management partners, to guide and support them in joint management. It is also a public document by which the public may learn about the Park, its values and management.

This Plan explains how the joint management partners will work together to look after the Park. It provides direction for operational planning and day-to-day programs. It provides for the ongoing conservation of the Park's significant natural and cultural values and continued public use and enjoyment. It shows how public interests in the Park will be best served while recognising that the Park belongs to and is of deep cultural and spiritual significance to the Traditional Owners.

This Plan sets management objectives and performance measures against which the PWS, Traditional Owners and the general public may measure progress. The Plan presents both general and specific management directions and performance measures with respect to the Park's purpose and current management issues. It also outlines measures that will ensure that future development of the Park is appropriate.

This Joint Management Plan replaces the 1998 Plan of Management and is effective until replaced by a new plan, preferably within ten years.

Map 1. Park Location and Neighbouring Tenure



Joint Management Partners

Joint management is about the Traditional Owners and the Parks and Wildlife Service working together in partnership to manage the Park. It is about the partners sharing their knowledge, values and interests, and considering the values and interests of the wider community, to jointly make decisions in relation to all aspects of the Park's management.

The land comprising Giwining / Flora River Nature Park is held by two Aboriginal Land Trusts on behalf of Traditional Owners under the *Aboriginal Land Rights (Northern Territory) Act 1976*. The land has been leased back to the Northern Territory for 99 years. This Joint Management Plan has force in law under the *Territory Parks and Wildlife Conservation Act*. It must also comply with a lease and Indigenous Land Use Agreement (ILUA) registered under the *Native Title Act 1993 (Cth)*.

"We have a good relationship with Parks and Wildlife Service, passing information and sharing stories, it's been good so far, all the way"

Traditional Owners

Giwining / Flora River Nature Park lies within the traditional lands of the Wardaman People of the Victoria River district. Wardaman People to this day see themselves as linked to and holding their lands through principles established in the Dreaming (creation period) during which the Burwarraja Dreaming beings formed the landscape (including Giwining / Flora River) through their exploits, and laid down the rules by which people were henceforth to live.

Individual Dreamings were responsible for the creation and naming of particular topographical features and vegetation, and for the ritual knowledge, ceremonial practices and rules of behaviour associated with them. After their heroic deeds, the Dreamings became the people, the plants and the animals of Wardaman country.

"When Buwarraja were all human before, they made everything and passed everything to each generation. That went right through to us – from that lot – they are the Creator"

From these Dreamings, each Wardaman clan inherited its own particular country, which is eternally infused with the presence of their own Dreamings as well as others that may have travelled through or visited their country. The Park includes parts of the countries of two clans, Yubulyawun, whose country extends west from the Flora River onto Innesvale Station and into east Judbarra / Gregory National Park, and Wunggayajawun, whose country extends south and east from the river.

Important Yubulyawun Dreamings include Eaglehawk (Bulyan), Grasshopper (Lidi), Rainbow (Golondolmi), Barramundi and Cheeky Yam (Garnmarnmali). Wunggayajawun Dreamings include Bar Shouldered Pigeon (Gojuk Gojuk) and Left-Hand Kangaroo / Nail Tail Wallaby (Marbirling).

Imprints of the Buwarraja include their 'mark' or 'shadow' on the landscape at identified sites; their presence in rock art; their visibility as specific plants and animals; and in the repertoire of art, song, ceremony and symbols left for their human descendants to celebrate the Buwarraja and their continuing presence and significance.

The Buwarraja also instituted the fabric of social and ceremonial life – the Law – for Wardaman People and for the groups around them with whom they share Law. Wardaman People inherited their Law through their ancestors from the Dreaming creation period. They have the responsibility to pass it on through their descendents.

The Law not only sets out the rules for the right ordering of relations amongst people, but also for the proper use and care of Wardaman country and its resources. Wardaman People

have responsibility under their Law to care for their country and sites as a whole.

“The Dreaming made the Law”

This principle allows for people’s rightful use of country and its resources, but prohibits wanton misuse. Wardaman People collectively want to ensure that lands in the Park are respected and cared for. Particular responsibility however is held by those Wardaman People associated with the Yubulyawun and Wunggayajawun clans whose traditional countries encompass the Park.

Originally, for Wardaman People, as for their neighbours across other parts of the Victoria River district, the core group holding a particular country under Law was the clan, whose members traced their connections through their father and his father, ultimately back to the Dreamings associated with that country.

“Don’t break up anything for nothing – it’s a Dreaming”

Settlement of the region by non-Aboriginal people has led to many changes for Wardaman People, including the structures of Wardaman land-holding groups. Today, those associated with the countries of each of the original clans are drawn from a number of particular Wardaman families, and while some senior members of these families continue to trace their connections to country and their Wardaman identity through their father, others do so through their mother, mother’s father, and/or father’s mother. Links to country through father and through mother continue however to be particularly important for Wardaman today as they were in the past.

Creation stories (given in the Cultural Values section), further demonstrate Wardaman living culture and the Aboriginal connections with Giwining / Flora River.

Parks and Wildlife Service (PWS)

The PWS is a Division of the Department of Natural Resources, Environment, The Arts and Sport. The Service is dedicated to conserving the natural and cultural values of 87 parks and reserves in the Northern Territory. Giwining / Flora River Nature Park is managed by PWS as part of the Victoria River – Nitmiluk Region. Currently there are two permanent full-time Park Rangers and two permanent part-time Indigenous Park Rangers, based in the PWS office in Katherine, managing this Park along with two other reserves within the Region.

The PWS has involved Wardaman Traditional Owners in the management of this Park from its earliest days, and the relationship between the partners has developed over this time. The new joint management arrangements formalise the partnership, and guarantee stronger involvement by Traditional Owners. The PWS is committed to seeing that the joint management partnership grows and becomes truly equitable, and that Traditional Owners benefit culturally, socially and economically from joint management.

“Because we [Parks & Wildlife] have a good relationship with a lot of Traditional Owners, it’s made our job easier. Although there’s still a lot to learn on both sides, we’re quite confident we’re going to get there”

Zoning

As the Park is managed for multiple purposes, different areas of the Park will be managed differently. The zoning scheme summarises the management purposes and focus for the Park based on the specific values of each area and their level of visitor access and infrastructure development.

Aim

- Protect the Park's values whilst providing for public use.

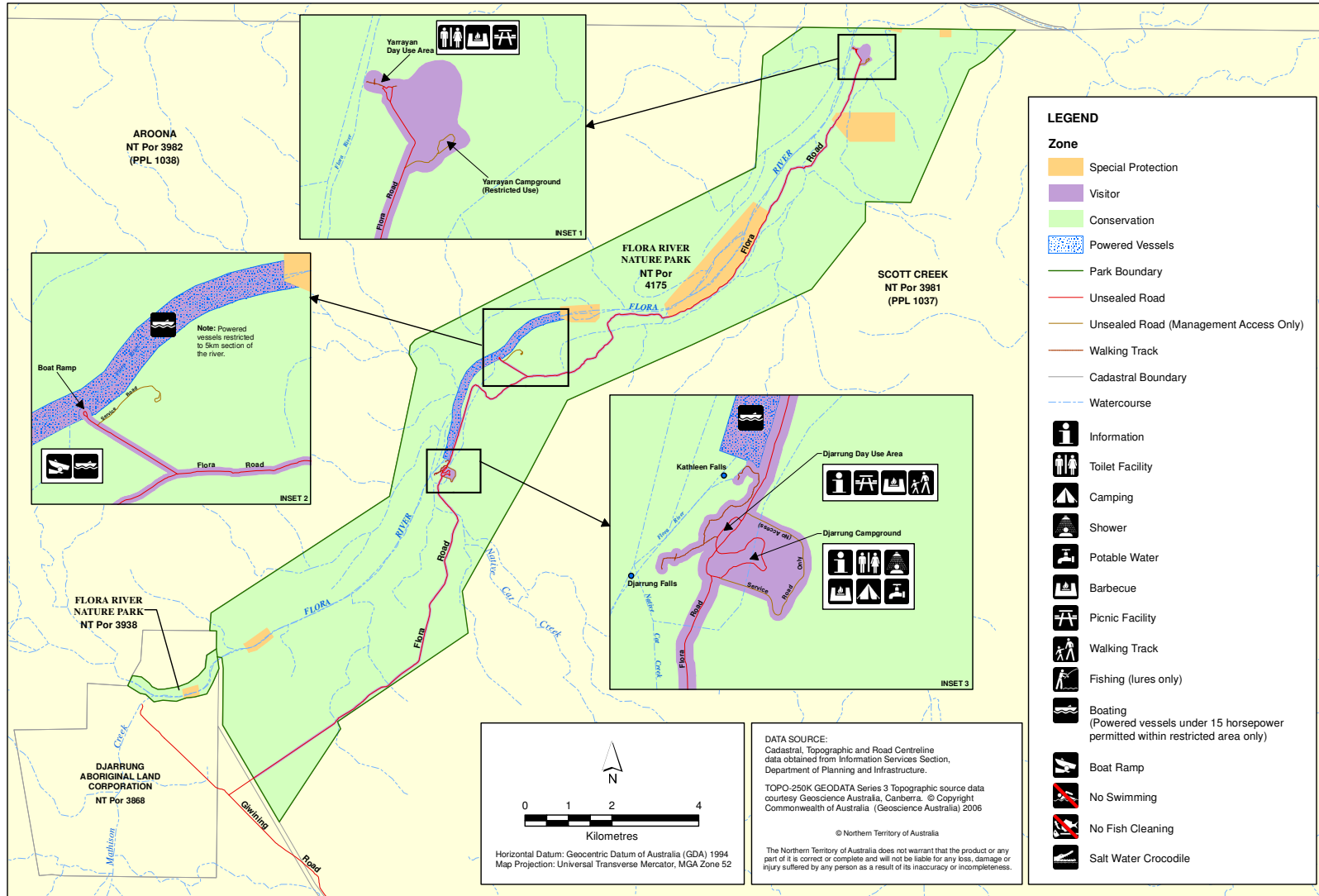
Management Directions

1. Conform to the zoning scheme in managing the Park (Table 3, Map 3). Development in any zone is subject to normal approval processes to ensure appropriate protection of cultural and environmental values. Special activities are always subject to normal by-laws and permits.

Table 1. Zoning Scheme Summary for Giwining / Flora River Nature Park.

	Visitor Zone	Conservation Zone	Special Protection Zone
Purpose	Allow for concentrated visitor use while minimising negative environmental impacts. Provision for possible future development.	Manage for the protection of natural and cultural values while still allowing for personal nature/culturally based experiences.	Protect areas of exceptional conservation or cultural significance.
Management Focus	Maintenance and presentation of visitor facilities, information, interpretation and visitor safety.	Land conservation programs; fire, weed and feral animal management. Maintenance of management facilities and services.	Areas are subject to special attention with regards to conservation and cultural heritage management programs.
Access	Conventional vehicle access to camping areas, canoe / boat launching facility and Yarrayan Day Use Area only. Constructed walking tracks to day use areas. Access to river by foot along defined tracks. Access by powered vessels within visitor zone only (see Map 3). Canoe launching and canoeing with approved concession only. Management access, as approved by GJMC.	Access by canoe with approved concession. Access on land by walkers only or on designated vehicle tracks. Management access, as approved by GJMC.	Access by canoe with approved concession. Canoes must pass to the west and northwest of islands and must not stop in these areas. Management access for specifically approved programs (GJMC) only.
Activities	Camping, picnicking / barbequing, short walks, photography, boating, fishing with supporting infrastructure. Management and commercial tourism with approval from GJMC. Canoeing with approved concession.	Low level personal exploration with no supporting infrastructure. Management and commercial activities with approval from GJMC. Canoeing with approved concession.	Management and commercial activities with approval from GJMC. Canoeing with approved concession as per specific access requirements.
Facilities	Parking, picnic, barbeque and camping facilities, toilets, vessel launching facilities, canoe portage facilities to protect tufa formations. Potable water. Shade shelters, visitor information and interpretive walks.	Allow specially approved visitor facilities subject to demonstrated Traditional Owner and public benefit. Management facilities necessary to protect key values.	Allow only those management facilities necessary to protect key values.

Map 2. Park Zones and Facilities



Natural Values

The Park is located in the Daly Basin bioregion and its habitats include dense stands of pandanus and palm fringing the major waterholes, patches of riparian monsoon forest on river islands and banks, and a variety of tropical savannah eucalypt woodlands on floodplains with heavy clay soil and higher ground with more well-drained earths.

In the context of the Northern Territory reserve system, the Park's values are mainly regionally significant. The Park's relatively small area, its shape (large boundary in comparison to its area) and surrounding land-use mean that the biodiversity values of the Park are vulnerable to impacts over time. Opportunities to enhance the Park's conservation viability by expanding the Park, or entering into conservation agreements with surrounding land holders, should be pursued.

Geological Features

The Park's main conservation asset is the Flora River itself, a significant and representative example of a tropical riverine environment conserved within the Territory parks system. The natural springs that feed the Flora River help maintain a high flow rate, even during the dry season (between 250 to 350 million litres / day). The springs contain high concentrations of calcium bicarbonate that is absorbed when water passes through the limestone that underlies the Park and surrounding areas. When the flow of mineral-rich water is interrupted, for example by plant debris or rock bars, carbon dioxide is lost from the calcium bicarbonate, and calcium carbonate is precipitated onto the obstruction. In time this becomes the tufa that forms the picturesque dams and cascades for which the river is known. Kathleen Falls is a tufa dam that spans the breadth of the river. The tufa formations are fossil-rich and contain gastropod (snail) and lamellibranch (mollusc) remains of scientific interest. Human activities can damage the tufa. Portages have been installed in some sections of the river to protect the tufa formations from damage by dragging canoes.



The Flora River.

Riparian Forest

The areas of riparian closed forest occurring on the islands and banks of the Flora River are one of the Park's most significant natural values, and are one of the best and most accessible examples of this habitat in the NT reserve system. The riparian forest is species-rich and includes many plants found in tropical closed forests, such as *Nauclea orientalis* (Leichardt Pine - Jamagarra), extensive stands of the distinctive palm *Livistona mariae* ssp. *rigida* (Palm - Garnbany), *Casuarina cunninghamiana* (River Casuarina - Lalmarrin) and *Melaleuca* spp. The water's edge is commonly fringed by *Pandanus aquaticus* (River Pandanus – Bondoyorron), the Fresh water Mangrove, *Barringtonia acutangula* (Freshwater Mangrove – Menyjeng) and *Terminalia erythrocarpa* (Manman). The forest areas are also particularly vulnerable to damage by feral animals, fire and irresponsible visitor behaviour (such as driving off-road to gain close vehicle access to the river). Visitor access to, and activities within forest areas, are tightly controlled and monitored.

Savanna Woodlands

Savanna woodland and open woodland broadly typical of Top End environments forms about 85 percent of the Park. The savanna is typified by grassland with an overstorey of relatively widely-spaced large trees, and sometimes with a midstorey of smaller trees and shrubs of varying density and composition. Common overstorey trees of the woodland are *Eucalyptus tectifica* (Hill Coolibah – Yarrayany), *Corymbia foelscheana* (Bloodwood – Dolyan), *E. microtheca* (Coolibah - Yarrayany, *C. bella* (Ghost Gum - Belerren), *Corymbia grandiflora* (Bloodwood - Golordordorn), *Terminalia* spp., and *Erythrophleum chlorostachys* (Ironwood - Yarlan). Other species of interest include *Bauhinia cunninghamii* (Bauhinia - Windinyin), *Petalostigma* spp. and *Vachellia valida* (Wattle – Gorlmedin). Grasses include annual *Sorghum* spp. and a variety of perennials including *Themeda triandra*, *Chrysopogon fallax*, *Sehima nervosum* and *Heteropogon contortus* with *Plectrarchne* spp. (spinifex) occasionally occurring on the peaks of low hills. Dead trees litter the woodland, providing valuable animal habitat. Flora River is currently the only known location in the Northern Territory of a small herb, *Goodenia durackiana*, which is listed as Data Deficient under the *TPWC Act*.

Wildlife

The wildlife associated with the river is of significant conservation and recreation value, with visitor experience strongly enhanced by wildlife that live in, or use the river. A total of 277 native plant species and 194 native vertebrate (including fish) species have been recorded from the Park to date. Flora and fauna monitoring sites were established in the Park in 2008, with the joint management partners conducting initial surveys.

The Freshwater Sawfish (*Pristis microdon*) (vulnerable) is one of 27 fish species recorded from the Flora River by researchers from Charles Darwin University with the help of Traditional Owners. Traditional knowledge of the fish and their habitats has been recorded and this information is available to Park managers. Other aquatic species include Barramundi (*Lates calcarifer*), catfish, bream, grunters, crustaceans (including the Freshwater Yabby (*Cherax quadricarinatus*) and the Giant Freshwater Prawn (*Machrobrachium rosenbergii*) and the Freshwater Mussel (*Velesunio* spp.).

At least 11 frog species have been recorded in the Park, including a number of tree frogs and the Giant Frog (*Litoria australis*).

There are 32 reptile species recorded from the Park, and some of these are of particular conservation value. The Pig-nosed Turtle (*Carettochelys insculpta*) is of scientific interest as

the sole surviving member of the family Carettochelydidae. This species is known from four Territory river systems, with its stronghold in the Daly River catchment. The size of the local Flora River Pig-nosed Turtle population is estimated from an annual survey of turtle numbers in selected waterholes. Traditional Owners acknowledge the conservation significance of the Pig-nosed Turtle (Jurrul) and want to be involved in projects monitoring and protecting this species.



A Pig-nosed Turtle captured during the annual survey.

Merten's Water Monitor (*Varanus mertensi*; vulnerable) inhabits the river's edge. This once common species has declined considerably following the invasion of the Cane Toad into Top End environments, as the monitor preys on this toad species.

Both Saltwater (*Crocodylus porosus*) and Freshwater (*Crocodylus johnstoni*) Crocodiles inhabit the river. Saltwater Crocodiles are dangerous to people and are managed as per the Katherine River Saltwater Crocodile Management Strategy and the Estuarine Crocodile Management for Visitor Safety: Plan for Flora River Nature Park.

A total of 107 bird species have so far been recorded in the Park, including Shining Flycatcher (*Myiagra alecto*), White-browed Robin (*Poecilodryas superciliosa*) and Green-backed Gerygone (*Gerygone chloronotus*), as well as Darter (*Arhinga melanogaster*), cormorants and herons. The Australian Bustard (*Ardeotis australis*; vulnerable) is of conservation significance but has limited habitat within the Park. Although its presence in the Park has not been recently confirmed, the Purple-crowned Fairy Wren (*Malurus coronatus coronatus*; vulnerable) has been recorded here. There was a single reliable report for this species near the boat ramp, but the cane-grass stands were badly damaged by severe flooding in 2007 and the species was not located during intensive searches in 2008. Their presence will be monitored as part of a regional conservation project aiming for the long-term survival of this wren in the Victoria River District. Known major threats to survival include loss of river grass habitat and predation by Black Rats (*Rattus rattus*). The presence and abundance of many bird species (including honeyeaters, raptors, finches and pigeons) are highly variable, depending on seasonal patterns of abundance of resources such as flowering trees and grass seeds.

Seventeen native mammals are known to occur in the Park, including Northern Nail-tail Wallaby (*Onychogalea unguifera*), Northern Brown Bandicoot (*Isodon macrourus*), Sugar Glider (*Petaurus breviceps*), Western Chestnut Mouse (*Pseudomys nanus*), Pale Field-rat

(*Rattus tunneyi*), and the tiny Long-nosed Planigale (*Planigale ingrami*). Kangaroos and wallabies are numerous in the Park, and include at least four species. Little Red Flying Foxes (*Pteropus scapulatus*) are important pollinators and dispersers of native plants.

Many of the animals found in the riverine habitat are significant to the Wardaman people as having connections to ancestral creation beings, and as traditional bush tucker. Traditional Owners are very keen to support fauna conservation efforts.

Threats

Giwining / Flora River Nature Park lies within the Daly River catchment, which is a focus for agricultural development in the Territory. The Park makes up only 1.5% of this large catchment and is vulnerable to environmental influences within it, especially to changes upstream. The Daly River Management Advisory Committee and other groups have been established to address sustainable use and conservation at the catchment level. Threats to the significant aquatic values of the Daly River catchment include water overuse, land clearing and agricultural development, wildfires, weeds, feral animals, pollution (from fertilisers, sewerage and fuel) and erosion causing sediments to be deposited into the aquatic system (Blanch *et al.* 2005). Almost all such threats to the broader Daly River catchment potentially apply to the aquatic values of the Park.

Weeds

Some key weeds pose a significant threat to the values of the Park, displacing native plants, reducing food and habitat for native animals, increasing fire intensity and detracting from visitors' experience of the Park. Cattle previously grazed the Park and most weed problems have been inherited from this past land use or have been affected by surrounding land management practices.

Weed management priorities in the Park are assigned according to legislative requirements under the *Weeds Management Act*, associated statutory Weed Management Plans and regional priorities under the Katherine Regional Weed Management Strategy and Action Plan 2005 – 2010. To date 20 weed species have been recorded in the Park. The most significant weeds on the Park in priority order are:

1. *Jatropha gossypifolia* (Bellyache Bush)
2. *Themeda quadrivalvis* (Grader Grass)
3. *Pennisetum polystachion* (Mission Grass)
4. *Parkinsonia aculeata* (Parkinsonia)
5. *Xanthium occidentale* (Noogoora Burr)

Bellyache Bush is a Class B/C declared weed under the *Weeds Management Act* in this area and is widespread throughout the catchment. As the Park is located at the lower end of the Flora catchment (where it joins the Katherine River to form the Daly River), control of weeds such as Bellyache Bush is difficult and ultimately dependent on effective eradication measures upstream of the park.

Themeda quadrivalvis (Grader Grass) and *Pennisetum polystachion* (Mission Grass) are also declared Class B/C weeds and under legislation must be controlled. These species, along with Bellyache Bush, must be the focus of weed control efforts on the Park. Parkinsonia (*Parkinsonia aculeata*) and Noogoora Burr (*Xanthium occidentale*) are also Class B/C weeds that have not yet fully established on the Park and opportunities should be taken to remove them whilst eradication is still possible.

Other weeds found on the Park include Hyptis (*Hyptis suaveolens*), Coffee Senna (*Senna*

occidentalis) and Rubber Bush (*Calotropis procera*). Four weed species not yet found in the Park, but of particular concern due to their impact in the region and/or potential impact on visitor values, are *Martynia annua* (Devil's Claw – Class A/C weed), *Ziziphus mauritiana* (Chinee apple – Class A/C), *Acanthospermum hispidum* (Goat's Head Burr – Class B/C) and *Tribulus terrestris* (Caltrop – Class B/C).

Feral animals

Feral animals have had a detrimental impact on the natural and cultural values of the Park. They introduce and disperse weeds, and trample and consume native vegetation. Such actions have increased soil erosion, polluted waterways, displaced and killed native wildlife, and damaged traditional bush foods and cultural sites.

Feral animal species recorded in the Park include cattle, donkey, horse, pig, cat, buffalo, Cane Toad and Black Rat. The most significant feral animals on the Park in priority order are:

1. Cattle
2. Pigs
3. Black Rat

In the past, large numbers of cattle have entered the Park, causing significant problems for Park managers. Pigs are also a problem, but their numbers inside the Park are relatively low. Pigs dig up patches of riparian habitat, destroying vegetation and diminishing the Park's scenic value.

The 47 kilometre Park boundary is fully stock-proof fenced and includes six floodgates. There is a basic gate at the Park entrance, which Park Rangers lock when the Park is closed during the wet season. The gate remains open at all other times, which allows large feral animals to enter the Park. Installation of a cattle grid may occur in 2011, funding dependant.

Park Rangers estimate that 5-15% of the boundary fence is destroyed each year by wet season rains or floods, allowing cattle and other large animals to enter the Park. Fencing is fixed as soon as practical in the early dry season, and cattle inside the Park are removed through liaison with neighbours and other stakeholders. Park Rangers opportunistically remove cattle and maintain several pig traps throughout the dry season.

Traditional Owners are supportive of current efforts to remove feral animals, in particular pigs, because of the damage they do to the habitats of bush tucker plants and animals.

Black Rats (*Rattus rattus*) may prey on significant species such as the Purple-crowned Fairy-wren. These introduced rats were recorded in riparian forest near the main campground in 2008, and have probably been introduced with building material, or visitors' vehicles. While their population is small and localised there is a good chance of successful control, and occasional monitoring would ensure that any future introductions can be controlled.

“Pigs are no good. We worry about them digging up turtle eggs and causing other problems in the Park”

Managing fire

The Wardaman people have a long history of using fire to manage the land, to open up country for access, hunting and ceremonial purposes. By and large, traditional burning was patchy, resulting in a mosaic of vegetation communities at different stages of recovery from fire, promoting diversity of habitat. Large wildfires were few and rare.

“The grass along this river area should be burned in the cold time to help plants grow and get rid of weeds. The best time of year to burn is April to June”

“Keep fire away from palms and the yams. Don’t burn the Bush Tea Leaf, Casuarina and Milkwood, which all grow in the same area. Also try to avoid burning the bigger trees, such as the Corkwood, White Gum and Carbeen. If one species goes, several do”

When pastoralism became a major land use in the area, the effect upon fire patterns was dramatic. Some areas were burnt frequently to promote new growth for cattle feed and in an attempt to control cattle-ticks and worms. Other areas remained unburnt and ungrazed for long periods before being burnt in hot, late dry season wildfires, often started by lightning. Over time, pastoralists varied their approach to managing fire. Firebreaks were established around grazing paddocks, boundaries and infrastructure to prevent broad scale wildfire incursion. The Flora River was used as a firebreak. Fire was often used to control weeds or to thin out woodlands to reduce competition for pasture grasses. This new fire regime was generally one of increased fire frequency and intensity. Habitat diversity was diminished over large parts of the country, including the area now managed as the Park.

Since the Park was created, managing fire has been a key management action. Prescribed low-intensity burns are undertaken in the early dry season to protect infrastructure and the Park boundary, create a patchwork effect, and protect the larger area of the Park from wildfire. Where possible, prescribed burning is also undertaken within a few days of rain in the early wet season, to aid the regeneration of vegetation and protect the surface soil structure. Park Rangers use slashers, graders and herbicides to reduce fuel loads and create firebreaks. In recent years, a long-term approach has been developed for fire management in the Park, with annual action plans directed by a strategic plan that is reviewed every few years.

The Park’s Traditional Owners retain their traditional knowledge of fire and its use in the landscape. They want to be involved in all aspects of fire management on the Park and have their interests and approaches incorporated into Park management programs. Traditional Owners work as, or alongside, Rangers exchanging knowledge and practices in implementing fire action plans.

By mapping fires and monitoring the recovery of vegetation after fire, the relationship between different types of fire and vegetation is becoming better understood. In recent years, spatial and other data relating to fires in the Park have been merged with the Park’s biophysical dataset. With this data, fire management planning and decision-making are based on sound information. Fuel loads can be estimated, fire exclusion areas identified and firebreaks planned.

Wildfires can be very destructive, especially at the hot end of the dry season. Wildfires on the Park are fought and extinguished if possible. Depending on the size of the fire, either direct attack or back-burning techniques are utilised. Fire can enter the Park from neighbouring land. It can also originate in the Park and enter neighbouring land. Fire management is therefore a matter for cooperation and communication with neighbouring landholders. Park Rangers currently work closely with neighbours when burning boundary firebreaks and when controlling fires that have escaped or entered the Park. Park Rangers also liaise frequently with staff from Bushfires NT, and receive on-ground assistance from them when it is requested.

Aims

- The Park’s natural features, character and aesthetic values protected with emphasis on protecting riparian forests from the damaging impacts of fire, feral animals, weeds and people
- Indigenous knowledge and skills integrated into management programs.

Management Directions

2. Landscape – The natural character of the Park will be protected. Any development will be carefully sited and designed to be in harmony with the natural environment and significant sites, so as not to detract from the Park’s landscape and scenic values.

3. Soil Erosion – Minimise disturbance to the Park's soils. Rehabilitate any areas severely impacted by feral animals or human activity, with priority given to the riverine corridor. Site infrastructure and facilities to avoid areas susceptible to erosion and minimise soil disturbance during any construction. Seek expert advice prior to development and for rehabilitation. Erect signs advising visitors to keep off rehabilitation sites and to keep to designated tracks.

4. Tufa Formations – Opportunistically monitor tufa formations to ensure they remain intact. If damage is noted then determine cause of impact and take action when damage is sustained through preventable actions.

5. Park Infrastructure – Design all developments on Park to avoid compromising water quality and local surface hydrology. In particular, design toilet systems to minimise risk of water contamination.

6. River Health – Work together as part of a cooperative group of land managers within the catchment and the larger Daly River catchment to protect ground and surface water. Park managers will regularly liaise and cooperate with groups set up to address conservation issues at the catchment level (e.g. Daly River Management Advisory Committee).

7. Watercraft – Regulate the use of watercraft in the river to protect natural and cultural values, to prevent soil erosion and water pollution, and to promote visitor safety and enjoyment.

8. Significant Plant and Animal Species and Communities – Plant and animal species and communities of high cultural and/or natural value will be subject to low-key monitoring and dedicated protection from threats. Such actions will include the following:

- Protect riparian forest communities from hot, late dry-season wildfires, and periodically assess the condition, including status, of species such as *Livistona mariae ssp. rigida* (Garnbany) and *Casuarina cunninghamiana* (Lalmarrin),
- Results of the annual Pig-nosed Turtle survey will be recorded into the NTG Fauna Database, to indicate the trend in population size over time, and an annual report will be written.
- Record observations of Purple-crowned Fairy Wren and Freshwater Sawfish into the NTG Fauna Database.

9. Hunting and Bush Tucker Collection – Traditional Owners will exercise their rights to harvest some animals and plants as bush tucker but will continue to forgo their right to use firearms when hunting on the Park. The impact of this traditional harvest will be managed if necessary to ensure sustainable populations.

10. Firewood – Collection from within the Park is prohibited to preserve important habitat.

11. Weed Management – Management of weeds will continue to take a strategic, catchment-scale approach by implementing a long-term (5-10 year) weed strategy and annually-reviewed action plans. Park operations must comply with the *Weed Management Act* including all associated statutory management plans.

Weed management actions will be implemented through a succinct, targeted weed program, developed in conjunction with, and using the standards developed by the Weed Management Branch NRETAS.

The Weed management program will focus on practical weed control methods, practices to minimise the number of weeds being brought into the Park, effective survey and monitoring, and including the concerns of the Traditional Owners. Weed management will concentrate in priority order on the following:

- Controlling Bellyache Bush, Grader Grass and Mission Grass (*Pennisetum polystachion*) as per the statutory Management Plan(s) or advice from Weeds Management Branch.
- Eradicating Parkinsonia and Noogoorra Burr, given they currently occur in isolated, small areas and can be opportunistically targeted.
- Any new weed incursion(s) will be assessed against legislative and statutory requirements, regional priorities and the current Park priority list before any action is taken, or changes made to the current priorities.

12. Feral Animal Control – Management actions will be implemented through a succinct, targeted program, developed in conjunction with, and using standards developed by Wildlife Management and Biodiversity Conservation, NRETAS. It will focus on practical, cost-effective control methods, effective monitoring, and include the concerns of the Traditional Owners. Feral animal management will concentrate in priority order on the following:

- Continue to monitor for pigs, particularly in sensitive riparian areas, and remove at the earliest opportunity.
- Complete the boundary fencing of the entire Park and install a cattle grid at the park entrance. Maintain boundary fences to a high, stock-proof standard.
- Continue to monitor the Park for cattle and work closely with neighbours to keep cattle out of the Park and their timely removal.
- Monitor annually for Black Rats at the campground(s) and remove when found.

13. Fire Management – Manage fire strategically by implementing a long-term (5-10 year) fire strategy and annually-reviewed action plans, developed in conjunction with Bushfires NT. The partners will jointly implement the fire management program, paying particular regard to:

- Protecting people, personal property and infrastructure from fire (highest priority);
- Protecting the riverine corridor and riparian forests from hot wildfires through active management in the early dry season;
- Protecting vulnerable cultural sites from fire damage;
- Reducing fuel and / or maintaining firebreaks to prevent wildfires from entering or exiting the Park and limiting the area of the Park burnt;
- Restricting open campfires to designated fireplaces in the Visitor Zone. In other zones, campfires may be permitted subject to conditions that minimise the impact and risk of wildfire;
- Involving the Park's neighbours and considering their interests;
- Maintaining data that will inform sound fire management decision-making and help in understanding fire-habitat relationships; and
- Training requirements and competency standards for PWS staff, participating Traditional Owners and volunteers.

Performance Measures

- Tufa formations are intact and no preventable damage is sustained
- Riparian forest communities are wildfire-free.
- No more than 25% of the Park, excluding riparian forest communities, are burnt each year.
- PWS working together with the Weeds Management Branch on statutory weed requirements.
- Coverage of Class B/C weeds in riparian areas will not increase over the life of this Plan, based on figures in the 2011 Weed Action Plan.
- The Park boundary fence is maintained to a stock-proof standard and the cattle grid is installed.

Cultural Values

“Young people men and women need to learn from old people, the Dreaming. That’s what this is about. Sharing our knowledge and culture, from the heart”

A Living Culture

Giwining / Flora River Nature Park is part of a living cultural landscape. The Traditional Owners have a rich cultural heritage and maintain a strong connection with this country. The Park’s cultural values include their stories and traditions, their Dreamings and associated sacred sites. Water is central to Wardaman culture. The river, its springs and the aquifers associated with Giwining / Flora River Nature Park all feature strongly in Wardaman creation stories. A traditional welcome to the Park involves wetting the head of a new visitor with water from the river. This practice introduces the ‘stranger’ to the country and its spirits. Further details about the importance of the Flora River, and of water in general to the Wardaman people, can be found in the creation story (Section 1 and in Cooper and Jackson 2008)

The Traditional Owners wish to share some of their Dreaming stories with visitors (see below).

For the Traditional Owners, it is vital that culture is kept strong through knowing and caring for country, and passing this knowledge on to future generations. Families therefore need opportunities to visit country and teach young people their cultural inheritance.

Some plants found on the Park, such as *Livistona rigida* (Garnbany) and *Casuarina cunninghamiana* (Lalmarrin), are of high cultural significance to the Wardaman people. Some plants continue to be a source of food, medicine and tools, including *Buchanania obovata* (Green Plum - Gulid), *Ficus racemosa* (River Fig - Mirdiwan), *Vitex glabrata* (Black Plum - Buda) and several yam species. Wardaman women are currently exploring the harvest of *Ocimum tenuiflorum* (Bush Tea Leaf – Yarlarrg) for sale. This project may be expanded to allow larger scale sustainable harvest as part of a commercial venture.

Dreaming Stories of Giwining / Flora River Nature Park (see Table 1 and Map 2)

The lower Flora River which includes the Flora River Nature Reserve is known to Wardaman People as Giwining. During the period known to the Wardaman as the buwarraja, the “Dreamtime”, the earth was featureless - “it was just sand”. The ancestors of the plants, natural phenomena and animals we know today had human form and their activities created and named the landscape and the laws that govern and order human society. At the end of the Dreamtime, the creative ancestors took their present day form; however, they continue to live on in features of the landscape and in the songs, laws and customs that the Wardaman follow today.

The stories are summaries of longer accounts told by Traditional Owners Bill Yidumduma Harney and Lily Gin.gina (deceased) to John Laurence and David Martin, and transcribed and paraphrased by John Laurence (6 February 2009). They cover four independent but interrelated events. Parts of these stories are not open publicly and are held by older Wardaman men and women.

The first story, which is part of a longer series of events on Wardaman country to the south, tells how the course of the river was created. The second recounts the Pig-nosed Turtle’s struggle with Short-necked Turtle and Barramundi over rights to use the river. The third story recounts the establishment of a number of social institutions – initiation and trade, while the fourth outlines a dispute that resulted in the creation of a number of important sites on the Flora, including Kathleen Falls.

Story one – The formation of the lower Flora River – Giwining (green sites)

In the Dreamtime all the country was flat. No trees, or rivers were here – it was just sand. And Dreamings were all human beings. Just like you and me. The fight of the Lightning Brothers

[Janganyaniwung – the Two Gekko Men] on Delamere to the south, caused the first rain. On what is now the Upper Flora, on Innesvale Station, the rain was backing up into a flood. Olive Python (Gunutjarri) said to Blackhead Python (Gurrbijimin) “Don’t sing that rain [to make it stop], open up a creek to the east”. Blackhead Python used her yam stick [hardened digging stick] to open up the Flora. She opened the Mathison at Ninin and her stick caused a spring to flow at Yibulkbulkabaya. Grasshopper men who were travelling with the snakes dived down under the ground and came up at Yinggawuyma. They started the water bubbling up from the ground there, and later became the reeds along the banks of the river. Blackhead Python pushed her yam stick under the ground all the way to Mataranka. The water comes underground from there to the springs on the Flora.

Story two – Lower stretch of river within reserve (black sites)

This is true – the old people told us. Short-necked Turtle called Bambidi used to live around this area. He painted red and white stripes on his face and he carried the children of Rainbow around on his back. Pig-nosed Turtle [Jarrul] came up the Daly to the Flora junction [Wudanbu]. Jarrul was looking for a place to nest.

Short-necked Turtle and Barramundi said “You can’t come up Wudanbu Junction. We stop you. You can’t come up the river”

Short-necked Turtle, Barramundi and Willy Wagtail built the tufa dams along the Flora [at Jiman and Gewalambala], so Pig-nosed Turtle travelled up the Katherine to Scott Creek. But he couldn’t find a nesting site and returned to the dams on the Flora.

“You can’t stop me, I’ve got two hands to push you away,” he told Short-necked Turtle.

But Pig-nosed couldn’t climb the dams and instead laid his eggs at Kumbitj Jurrala on the north side of the river. He returned to Daly and travelled downstream to the junction with the Ferguson. He’s still there today in the form of a large rock.

Story three – Middle stretch of river within reserve (white sites)

Willy Wagtail made many stone tools at Warrickbang Hill. But Bowerbird (Gorrijgorrij) was watching and when Willy Wagtail looked away he stole them and took them to Gindanya on the other side of the river. The old people – the Casuarina and Palm people, noticed that white quartz was missing from Warrickbang Hill and sat and watched for the thief. But they argued and went their separate ways.

Marbiling (Nail-tailed Wallaby) and Gojokgojok (Bar-shouldered Dove) were travelling from the north-east. Gojokgojok in the lead, dancing, with Marbiling behind carrying bamboo spear shafts to trade (yulun) for stone tools.

They carried out ceremony with Willy Wagtail at Jigjarjiga and the Women danced at Kulbinji, but while they were waiting for the stone tools, Marbiling got angry and threw the bamboo spear shafts to Janing on the Edith River. Further up stream he grabbed Gojokgojok and threw him into the river where he changed into a rock at Marilinba. The old people were transformed into the Casuarinas, Paperbarks and Palms that line the Flora today. Marbiling returned to Warrickbang Hill where he stayed.

Story four – Upper stretch of river within the Park (red sites)

The old people were having a big ceremony at Wurrkleni (on Willeroo Station to the south-west of the Flora). Rainbow (Gondolmi), Pheasant Coucal (Girribuk) and Walaminmin (small bat species) were there and Warlung (Ghost Bat) was there with his two wives – Waljibang (Red Wing Parrot) and Denening (Rainbow Lorikeet). The bats danced while Rainbow and Pheasant played the didgeridoo. Rainbow played so well, that Red Wing Parrot and Rainbow Lorikeet ran off with him while Ghost Bat slept.

Warlung tracked and followed them as they headed north to Yinggawuyma [aka Noyimaya – “Blowing water”] on the Flora. Where they met another mob – Catfish Mob - from Yibulbanya painted up with red ochre. Rainbow started to play the didgeridoo. Everyone was dancing and singing. Ghost Bat (Warlung) came out painted up – “Oh, he’s a good dancer,” said the mob – and he started kicking up the dust. He was dragging a spear with his big toe, each dance step bringing it closer and closer. Still those girls didn’t like him.

The dance finished and Ghost Bat sat down next to his spear. He pulled hair from his armpit and placed it on the fire. He got a fan and dancing with the firestick fanned the smoke. The smoke made

everyone sleep - a deep sleep.

Ghost Bat sang out. Nobody moved, everybody snoring. He was fanning everyone with smoke.

Rainbow was sleeping in the middle, Red Wing Parrot and Rainbow Lorikeet were on each side. Ghost Bat crept up and speared Rainbow in the heart. Blood shot out and lifted Rainbow into the river. He floated downstream where became the rock bar and falls at Kathleen Falls – Djarrung.



Traditional burning of country helps keep it healthy and reduces the frequency of severe wildfires.

Map 3. Dreaming Sites of Flora River Nature Park

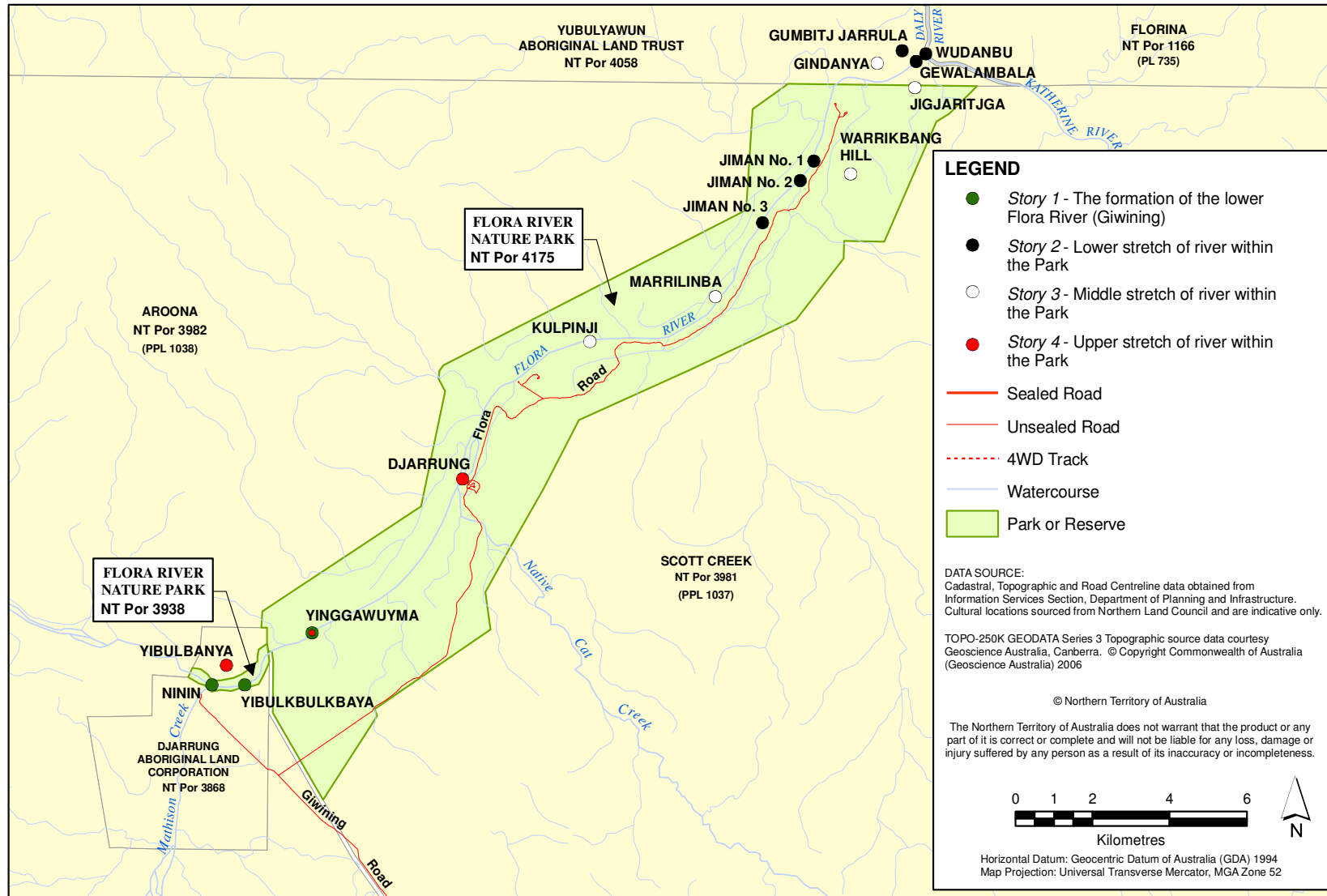


Table 2. Dreaming Sites of Giwining / Flora River Nature Park (as in Map 2)

Site Name	Map code	Description
Wudanbu	●	Junction of the Giwining / Flora and Katherine Rivers. Placename in the Pig-nosed Turtle Story - Bambidi refused to allow Jarrul into the Flora River.
Gewalambala	●	Placename in the Pig-nosed Turtle Story. Falls near turtle nesting site near mouth of Flora River.
Gindanya	●	Placename in the Left-Hand Kangaroo Story. Bowerbird left stone tools here at this un-located site on the western bank of the Flora.
Gumbitj Jarrula	●	Place name in the Pig-nosed Turtle story. Pig-nosed Turtle left eggs at this un-located site on the western bank of the Giwining / Flora River.
Warrikgang Hill	●	Hill - Placename in the Left-Hand Kangaroo story. Willy Wagtail made many stone tools here. They are still in the rock. Marbiling stopped at hill, while Gojokgojok went to the standing stone.
Jigjaritjga	○	Small swamp, Placename in Left-Hand Kangaroo Story. Yimulen - "swamp".
Jiman 1	○	Rapids in Giwining / Flora River. Placename in Pig-nosed Turtle Story. Rapids pushed up by Short-necked Turtle and Willy Wagtail.
Jiman 2	○	Rapids in Giwining / Flora River.
Jiman 3	○	Rapids in Giwining / Flora River. Placename in Pig-nosed Turtle Story. Rapids pushed up by Short-necked Turtle and Willy Wagtail.
Marrilinba	○	On island. Gender Restrictions - men only. No access to island. Canoes and other boats must travel to the west of the rock. Placename in the Left-Hand Kangaroo Story. Gojokgojok went into the water at this place.
Kulbinji	○	Gender Restrictions - women only. No access to island. Fishing from banks okay. Placename in the Left-Hand Kangaroo story. Name means 'body decorations'.
Djarrung	●	Katherine Falls on Giwining / Flora River. Placename in the Rainbow story. Djarrung falls is the metamorphosed body of Rainbow.
Yinggawuyma	●	'Boiling water' on Giwining / Flora River. Placename in Blackhead Python and Rainbow stories. Aka "Noyimaya". Access restrictions apply Canoes and boats must keep away from the 'boiling water'. No fishing from bank closest to water. Warning signage is needed.
Yibulbulkabaya	●	Less restrictions apply. Placename in Blackhead Python story. This unrecorded site is a spring running into Giwining / Flora River downstream from Mathison Junction. Gunutjarri Olive Rock Python (some say Blackhead Python) cut the rock with her yam stick causing water to flow in Giwining / Flora River. The yam stick came out at Gumun (a cave just outside the park), then opened up a passage from Elsey to the Flora. Spring is nocturnal.
Ninin	●	Junction of the Mathison Creek and Giwining / Flora River. Placename in Blackhead Python story. Junction of Giwining / Flora River and Mathison Creek.
Yibulbanya	●	At the junction of Mathison Creek and Giwining / Flora River. Placename in the Rainbow story. Site opposite the junction of Giwining / Flora River and Mathison Creek. Trade (yulun) was carried out here. Associated with White Catfish (Galambuga) and Warrark (Black Catfish).

Cultural Knowledge

The Traditional Owners of the Park are the Wardaman People who know the river as Giwining. They have a rich cultural heritage and a long and continuing association with the Flora River area. There are many sites of significance to the Wardaman People within the Park, particularly in the riverine area, some of which are registered under the *Northern Territory Aboriginal Sacred Sites Act*. There are also archaeological sites in the Park, protected under the *Northern Territory Heritage Conservation Act*.

Stories and traditions, sacred sites and related Dreamings represent significant cultural values. Traditional Owners' connection with land and water involves a complex set of traditional rights, benefits, obligations and responsibilities. Some of these traditions can be shared publicly and provide insight into the connections between the land and its people. This knowledge is intrinsically valuable. Traditional knowledge of plants and animals and traditional land management knowledge are also valued by the PWS and the wider community.

Giwining / Flora River Nature Park is part of the larger Wardaman estate, which also incorporates sections of east Judbarra / Gregory National Park. For the Wardaman Traditional Owners the landscape is a living entity with which they are in life-long interaction and communication. Strong culture comes from connection to country, knowing country well, using and caring for country. Caring for country is an obligation Traditional Owners willingly accept. Their relationship with country involves both rights and responsibilities.

Country and culture can be kept strong, particularly by:

- keeping country productive through burning, and selective hunting and gathering;
- performing ceremony;
- talking with country, and with ancestors;
- preventing damage to the country;
- managing dangerous places so that harm does not come from country; and
- passing on knowledge, rights and responsibilities to successive generations of owners.

The Wardaman have a reciprocal relationship with country. The people have an obligation to care for country and in turn the country will provide and care for its people. The Traditional Owners see themselves as caretakers of a relationship of trust derived from the Dreaming and passed on to them by their immediate forebears.

"I just come out to listen to the story. Probably take over from my grandfather, and then I'll continue it on and then whenever I have a son, pass it on to him. And then when he grows up, he can pass it on, and keep passing it on to the next generation, and that way it will never be forgotten and then it will always be there for all eternity.... for life"

Traditional Owners are concerned that traditional knowledge will be lost and want to be sure that knowledge is passed on to the next generation. They want joint management to provide opportunities for Wardaman People of all ages to spend time on country to reinforce traditional knowledge. The Traditional Owners also want the Park Rangers to understand Wardaman culture, knowing that this will help them manage the park in the right ways. There may be opportunities through joint management to address Traditional Owners' cultural interests by recording their histories and knowledge. It must be remembered that their knowledge is their intellectual property and must be carefully managed.

Wardaman Seasons

The Wardaman Aboriginal Corporation has given permission for their bush calendar to be included here as one way for traditional ecological knowledge to be incorporated into joint

management of the Park (see also Bureau of Meteorology's Indigenous Weather Knowledge website <http://www.bom.gov.au/iwk/> and Raymond et al. (1999).

The four Wardaman seasons are defined by weather patterns and happenings in nature such as plant flowering and fruiting, and animal behavioural patterns (Figure 1) with further detailed description of each season including environmental indicators and bush foods available during each season provided in Appendix 2.

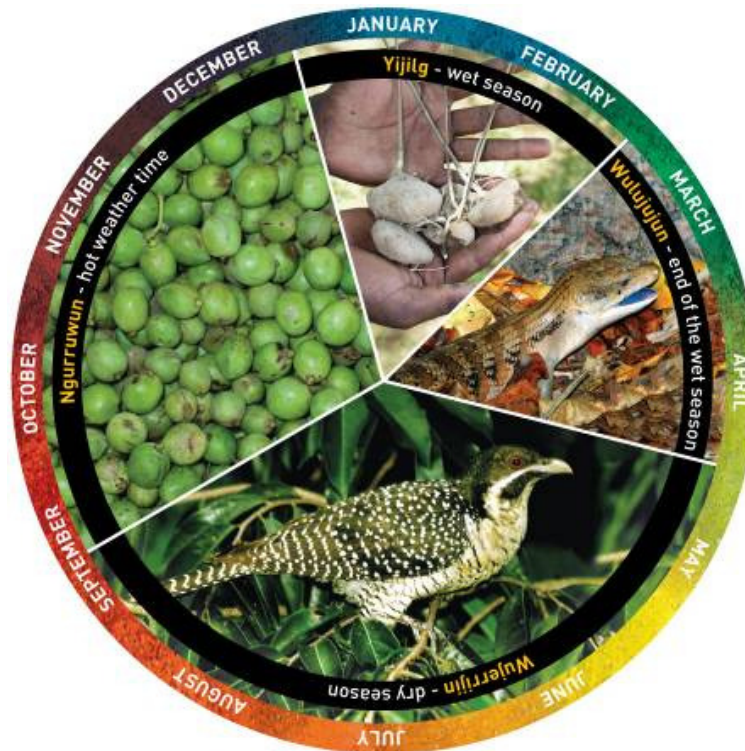


Figure 1. Wardaman Seasonal Calendar

Yijilg - Wet season (December to February): This is the Wet season when rain falls daily, often in large amounts. Often travel is restricted due to flooding and the boggy nature of heavy soils on black soil plains.

Wulujujun - end of the Wet season (February to March): This season sees the last of the rains and the end of the Wet season.

Wujerrijin - Dry season (April to September): This is the Dry season when the weather is cold and no rain falls. The skies are generally clear.

Ngurruwun - hot weather time (September to December): This is the hot weather time when the ground becomes very hot to walk on. The first rains begin.

Traditional Use of Giwining

The Traditional Owners are entitled, under the *Territory Parks and Wildlife Conservation Act*, to use the natural resources of the land, to hunt wildlife and gather bush foods. They believe however, that the Park is too small and that hunting, especially with firearms may endanger or annoy visitors, and they will continue to forgo this right. Their interest in fishing, and gathering bush foods and medicines within the Park remains high. They acknowledge the conservation significance of the Pig-nosed Turtle (Jurrul) and want to be involved in projects monitoring and protecting this species.

“We need to make sure we continue with the important traditions, when we’re travelling on the country and introducing visitors to the country”

Places of Cultural Significance

Giwining / Flora River Nature Park contains sites of great cultural significance to the Wardaman People. The creation stories name many of these sites and clearly connect the Wardaman with the area (Map 2). These sites need to be protected from unnatural damage and any access restrictions must be respected.

Knowledge of sites, ceremonies and associated stories are often restricted to senior Traditional Owners. Visitor activities in and around sacred sites are controlled under the *Northern Territory Aboriginal Sacred Sites Act* and the *Aboriginal Land Rights Act*. Six sites have been recorded in the Park by the NT Aboriginal Areas Protection Authority. Many places of cultural significance (Map 2) lie within the Special Protection Zone (Map 3). Visitors are not permitted to enter these areas (apart from canoeists as specified in Table 1) and only management activities consistent with the directions of the Traditional Owners will be allowed (see Table 1 for specific directions).

The Park also contains archaeological sites and artefacts that are valued by the Traditional Owners as well as by the wider community. The *Heritage Conservation Act* specifically protects archaeological sites and resources in the Northern Territory regardless of whether they are recorded or not. There are two known recorded archaeological places within the Park and it is probable that additional and as yet unrecorded places exist.

Processes for protecting sacred and archaeological sites from damage from proposed works or development are detailed in the Special Activities and Development section (page 35).

Aims

- Ample opportunity for Traditional Owners to maintain their cultural obligations, knowledge and connection to the land within the Park.
- Aboriginal skills and knowledge of country integrated into park management programs.
- Places and objects of Aboriginal cultural significance protected.

Management Directions

14. Access to Country – Support Traditional Owners’ rights and obligations to visit and use country to maintain cultural traditions. The Yarrayan Campground may be used as a base for their visits. Joint management programs will allow for Traditional Owners to fulfil customary obligations. Pursue other supporting resources as required.

15. Respect for Cultural Business – Traditional Owners’ authority on cultural matters will be respected. Senior Traditional Owners may supervise access and advise on appropriate behaviour if PWS staff are required to access culturally sensitive areas. Parts of the Park may occasionally be closed for short periods to allow Traditional Owners to conduct ceremony. Adequate public notice will be given by PWS regarding any such closures.

16. Sacred Sites – For sacred site clearance processes see Special Activities and Development section (page 35). Access restrictions will apply for the following special protection zone sites (Map 3):

- Registered Site 5268-22, Marrilinba – access to the island is allowed only to Aboriginal men. Canoes must pass to the west of the rock.
- Registered Site 5268-24, Kulpinji – access to the island is allowed only to Aboriginal women. Fishing from the riverbank is allowed.
- Registered Site 5268-7, Yinggawuyima – access restricted. Boats must keep away from the ‘boiling’ water
- Unregistered Site 5258-8, Yibulkbulkabaya – access restricted.

17. Heritage Sites - For clearance processes regarding archaeological places and objects see Special Activities and Development section (page 35).

18. Traditional Use – Traditional and legal rights to hunt and gather will be respected. Rights to harvest plant materials from the Park for traditional purposes will extend only to Traditional Owners. Gathering of plant foods and materials by others will require the approval of the Giwining Joint Management Committee (GJMC) and normal approval processes. The GJMC will review harvesting practices from time to time to ensure that use in the Park is sustainable and that visitors' experiences are not significantly affected. Traditional Owners will continue to forgo the use of firearms when hunting in the Park.

19. Cultural Heritage Management Program – The joint management partners will develop a cultural program and associated guidelines for the Park which will be regularly reviewed. They will provide for Traditional Owners' interests, including time on country, recording and monitoring places or objects of cultural significance, and recording and transferring Aboriginal knowledge as appropriate.

20. Indigenous Ecological Knowledge – Indigenous ecological knowledge and skills will be integrated into park management programs where possible and recorded appropriately.

21. Indigenous Cultural Intellectual Property – The intellectual property rights of Traditional Owners will be protected through the Departmental Indigenous Cultural and Intellectual Property policy. The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners through the GJMC and with overarching policy agreed between the NLC and PWS.

Performance Measures

- Traditional Owners report no significant adverse impacts on sites of cultural significance.
- The GJMC are satisfied that Aboriginal skills and knowledge of country continue to be integrated into park management.

Managing For Visitors

Traditional Owners want to share their country and culture and enthusiastically welcome visitors to the Park. They also want visitors to learn about and respect the area's values, and enjoy the Park in safety. The joint management partners believe good visitor information is a key to those outcomes. They also want visitors to have well maintained facilities befitting the Park's character. Traditional owners believe that visitor numbers may be increased if appropriate cultural tourism opportunities were offered. Various options in establishing a tourism enterprise or partnering with an existing tourism company are being explored by Traditional Owners.

Activities and Facilities

The typical visitor camps overnight and has an uncrowded, relaxing time taking short bushwalks through the riverside forests, enjoying the native wildlife and photographing the stunning river scenery, including the remarkable tufa formations. An estimated one third of visitors use a boat on the river for a closer experience of the watercourse and its wildlife. Fishing is a popular activity.

About 1200 people visited the Park in 2009. Most visitors travel privately to the Park and visit in the cooler dry season (May and August). Access to the Park is via the unsealed Giwining (Flora) Road, which leaves the Victoria Highway 86 kilometres west of Katherine. It is 36 kilometres to the Park entrance from the Victoria Highway. Both the access road and main road within the Park are suitable for conventional vehicles, with care, during the dry season. The Park becomes inaccessible to all vehicles after heavy rain and is closed to visitors during the wet season (usually between November and March). The roads to and within the Park are maintained by the NT Department of Planning and Infrastructure (Roads Division).

Facilities in the Park include:

- About 20 shaded camping sites at the Djarrung Campground, with amenities that include drinking water, wood fireplaces, picnic tables and ablution block with solar hot water showers and flushing toilets. Fees are payable through an honesty system.
- The Djarrung day-use area with picnic facilities and two bushwalks of about one kilometre and half-a-kilometre to the Djarrung Falls tufa dams and Kathleen Falls tufa dams respectively.
- The low-key Yarrayan day-use area with picnic facilities.
- A canoe and boat launching facility is located four kilometres from Djarrung, Canoe's may also be launched at the Yarrayan day-use area, located in the north of the Park. Canoe's may only be launched by permitted operators as part of commercial tours.
- Orientation information and interpretive signs.

The Djarrung campground is for public use while the Yarrayan campground at the northern end of the Park has been developed more recently, primarily for joint management activities. The Djarrung campground is rarely full, but if visitor numbers increase, the Yarrayan campground may also be developed for public use. Pets are not allowed in the Park and generators can not be used so that visitors can enjoy a peaceful and relaxing experience.

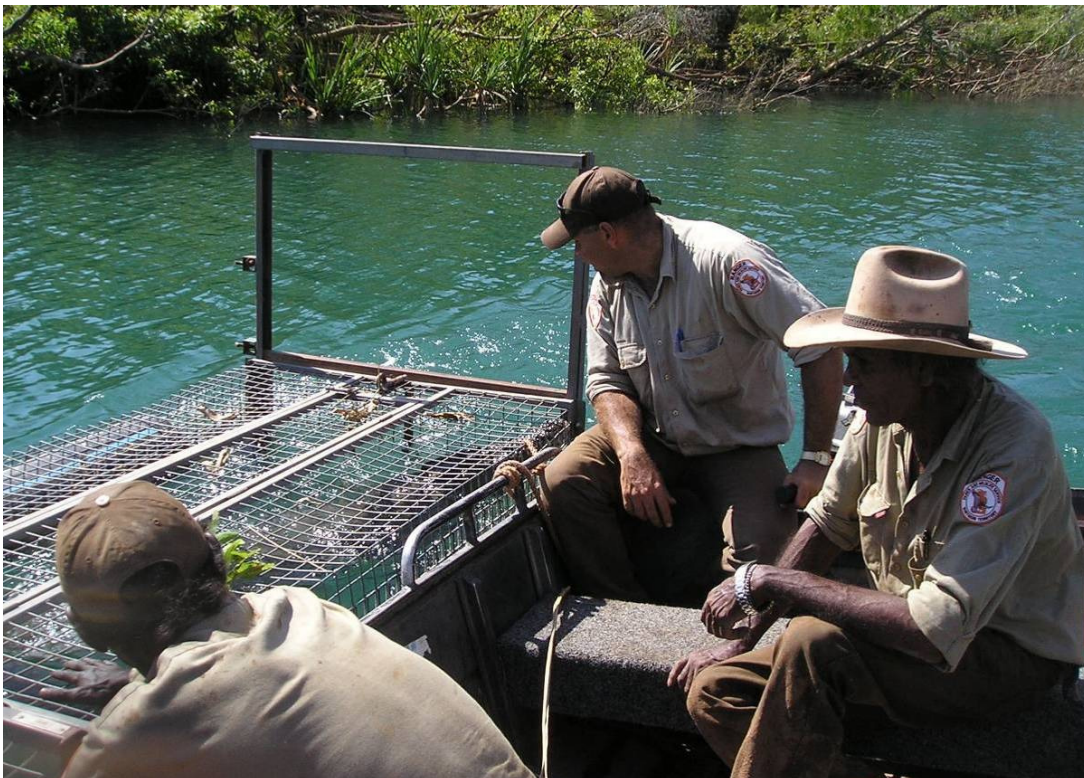
The use of powered vessels in the river is confined to a five kilometre section of the river (within the visitor zone, see Map 3) in the middle section of the Park. It is prohibited to use bait for catching fish to prevent accidentally capturing turtles.

One commercial tour operator was running canoe tours in the Park for many years, however they have not accessed the Park with a tour group since 2006. There are currently no commercial businesses operating on the Park, although Traditional Owners are interested in exploring commercial tourism opportunities.

Visitor Safety

Saltwater Crocodiles are present in the Flora River system, and swimming in the river is therefore prohibited. Crocodiles are managed in accordance with the Katherine River Saltwater Crocodile Management Strategy and the Estuarine Crocodile Management for Visitor Safety - Plan for Flora River Nature Park. Park Rangers survey regularly during the dry season, as well as conduct river patrols to maintain traps and remove animals. This does not guarantee the absence of crocodiles. Results of the 2008 independent 'Crocodile Risk Assessment of Flora River Nature Park' indicated a very high risk for canoeists on the river, particularly those not with a permitted commercial operator. In 2009 the joint management partners agreed that canoeing should only be allowed on commercial tours, with strict safety standards being a condition of permit. There is a whirlpool upstream of Djarrung Falls which poses potential danger to watercraft. There are no other significant environmental risks to visitors.

While it is not possible to eliminate all risk, it can be reduced if visitors are prepared for hazards, have realistic expectations and behave appropriately. Having a clear and current set of emergency response procedures, appropriately trained Park Rangers and adequate resources will help effectively manage any emergency incidents that arise.



Park Rangers prepare to remove a Saltwater Crocodile (Crocodylus porosus) from one of the Park's traps.

Information and Interpretation

Information and interpretation plays an important role in visitor management by informing people about the values of the Park and how visitors can respect them. Public education informs visitors about facilities, activities, safety aspects and regulations, and explains or interprets the Park's natural and cultural features.

Interpretive and safety information is currently provided in the Djarrung Campground and beside the trailhead of the two short walks along the river. A park information bay is located outside the Park at the Giwining Road – Victoria Highway intersection. The 2006-7 visitor survey found that Park visitors would like to be able to access more interpretation about the Park's natural and cultural values. The partners want visitors to feel welcome and would like to see visitor information improved over time.

Aim

- Visitors enjoying the Park safely and respectfully.

Management Directions

22. Visitor Facility Planning – Visitor access, activities and facilities within the Park will be managed and developed according to the Zoning scheme (Table 2, Map 3). Future development will be consistent with a low-key, tranquil visitor experience and protection of Park values.

23. Campgrounds – Djarrung campground will be the main public camping facility. The Yarrayan joint management campground may be developed for public use if Park visitation increases significantly. Options to contract campground services will be considered, with Aboriginal businesses or organisations employing Traditional Owners being awarded preference in accordance with joint management agreements.

24. Access – Visitors will be encouraged to keep to vehicle and walking tracks to minimise damage to sensitive environments and avoid risk of accidental entry into culturally sensitive areas.

25. Concession Operations – When considering applications for Park concession operations, the partners will give preference to tour operators who are Traditional Owners.

26. Boating and Canoeing – Canoeing on the river will only be permitted with appropriately licensed tour operators. For safety and to protect Park values the following restrictions will be placed on boats and canoes:

- Powered vessels are confined to the central, 5km section of river, as indicated in Map 3.
- Powered vessels may have a maximum power output of 15 horsepower, are restricted to a speed of 5 knots and must be no longer than 3.6 metres.
- Watercraft will not be permitted upstream of Djarrung Falls or downstream of the last canoe portage (as per Map 3).
- Canoeists on tours will be required to use portages provided and take care not to damage the tufa formations.
- Visitors must not access islands within the river system. Watercraft must travel on the west and northwest sides of the islands and keep away from the whirlpool upstream of Djarrung Falls.
- Boats must be launched at the boat ramp. Canoes must be launched at either the boat ramp or Yarrayan day-use area.

27. Impacts of Boats –The effect of wash from outboard motors on the banks of the Flora River will be monitored, and control measures (such as limiting boat numbers) introduced if necessary. Visitors and tour operators will be encouraged to use electric motors to limit pollution. Activities which have the potential to pollute waterways in the Park will not be permitted.

28. Fishing – To avoid accidental capture of turtles, use of lures only (no bait) will be permitted in the Park. Northern Territory bag limits will apply.

29. Temporary Park Closures – Access to the Park, or to areas within the Park, may be restricted for environmental, cultural or safety reasons.

30. Visitor Information – Giwining Joint Management Committee are to regularly review all available visitor information and update as required, subject to resources.

- Erect additional signs where appropriate to warn visitors of hazards, install regulatory information and pictograms and provide further cultural and joint management information.
- Use Wardaman words and language in visitor information to enhance cultural appreciation.
- Check all shared cultural information for accuracy and ensure it is approved by the appropriate Aboriginal people (as identified by the NLC) and consistent with policy to protect Indigenous Cultural Intellectual Property (ICIP – see page 22).

31. Crocodiles – Continue to implement the Katherine River Saltwater Crocodile Management Strategy and the Estuarine Crocodile Management for Visitor Safety - Plan for Flora River Nature Park to reduce the potential for harm to visitors.

32. Generators – Generators may not be used on the Park without a permit.

33. Pets – Pets will not be allowed in the Park without a permit.

34. Firewood – The collection of firewood on the Park will be prohibited.

35. Swimming – Swimming in the Flora River in the Park will be prohibited to reduce the risk of crocodile attack.

36. Risk Assessment – Continue to assess the risks from the Park's facilities and visitor management practices. Any identified risks will be rectified on a priority basis.

37. Emergency Response – Review and update the emergency response plan for the Park annually before each visitor season. Train all staff appropriately and report emergency incidents and accidents to the Giwining Joint Management Committee.

Performance Measures

- There are no preventable cases of injury or death as a result of Saltwater Crocodile attack.
- Visitor satisfaction with the Park and its facilities is at least 90%.



Park Rangers and flexible employment staff install bollards at Djarrung campground.

Governance

The joint management partners of the Park believe that:

- Governance must be consistent with statutory requirements and obligations.
- Decision making and accountability should be equally shared between the partners.
- Indigenous decision making processes should always be respected.
- Management priorities should be based on the Park's key values, as jointly identified.
- Working together and spending time on country is central to developing mutual trust, respect and understanding.
- Participation and employment of Traditional Owners in operational programs is basic to joint management success.
- Joint Management needs to continuously adapt and improve; monitoring and evaluation supports this process.
- Resources are limited and must be efficiently used.
- The Park is not an island but is connected naturally and culturally to surrounding country.
- Public support for joint management is very important.

Planning and Decision-making

Managing Giwining / Flora River Nature Park with respect for indigenous cultural values and interests is not new to the joint management partners as the Traditional Owners of Giwining have been involved in Park management through the Flora River Local Management Committee since 1993. New joint management brings extra meaning to this relationship. As joint management partners PWS and Traditional Owners now share responsibility for developing an equitable partnership that achieves the legislated objectives of joint management.

Building Effective Governance through Monitoring and Evaluation

The partners were meeting regularly to share in the business and decision-making of the Park's management while this Plan was being prepared. The preparation of this plan by the joint management partners also marks a positive beginning to joint management. The partners realise that the partnership will need to keep growing and improving through commitment and new skills in governance. For the purposes of this plan, 'governance' means how the partners organise themselves to work towards their vision. It includes all aspects of communication, partnership, planning and decision-making.

This plan sets out a framework for the Park's governance. In doing so it marks a solid start, but by itself will not guarantee effective governance. By monitoring joint management, the partners will be able to identify problems and make changes early, and in doing so, continue to improve and build strong governance over time. Since 2007 the partners, with assistance from the NLC, have been working on a pilot program with staff from Charles Darwin University to set up a joint management monitoring and evaluation program for Giwining / Flora River Nature Park.

The joint management partners have together defined indicators of social, economic and

conservation success for the Park. These desired outcomes form the focus of the aims and management directions of this Plan. In 2007 the following outcomes for joint management (and the means to assess their achievement) were agreed:

- Keeping culture strong (culture camps, two-way learning, protecting cultural sites);
- Benefits to Traditional Owners (direct employment, contracting work, business enterprise);
- Good working relationships between the partners (partners' satisfaction, good communication, Aboriginal voices heard in planning and management meetings, understanding of financial management, availability of cultural information relating to the Park);
- Good park management (healthy country / biodiversity, good partnership with other stakeholders, infrastructure in the Park and around the camps and other areas is well maintained, visitors satisfaction); and
- Strong community ownership of joint management through strong participation in decision making (clarity of roles and responsibilities among all stakeholders, strong and effective joint management committee, good facilitation at meetings).

The monitoring and evaluation program will use these outcomes and indicators as the basis for assessing the effectiveness of joint management.

A Partnership Approach

Joint management is an opportunity for better management decisions based on a combination of indigenous knowledge and principles and contemporary, scientific approaches. Positive working relationships based on mutual understanding, trust and respect are basic to strong joint management. A shared understanding of country and culture is vital to joint management decision-making. The partners recognise that the partnership will be dynamic and their capacity to be effective partners will need to grow, through experience and appropriate training. Traditional Owners want to teach Park Rangers and visitors cross-cultural skills, language and Aboriginal land management techniques. In turn, Park Rangers want to share their knowledge of planning, budgeting, organisational structures and scientific management with Traditional Owners. Respecting differences and a commitment to understanding each others' views will make for a strong relationship and provide the basis for effective governance and joint management of the Park.

Communication warrants special consideration, for the partnership spans two different cultures, each with their own world view and language. While the Traditional Owners have a direct interest in park operations, they cannot all be continuously engaged in day to day activities. Furthermore, PWS staff can readily communicate with each other through the workplace, while Traditional Owners who live in different places cannot maintain such constant contact with each other. The NLC and PWS therefore need to help in this regard. Providing feedback to Traditional Owners through verbal reports at country camps and meetings and written reports for those not in attendance is vital.

Respecting Aboriginal Decision-making

Aboriginal cultural traditions must be considered in establishing governance for the Park. They will strongly influence who attends meetings, who has the right to make decisions for others and the timeframes required for decisions to be made.

The Giwining / Flora River Nature Park incorporates sections of the traditional countries of two Wardaman clans, Yubulyawun whose country extends west from Flora River, and Wunggayajawun whose country extends south and east from the river. However, clan members do not make decisions, even about their own clan estates, without reference to

others.

“We [Yubulyawun clan] are boss for this part of Giwining, Flora River. But further down, everybody shares it, all the way down. Those from the eastern side [Wunggayajawun clan] come in too, they share it out. This one river, Giwining, belongs to everyone [Wardaman]”

The authority to make decisions concerning lands within the Giwining / Flora River Nature Park depends upon interrelated factors such as knowledge of Law and country – especially its sacred geography – seniority, and traditional connections to the area or locale in question. The Traditional Owners of an area are accorded respect and the right to make decisions about it, but typically, they do not act as individuals. Further, when decisions are being made on issues which may impact more generally, there is an expectation that a wider group of Wardaman will want to participate in the decision making process.

Traditional, lawful Wardaman decision-making about country is rarely, if ever, limited to a single Traditional Owner or even a small group, but involves careful consultation and negotiation with the wider group who have connections (such as through kinship) to the country. Further, senior Wardaman men and women, who may not be Traditional Owners for the area in question but who nonetheless are knowledgeable about Law and country, will typically be consulted and play a role in any final decision.

While hierarchical authority structures are not a feature of Wardaman society, matters of seniority, traditional knowledge and customary entitlements are key elements of decision-making processes that operate within a framework of inclusiveness and participation by the wider group. Senior people may ultimately make certain decisions, but Wardaman emphasise the right of all Wardaman to participate in the process. Concerns can arise if decisions are made without this wider participation. For these reasons, decision-making for the Park needs to include the voice of people from the wider Wardaman group, as well as from the two Traditional Owner clans. The benefits and rights of any Wardaman person to participate in meetings is recognised.

Clear Roles and Responsibilities

Effective governance, including shared planning and decision-making, requires clear understanding of the roles and responsibilities of the people and groups involved. The decisions to be made in managing the Park fall broadly into two groups: 1) policy and planning and 2) Park operations. One of the most important distinctions to be made regarding roles and responsibilities is that between the decision-making group or committee, and Parks staff.

For **Traditional Owners**, people within particular clan estates have responsibility for decision-making, ownership and caretaking. Traditional Owners also have responsibilities for managing Aboriginal knowledge and passing it on to the right people, looking after the land and its resources, maintaining sacred sites and keeping the country alive.

The **Parks and Wildlife Service** has been nominated by the Territory as its representative as the joint management partner with the Park’s Traditional Owners. The Parks and Wildlife Service is responsible for day-to-day management of the Park under the direction of the Joint Management Committee. The Parks and Wildlife Service is required to finance and resource the Park’s ongoing management, including administrative functions, staffing, infrastructure and visitor services. Parks and Wildlife Service employees are responsible to the Minister for Parks and Wildlife and the head of the Department.

The **Northern Land Council** has an important role in assisting joint management. The NLC primarily represent and protect the interests of Traditional Owners in Park management. This includes attending GJMC meetings and facilitating information to the Wardaman so that informed joint management decisions can be made by the Traditional Owners.

The **Giwining Joint Management Committee** (GJMC) includes representatives of each of

the joint management partners. Their role is to set the broad direction for management of the Park guided by relevant legislation, this Plan and other jointly developed policy and guidelines. The GJMC will be the principal decision-making body for the Park, and will consist of:

- Six Traditional Owners consisting of two representatives of the Yubulyawun clan, two representatives of the Wunggayajawun clan, and two other Wardaman, nominated by the Park's Traditional Owners. Each of these members may nominate a proxy to attend meetings in their absence.
- At least two, and up to four, PWS staff.
- Proxies and other Wardaman People, especially young people with an interest in the management of the Park, will be welcomed to GJMC meetings. The partners may from time to time invite other people to meetings to provide advice on particular issues or represent community interests (for example, tourism).
- The joint management partners will define and document the functions, procedures and other governance standards of the GJMC as a high priority.

Through working together on park projects the partners will foster a higher level of understanding of each other's values and interests and therefore develop a stronger relationship resulting in better governance.

Resolving Disputes

The joint management partners know they need to continue to communicate clearly and openly with each other and that communication within the wider of group of Traditional Owners is kept strong. From time to time however, disputes may occur. The joint management partners will aim to resolve disputes through open discussion and communication, involving the NLC as required or requested by the Traditional Owners. However, should a dispute arise between the joint management partners that cannot be resolved, the partners agree to jointly appoint an independent mediator to facilitate a mutually acceptable decision.

Aims

- The partners and wider community are satisfied with the processes and outcomes of joint management.
- Effective governance and continuous improvement.

Management Directions

38. Committee Meetings – The GJMC will meet at least twice each year to: plan and develop policy for the management of the Park, evaluate joint management, monitor management progress, and discuss any other business. Decisions will be made where possible by consensus, not by majority vote.

39. Making Decisions – The partners will share decision-making (Table 2). Working groups of Traditional Owners may be formed to progress specific projects or consider special issues or proposals in between committee meetings. The PWS will manage the Park on a day-to-day basis under the direction of the GJMC.

40. Communication – The PWS will ensure that Traditional Owners are kept well-informed about management activities and issues. GJMC members will be responsible for passing on information to other Traditional Owners. Opportunities will also be provided for Traditional Owners to exchange ideas and knowledge with other Aboriginal people engaged in joint management.

41. Participation of Traditional Owners – Opportunities for the paid participation of Traditional Owners in management programs will be maximised given resources available. These will be scheduled at committee meetings.

42. Supporting and Building the Partnership – The partners and NLC recognise that joint management will be a process of continuous learning and growth. Special support and training will be provided to the partners to grow their skills in cross-cultural communication and governance, with attention given to needs identified by the monitoring and evaluation program.

43. Monitoring the Partnership - The joint management partners will monitor management performance to ensure that learning and improvement are continuous. A monitoring and evaluation program will be put in place as a high priority, within the early years of the implementation of this plan, and information from this will inform actions to develop effective governance and cross-cultural management practices.

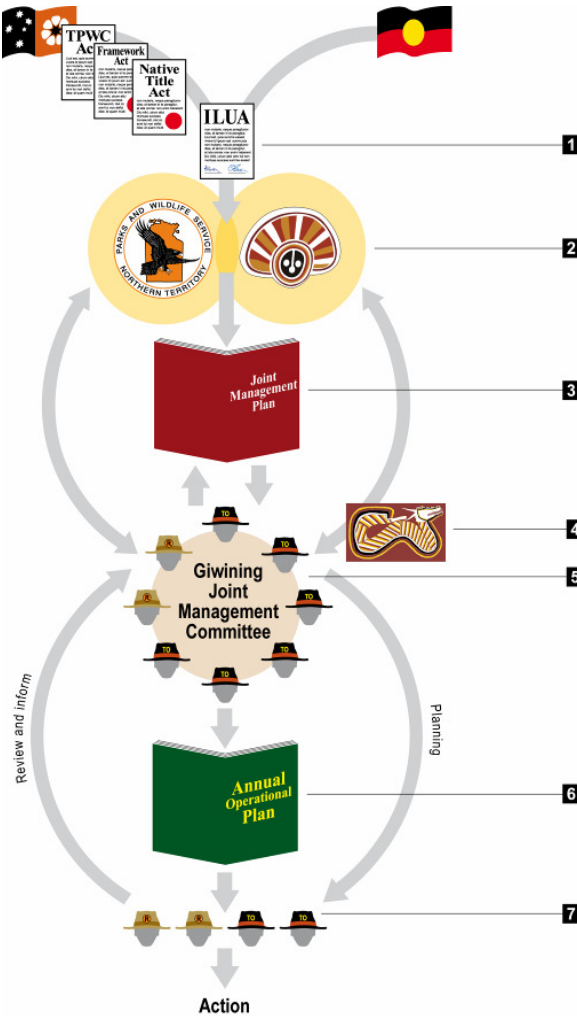
Performance Measures

- A participatory monitoring and evaluation program between Wardaman and PWS is run annually
- Satisfaction of the joint management partners
- Effectiveness of the joint management partnership (including decision-making processes)
- Implementation of annually agreed priorities
- Achievements related to the longer-term aims stated in this plan relating to culture, country and visitors.



Senior Park Ranger Andrew Peckham talks about weed management at a Giwining / Flora River Country Camp.

Figure 2. Joint Management, Decision Making and Planning



1. Legislation – Joint Management is set up under Northern Territory Law. Under the Commonwealth *Native Title Act 1993 (Cth)*, the Indigenous Land Use Agreement provides for joint management of the Park.
2. Joint Management Partners – The Northern Territory PWS and the Traditional Owners of Giwining / Flora River Nature Park.
3. Joint Management Plan – An agreement between the joint management partners about managing the Park together. This Plan will stay in effect until replaced by a new plan.
4. Northern Land Council – The Council assists and represents the interests of Traditional Owners.
5. Giwining Joint Management Committee – The GJMC will meet at least twice each year to: consider and ratify the Park’s annual budget and operational plan, evaluate joint management, monitor progress against the operational plan, and discuss other business as appropriate. Decisions will be made by consensus, not by majority vote. The NLC will generally assist the running of committee meetings.
6. Annual Operational Plans – The Giwining Joint Management Committee reviews and approves operational plans annually, consistent with directions in the Joint Management Plan.
7. Day-to-Day Work – Traditional Owners and Park Rangers work together to carry out agreed management programs and priority tasks, as set out in the annual operational plan.

Table 3. Decision making framework

Giwining Joint Management Committee	Operational Staff
Role	
<ul style="list-style-type: none"> • Exercise executive authority and be accountable for the management of the Park. • Set direction for park management programs, using the Joint Management Plan as a guide. • Approve annual budgets. • Set policy and procedural directions. • Approve commercial and development proposals in line with approved guidelines. • Monitor, evaluate and report on management performance. • Engage at a senior level with other interested stakeholders. 	<ul style="list-style-type: none"> • Manage Park on a day-to-day basis. • Implement programs, policy and procedure as approved by the Committee. • Maximise on-ground participation of Traditional Owners in management of the Park.
Types of decisions	
<ul style="list-style-type: none"> • Approve operational plans for Park management programs. • Delegate tasks to working / advisory groups as appropriate. • Consult with community stakeholders and wider group of Traditional Owners as appropriate. • Consider other proposals or issues not otherwise specified in this plan. 	<ul style="list-style-type: none"> • Implement routine activities and programs in line with approved Joint Management Plan and associated policy and procedures. • Issue permits according to policy and procedure. • Develop and implement operational plans and allocate annual budget in consultation with Traditional Owners for approval of the Park Management Committee.

Business Operations

Engaging Traditional Owners in park related work for economic and social benefit is a key to true joint management. For Traditional Owners, joint management is an opportunity to participate in management, commercial tourism and park service provision. They recognise that long-term institutional support and capacity building will be needed for these goals to be achieved. Bridging the gap between their aspirations and their capacity will require training, employment and enterprise development. Other business operations themes include operational planning, administration of special activities requiring permits, stakeholder engagement and research and monitoring activities.

The joint management partners of the Park believe that:

- Effective management means that available resources are used efficiently to achieve tasks in agreed priority order.
- Successful management will be achieved by competent, well-trained staff.
- Training and employment opportunities for local Aboriginal people are a key priority.

- Park management benefits from involving stakeholders and the public.
- The public image of the Park needs to be consistent with the Park's vision and values.
- Research and monitoring of natural and cultural values make for better informed management decisions.

Effective Operations

The management requirements of Giwining / Flora River Nature Park are relatively simple. Although visitor numbers may rise during the term of this Plan, it is expected they will remain low. Environmental programs require a moderate level of investment. The Park has no resident staff and is managed from the PWS operational base in Katherine. The Park is closed at the onset of the wet season for visitor safety, to protect roads from damage, and to protect Park values. A small fenced off maintenance compound is located on Park. Park Rangers mainly visit the Park during the cooler months when visitor activity is highest.

The majority of funding to manage or develop this Park is provided by the Northern Territory Government (NTG), allocated as a share of funds to manage this and all other parks and reserves within the NTG parks estate. The NLC also makes contributions to joint management activities. Capital works programs are subject to whole of government and Departmental priorities.

Effective use of limited resources hinges on integrated operational planning. All Operational Plans are developed and reviewed annually by the joint management partners, with priority actions identified against available management resources. Operational Plans include visitors, weeds, fire and feral animals, as well as research and monitoring. Annual fire, weed and feral animal plans are based on long-term strategies of five years or more. Co-ordination and integration into a prioritised, annual Operational Plan, based on protection of core values, is essential to maximising resource use and efficiency.

Indigenous Training, Employment and Enterprise Development

The Traditional Owners want employment for their families and joint management should provide them with at least some such benefit. Although park-based work and training will not meet their broader employment aspirations, joint management is a significant opportunity, especially for their young people to develop the skills and confidence for them to enter the work force.

While direct employment as Park Rangers is important to both partners, financial constraints mean that only a small number are able to benefit from these arrangements.

Flexible work programs are a chance for a larger number of Traditional Owners and their families to work on Park management projects with the PWS, sharing skills and receiving training. To date Wardaman People have been employed to assist with a range of everyday park management activities such as fire, weed and crocodile control. They have also worked on projects such as flora and fauna surveys, fence construction and maintenance, sign installation, campground maintenance, boat ramp repair, harvest of plant materials and provision of cultural information.

From time to time the PWS also lets contracts for works and services relating to the Park. Joint management agreements allow for favour to be given to Aboriginal organisations or businesses that employ Aboriginal people. In time, it is hoped that a significant amount of work relating to the Park's management will be partially or fully contracted to Aboriginal businesses, in accordance with contract laws and policies in force in the Northern Territory. A number of contracts have been awarded to the Wardaman Aboriginal

Corporation based in Katherine.

Tourism ventures are another way that Traditional Owners may benefit economically from the Park. Some Traditional Owners have expressed interest in selling arts and crafts on the Park. Others are interested in running commercial tours. As visitation to the Park is low and seasonal, any financial returns from the Park are likely to be small, and therefore the availability of business support and partnerships should be considered if developing such Aboriginal enterprises.

“We might run an ecotourism operation, such as boat cruises, where we show visitors different trees and talk about bush medicine.”

Special Activities and Development

Commercial enterprises, or any activities involving special access or use of any part of the Park, require a permit issued under the *Territory Parks and Wildlife Conservation Act*. Such activities include: research, public gatherings and events, commercial tourism, aircraft operation, and commercial filming and photography. Permits are issued with conditions which permit holders must abide by to ensure safety standards and minimise negative impacts on the values of the Park and on other Park users. Additionally, where a secure form of land tenure is needed for the occupation or specific use of an area, for example, by a tourism enterprise, the *Territory Parks and Wildlife Conservation Act* provides for a licence or lease to be negotiated.

The GJMC will need to ensure that permit proposals can be efficiently and effectively processed, having regard to the interests of the Park and the joint management partnership, stakeholders and the wider community, and existing PWS policy and procedures. Only one commercial tour company has operated in the Park, conducting infrequent guided canoe tours on the river. Tour companies visiting Northern Territory parks require a permit under the PWS Tour Operator Permit System.

Development proposals on parks and reserves are subject to assessment that ensures that natural, cultural and historical values are not affected. Larger developments may be subject to the *Environmental Assessment Act* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act*.

Protection for places of cultural significance in the NT is afforded through overlapping legislation. The Commonwealth *Aboriginal Land Rights Act (NT)* (ALRA) gives legal recognition to areas which that Act terms as “sacred sites” and defines as:

A site that is sacred to Aboriginals or is otherwise of significance according to Aboriginal tradition, and includes any land that, under a law of the Northern Territory, is declared to be sacred to Aboriginals or of significance according to Aboriginal tradition. The ALRA makes it an offence to enter or remain on land that is a sacred site.

Complementary Northern Territory legislation, the *Northern Territory Aboriginal Sacred Sites Act* also provides protection for all sites that fall within the scope of this definition. This protection is generally provided in the form of an Authority Certificate from the Aboriginal Areas Protection Authority (AAPA) in response to land use proposals. It means that Traditional Owners have an enforceable right to say who enters their sacred sites, and what cannot happen on their sacred sites. Illegal entry, work on, and use of a sacred site are all offences.

Strong joint management will ensure that sacred sites are protected according to Traditional Owners’ wishes. Under the ALRA the NLC has a specific function to “assist Aboriginals in the taking of measures likely to assist in the protection of sacred sites” and, under its established procedures, will carry out this role in facilitating joint management.

The *Heritage Conservation Act* provides for the protection and conservation of

archaeological places and objects. Any work, including conservation, on these requires consent from the Minister, or Minister's delegate.

Mining

Mining and extractive activities may have significant adverse impacts on the natural and cultural values of the Park. There are no current mining or exploration licences covering the Park. The Park's small area means that the impact of any mining activity is likely to be significant. The Traditional Owners have expressed opposition to any form of exploration or mining activity in the Park. Before granting a mining or petroleum interest in a park, the Northern Territory Minister for Mines is required to consult the partners through the Minister for the Parks and Wildlife Service. A Reservation from Occupation may be sought over all or part of the Park to exclude mineral exploration or extraction.

The Park's Public Profile

The joint management partners want the Park to have a positive public profile. Media coverage and other forms of promotion can help build public support for the Park with flow-on benefits to the partners and the Territory. Accurate promotion and marketing of the Park gives visitors appropriate expectations. It also influences visitor numbers, behaviour and satisfaction.

The Park has a low public profile, as evidenced by its small number of visitors. Larger parks in the region, such as Gregory National Park and Nitmiluk National Park, will maintain a higher profile and much higher visitor numbers than Flora River National Park. The Park is situated on the Savannah Way tourist route, which runs from Cairns to Broome via the Victoria Highway.

Departmental Commercial Film and Photography policy and locally developed guidelines will ensure the Park is promoted properly without compromising the Park values.

The Traditional Owners are proud of their cultural connections to the Park and their formal status as joint management partners. They wish to change the name of the Park to Giwining to reflect this. PWS policy supports proposals of this nature.

Relations with Community and Neighbours

Park neighbours and the wider community have been involved in the management of the Park for many years. This will not change under joint management. The Park is a public asset and the partners are jointly accountable to the community.

Land management activities such as control of fire, weeds, cattle and feral animals can be more effective if neighbours and other stakeholders are involved. The Park's immediate neighbours are Scott Creek and Aroona Stations, the Djarrung Aboriginal Land Corporation and the Yubulyawun Aboriginal Land Trust. Stakeholders from the Katherine region include the Wardaman Aboriginal Corporation and the Victoria River District Conservation Association.

The wider community, and tourism and conservation groups such as Tourism NT, Tourism Top End and Greening Australia, have interests in the Park. From time to time, these and other agencies may have reason to access the Park, seek information or give management advice.

Research and Monitoring

Most Park research and monitoring programs are carried out as internal projects by the PWS or its Department. External projects are encouraged, particularly targeted research which might improve management, and where any impact on the Park's values is

minimal. Activities associated with research, such as interfering with wildlife and taking, interfering or keeping protected wildlife requires a permit issued under the *Territory Parks and Wildlife Conservation Act*. Local research guidelines are required to assist the permit approvals process. Traditional Owners' wealth of knowledge about the Park may contribute to research projects. It is important for them to be consulted and invited to participate in research and monitoring projects and, where possible, employed in related work.

Monitoring visitor numbers, demographics, behaviour and satisfaction helps to guide visitor management, including planning and design of facilities. This data can also be useful to inform Traditional Owners interested in developing tourism enterprises.

The success of both joint management and park management will be measured against the performance measures contained within this Plan. Each year during GJMC meetings, achievement against the aims of this Plan will be considered. Progress with management directions, performance measures and overall direction will be assessed. This assessment will determine whether the Plan requires revision or should continue in operation for the intended ten-year period. Implementation of the annual joint management participatory monitoring and evaluation program will ensure joint management at Giwining / Flora River Nature Park continues to be assessed and improved into the future.

Living on the Park

Joint management agreements provide for Traditional Owners to live on and near parks so they might actively contribute to natural and cultural resource management. Many of the Flora River Traditional Owners live on communities either adjacent to, or very close to, the Park. The joint management partners have agreed therefore that living area proposals will not be considered for Giwining / Flora River Nature Park during the period of this Plan.

Consolidating and Extending the Park

The Park is relatively small and a poor shape for an "island" conservation reserve, as it has a long boundary relative to the enclosed area. Opportunities to enhance the Park's conservation viability by expanding the Park, or by entering into agreements covering landscape-scale conservation with neighbouring and other land holders in the region, are being explored. Giwining / Flora River Nature Park is well placed to provide a significant contribution to the NTG Ecolink initiative. The Traditional Owners of NT Portion 4058, the Yubulyawun Aboriginal Land Trust, are keen to have this managed in conjunction with Giwining / Flora River Nature Park. This would provide an invaluable link to NT Portion 4200 creating an uninterrupted corridor linking Wagiman and Wardaman land down to the Daly River mouth. The GJMC will initially consider any proposal for an expansion of the Park, prior to consulting thoroughly with adjoining landholders. NT Portion 3938 is managed as part of the Park and the partners would like this portion to be formally declared part of the Park.

Aims

- Traditional Owners benefiting economically from the Park.
- The public profile of the Park is accurate, appropriate and consistent with the values and purpose of the Park.
- A supportive community and productive relations with others who have an interest in the Park's management.

Management Directions

44. Operational Planning - The GJMC will endorse annual prioritised operational plans which focus on key values of the Park and risks or threats to these values. Operational Planning will pay particular attention to:

- The vision, principles, core values, aims and directions contained in this Joint Management Plan.
- Incorporating Indigenous knowledge and priorities into park management programs.
- Regional priorities, available resources and external funding options.
- Maximising Traditional Owner participation in programs.
- Integrating Operational Plans.

45. Employment, Training and Enterprise Development – Training, employment and business outcomes for Traditional Owners will be actively pursued. Opportunities for direct and flexible employment, contracts and enterprise development will be reviewed annually, together with Traditional Owners' interests and capacity. Agreed, achievable plans will be developed. The PWS will ensure that where it cannot directly assist, that training and business development are coordinated with other agencies.

- Paid Participation – Opportunities for paid participation of Traditional Owners in Park management programs will be maximised. This may include on-the-job training as well as accredited activities carried out by training organisations.
- Contract Services – Contract services relating to the Park will be procured with respect to NT government processes and principles. Traditional Owners and Aboriginal organisations they support will be the preferred contract service providers where capacity to fulfil contract standards is demonstrated. Preference will also be given to contractors who provide training and employment to local Aboriginal people.
- Cultural Advice – Traditional Owners will be paid for specialist cultural advice and supervision when required.
- Indigenous Employment Opportunities in the PWS – The PWS will continue to provide opportunities for direct employment and training for Aboriginal people. Where appropriate aptitude and competency is demonstrated, preference will be given to people with local affiliations.
- Community-based Indigenous Rangers and Special Interest Groups – Local Indigenous community-based Rangers, community volunteers, and sponsored training and employment organisations will be encouraged and, where possible, invited to assist with Park management.
- Other Aboriginal Rangers Working on the Park – Aboriginal Rangers from other areas will be introduced to the GJMC or delegated Traditional Owners before working at the Park.

46. Permits and Development Proposals - The joint management partners will establish guidelines and procedures by which proposals requiring permits under the *Territory Parks and Wildlife Conservation By-laws* will be considered.

- Routine Commercial Tours – Permits for tour businesses making normal use of the Park will be issued through the Tour Operator Permit System. Information from this system will be used for the better management of the Park, including improved communication with operators.
- Pending development of agreed guidelines and procedures, PWS will consult with Traditional Owners (with the assistance of the NLC) in relation to permit applications that request any access or activity that would not normally be allowed to visitors to the Park.
- Concession Permits – Concession permits will be issued by the PWS with approval of the GJMC.
- Sacred Sites Clearance – The NLC will have primary responsibility for sacred sites clearances for proposed works on the Park. However, should the joint management partners agree in consultation with the NLC, a proponent for work within the Park may apply for an Authority Certificate under the *Northern Territory Aboriginal Sacred Sites Act*.

- Cultural Sites Protection – Proposals for work affecting archaeological sites or objects will be consistent with the requirements of the *Heritage Conservation Act*. Expert advice will be sought from the relevant NT government authority. Sacred sites clearance process will also apply to works that may impact archaeological sites.

47. Mining and Exploration – The joint management partners will seek to establish a mining reserve (Reservation from Occupation) over the entire Park.

48. Promotion – The joint management partners will work with Tourism NT, Tourism Top End, and other relevant organisations to ensure that pre-visit information and promotion of the Park is accurate, reinforces the Park's values and presents the Park in ways that are acceptable to the Traditional Owners. The Traditional Owners are proud of their cultural connections to the Park and their formal status as joint management partners. The PWS will work with Traditional Owners to have the Park's name formally changed to Giwining.

49. Community Involvement – Community involvement initiatives that assist in achieving this Plan's aims will be actively supported. The partners will keep the community and stakeholders informed about significant issues and proposed developments.

50. Stakeholder Liaison – The partners will be proactive in liaising with the tourism industry through established forums and organisations such as Tourism NT and Tourism Top End. The partners will liaise with neighbours and, when appropriate, work together on matters of mutual interest such as fire prevention and control, stock and feral animal control, weed control and tourism development.

51. Internal Research and Monitoring – Programs will be designed and approved in accordance with the Parks and Wildlife Service Division Research Plan. Monitoring of visitor numbers will be carried out at a frequency to be determined by the partners and the PWS Tourism Visitor Services Unit. Visitor monitoring reports will be provided to the GJMC to assist in planning and decision making.

- Traditional Owner Participation – Participation by Traditional Owners and their employment in research and monitoring projects will be maximised. Aboriginal knowledge will be incorporated in project objectives and outcomes where appropriate.

52. Protecting Intellectual Property – The intellectual property rights of Traditional Owners will be protected through the Departmental Indigenous Cultural and Intellectual Property policy. The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners through the GJMC and with overarching policy agreed between the NLC and PWS.

53. Living and Camping on the Park – The Traditional Owner group has said they do not want permanent living area proposals considered during the term of this Plan. The Yarrayan campground will be available to Traditional Owners for their use for cultural purposes according to standards agreed with the PWS.

54. Consolidating the Park – The joint management partners will seek to declare NT Portion 3938 as part of the Park under the *Territory Parks and Wildlife Conservation Act*. The PWS will continue to explore options for conservation partnerships with landholders in the region to improve the conservation viability of the park and conservation outcomes across the broader landscape.

Performance Measures

- Opportunities to engage Traditional Owners (training, employment and enterprise development) actively pursued.

Appendix 1. Selected References

- Blanch, S., Rea, N. and Scott, G (2005) *Aquatic Conservation Values of the Daly River Catchment, Northern Territory, Australia*, Environment Centre of the Northern Territory, Darwin.
- Cooper, D. and Jackson S. (2008) *Preliminary Study on Indigenous Water Values and Interests in the Katherine Region of the Northern Territory*. A report prepared for NAILSMA's Indigenous Water Policy Group by CSIRO Sustainable Ecosystems, Darwin, Northern Territory.
- Karp, D. (1997) *Groundwater Investigation, Flora River Nature Park, 1996*. Unpublished report prepared for the Parks and Wildlife Commission, Darwin.
- Manolis, C., Wurst, D. and Barker, S. (2008) *Crocodile Risk Assessment of Flora River Nature Park*. Unpublished report prepared for the Parks and Wildlife Service of the Northern Territory, Darwin.
- NRETA. (2005) *Draft Northern Territory Parks and Conservation Masterplan*. Parks and Wildlife Service of the Northern Territory, Darwin.
- NRETA. (2006) *Flora River Nature Park Statement of Management Intent*. Unpublished statement prepared for Flora River Nature Park Joint Managers, Katherine.
- NRETA. (2008) *Draft Katherine River Saltwater Crocodile (Crocodylus porosus) Management Strategy*. Unpublished, Katherine.
- Raymond, Mrs E. (deceased), Blutja, J., Gin.gina, L., Raymond, M., Raymond, O., Brown, J., Morgan, Q., Jackson, D., Smith, N. and Wightman, G. (1999) *Wardaman ethnobiology: Aboriginal plant and animal knowledge from the Flora River and south-west Katherine region, north Australia*. The Centre for Indigenous Natural and Cultural Resource Management, Northern Territory University and Parks and Wildlife Commission of the Northern Territory, Darwin.

Appendix 2. Wardaman Seasonal Calendar

Yijilg - wet season December to February

This is the wet season when rain falls daily, often in large amounts. Often travel is restricted due to flooding and the boggy nature of heavy soils on black soil plains.

Fruits available in this season include Bungen (*Ficus platypoda* and *F. leucotracha*), Buda (*Vitex glabrata*) and Julamarran (*Flueggea virosa*). In the past, Wolon (*Heteropogon contortus*) grass was used to make a covering for bush houses that were constructed in Yijilg to provide protection from rain.

Towards the end of Yijilg and into Wulujujun, when the Berndeny (*Heteropogon triticeus*) or "Bush sugar cane" is succulent and juicy, the stems are chewed and sucked to obtain the sweet liquid inside. The stems are broken into short lengths so that they may be carried easily.

Yidawurru (*Citrullus lanatus*) or watermelon are often found growing along roadsides during this season and are much sought after for their fruit.

The Bawujin (*Brachystelma glabriflorum*) or bush potato is best dug up in the Yijilg season when they are fat and juicy after the rains. The small disc shaped tubers or yams are dug up, washed and eaten. They are especially favoured by children. The dark flowers, Ngayal, hang downwards off the stem and point to areas where more yams may be found.

Wulujujun - end of the wet season February to March

This season sees the last of the rains and the end of the wet season.

Fruit available include Magorigori (*Ampelocissus acetosa* and *A. frutescens*), Yiwung (*Antidesma ghesaembilla*), Mlyarlunguj (*Antidesma parvifolia*), Julamarran (*Flueggea virosa*), Menyjeng (*Terminalia erythrocarpa*) and Mordon (*Vigna lanceolata*, *V. vexillata*). The yams of Magulu (*Dioscorea bulbifera*) and Megerrman/Gawkawili (*Dioscorea transversa*) and Gayalarrin (*Typhonium liliifolium*) are also available.

The Gayalarrin tuber is washed repeatedly, before being smashed on a stone and cooked on hot ashes. The process is then repeated again before eating. The leaves are only visible in the Wulujujun season but the tuber is available all year round. This plant can be found on black soil country or Bern-gjijn.

The ripe fruit of the Yiwung are dark blue to black and are a highly regarded food resource. They are produced at the end of this season. Various birds and fruit bats also eat the fruit. Harlequin bugs are often found on this species.

The fruit of the Magorigori are eaten when black and ripe. They are sweet to taste but leave a sour aftertaste. When the fruits are ripe, blue tongue lizards - Burarriman and Yarringa, are fat and ready to catch and eat.

Wujerrijin - dry season April to September

This is the dry season when the weather is cold and no rain falls. The skies are generally clear of clouds. Jegban (bush turkey), Gangman (kangaroo) and Walanja (goanna) will be properly fat and good to eat. Waterlily seed - Gardi (*Nymphaea macrosperma*, *N. violacea*) are now ready for collection to eat raw or make into damper.

Fruits available in this season include Lerrwewen (*Ficus opposita*), Merdengdeng (*Ficus scobina*), Jamagarra (*Nauclea orientalis*), Buda (*Vitex glabrata*), Manamurran (*Grewia retusifolia*), Mardulg (*Cucumis melo*, small leaf), Ngarlwog (*Cucumis melo*, large leaf), Mardarrgu (*Ziziphus quadrilocularis*) and Julamarran (*Briedelia tomentosa*). The seeds of Bardigi (*Terminalia arostrata*) and the tubers of Ginyuwurru (*Cyperus bulbosus*) are also

available to be eaten.

The fruit of the Ngarlwog is eaten when ripe and pale green to yellow in colour. The hairs should be washed or rubbed off the skin of the fruit before eating as they can irritate the lips and tongue. The fruit of the Mardulg is also eaten when the fruit is ripe, pale green to yellow. As for Ngarlwog, the fruit needs to be prepared before eating to avoid irritation. Bitter fruits can be cooked or softened in hot sand that has been heated under a fire.

The fruit of the Buda are eaten when they are black and ripe. They are sweet and very pleasant tasting. The fruits can be dried, mixed with red ochre and stored wrapped in a paperbark envelope for later use. Fruit are available at the end of the Wujerrijin or early Yijilg seasons. The rain bird, Juwogban, calls out when it is time to collect the fruit and eat them. Dry, straight branches and stems are used as firesticks – Jinggiyn - to light fires.

The small tubers of the Ginyuwurru are dug up and may be eaten raw or after cooking in hot coals and ashes. The tubers are collected in Wujerrijin season when they are properly formed after the wet.

In this season, the fruit of the Bardigi are cracked open between stones and the seed inside is taken out and eaten. The bark of the Bardigi is used as medicine for scabies and measles. It is boiled in water and the liquid is used as a wash. The bark can be boiled in water and used as a dye.

Ngurruwun - hot weather time September to December

This is the hot weather time when the ground becomes very hot to walk on. The first rains begin but they are inconsistent. It is also the time of flowering for many plants including Binin and Dangirndi (*Melaleuca* spp.), Bardigi (*Terminalia grandiflora*), Galarwarriny (*Eucalyptus confertiflora*) and Yiwung (*Antidesma ghesaembilla*).

Fruits available in this season include Gulid (*Buchanania obovata*), Mirdiwan (*Ficus racemosa*) and Belwern (*Syzygium eucalyptoides* and *S. forte*). Jen-gen (*Brachychiton megaphyllus*) starts to flower to indicate the beginning of this season.

The appearance of March flies in September or October indicates the end of the dry season and beginning of the buildup. When they start biting it also indicates that Freshwater Crocodiles are laying their eggs.

The ripe pale pink fruit of the Belwern (pink apple) are ready for eating. The fruit can be collected by scooping them off the top of the water as they float along with the current. The fruit of the Belwern (white apple) are also ready for eating. The papery bark of this species can be used to cover the top of ground ovens before covering the oven further with earth ready for cooking. Both apple species also grow in the river country - Yirrgulun.

The fruit of the Gulid are eaten when ripe and green but soft to touch. The fruit has high Vitamin C levels. Flowers are produced during the hot, dry period, the same time that mango trees flower. The fruits are also eaten by kangaroos and wallabies - Gangman, and some birds – Jigjig such as parrots and friar birds. The fruit is available when the early rains are falling, the same time that mango fruit are produced. Often the fruit are collected from the ground.

The swollen tap root of the young Gulid plants may be eaten raw or roasted. The leaves and bark may be boiled in water and the liquid used as a washing medicine to treat skin sores and scabies. The young roots of this plant are used to treat toothache. The roots are heated on the fire and then held against the painful tooth to relieve pain.

Appendix 3. Priority Management Actions

The management actions from this management plan have been collated and prioritised below for easy reference.

Management Action	Priority
Zoning Scheme	
1. Conform to the zoning scheme in managing the Park (Table 3, Map 3). Development in any zone is subject to normal approval processes to ensure appropriate protection of cultural and environmental values. Special activities are always subject to normal by-laws and permits (refer to MD ¹ 1).	Ongoing
Natural Values	
2. Protecting people, personal property and infrastructure from fire (highest priority) (refer Management Direction (MD 13).	High
3. The natural character of the Park will be protected. Any development will be carefully sited and designed to be in harmony with the natural environment and significant sites, so as not to detract from the Park's landscape and scenic values (MD 2).	High
4. Design all developments on Park to avoid compromising water quality and local surface hydrology. In particular, design toilet systems to minimise risk of water contamination.	Ongoing
5. Controlling Bellyache Bush, Grader Grass and Mission Grass as per the statutory Management Plan(s) or advice from Weeds Management Branch (MD 11).	High
6. Protect the riverine corridor and riparian forests from hot wildfires through active management in the early dry season (MD 13).	High
7. Reducing fuel and / or maintaining firebreaks on boundary areas to prevent wildfires from entering or exiting the Park and limiting the area of the Park burnt (MD 13).	High
8. Training requirements and competency standards for PWS staff, participating Traditional Owners and volunteers	Ongoing
9. Maintaining data that will inform sound fire management decision-making and help in understanding fire-habitat relationships	Ongoing
10. Complete the boundary fencing of the entire Park and install a cattle grid at the park entrance. Maintain boundary fences to a high, stock-proof standard (MD 12).	Moderate
11. Continue to monitor for pigs, particularly in sensitive riparian areas, and remove at the earliest opportunity (MD 12).	Moderate
12. Continue to monitor the Park for cattle and work closely with neighbours to keep cattle out of the Park and their timely removal (MD 12).	Moderate
13. Protecting vulnerable cultural sites from fire damage (MD 13).	Moderate
14. Eradicating Parkinsonia and Noogoorra Burr, given they currently occur in isolated, small areas and can be opportunistically targeted (MD 11).	Moderate
15. Regulate the use of watercraft in the river to protect natural and cultural values, to prevent soil erosion and water pollution, and to promote visitor safety and enjoyment (MD 7).	Moderate

¹ Management Direction

Management Action	Priority
16. Monitor annually for Black Rats at the campground(s) and remove when found (MD 12).	Moderate
17. Record observations of Purple-crowned Fairy Wren and Freshwater Sawfish into the NTG Fauna Database (MD 8).	Moderate
18. Periodically assess the condition, including status, of species such as <i>Livistona mariae</i> ssp. <i>rigida</i> (Garabany) and <i>Casuarina cunninghamiana</i> (Lalmarrin) (MD 8).	Moderate
19. Results of the annual Pig-nosed Turtle survey will be recorded into the NTG Fauna Database, to indicate the trend in population size over time (MD 8).	Moderate
20. Opportunistically monitor tufa formations to ensure they remain intact. If damage is noted then determine cause of impact and take action when damage is sustained through preventable actions (MD 4).	Moderate
21. Any new weed incursion(s) will be assessed against legislative and statutory requirements, regional priorities and the current Park priority list before any action is taken, or changes made to the current priorities (MD 11).	Ongoing
22. Traditional Owners will exercise their rights to harvest some animals and plants as bush tucker but will continue to forgo their right to use firearms when hunting on the Park. The impact of this traditional harvest will be managed if necessary to ensure sustainable populations (MD 9).	Ongoing
23. Work together as part of a cooperative group of land managers within the catchment and the larger Daly River catchment to protect ground and surface water. Park managers will regularly liaise and cooperate with groups set up to address conservation issues at the catchment level (e.g. Daly River Management Advisory Committee (MD 6).	Ongoing
24. Collection from within the Park is prohibited to preserve important habitat (MD 10).	Ongoing
25. Minimise disturbance to the Park's soils. Rehabilitate any areas severely impacted by feral animals or human activity, with priority given to the riverine corridor. Site infrastructure and facilities to avoid areas susceptible to erosion and minimise soil disturbance during any construction. Seek expert advice prior to development and for rehabilitation. Erect signs advising visitors to keep off rehabilitation sites and to keep to designated tracks (MD 3).	Low
26. Restricting open campfires to designated fireplaces in the Visitor Zone. In other zones, campfires may be permitted subject to conditions that minimise the impact and risk of wildfire (MD 13).	Ongoing
27. Involving the Park's neighbours and considering their interests (MD 13).	Ongoing
Cultural Values	
28. Traditional Owners' authority on cultural matters will be respected. Senior Traditional Owners may supervise access and advise on appropriate behaviour if PWS staff are required to access culturally sensitive areas. Parts of the Park may occasionally be closed for short periods to allow Traditional Owners to conduct ceremony. Adequate public notice will be given by PWS regarding any such closure (MD 15).	High
29. For sacred site clearance processes see Special Activities and Development section (page 35). Access restrictions will apply for special protection zone sites (MD 16): <ul style="list-style-type: none"> • Registered Site 5268-22, Marrilinba – access to the island is allowed only to Aboriginal men. Canoes must pass to the west of the rock; • Registered Site 5268-24, Kulpinji – access to the island is allowed only to Aboriginal women. Fishing from the riverbank is allowed; • Registered Site 5268-7, Yinggawuyma – access restricted. Boats must keep away from the 'boiling' water; and • Unregistered Site 5258-8, Yibulkbulkabaya – access restricted. 	High

Management Action	Priority
30. Traditional and legal rights to hunt and gather will be respected. Rights to harvest plant materials from the Park for traditional purposes will extend only to Traditional Owners. Gathering of plant foods and materials by others will require the approval of the Giwining Joint Management Committee (GJMC) and normal approval processes. The GJMC will review harvesting practices from time to time to ensure that use in the Park is sustainable and that visitors' experiences are not significantly affected. Traditional Owners will continue to forgo the use of firearms when hunting in the Park (MD18).	Ongoing
31. Support Traditional Owners' rights and obligations to visit and use country to maintain cultural traditions. The Yarrayan Campground may be used as a base for their visits. Joint management programs will allow for Traditional Owners to fulfil customary obligations. Pursue other supporting resources as required (MD 14).	Ongoing
32. The joint management partners will develop a cultural program and associated guidelines for the Park which will be regularly reviewed. They will provide for Traditional Owners' interests, including time on country, recording and monitoring places or objects of cultural significance, and recording and transferring Aboriginal knowledge as appropriate (MD 19).	Moderate
33. Indigenous ecological knowledge and skills will be integrated into park management programs where possible and recorded appropriately (MD 20).	Moderate
34. The intellectual property rights of Traditional Owners will be protected through the Departmental Indigenous Cultural and Intellectual Property policy. The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners through the GJMC and with overarching policy agreed between the NLC and PWS (MD 21).	Ongoing
Visitor Values	
35. Continue to implement the Katherine River Saltwater Crocodile Management Strategy and the Estuarine Crocodile Management for Visitor Safety - Plan for Giwining / Flora River Nature Park to reduce the potential for harm to visitors (MD 31).	High
36. Swimming in the Flora River in the Park will be prohibited to reduce the risk of crocodile attack (MD 35).	High
37. Continue to assess the risks from the Park's facilities and visitor management practices. Any identified risks will be rectified on a priority basis (MD 36).	High
38. Review and update the emergency response plan for the Park annually before each visitor season. Train all staff appropriately and report emergency incidents and accidents to the Giwining Joint Management Committee (MD 37).	High
39. To avoid accidental capture of turtles, use of lures only (no bait) will be permitted in the Park. Northern Territory bag limits will apply (MD 28).	High
40. Visitor access, activities and facilities within the Park will be managed and developed according to the Zoning scheme (Table 2, Map 3). Future development will be consistent with a low-key, tranquil visitor experience and protection of Park values (MD 22).	High
41. When considering applications for Park concession operations, the partners will give preference to tour operators who are Traditional Owners (MD 25).	High
42. Access to the Park, or to areas within the Park, may be restricted for environmental, cultural or safety reasons (MD 29).	Ongoing

Management Action	Priority
43. Canoeing on the river will only be permitted with appropriately licensed tour operators. For safety and to protect Park values the following restrictions will be placed on boats and canoes (MD 26): <ul style="list-style-type: none"> • Powered vessels are confined to the central, 5km section of river, as indicated in Map 3; • Powered vessels may have a maximum power output of 15 horsepower, are restricted to a speed of 5 knots and must be no longer than 3.6 metres; • Watercraft will not be permitted upstream of Djarrung Falls or downstream of the last canoe portage (as per Map 3); • Canoeists on tours will be required to use portages provided and take care not to damage the tufa formations; • Visitors must not access islands within the river system. Watercraft must travel on the west and northwest sides of the islands and keep away from the whirlpool upstream of Djarrung Falls; and • Boats must be launched at the boat ramp. Canoes must be launched at either the boat ramp or Yarrayan day-use area. 	Ongoing
44. Generators may not be used on the Park without a PWS permit (MD 32).	Ongoing
45. Pets will not be allowed in the Park without a PWS permit (MD 33).	Ongoing
46. The collection of firewood on the Park will be prohibited (MD 34).	Ongoing
47. The effect of wash from outboard motors on the banks of the Flora River will be monitored, and control measures (such as limiting boat numbers) introduced if necessary. Visitors and tour operators will be encouraged to use electric motors to limit pollution. Activities which have the potential to pollute waterways in the Park will not be permitted (MD 27).	Moderate
48. Giwining Joint Management Committee are to regularly review all available visitor information and update as required, subject to resources (MD 30): <ul style="list-style-type: none"> • Erect additional signs where appropriate to warn visitors of hazards, install regulatory information and pictograms and provide further cultural and joint management information; • Use Wardaman words and language in visitor information to enhance cultural appreciation; and • Check all shared cultural information for accuracy and ensure it is approved by the appropriate Aboriginal people (as identified by the NLC) and consistent with policy to protect Indigenous Cultural Intellectual Property (ICIP – see page 22). 	Moderate
49. Visitors will be encouraged to keep to vehicle and walking tracks to minimise damage to sensitive environments and avoid risk of accidental entry into culturally sensitive areas (MD 24).	Moderate
50. Djarrung campground will be the main public camping facility. The Yarrayan joint management campground may be developed for public use if Park visitation increases significantly. Options to contract campground services will be considered, with Aboriginal businesses or organisations employing Traditional Owners being awarded preference in accordance with joint management agreements (MD 23).	Ongoing
Governance	
51. The GJMC will meet at least twice each year to: plan and develop policy for the management of the Park, evaluate joint management, monitor management progress, and discuss any other business. Decisions will be made where possible by consensus, not by majority vote (MD 38).	High

Management Action	Priority
52. The partners and NLC recognise that joint management will be a process of continuous learning and growth. Special support and training will be provided to the partners to grow their skills in cross-cultural communication and governance, with attention given to needs identified by the monitoring and evaluation program (MD 42).	High
53. The joint management partners will monitor management performance to ensure that learning and improvement are continuous. A monitoring and evaluation program will be put in place as a high priority, within the early years of the implementation of this plan, and information from this will inform actions to develop effective governance and cross-cultural management practices (MD 43).	High
54. The PWS will ensure that Traditional Owners are kept well-informed about management activities and issues. GJMC members will be responsible for passing on information to other Traditional Owners. Opportunities will also be provided for Traditional Owners to exchange ideas and knowledge with other Aboriginal people engaged in joint management (MD 40).	High
55. The partners will share decision-making (Table 2). Working groups of Traditional Owners may be formed to progress specific projects or consider special issues or proposals in between committee meetings. The PWS will manage the Park on a day-to-day basis under the direction of the GJMC (MD 39).	Ongoing
56. Opportunities for the paid participation of Traditional Owners in management programs will be maximised given resources available. These will be scheduled at committee meetings (MD 41).	Moderate
Business Operations	
57. Community involvement initiatives that assist in achieving this Plan's aims will be actively supported. The partners will keep the community and stakeholders informed about significant issues and proposed developments (MD 49).	High
58. Pending development of agreed guidelines and procedures, PWS will consult with Traditional Owners (with the assistance of the NLC) in relation to permit applications that request any access or activity that would not normally be allowed to visitors to the Park (MD 46).	High
59. Paid Participation – Opportunities for paid participation of Traditional Owners in Park management programs will be maximised. This may include on-the-job training as well as accredited activities carried out by training organisations (MD 45).	High
60. Contract Services – Contract services relating to the Park will be procured with respect to NT government processes and principles. Traditional Owners and Aboriginal organisations they support will be the preferred contract service providers where capacity to fulfil contract standards is demonstrated. Preference will also be given to contractors who provide training and employment to local Aboriginal people (MD 45).	High
61. The GJMC will endorse annual prioritised operational plans which focus on key values of the Park and risks or threats to these values. Operational Planning will pay particular attention to (MD 44): <ul style="list-style-type: none"> • The vision, principles, core values, aims and directions contained in this Joint Management Plan; • Incorporating Indigenous knowledge and priorities into park management programs; • Regional priorities, available resources and external funding options; • Maximising Traditional Owner participation in programs; and • Integrating Operational Plans. 	Ongoing

Management Action	Priority
62. The Traditional Owner group has said they do not want permanent living area proposals considered during the term of this Plan. The Yarrayan campground will be available to Traditional Owners for their use for cultural purposes according to standards agreed with the PWS (MD 53).	Ongoing
63. Indigenous Employment Opportunities in the PWS – The PWS will continue to provide opportunities for direct employment and training for Aboriginal people. Where appropriate aptitude and competency is demonstrated, preference will be given to people with local affiliations (MD 45).	Ongoing
64. Cultural Advice – Traditional Owners will be paid for specialist cultural advice and supervision when required (MD 45).	Ongoing
65. Sacred Sites Clearance – The NLC will have primary responsibility for sacred sites clearances for proposed works on the Park. However, should the joint management partners agree in consultation with the NLC, a proponent for work within the Park may apply for an Authority Certificate under the <i>Northern Territory Aboriginal Sacred Sites Act</i> (MD 46).	Ongoing
66. Cultural Sites Protection – Proposals for work affecting archaeological sites or objects will be consistent with the requirements of the <i>Heritage Conservation Act</i> . Expert advice will be sought from the relevant NT government authority. Sacred sites clearance process will also apply to works that may impact archaeological sites (MD 46).	Ongoing
67. Concession Permits – Concession permits will be issued by the PWS with approval of the GJMC (MD 46).	Ongoing
68. Routine Commercial Tours – Permits for tour businesses making normal use of the Park will be issued through the Tour Operator Permit System. Information from this system will be used for the better management of the Park, including improved communication with operators (MD 46).	Ongoing
69. The joint management partners will work with Tourism NT, Tourism Top End, and other relevant organisations to ensure that pre-visit information and promotion of the Park is accurate, reinforces the Park's values and presents the Park in ways that are acceptable to the Traditional Owners. The Traditional Owners are proud of their cultural connections to the Park and their formal status as joint management partners. The PWS will work with Traditional Owners to have the Park's name formally changed to Giwining (MD 48).	Ongoing
70. The partners will be proactive in liaising with the tourism industry through established forums and organisations such as Tourism NT and Tourism Top End. The partners will liaise with neighbours and, when appropriate, work together on matters of mutual interest such as fire prevention and control, stock and feral animal control, weed control and tourism development (MD 50).	Ongoing
71. The intellectual property rights of Traditional Owners will be protected through the Departmental Indigenous Cultural and Intellectual Property policy. The recording, storage and use of cultural information will be consistent with the directions of Traditional Owners through the GJMC and with overarching policy agreed between the NLC and PWS (MD 52).	Ongoing
72. Community-based Indigenous Rangers and Special Interest Groups – Local Indigenous community-based Rangers, community volunteers, and sponsored training and employment organisations will be encouraged and, where possible, invited to assist with Park management (MD 45).	Ongoing
73. Traditional Owner Participation – Participation by Traditional Owners and their employment in research and monitoring projects will be maximised. Aboriginal knowledge will be incorporated in project objectives and outcomes where appropriate (MD 51).	Moderate

Management Action	Priority
74. Other Aboriginal Rangers Working on the Park – Aboriginal Rangers from other areas will be introduced to the GJMC or delegated Traditional Owners before working at the Park (MD 45).	Moderate
75. The joint management partners will seek to declare NT Portion 3938 as part of the Park under the <i>Territory Parks and Wildlife Conservation Act</i> . The PWS will continue to explore options for conservation partnerships with landholders in the region to improve the conservation viability of the park and conservation outcomes across the broader landscape (MD 54).	Moderate
76. The joint management partners will seek to establish a mining reserve (Reservation from Occupation) over the entire Park (MD 47).	Low