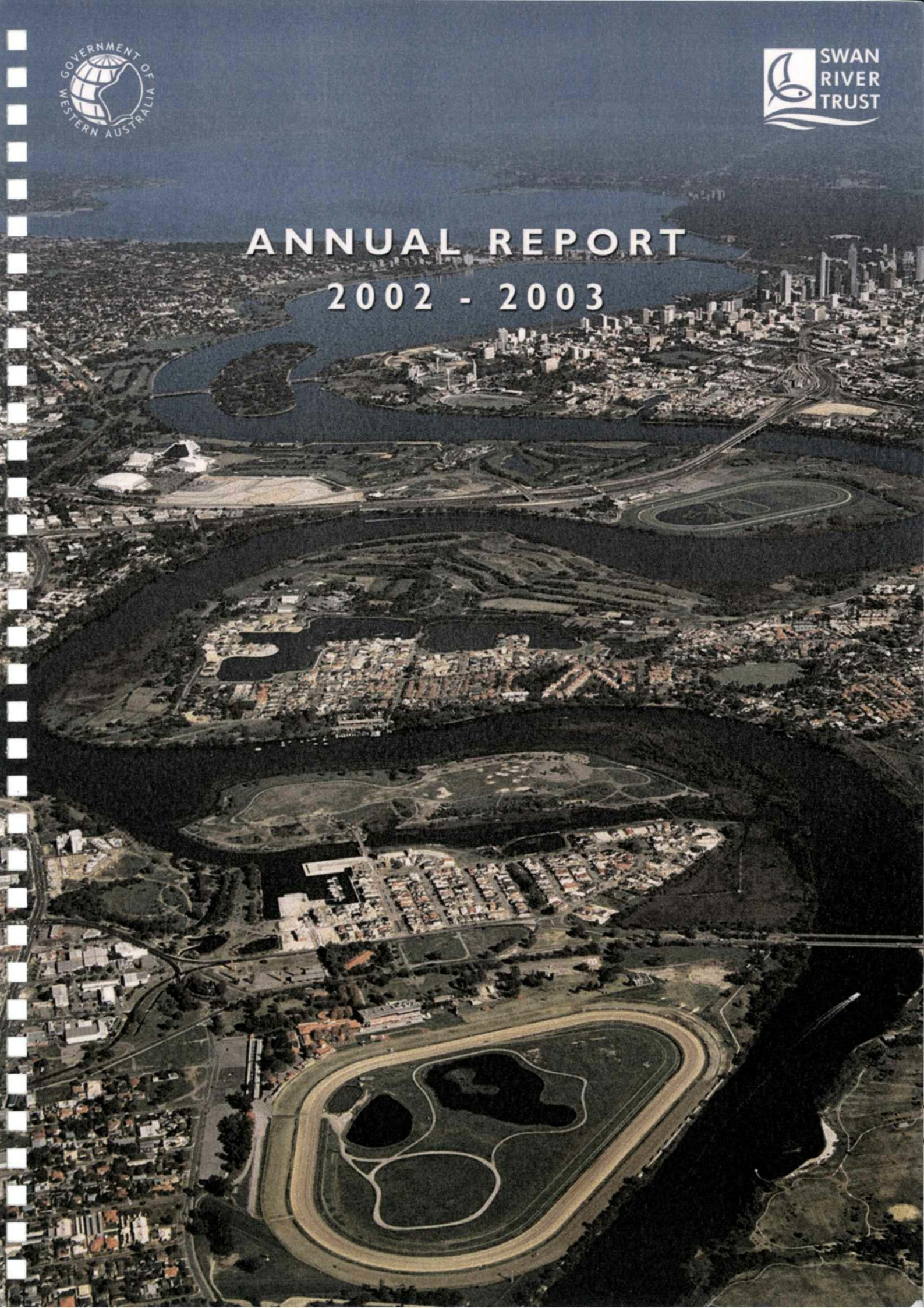
GOVERNMENT OF WESTERN AUSTRALIA

SWAN RIVER TRUST

ANNUAL REPORT
2002 - 2003



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Letter to the Minister

Hon Dr Judy Edwards, MLA
Minister for the Environment and Heritage

To the Hon Dr Judy Edwards, MLA
Minister for the Environment and Heritage

In accordance with the *Swan River Trust Act 1988* and Section 66 of the *Financial Administration and Audit Act 1985*, I have pleasure in submitting the 15th annual report on the operations of the Swan River Trust for the period 1 July 2002 to 30 June 2003.

Charlie Welker
Chairman
24 October 2003

Chairman's Report

As the incoming Chairman, I would like to express the Swan River Trust's gratitude for the contribution of outgoing Chairman Mr Geoff Totterdell. Geoff's nine years as Chairman speak for themselves – he has overseen the development and implementation of many important initiatives to protect the Swan and Canning rivers.

This challenging task continues for the Trust, with increasing pressures for development and other uses in the rivers and their catchments.

In meeting this challenge, the Trust works with and enlists the support of other state agencies, local governments, industry and the community to ensure development and use of the rivers meets the diverse expectations of the community.

This is evident in the two main activities that made up the bulk of the Trust's work in the past year:

- environmental management of the rivers
- assessment of development proposals

As this report will show, there have been improvements in reducing the amount of nutrients entering the rivers – the key cause behind nuisance and toxic algae blooms.

However, the fish-killing *Karlodinium micrum* algal bloom in Autumn dramatically demonstrated that the Swan-Canning system remains vulnerable to blooms that can produce highly negative impacts.

In this case, the algal bloom pattern in the river was very different from average cycles. The dinoflagellate *K. micrum* began blooming in April, triggered by an early storm that brought nutrient-rich water from the Avon catchment into the Swan. This nitrogen combined with the high concentrations already present in the system provided sufficient food for the algae to grow rapidly. Nutrient inflow from the Avon catchment was also implicated in the major algal bloom of February 2000.

The high nutrient concentration combined with periods of fine, sunny conditions to set off the bloom which continued until June, killing thousands of fish. This event was of great concern to the Trust and the community and reinforces that we must significantly boost our efforts to reduce nutrients entering the river, especially from the wider Avon catchment. To this end the Minister announced on 28 June 2003 additional funding of $1.2 million to extend the existing Swan-Canning Cleanup Program for the reduction of nutrients entering our rivers.

This report outlines many of our key initiatives already in place, such as the Swan-Canning Cleanup Program, foreshore restoration programs and routine environmental management work such as removing debris, restoring beaches and responding to pollution events. Increased foreshore erosion has been recorded this year which is partially due to low water levels in the estuary. A foreshore condition assessment project began this year and will identify areas for future restoration.

In the coming year, the Cleanup Program, its targets and indicators will be reviewed to make sure it is correctly focused and delivering the best possible outcomes. We will also be reinforcing our link

with the Avon and Swan Catchment Councils to achieve greater integration and coordination of efforts in the wider catchment which have such important implications for the state of the river.

I note also that we continue to see senseless acts of vandalism, damage to riverbank trees and continuing littering of the river's surrounds. It disturbs me that scarce Trust resources have to be stretched to try to respond to these issues when there are other areas more critical to the long-term survival of the river. However, in meeting the community's expectations for a clean and safe environment, we will look to ways to have a stronger enforcement response to attack this problem.

Following the Machinery of Government Review of 2001, the Minister for the Environment and Heritage asked for a more focussed review of the Trust's function and structural arrangements.

This review recommended retention of the Trust as an independent statutory authority, but with more emphasis on strategic functions, to provide direction and framework for addressing increasing development and recreation pressures on the river and to achieve greater community involvement.

This has important implications for the other critical area of the Trust's activities, namely assessment of development proposals in and adjoining the Trust's Management Area.

This year the Trust provided advice to the Minister on 56 development applications under Part V of the Swan River Trust Act, including notable issues such as the Barrack Square Hotel, a private jetty in North Fremantle and proposed culvert on the Southern River.

As a result of the review, greater effort is being made to ensure public participation in the assessment process. This has begun with the notification on the Trust's website of development applications received and publication of the Trust's report and recommendations after the assessment has been made.

In the coming year, we will take further steps to increase the public's awareness of their opportunities to be involved in this important process aimed at protecting the river and its surrounding landscape.

Work has already begun towards legislative amendments to allow the Trust to focus on more critical strategic issues. For example, changes would be proposed to streamline decision-making for minor developments. We will also seek the ability to impose financial assurance provisions to ensure river management works required as part of development proposals are satisfactorily completed.

The year ahead will see greater scrutiny of the Swan River Trust and how we deliver our charter. There is continuing strong interest across the community in the long term future of the Swan and Canning rivers. This interest and energy is critical to the success of the Trust and, I hope, will help us secure the resources, powers and institutional arrangements needed to do our job.

I thank Board members, Trust staff and all of our partners for their commitment and contribution to the good management of the Swan and Canning rivers. I especially pay tribute to long-term Board member Noel Robins who passed away in May 2003 and to Pat Hart who left the Board during the year.

Charlie Welker
CHAIRMAN

*Charlie Welker was appointed Chairman of the Swan River Trust from 1 July 2003, replacing outgoing Chairman Geoff Totterdell.

Operations Summary

Water Information

Aims:

To understand and assess the water quality, to assist in assessment of general environmental quality of the Swan-Canning river system and establishment of environmental standards.

To provide information to assist public health authorities assess hazards to public health and recreational use of the rivers associated with algal blooms.

Achievements:

- Calculated compliance or performance against targets developed for the lower Canning for the first time this year.
- Continued nutrient monitoring in the Swan-Canning estuary and its 15 key tributaries and reporting against Swan-Canning Cleanup Program (SCCP) short-term targets for nitrogen and phosphorus.
- Continued phytoplankton monitoring in the Swan-Canning estuary and provision of information to public health authorities and the community.
- Applied Phoslock™ to 1 500 metres of the Canning River upstream of the Kent Street Weir during December and February to reduce phosphorus release from sediments.
- Extension of Centre for Water Research computer modelling of the Swan-Canning catchments and estuary.

Future directions:

- Continue monitoring and reporting against SCCP targets.
- Continue development of Phoslock™.
- Application of computer modelling to direct management actions in achieving water quality targets.
- Investigation of non-nutrient contaminants in the Swan-Canning.
- Improved public availability of information through the Internet and catchment report cards.

Riverside Planning and Development

Aims:

To plan for the conservation, enhancement and appropriate development of the Swan-Canning river system.

Achievements:

- The Trust considered 224 applications for development within and adjoining the Swan River Trust Management Area.

- As a result of the Trust's public review, notification of development applications received has been available on the Trust's web site since March 2003.

Future directions:

- Continue to influence the policies of other agencies associated with development on the river.

- Continue to establish partnerships with local government to promote the Trust's outcomes for the river.

- Continue to provide the community with the opportunity to comment on the Trust's recommendations to the Minister for the Environment and Heritage.

Management Planning

Aims:

To prepare management plans based on sound information to ensure conservation and enhancement of the Swan-Canning river system while allowing appropriate development and recreational use.

Achievements:

- Implementation of the Discharge of Cooling Tower Waste Policy was initiated through the completion of stage one of a survey of building owners or ratepayers within the Perth Central Business District.

- Developed a strategic plan to guide the Swan-Canning Industry Project for the next few years and attribute responsibility to more stakeholders (replaces recommendations in the *Swan-Canning Industry Survey Final Report 2000)*.

- Yacht clubs and marinas were provided with a generic environmental management system to manage the potential environmental effects of their operation. Individual organisations considered the generic system, added risks specific to their club or marina and identified what management options they will undertake to reduce risks.

- A communications program was undertaken to assist local government and other agencies in better understanding the purpose of the Precinct Planning Project and to encourage the production of precinct policy plans.

Future directions:

- Continue to collaborate with local government and other agencies to produce precinct policy plans.

- Continue to follow up Surveys and further develop the database for the Discharge of Cooling Tower Waste Policy.

- Support finalisation of Riverplan and negotiate its implementation with State and Local Governments.

Protection of Waterways and Foreshores

Aims:

To protect the Swan-Canning river system from the adverse effects of human activity and to facilitate public use and enjoyment of the river.

Achievements:

- 33 public beaches/foreshores and 146 kilometres of shoreline of the Swan-Canning rivers were regularly cleaned and maintained.

- 1 013 tonnes of beach sand was recycled from accumulation sites to help restore eroded public beaches.

- River*bank* funds to the amount of $162 725 have been allocated to support five cost sharing projects with local government. These projects have varied from removal of exotic vegetation, planting of sedges, rushes and other indigenous plants, repair and replacement of limestone river walls, beach stabilisation, and rock protection of eroding riverbanks.

- $425 000 was allocated to help eight SCCP Action Plan priority catchment groups with operational costs.

- Progress to a regional delivery model for natural resource management including a review of catchment boundaries by catchment groups.

- The Swan Catchment Urban Landcare Program (SCULP), a joint initiative of Alcoa and the Trust, funded 60 groups to implement 109 separate restoration projects.

- The Trust's Cleanup Program continued to support:

    - oxygenation of 2.3 kilometres of the Canning River upstream of the Kent Street Weir to assist reduction of phosphorus release, facilitate removal of nitrogen and prevent anoxic conditions

    - completion of Skills for Nature Conservation program evaluation, training calendar and co-ordinators information manuals (Swan Catchment Centre)

    - delivery of community education about the river environment through the Swan River Action Kit, learning circles and forums (Swan Catchment Centre)

    - provision of assistance with property planning for small landholders (Department of Agriculture)

    - a Natural Resource Manual (NRM) was produced as part of the Local Government Natural Resource Policy Development Project

    - the 'Caring for the Canning, a plan to revitalise the Canning and Southern Wungong Rivers' was released and implementation commenced.

Future directions:

- Continued implementation of the River*bank* program.
- Continued implementation of the SCCP Action Plan through:
  - comprehensive evaluation of the Swan-Canning Cleanup Program to direct future actions
  - training sessions for local government staff on natural resource management
  - direct funding for community participation in catchment management
  - provision of training for landholders to reduce nutrient losses from rural land
  - further development and application of constructed wetland and drain retrofitting technologies
  - improved industry practices by extension of the successful Greenstamp program to a range of industries
  - strengthened linkages with the Swan Catchment Council in implementing the Swan Region Strategy

Community Awareness, Education and Involvement

Aims:

To increase community awareness of, education, and involvement in the conservation and management of the Swan-Canning river system.

Achievements:

- Expanded the Trust's website to include a 'What's New' page with links to Cleanup Program projects and publications in a more user–friendly format http://www.wrc.wa.gov.au/srt/whatsnew/index.html.

- Use of the highly successful interactive Drain Game at more than 24 public events. The accompanying children's activity sheet was distributed to a wider audience, reinforcing the concepts of the game and carrying river management messages into households and schools.

- Maintained a continuing link with the eight river-based yacht clubs during the year. Detailed information on 'How To Be A River-Friendly Boat User' was available at the annual opening of season events.

- Developed the Fertilise Wise Guide in partnership with the Phosphorus Action Group and the Water Corporation as part of a new SCCP initiative to target the urban domestic market with best practise garden management advice.

- The Ribbons of Blue/Waterwatch program now has 85 schools and 25 community groups registered and actively involved in the program.

- Produced a new SCCP householder brochure to present introductory information about the Cleanup Program to the general community.

- An increase in the engagement and environmental education of the business community through the Trust's Corporate Care Day program which supports catchment groups by working together on river restoration projects.

Future directions:

- Continue to build public awareness and involvement in the conservation and protection of the Swan-Canning river system directly and through partnerships with the community, local government and other agencies.

Contents

Swan River Trust Vision and Mission

Vision

To cherish the Swan and Canning rivers as a valued river system and a source of enjoyment for the community forever.

We must be a creative team with a deep commitment to deliver quality river planning and management.

Mission

To work with the government, local government and community to ensure that the Swan and Canning river system is conserved and managed to enhance its environmental quality and public amenity.

About the Swan River Trust

The Swan River Trust was established in 1989 and plays a vital role in the protection and management of the Swan-Canning river system – one of the State's most treasured assets. The Trust is constituted under the *Swan River Trust Act 1988* and is responsible to the Minister for the Environment and Heritage.

The Swan-Canning river system is the life and soul of Perth. Its waterways and shorelines are part of our heritage and the central focus of our urban landscape. The rivers provide a range of recreational opportunities, maintain a functional living environment in the heart of an urban area, supports businesses and tourist enterprises and contributes to surrounding property values.

Specifically, the functions of the Swan River Trust are to:

- Manage and protect the river system and work with local government and other bodies to provide facilities around the rivers
- Advise the Minister for the Environment and Heritage on development proposals within the Trust's Management Area
- Control and prevent pollution of the rivers and keep them clear of rubbish
- Advise on and control erosion of river banks
- Provide advice to local governments and the Western Australian Planning Commission on town planning issues affecting the rivers
- Promote community awareness of issues affecting the health of the river system and increase community involvement in river protection and restoration.

The Trust has a very close relationship with the Water and Rivers Commission, sharing similar philosophies and carrying out complementary functions.

Under a Machinery of Government Taskforce Report in 2001 it proposed to amalgamate the Department of Environmental Protection, the Water and Rivers Commission and the Keep Australia Beautiful Council. While the agency has been operating as a combined entity under the title Department of Environment, the busy legislative program in Parliament has meant that the legislation required to formally establish the new department is yet to be introduced.

As required under the Swan River Trust Act the new Department of Environment will continue to provide staff, technical and administrative support to the Swan River Trust, which remains a separate statutory authority.

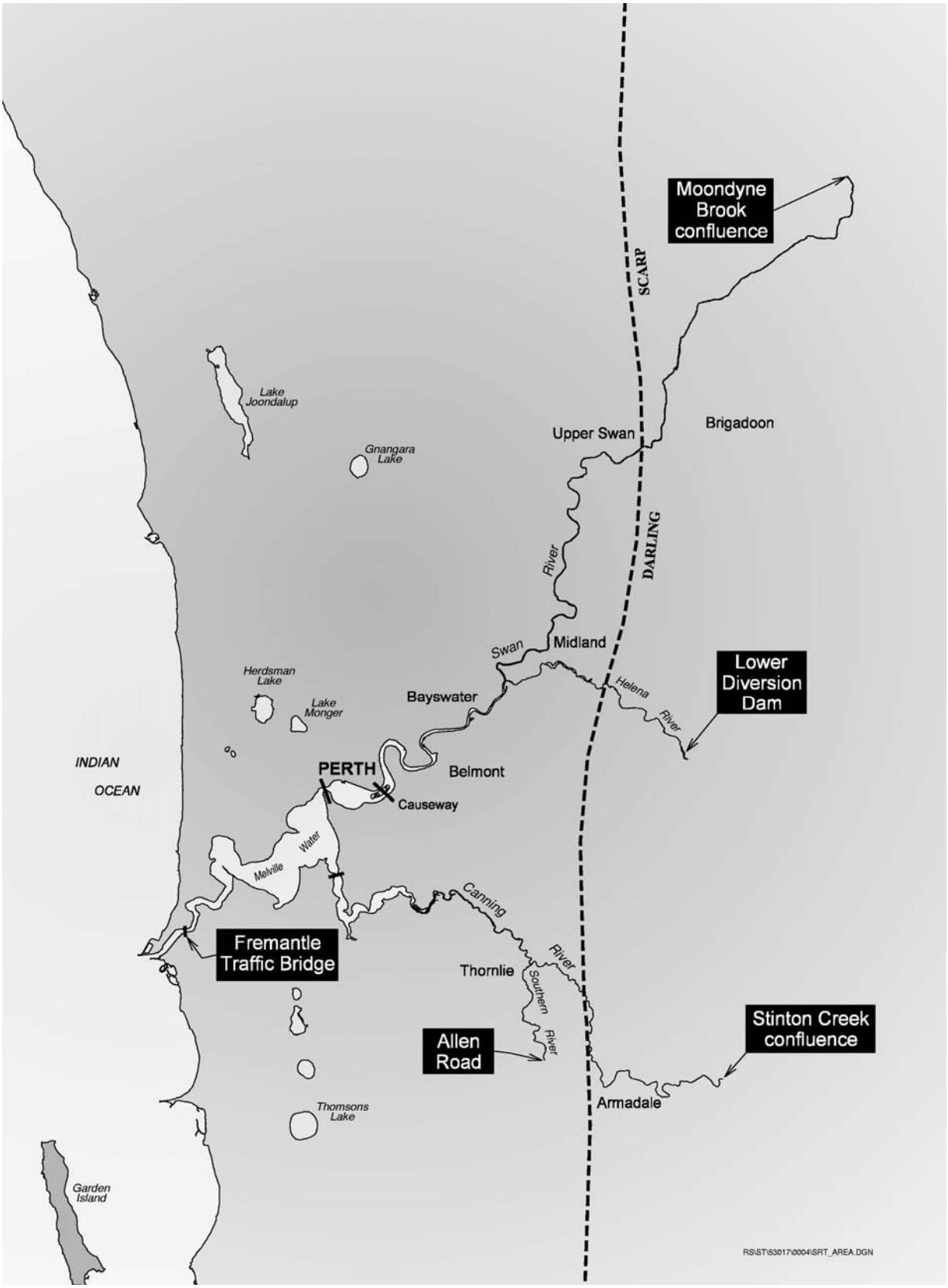


Figure 1: The Swan River Trust Management Area includes the waters of the Swan and Canning rivers and adjoining parks and recreation reservations – extending upstream from the Fremantle Traffic Bridge to Moondyne Brook on the Avon River, to the lower diversion dam on the Helena River, along Southern River to the Allen Road crossing and the Canning River to its confluence with Stinton Creek.

Major programs

Riverbank

The Trust has a statutory function to control and provide advice on erosion. Revegetation and restoration projects are essential to reducing erosion damage and restoring foreshore function and amenity. River*bank*, the Swan River Trust's four-year $500 000 restoration and revegetation program for Perth's river shorelines helps to fund projects to restore degraded shorelines of the Swan and Canning rivers.

Since its inception in January 2002 River*bank* funds to the amount of $251 154 have been allocated to support 14 cost sharing projects with local government. These projects have varied from removal of exotic vegetation, planting of sedges, rushes and other indigenous plants, repair and replacement of limestone river walls, beach stabilisation, and rock protection of eroding riverbanks.

Swan-Canning Cleanup Program

Through the Swan-Canning Cleanup Program, the Trust and the organisations working with it have identified the sources of nutrients that support algal blooms and have developed a range of coordinated strategies to reduce the frequency and extent of algal blooms. A key component is supporting community-coordinated management of the catchments so that the level of nutrients entering the river system is reduced.

Public awareness campaign

Public understanding of the importance of protecting and managing the river system is vital to the Trust's work. Production of environmental reports and information for shoreline residents, householders and students, community groups, boat owners and recreational anglers make sure people know and care about the Swan-Canning river system.

Review of the Swan River Trust

As a result of recommendations of the Machinery of Government Taskforce the Minister for the Environment and Heritage appointed CSIRO Director of the Australian Research Centre for Water In Society, Dr Geoff Syme, to review the functions and structural arrangements of the Trust.

The independent review of the Swan River Trust recommended retention of the Swan River Trust as an independent statutory authority, but with more emphasis on:

- strategic functions, to provide direction and a framework for addressing increasing development and recreation pressures on the river and surrounds; and
- increased community participation.

Cabinet endorsed measures proposed to implement the Syme Review recommendations in November 2002, and implementation of those measures have commenced.

The community's right to knowledge and participation are being addressed. Public notification of development applications received has been available on the Trust's web site since March 2003.

Another new initiative, introduced at the same time, is a public comment and review period relating to the Trust's recommendations on development applications. People will have fourteen days to comment on applications that require the Minister's approval.

Preparatory work is under way for legislative amendments that will assist the Trust to focus in strategic directions. For example, the amendments will streamline decision making for minor developments. It is anticipated that the amendments will also result in the introduction of financial assurance provisions, to ensure that the river management works which are at times required as part of development approvals are completed in a satisfactory manner.

The Swan River Trust Board

The Swan River Trust Board comprises eight members drawn from the community, local government and government agencies. They are:

- a Chairman appointed by the Minister for the Environment and Heritage
- a member of the board of the Water and Rivers Commission
- nominees of the Minister for Planning and Infrastructure and the Coordinator of Water Services
- a representative of the Western Australian Local Government Association appointed by the Minister for the Environment and Heritage
- two independent members appointed by the Minister for the Environment and Heritage.

When the Trust is considering a development application, local governments from areas affected by the development may nominate a representative to attend Trust meetings and vote on the development. Local government representatives are also regularly invited to attend committee and other meetings.

In December 2002 the Minister for Environment and Heritage Dr Judy Edwards outlined new reforms for the Trust that will include changes to the board of management. The Trust will remain as a board at its current size of eight permanent members, but will be restructured to facilitate it undertaking a more strategic role. In addition to its Western Australian Planning Commission and local government members, the new board will have six members from the community, one of whom will be appointed as Chair of the Trust.

Members will be selected to ensure that the Trust will have available to it the experience and expertise in urban and landscape planning, recreation and tourism, local government, matters of interest to the Nyungah community, conservation and natural resource management and development necessary for it to take a more strategic role. This will include continuation of the development of landscape policy plans in collaboration with the Department for Planning and Infrastructure and local governments.

Changes to the *Swan River Trust Act* are required to implement changes to the board. These will be included in the Bill proposed to implement legislative changes recommended as a part of the Machinery of Government review.

Membership changes

Mr Rod Willox was appointed as a temporary board member on 3 May 2003. Mrs Pat Hart resigned from the Swan River Trust Board on 5 May 2003 to take up a Councillor role with the City of Armadale. Sadly Mr Noel Robins passed away on 22 May 2003. Chairman Mr Geoff Totterdell retired on 30 June 2003 after nine years of dedicated service.

Board members

Mr Geoff Totterdell B.Com, FCPAA, CD, AICD
Chairman
Mr Totterdell is an active river user who has chaired the Swan River Trust since August 1994. His interests over many years have included swimming, fishing, canoeing, powerboat time trialing and yachting. He holds a Bachelor of Commerce degree (UWA) and is a Fellow of the CPA Australia and a member of the Australian Institute of Company Directors.

Mr Noel Robins
Deputy Chairman
Nominee of the Water and Rivers Commission
Mr Robins was a former Commissioner for Waterways who had extensive experience in river and estuary management. He played a lead role in the creation of the Swan River Trust and in the establishment of various community-based management authorities to tackle environmental problems in waterways. Mr Robins was a member of the Water and Rivers Commission Board. He passed away on 22 May 2003.

Mr Ray Stokes Dip TP (Nottm), Dip TD (L'pool), FPIA
Nominee of the Minister for Planning and Infrastructure
Mr Stokes is a qualified town planner and Fellow of the Planning Institute of Australia. He is currently Director Policy and Legislation with the Department for Planning and Infrastructure.

Mr Cleve Flottmann
Nominee of the Minister for Planning and Infrastructure
Mr Flottmann has an extensive background in engineering and project management, particularly in urban planning and development and in the maritime sectors. In a diverse career he has worked for both Commonwealth and State Governments, and as a private engineering consultant. He is currently Manager New Application Coastal Assets in the Asset Management Directorate of the Department for Planning and Infrastructure.

Dr Brian Martin M ScAgric, PhD
Coordinator of Water Services
Dr Martin is an economist who has worked in a range of State and Commonwealth Government agencies over 25 years, primarily in the area of policy development. In 1996, he was appointed Coordinator of Water Services in Western Australia, with the task of establishing and leading the newly formed Office of Water Regulation.

Cr Marion Blair
Nominee of the Western Australian Local Government Association
Marion Blair has been a Councillor of the City of Belmont since 1987 and has been the Deputy Mayor for seven of those years. She was Deputy President of the Western Australian Local Government Association and is currently a member of the Eastern Metropolitan Regional Council, which, as part of its responsibilities, looks after regional community services and the environment including the Swan River.

Mrs Pat Hart

Member

Mrs Hart is a retired business proprietor with over 30 years' involvement in rural and urban community organisations. She has served on numerous committees involved with catchment management and has been Chair and member of the Swan Catchment Council, Chair of the Swan-Avon Integrated Catchment Management Group and a member of the Swan-Canning Cleanup Program Taskforce. She is currently Chair of the Canning Catchment Coordinating Group, deputy chair of the Armadale/Gosnells Landcare Group and a Board member with the Botanic Gardens and Parks Authority. Mrs Pat Hart resigned from the Swan River Trust Board on 5 May 2003 to take up a role as Councillor with the City of Armadale.

Dr Tim Mather BVSc FAICD MAVA

Member

Dr Mather is a business owner/manager and retired veterinarian with extensive experience in environment and human/animal ecosystem relationships. He has trained in business and financial management and architectural studies and is a regular river user with an interest in rowing and yachting.

Col Rod Willox AM RFD ED JP

Nominee of the Water and Rivers Commission

Col Willox (retired) has degrees in medical science (microbiology and biochemistry) and pathology, also a diploma in OHSM. He is a Graduate of the Australian Defence College, and a former company director in risk management consultancy. Col Willox is very active in local government and community organisations, particularly related to environmental health and waste management. He is a member of the Water and Rivers Commission Board, a property owner in the Avon Catchment and a keen sailor.

Organisational Structure

The Swan River Trust has a core 21.6 FTE staff and receives administrative and technical support from staff of the Water and Rivers Commission. The Trust is divided into two sections - Assessment and Policy and River Management.

The Assessment and Policy Section evaluates and provides advice on applications for approval of development in and next to the Swan River Trust Management Area. This requires regular consultation with developers, local government and other agencies whose activities impact on the health and amenity of the Swan-Canning river system. Assessment reports are prepared and form the basis of Trust advice to the Minister.

This section also prepares Trust policies and provides advice on policy development by other agencies. Staff provide advice to members of the public concerning development and land use around the river, assist in interpreting policies and legislation, and support local governments in the preparation of foreshore management plans.

The River Management Section coordinates the Trust's Swan-Canning Cleanup Program, River*bank* and the Public Awareness Campaign. It supports the development of catchment and foreshore management plans, undertakes environmental investigations and audit and enforcement activities. It also cleans and maintains beaches and foreshores, removes derelict vessels, undertakes pollution investigation and control and provides logistical support for research activities. Its staff work closely with local government, the Water and Rivers Commission, Department for Planning and Infrastructure and the Department of Environmental Protection.

State of the River

General algal pattern

A successional pattern of algal growth occurs every year in the Swan-Canning river system. It is influenced by the timing of rainfall, nutrient inputs during the year, seasonal movement of the salt wedge into the upper reaches of the river and changes in salinity over the entire tidal portion are influences on the system.

In winter diatoms are present in the water, but cold temperatures and short day lengths do not favour photosynthesis and rapid algal growth. In late winter and early spring, when temperatures begin to rise and the day length becomes longer, Chlorophytes become the dominant algae. They are stimulated by nutrients washed into the system, particularly nitrogen, by the late winter and early spring rains.

In mid spring the composition of algae again changes and more marine species, particularly diatoms are dominant. They are associated with the leading edge of the salt wedge pushing upstream from the mouth of the river as fresh water flow diminishes. Also during this period, rusty coloured blooms of dinoflagellates occur. Dinoflagellates can mix with blooms of diatoms making the water appear brown or red. These species bloom in response to high nutrient levels present in the brackish bottom waters.

Dinoflagellates and cryptophytes are often the dominant algae in mid to late summer when the tidal portions of the rivers and estuary have become salty. The abundance of these algae is influenced by the amount of nutrients that have been released into the water column through recycling from the bottom sediments and from previous spring blooms.

Mixed blooms of opportunistic algae such as diatoms, dinoflagellates and marine algae often occur in autumn. Some flourish before winter rains push the salt water out of the rivers and estuary. Others bloom if early autumn rains occur, bringing a flush of nutrient rich freshwater into the rivers. They may also bloom as a result of nutrients being released from the sediments in calm conditions.

In the Canning River upstream of the weir the succession of algae is similar except that in the Canning freshwater species such as the blue-greens *Anabaena*, *Microcystis* and *Cylindrospermopsis* are involved.

July 2002-June 2003 algal abundance

This year conditions in the late winter and spring were typical of a dry year with no notable algal bloom activity. In late summer however, a blue-green algal bloom occurred in the Canning River upstream of Kent Street Weir for a short duration.

The algal bloom pattern in the Swan-Canning system in autumn was very different from the average cycle this year. A dinoflagellate bloom of *Karlodinium micrum* began in early April and continued through until the end of June. The trigger for the bloom was a storm early in April that resulted in nutrient rich water from the Avon Catchment entering the Swan River (Figure 2).

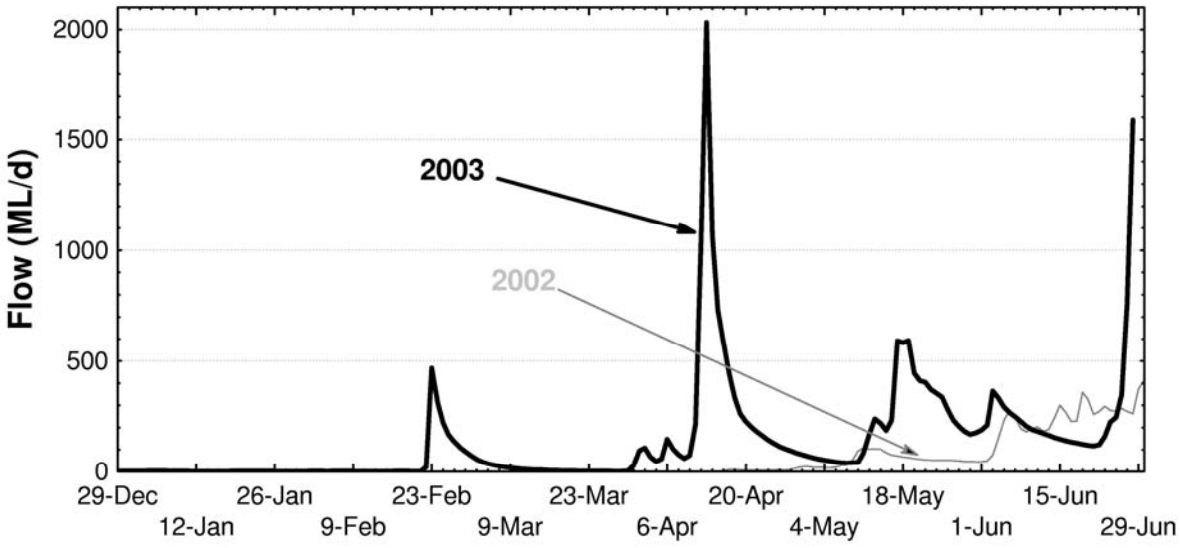


Figure 2. Water flow in the Swan River, upstream of the Ellen Brook confluence, in 2002 and 2003.

The flow from the Avon River into the Swan brought with it nutrients and organic material. In particular it resulted in high concentrations of soluble oxidised nitrogen entering the Swan River (Figure 3).

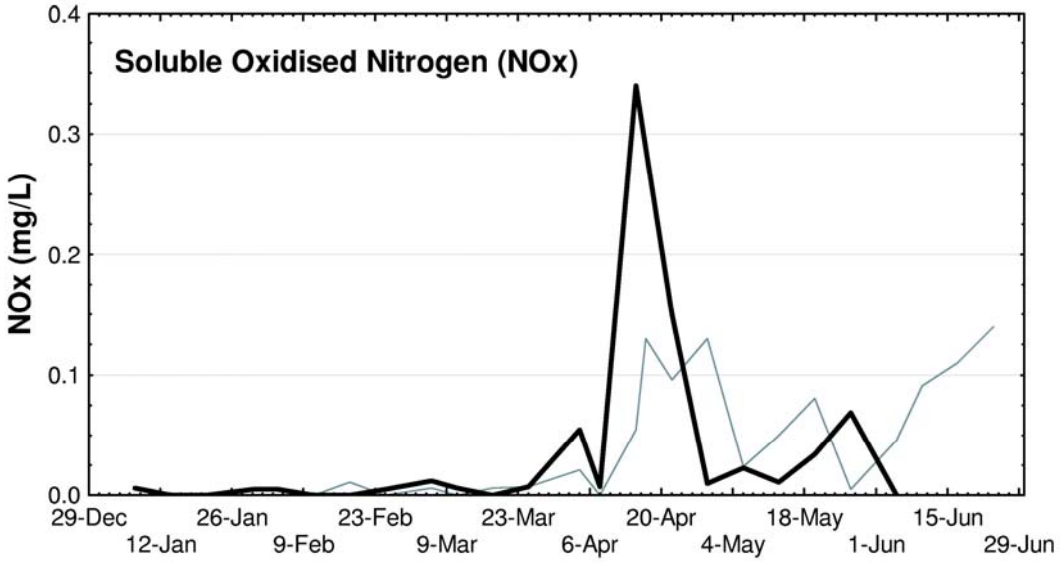


Figure 3. Soluble oxidised nitrogen concentrations in the middle Swan River, 2002 and 2003.

This inflow combined with subsequent fine, sunny conditions resulted in the escalation of *K. micrum* from being extremely low, to over 100 000 cells/ml at some sites in the estuary (Figure 4). The bloom started in the middle Swan Estuary, developed in Perth Water, then in the lower Canning and eventually up above Kent Street Weir.

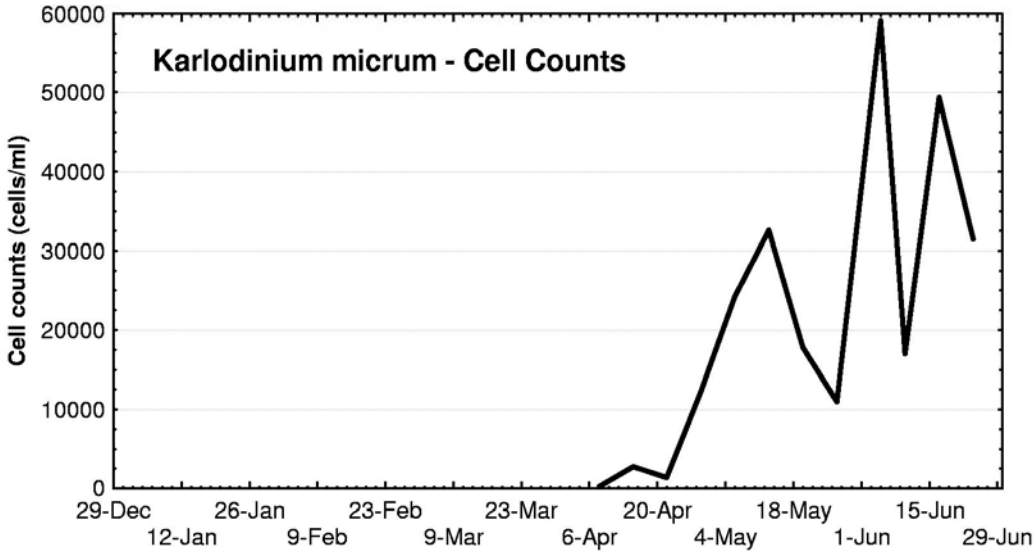


Figure 4. Karlodinium micrum bloom in the middle Swan River, 2003.

The *K. micrum* bloom killed thousands of fish in both the Swan and Canning rivers over the three months of April, May and June. When the fish or other gill-breathing animals came in contact with the algal bloom the gills became clogged with the algae and a brown mucus was observed. The algae also released a toxin that ruptured cells, including red blood cells, in the gill resulting in the suffocation of the fish. The affected fish were observed swimming very slowly coming to the surface in an attempt to get oxygen. Over a period of one to two days the fish become more lethargic, gradually stopped swimming and died.

There were six discrete fish kill events throughout the three months occurring on 7 April, 5 May, 22-27 May, 12 June, 18-19 June and 23-24 June (Table 1). The algae bloom killed a wide range of fish species from all age classes. The dominant fish collected were black bream, however, Perth herring, mulloway, flathead, flounder, mullet and Swan River gobies were also killed.

Finally towards the end of June several weeks of heavy rainfall changed conditions in the estuary. This resulted in the collapse of the algal bloom allowing winter diatoms to dominate the estuary and no further fish kills occurred.

Fish kill 2003

Table 1. Swan-Canning fish kill events in 2003.

Date	River	Location	Dominant Fish Species Effected	Estimate of the Number of Fish Collected	Estimate of Total Dead Not Collected
7/04/03	Swan	Redcliffe Bridge to Ascot	Black Bream	300	
2/05/03	Swan	Guildford to Rivervale	Black Bream	20	
22/05/03	Swan	Bayswater to East Perth	Black Bream	6 000	
27/05/03	Swan	Redcliffe to Victoria Park	Black Bream	18 000	120 000
12/06/03	Swan	Maylands to East Perth	Black Bream	60	
18/06/03	Canning	Coffee Point	Perth Herring	700	
19/06/03	Canning	Kent Street Weir	Black Bream	0	
23/06/03	Canning	Aquinas Bay	Swan River Goby	0	100 000
24/06/03	Canning	Mt Henry Bridge to Salter Pt	Black Bream	500	55 000

Conclusion

This event highlighted that the Swan-Canning system is vulnerable to algal blooms that can produce negative impacts on the fauna of the estuary. It demonstrates that the system has ample nutrients in *situ*, allowing small changes in weather conditions to result in large impacts. The event confirms previous studies that advise a reduction in nutrients entering the system is vital to the long term health of the system. The event provided useful learnings about the river which will be used in the coming year as the Swan-Canning Cleanup Program is reviewed and as new initiatives come on stream.

Swan-Canning Cleanup Program

A comprehensive Action Plan for restoring and protecting the Swan-Canning river system was released by the Minister for the Environment and Heritage in June 1999 and has played a central role in shaping the water quality protection activities of the Trust over the past four years.

More than $3 million, over 60 per cent of the Swan River Trust 2002-2003 budget, was committed to implementation of the Trust's Swan-Canning Cleanup Program (SCCP) Action Plan.

The SCCP Action Plan is focused on reducing nutrient levels in the Swan-Canning river system to limit the frequency and extent of algal blooms and prevent toxic blooms. In this fourth year of implementing the Action Plan SCCP consisted of 20 major projects, involved more than 50 people from government agencies as well as increasing participation by community based catchment groups.

A Senior Officers Group and a Project Managers Group coordinate SCCP and oversee implementation of the projects and ensure SCCP objectives are achieved. Each of the projects are mentioned in the relevant output section of this annual report. SCCP projects are identified by this symbol:

The approach taken in the Action Plan is to:

1. Support natural resources management to reduce nutrient inputs

2. Improve planning and land use management to reduce nutrient inputs

3. Modify river conditions to reduce algal blooms

4. Monitor river health, fill critical gaps in knowledge and report progress to the community.

The major achievements of the Swan-Canning Cleanup Program in 2002-2003 were:

- Establishment of SCCP short and long-term water quality targets: Compliance or performance against targets developed for the Canning section of the Estuary has been calculated for the first time this year.

- Swan Canning Industry Project: More industry associations joined the Working Group, providing strong industry representation. An important partnership has developed with the Swan Catchment Council providing the council with a mechanism to engage industry in the implementation of the *Swan Region Natural Resource Management (NRM) Strategy 2002.*

- Increased support for catchment groups: In 2002-2003, $425 000 was allocated to catchment groups to help with operational costs such as employment of coordinators, project officers, administration support and office supplies.

- Catchment Groups progressed to a regional delivery model for natural resource management coordinated through the Swan Catchment Council. As part of this model, catchment boundaries were reviewed. During the year North East Catchment Committee

and Ellen Brockman Integrated Catchment Groups have formed and strong progress has been made in forming a new alliance amongst the South East Catchment Groups.

- Expansion of adult learning and community conservation training using the Swan River Action Kit. 245 people participated in learning circles, training and forums.

- Development of the "Waterwise Catchments Initiative" along with Water Corporation, in recognition of the International Year of Fresh Water through the Swan Catchment Centre.

- The Heavenly Hectares seminars, which introduce small landholders to concepts of sustainable land management, continued to attract large numbers of participants. During 2002-2003 1931 people participated in a learning. The small farm website was also popular at http://www.agric.wa.gov.au/smallfarm.

- The 'Caring for the Canning, a plan to revitalise the Canning and Southern Wungong Rivers' was released and implementation commenced. A process has been defined for the development of environmental water provisions, in consultation with key stakeholders.

- The Local Government Natural Resource Manual (NRM) was launched as part of the Local Government Natural Resource Policy Development Project. Each Local Government in the Swan-Canning has received their copies of the manual which provides environmental policies, guidelines and checklists ready for use by Local Government.

- The SCCP public awareness campaign has increased the boundaries of its influence this year by participating in a more specific range of public activities, and developing particular community knowledge and skills.

  More than 116 stakeholders and members of the public attended SCCP's annual community forum, and for the first time the forum was presented as a trade show format featuring more than 20 Cleanup Program projects and related activities.

- Engagement and environmental education of the business community has continued to increase its influence through the Trust's Corporate Care Day program supporting catchment groups by working together on river restoration projects.

- Developed the Fertilise Wise Guide in partnership with the Phosphorus Action Group and the Water Corporation as part of a new SCCP initiative to target the urban domestic market with best practise garden management advice.

- The message of the Cleanup Program was spread through the International Year of Freshwater 2003 Calender. 27 000 calendars featuring unique colour photos of the Swan River and environmental messages focussed on keeping our rivers healthy, were distributed to residents of the City of Melville.

- The popular SCCP Drain Game featured at more than 24 public events. The accompanying children's activity sheet was distributed to a wider audience, reinforcing the concepts of the game and carrying river management messages into households and schools. More than 200 000 people have now been exposed to the drain game's message.

Water Information

Sound scientific information is essential to determine what condition the rivers are in, what management strategies are needed and how effective they are likely to be and whether they are having the desired effect.

Water quality monitoring and analysis program

Monitoring programs are necessary to track trends in water quality such as nutrient concentrations and oxygen levels and to measure compliance against established targets. They are also vital to provide the data required for computer modelling and to assess whether implementation of the Swan-Canning Cleanup Program Action Plan is making a difference to the health of our river system.

The Swan River Trust and the Water and Rivers Commission have developed an extensive program to provide information on water quality in the Swan-Canning river system. The program is funded by the Swan-Canning Cleanup Program (SCCP).

The aim of this program is to:

- provide chemical, physical and biological information on water quality and information on water quality trends in the estuary and coastal catchment
- assess whether SCCP water quality targets are being met
- provide information to help public health authorities assess hazards to public health and recreational use of the rivers associated with algal blooms, and
- help establish environmental standards and assess trends in environmental quality.

Water quality sampling in the Swan-Canning river system involves the use of sophisticated monitoring equipment at a number of sites across the estuarine and freshwater portions of the system. The program measures nutrient levels entering the tributaries of the Swan-Canning river system from 15 key catchments and physical, chemical and phytoplankton aspects of water quality in the estuarine portions of the river system.

There is now nine years' water quality and ecosystem health information for the estuarine portions of the Swan-Canning river system and over 16 years of continuous monitoring of nutrient levels in key catchment tributaries. Two weather stations are also located in the Swan River in Maylands and have been operating for six years to provide wind and barometric pressure data to support modelling and understanding of salt wedge movement and water quality.

Quality Assurance procedures are in place to ensure the standard of monitoring and data analysis is one of the highest in Australia. This high quality and reliable data is essential to measure progress and change.

Two Riverscience issues have been published this year informing the public of water quality and technical issues associated with SCCP. Two technical reports, summarising catchment nutrient

fractions and estuarine water quality trends between 1994 and 2000 in the Swan and Canning Rivers were also completed and provide a good basis for reporting on the state of the river.

Estuarine sampling

The sampling network for the estuarine portions of the Swan-Canning river system consists of 10 sites on the Swan River and seven on the Canning River. A wide range of water quality variables are measured at these sites, including salinity, temperature, dissolved oxygen, total suspended solids, turbidity, chlorophyll-a (the photosynthetic pigment in phytoplankton), phytoplankton cell counts, pH and the nutrients nitrogen and phosphorus. These variables are measured on the surface and at half- to one-metre deep intervals until the bottom is reached. Nutrients are measured at the surface and bottom and phytoplankton is measured throughout the water column.

During periods of high phytoplankton activity phytoplankton levels at several other sites on the Canning River and on the Swan River are also monitored. These sites provide additional information to assist assessment of public health risks, to better refine information on algal blooms and for measuring the effectiveness of the SCCP Action Plan.

Information from the estuarine sampling program has recently been used to develop estuarine water quality targets and to assess whether they are being met.

Weekly water quality reports for the estuarine portions of the Swan-Canning river system are available on the Trust's website, allowing the public to view current conditions.

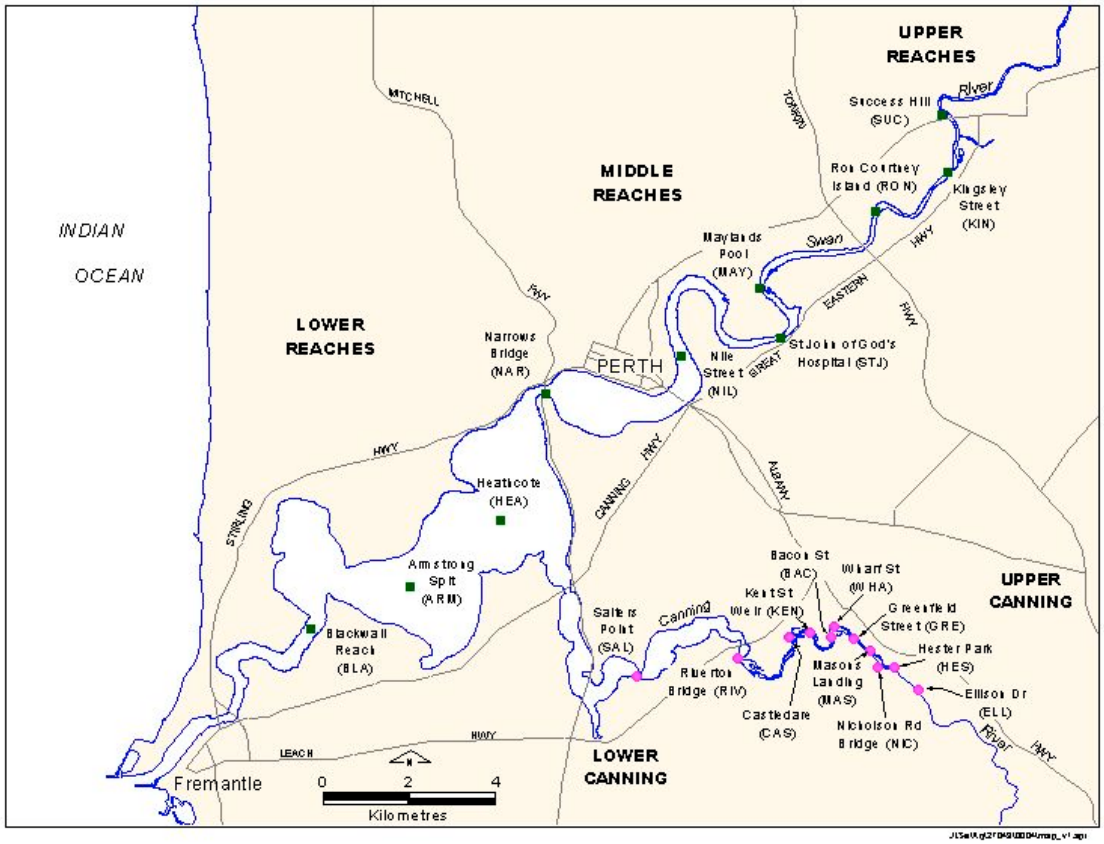


Figure 5: The Swan-Canning river system estuarine sampling sites. A total of 17 sites are sampled regularly over the year with another four sites sampled in the Canning River during the summer and autumn when blooms frequently occur (for a total of 21 sites). One random site in Melville Water is also sampled between January and May to help assess whether estuarine water quality

targets have been met. Nutrients, phytoplankton, chlorophyll, dissolved oxygen, salinity and a number of other water quality parameters are sampled weekly.

Catchment sampling

There are 15 sites on tributaries in the Swan-Canning catchment that are sampled fortnightly to provide data on nutrient concentrations. Flow measurements are also taken at these sites. Nine have continuous flow recording instrumentation and the remainder have staff gauges, which are read fortnightly, with flows computed from a ratings curve.

Auto samplers located at three sites, Ellen Brook, Mills Street and Walyunga allow nutrient samples to be taken during storm event flow periods. This enables nutrient levels to be calculated with good precision. The information is critical to understand how nutrient levels change as flows change so that catchment management can be better focussed on the most important land use practices causing nutrient problems.

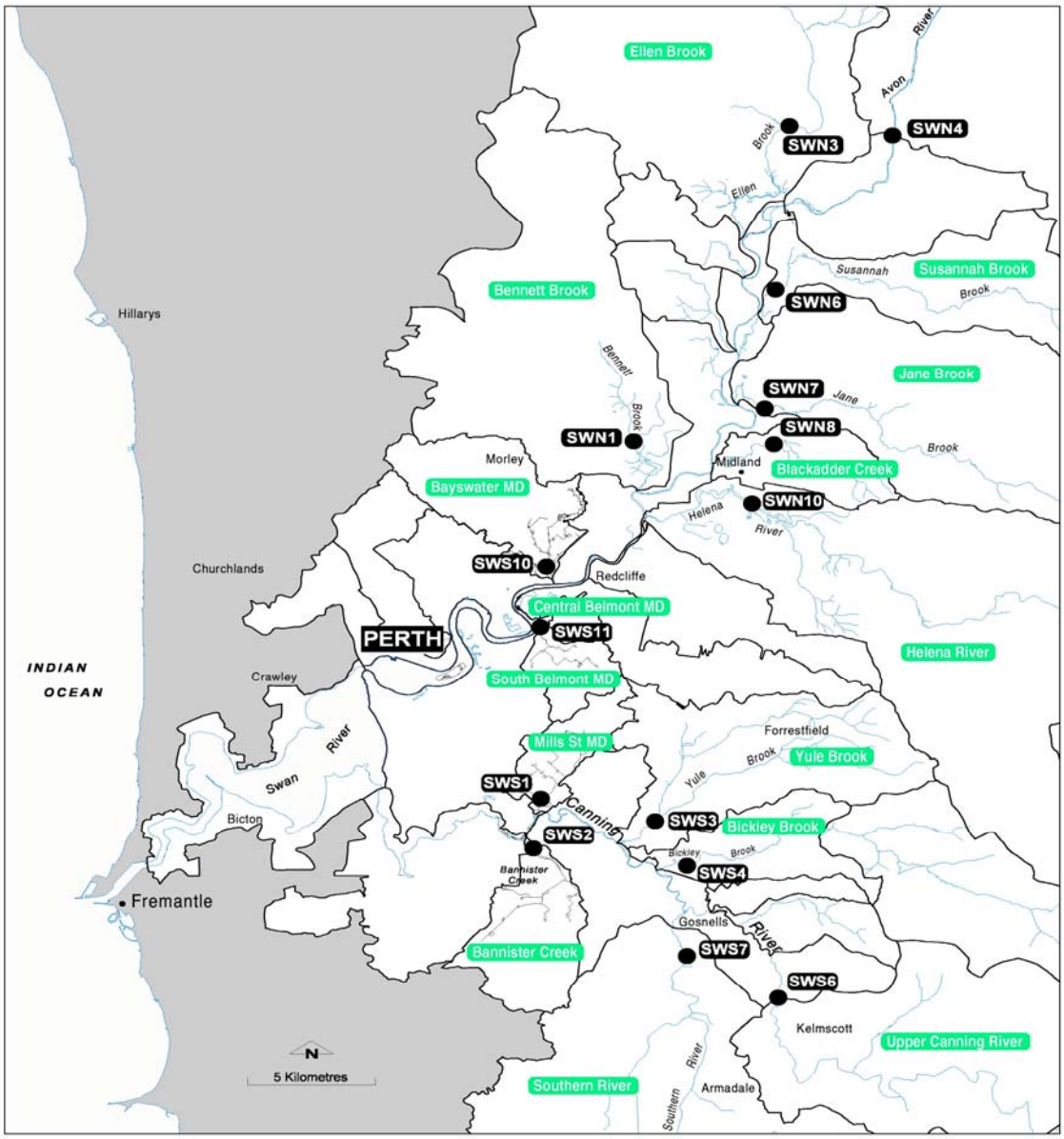


Figure 6: Locality of catchment sampling sites for tributaries and drains in the Swan-Canning catchment. Fifteen sites are sampled for the nutrients nitrogen and phosphorus. Sub-catchment names and sampling site numbers are shown.

Water quality targets

The Swan-Canning Cleanup Program (SCCP) aims to reduce the levels of nitrogen and phosphorus entering the estuary from its freshwater tributaries to limit the extent and frequency of algal blooms and to prevent the occurrence of toxic blooms. Short-term targets have been established to identify when change is occurring and to assess progress towards long-term targets that have been set to indicate the eventual nutrient levels likely to be needed for SCCP to meet its aims.

Water quality in the tributary inflows of the Swan-Canning river system is the focus of a series of web-based report cards being developed for the major sub-catchments. The website page will include reporting on performance against tributary targets.

Compliance or performance against targets developed for the lower Canning estuary has been reported for the first time this year. Performance against these targets is reported in the performance indicators section of this report.

River intervention

River intervention measures in the estuarine portion of the Swan-Canning river system are necessary to lessen the problems caused by high nutrient levels until changes in catchment management practices reduce the levels of nutrients entering the system.

Modified clay to bind phosphorus

The use and development of Phoslock™, as a river intervention tool, continued. Phoslock™ is a modified clay that binds phosphorus in the sediment so that it cannot be used by phytoplankton. This was the fourth year of Phoslock™ trials. A 1 500 metre length of river upstream of the Kent Street Weir was treated with two thirteen tonne applications of Phoslock™. The first treatment occurred in December 2002 and the second in February 2003.

Analysis of data from these trials show that not only phosphorus release from sediments is significantly reduced but phosphorus in the overlying water is also reduced. However, although over 95% of the phosphorus available to phytoplankton growth was reduced by the modified clay applications, sufficient phosphorus was available for a small algae bloom to form due to the constant supply of phosphorus from drains and decaying vegetation.

In the coming year trials will be conducted in applying Phoslock^{TM} to selected urban drains.

Oxygenation

Artificially increasing oxygen levels in the water on the riverbed has been identified as a way of reducing phosphorus release from sediments and increasing removal of nitrogen to reduce the levels of nutrients available to trigger and support algal blooms. Oxygenation also has the effect of maintaining conditions suitable for benthic organisms.

Results indicate that the frequency and intensity of bloom activity is lower and the river is in a healthier condition when oxygenation is used. (see Caring for the Canning River, page 55)

Computer models to support decision making

Computer modelling of the Swan-Canning catchments and estuaries provides an important way of assessing the changes in the estuary that are likely to occur as a consequence of changes in catchment and estuary water quality. It provides a mechanism for testing the effectiveness and relative cost/benefit of different management strategies.

For several years the Trust through the Swan-Canning Cleanup Program has supported modellers based in the Water and Rivers Commission to evaluate and develop a range of models to meet the needs of the Trust in assisting decision making on appropriate intervention strategies.

These models cover areas such as the hydrology, salt and nutrient loads, hydrodynamics and the ecology of the Swan estuary.

Riverside Planning and Development

The Swan River Trust provides advice to the Minister for the Environment and Heritage on applications for approval of development in and abutting the Swan River Trust Management Area.

The Swan River Trust is responsible for assessing applications under Part 5 of the *Swan River Trust Act 1988*, for developments located entirely within the Trust's Management Area. Advice is provided to the Trust by organisations, local governments and State agencies during the assessment process. The officers then provide reports used by the Swan River Trust Board as the basis for its recommendations to the Minister for the Environment and Heritage.

Under Clause 30A of the Metropolitan Region Scheme the Swan River Trust also assesses developments located partly inside, or directly abutting the Trust's Management Area. These applications are either jointly determined by the Minister for the Environment and Heritage and the Minister for Planning and Infrastructure; or Trust advice is provided to local government where the determination is made by local government.

As a result of the Trust's public review (see page 19 for more information), public notification of development applications received has been available on the Trust's web site since March 2003. Another new initiative, introduced at the same time, is a public comment and review period (available on the website) relating to the Trust's recommendations on development applications. The public will have 14 days to comment on applications that require the Minister's approval.

Development control

There are two categories of proposals that constitute development under the *Swan River Trust Act 1988*:

- Construction of buildings, earthworks, structures such as jetties, bridges or other works,
- Operation of commercial activities such as houseboats, ferry services and recreational activities often allied to tourism.

The Trust considered 224 development applications during the year. This included 56 applications that were determined by the Minister for the Environment and Heritage, under the *Swan River Trust Act 1988*, with 37 being assessed under Clause 30A of the Metropolitan Region Scheme. The balance was Trust advice to local government.

The following proposals are some of the more notable matters considered by the Trust during the year under the *Swan River Trust Act 1988*:

- The Barrack Square Hotel, Perth

The initial approval for the Barrack Square Hotel expires in October 2003. A new application was subsequently submitted for consideration in view of the original approval being due to lapse. The original application was to be three to four storeys in height, containing a total of 86 rooms and being sited between the Western Australian Rowing Club and the Old Perth Port in Barrack Square. The renewal application is of a similar height, however, minor design modifications have been included that give a more contemporary appearance that well suits the locality.

- Proposed private jetty, Northbank, North Fremantle.

A proposal was considered by the Trust for a private jetty at Northbank, North Fremantle. The jetty was initially part of a foreshore management plan and was to be tied to units in the adjacent development. The foreshore plan was not implemented and the approval expired. This application was the subject of robust debate in the local Fremantle press. Due to public interest in this proposal it was advertised for public comment with the major issues raised including:

  - The need for improvement and enhancement of the foreshore
  - Whether a private jetty was suitable in the proposed location
  - Public access to the jetty.

- The Minister is currently considering the application. Extension of the Mount Henry Bridge and Narrows Bridge for the Perth/Mandurah Railway.

The Trust has received proposal for the expansion of Mount Henry Bridge and additions to the Narrows Bridge to enable the proposed rail link to cross the Canning and Swan rivers. The railway proposal is currently the subject of a Public Environmental Review (under the *Environmental Protection Act 1986*) and the assessment process will not be completed prior to July 2003. The assessment of the application is currently proceeding.

- Proposed culvert on Southern River (Tonkin Highway Extension)

The proposed extension of Tonkin Highway has resulted in a proposal from Main Roads WA to construct a culvert across the Southern River. Previously bridges have been approved, however Main Roads WA submitted an alternative application. The issues that were related to this proposal included the need for fauna corridors, public access corridors and the potential effects on flow regimes in the Southern River. The Trust is awaiting further information from Main Roads WA prior to finalising its consideration of the proposal after 30 June 2003.

- Foreshore Management Plans

The Trust received several foreshore management plans from local governments, state agencies and private developers. To streamline the approval process for the works proposed within each foreshore plan (for example, boardwalks, dual use paths, fencing, etc.), and to ensure that a holistic approach is taken, the Trust generally assesses foreshore management plans as a single development application. This approach is managed to ensure that the works necessary to implement the Plan are covered by the overall assessment of the Plan.

The Trust provides advice on revegetation, erosion management, and weed and pest control issues and works with the applicant to resolve any issues related to landscaping, aesthetics, traffic management, public safety and access to the river and foreshore. The Trust assesses the foreshore management plans and makes its recommendation to the Minister for the Environment and Heritage.

Foreshore management and restoration plans were received by the Trust and approved by the Minister for the Environment and Heritage for:

- City of Canning - Shelley Rossmoyne Foreshore Recreation Node
- City of Gosnells - Pioneer Park Ecological Recovery Plan

- City of Gosnells - Rehabilitation works to foreshore reserve, Chamberlain Street
- City of Perth - Point Fraser Landscape plan
- Swan River Trust Development Assessment Policies

The Trust has completed a review of its development assessment policies. In addition to the review of existing policies a number of new policies were generated including:

- Miscellaneous infrastructure (SRT/D19)
- Boardwalks (SRT/D25)

The reviewed and new policies are now available to the public on the Trust's website.

Regulatory control

The Swan River Trust Regulations 1989 require spectator events held on land or waters within the Trust's Management Area to be approved by the Trust. The Trust ensures that public access to the river and foreshores is maintained, appropriate environmental protection controls are in place and the site is cleaned up after the event. During the year the Trust considered over 37 requests.

Management Planning

Effective planning based on sound information is the key to conserving and enhancing the Swan-Canning river system while making provision for appropriate development and recreational use.

There is great community interest in the waterways of the Swan-Canning river system and the adjacent parks and reserves that make up the Swan River Trust Management Area. Activities that affect the waterways and the adjacent parks and reserves come under the jurisdiction of a wide range of State government agencies and local governments. Many activities, while they occur outside of the Management Area and are not under the Trust's direct influence, are critical to the health and amenity of the rivers. Development of plans for the protection and management of the environment and amenity of the waterways and shorelines is a requirement of the *Swan River Trust Act 1988.*

The Trust works in collaboration with other State government agencies, local government and the community to contribute to and assist in the coordination of studies and the preparation of plans for areas both inside and outside the Management Area. This includes activities that are likely to have an impact on the waterways of the Swan-Canning river system or on the adjacent parks and reserves.

Swan and Canning rivers Precinct Planning project

In 1997 the Trust's Swan River Landscape Description identified 23 precincts throughout the Swan-Canning river system. The Swan and Canning Rivers Precinct Planning Project is the outcome of this work. It encompasses the Trust's Management Area and the landscape corridor or "viewshed" beyond.

The project is being carried out by the Trust in partnership with the Western Australian Planning Commission (WAPC). It will help the Trust, the WAPC and local government to ensure that development applications and subdivision of land is considered in a broader strategic planning context with better regard for the landscape resource of the river setting. The project recognises that the character of urban areas adjacent to the river also affects the river and its landscape setting.

Since its launch in May 2002, the Trust has been undertaking a communications program to assist local government and other agencies in better understanding the purpose of the Precinct Planning Project and to encourage the production of such plans. The final stage of this project, the introduction of a Statement of Planning Policy by the Western Australian Planning Commission, is yet to be finalised.

Discharge of cooling tower waste policy

The wastewater produced by air-cooling towers generally contains biocides, anti corrosive and anti scaling chemicals that are added to inhibit the growth of potentially harmful bacteria, algae and fungi and to prevent corrosion. The Perth Central Business District contains the greatest

concentration of commercial air-cooling systems. The wastewater from these systems, including the water treatment chemicals, is generally discharged to stormwater drains that then flow directly into the Swan River.

The Trust worked with the Water Corporation, the City of Perth, the Department of Environmental Protection and the Property Council of Australia to develop an air conditioner wastewater policy and implementation strategy. Implementation of the policy will ensure that new air-cooling systems do not discharge wastewater to stormwater drains and discharge to these drains from existing systems is phased out.

The implementation of the policy has been initiated through the completion of stage one of a survey of building owners or ratepayers within the Perth Central Business District. In liaison with the City of Perth, building owners were requested to indicate their current level of compliance. Through completion of the survey owners who are not compliant with the policy were required to indicate their proposed compliance date. Follow-up surveys and further database development will be conducted this year. The communications strategy for the policy has also been initiated, including a presentation to the Australian Institute of Environmental Health State Conference.

Yacht club and marina environmental management system

Yacht clubs and commercial marinas have a responsibility to ensure their activities do not compromise the river environment. Maintaining, repairing and refitting boats are an essential part of the activities carried out in these facilities. These activities include the storage and use of paints, solvents and resins, fuel and oil and antifouling agents. Servicing, maintaining and refitting boats also generates wastes. While there is a high level of environmental awareness in yacht clubs and marinas there is a wide variation in the standards of their environmental management.

Yacht clubs and marinas worked with the Trust, the Department of Environmental Protection (DEP) and Department for Planning and Infrastructure (DPI) to develop a generic Environmental Management System. A set of generic risks that most of the organisations present to the environment was considered, and management options for reducing these risks were identified. Individual organisations are currently considering the generic system, adding risks specific to their club or marina and identifying what management options they will undertake to reduce risks.

The broad-based approach to environmental management is becoming established in yacht clubs with the development and adoption of environmental management systems still being expanded on. This is being facilitated through the support of the Trust, the DEP, and the DPI. Presentations have been made to yacht club members and small boat owners highlighting methods and practices to reduce the potential for pollution incidents.

Swan-Canning industry project

The Swan-Canning Industry Survey revealed small industry needed greater support in adopting environmental management practices to reduce their cumulative impact on the environment.

This year the Swan-Canning Industry Working Group has been developing a strategic plan to replace the recommendations in the *Swan-Canning Industry Survey Report 2000*, which were only designed to guide the project for two years. In 2003 more industry associations joined the Working

Group, providing strong industry representation. The Strategic plan focuses on collaborative partnerships and providing industry-specific support to small industry.

An important partnership has developed with the Swan Catchment Council. The Swan-Canning Industry Project provides the Council with a mechanism to engage industry in the implementation of the *Swan Region Natural Resource Management (NRM) Strategy 2002*. The Council has incorporated the project into their Foundation Funding bid to assist with accreditation of the NRM Strategy.

The Swan-Canning Industry Working Group is currently working with the Master Cleaners Guild to develop an accreditation/training program to improve environmental management within that industry.

Riverplan

Riverplan has been in development since 1998 when the State Government gazetted the Environmental Protection (Swan and Canning Rivers) Policy. The EPP's purpose is to ensure that the values of the Swan and Canning rivers are protected and restored by managing the activities that affect them. Riverplan is the principle mechanism for implementation of the EPP.

The initial Riverplan document was prepared by the Swan River Trust in 1999. The Environmental Protection Authority recommended that the document be revised and released for public comment before being finalised. The Water and Rivers Commission, in conjunction with the Swan River Trust have been working on the revised document since May 2002.

Riverplan is a strategic document that recognises that State Government agencies, local governments, community groups and industry groups have important roles in managing the Swan and Canning rivers.

Riverplan is scheduled to be released by the Minister for Environment and Heritage in July followed by a three month public comment period.

Committees

Throughout the year, the Trust was represented on and attended meetings of a wide range of committees that oversee or are involved in initiatives or activities that impact on the Swan-Canning river system.

They included:

- Sir James Mitchell Park Community Advisory Group - City of South Perth
- Ellen Brockman Integrated Catchment Group
- Swan-Canning Cleanup Program Senior Managers Group – Swan River Trust
- Swan Catchment Urban Landcare Program – Swan Catchment Council
- Swan Region Strategy Accreditation Working Group – Swan Catchment Council

- Drainage Reform Group
- Yacht Club / Marina Environmental Management System Steering Committee – Swan River Trust
- Swan-Canning Industry Working Group – Swan River Trust
- Swan-Canning Cleanup Program Project Managers Group – Swan River Trust
- Central Business District Airconditioner Waste Disposal Working Group – Swan River Trust
- Environmental Education Working Group – Swan Catchment Council
- Conservation and Landcare Committee - Royal Agricultural Society of Western Australia
- The Swan and Canning Rivers Precinct Planning Project Steering Committee – Swan River Trust
- Point Fraser Steering Group – City of Perth
- Barrack Square / Foreshore Project Liaison Group – City of Perth
- Perth District Emergency Management Advisory Committee – WA Police
- Aboriginal Heritage & Native Title Acts Compliance Committee – Water and Rivers Commission.
- Skyworks 2003 Committee – City of Perth
- Hydrocotyle Working Group – City of Canning

Protection of Waterways and Foreshores

Maintaining the environment and amenity values of urban waterways requires a continuous effort to deal with the effects of human activity and the influences of weather and tides. The Trust coordinates the work necessary to balance the use and protection of the waterways and shorelines, and to restore degraded environments. It works with local government and landowners to control shoreline erosion. It also works to prevent pollution, clean up contamination and remove rubbish from the waterways and shorelines.

Waterways and foreshore cleaning

The community places a high priority on ensuring that the Swan and Canning rivers are well maintained and kept free of rubbish, debris and pollution. Cleaning beaches, removing debris, reshaping eroded beaches, foreshore protection works and responding to pollution incidents are all part of the continuous work undertaken by the Trust to meet those expectations.

Table 2: Summary of material removed by field staff from waterways and foreshores.

Material collected	Units	96/97	97/98	98/99	99/00	00/01	01/02	02/03
Domestic rubbish collected from beaches	Tonne	80	87	85	46	56	77	33
Logs and timer from fallen trees	Tonne	152	109	150	109	101	121	70
Rotting weed removed from foreshores	Tonne	460	612	350	197	390	529	131
Tyres	Each	68	106	70	60	69	46	60
Drums assorted	Each	38	56	23	14	38	31	11
Display signs	Each	7	9	8	6	22	22	13
Derelict and abandoned boats salvaged	Each	5	6	1	1	3	7	1
Shopping trolleys	Each	28	62	92	81	64	92	68
Dead fish left by prawning parties	Tonne	11	11	10	7	5	4	12
Dead birds	Each	31	176	120	123	158	83	47
Syringes left on beaches and public places	Each	146	242	118	232	169	144	121
Dead animals (cattle, goats and sheep)	Each	9	8	6	4	11	7	4
White goods (washing machines/fridges)	Each	3	4	7	6	10	3	10
Bamboo removed from foreshores	Tonne	15	0	61	0	0	0	0
Sand renourishment of public beaches	Tonne	637	854	533	492	1 712	1 075	1 013
Rock renourishment to stop erosion	Tonne	16	0	109	38	414	74	12
Stolen vehicles salvaged from river	each		2	4	1	2	0	1

Most rubbish, debris and pollution is the result of irresponsible human behaviour. There are two aspects to the decrease in litter/debris reduction in the Swan River:

- the first is the growing awareness by the general population of the environmental effects of litter
- the second is Trust operational staff being unable to carry out the removal of debris due to a change in priorities resulting from the fish kills in the Swan and Canning rivers.

Waterways and beach cleaning

The Trust's field crew maintains 45 river beaches and about 358 kilometres of foreshores in the Swan, Canning, Helena and Southern rivers each year. Beach cleaning and the removal of debris from waterways and foreshores are essential to maintaining enjoyment of the river.

The Trust is unable to resource regular maintenance programs for all of this very large area, so attention is directed to areas of highest priority. The Trust regularly maintains 33 public beaches/foreshores and about 146 kilometres of the total shoreline. The remaining 12 beaches are visited periodically with maintenance undertaken according to the resources available and the scale of the problem.

Removal of waterway obstructions

Cleaning and inspection of waterways is carried out by boat to remove floating logs, litter and debris and by vehicle to remove rubbish along shorelines. Any fallen trees or obstructions impeding water flow are noted during these inspections and then re-aligned, selectively removed or relocated. Around 70 tonnes of logs and timber from fallen trees was removed over the course of the year.

Shopping trolleys have become a particular problem in the Canning and Southern rivers. Trolleys discarded into streams become eyesores that collect litter and debris. In the Canning and Southern rivers shopping trolleys are used by vandals to construct dams that divert the watercourse or bridges. This practice is a concern causing erosion by diverting the streams and if left may result in flooding upstream of the affected area.

Foreshore maintenance and restoration

Protecting the amenity and environment of waterways and shorelines is a key role played by the Swan River Trust.

Foreshore maintenance/beach replenishment

Each year in spring, the Trust works to replenish eroded beaches and level all major beaches to remove gullies caused by stormwater discharge from the many drains and run-off flowing over the beaches. This year, 1 013 tonnes of beach sand was recycled from accumulation sites to help restore eroded public beaches.

Sand recycling was necessary this year due to increased erosion of the foreshore resulting from lower water levels and requests received from local government for assistance.

Beach restoration

The Trust assisted the City of South Perth and the City of Perth remove 190 tonne of concrete debris and rubble between Mends Street and Ellam Street in South Perth and 210 tonne of concrete debris and rubble from the Causeway to Trinity College in East Perth. The rubble on the foreshore was exposed after winter storms accelerated erosion at these former landfill sites.

Walling repairs

The Trust assisted the City of Perth to temporarily repair a section of river wall upstream of the Old Swan Brewery. The wall is very old and winter storms left the wall in a very unsafe condition. The City of Perth has developed a plan to replace the walls in this area over the next few years.

Ron Courtney Island

The Trust is responsible for the management of Ron Courtney Island, located in the Swan River opposite Garvey Park in Redcliffe, and carries out maintenance four times a year. Weeds and undergrowth are cleared to prevent wild fires. A management plan for the island is being developed.

Kent Street Weir

The Trust, on behalf of the Water and Rivers Commission, organised the removal and installation of 'stop boards' and fittings at the Kent Street Weir. Stop boards are removed at the beginning of winter to allow normal river flow. At the end of winter the boards are installed to stop salt-water flowing upstream of the weir and to maintain a constant water level in the Canning River. Without the boards, the area above the weir would return to a salt-water environment.

The boards protect the freshwater vegetation that has developed upstream of the weir and allow residents with riparian rights to continue to have access to freshwater. The weir also maintains a constant water level over summer providing a valuable waterbird refuge and a recreation facility for canoeing even though this has meant the creation of an artificial environment.

Weed management

The Trust routinely conducts inspections and coordinates a spot-spraying program to control regrowth of *Hydrocotyle* and other serious aquatic weeds. The spraying program continued during the year after re-infestations of *Hydrocotyle* were found in the Trust Management Area.

During 1999-2000, the serious aquatic weeds *Saggitaria* and *Salvinia* were found in several locations in the Canning River and its drainage system. The plants were removed before the infestations could spread and the areas were monitored to enable early detection of any re-establishment. This year an outbreak was located in a drain next to Hester Park in Langford. This drain enters the Canning River near Nicholson Road in Langford. The City of Gosnells were notified of the problem and requested to remove the declared plant.

Riverbank

The Trust has a statutory function to control and provide advice on erosion. Loss of shoreline vegetation is caused by and results in erosion and reduces the nutrient assimilation capacity and amenity of the waterway. Revegetation and restoration projects are essential to reducing erosion damage and restoring foreshore function and amenity. Foreshore protection works also require periodic maintenance or replacement and new works may be required where revegetation alone provides insufficient protection.

Since its inception in January 2002 River*bank* funds to the amount of $251 154 have been allocated to support 14 cost sharing projects with local government. These projects have varied from removal of exotic vegetation, planting of sedges, rushes and other indigenous plants, repair and replacement of limestone river walls, beach stabilisation, and rock protection of eroding riverbanks.

To develop a foreshore management strategy and help set priorities for funding requests, a foreshore assessment study has started. This project will also contribute to accreditation of the Swan Regional Strategy being developed by the Swan Catchment Council in partnership with the Trust, the community and other government agencies. Complementing this project is a collaborative study with the University of Western Australia assessing the impact of boat wash on riverbank stability in the Swan-Canning system.

Inspection and enforcement

The Trust has a responsibility to ensure that developments comply with their conditions of approval and the provisions of the *Swan River Trust Act 1988* and its regulations.

Unauthorised development

The Trust checks the progress of development works within the Management Area which involves regular site visits and river patrols on the Trust's vessel, the Jack Mattinson. These patrols enable the Trust to identify unapproved developments, damage to vegetation, riverbanks and the riverbed, the use of boats as residences, boats being launched away from authorised boat ramps and pollution incidents.

Wherever possible the Trust provides information on its requirements and seeks voluntary compliance in preference to prosecution.

Reported incidents

The total number of complaints received was 278 in 2002-2003, compared to 231 received last year. Of the 278 complaints received, a total of 144 were substantiated and 79 were not. The remaining 55 were referred to other agencies to follow up. The algal bloom and resultant fishkill from April – June increased awareness in the community and may have boosted the number of complaints this year. Many complaints were received during the period of the fishkill in regard to possible pollution sources that required investigation.

Oil and fuel spills were the source of most of the complaints received by the Trust. The majority of these were not significant and did not require containment and treatment.

The cutting down and removal of foreshore vegetation continues to be a problem throughout the Management Area. In October 2002 a number of trees in Berringa Park Maylands were poisoned, ringbarked or cut down. The persons responsible were not located. Where offenders are caught the Trust invariably takes further enforcement action. In July 2002 a resident of Bassendean was successfully prosecuted for cutting down a river gum within the Trust's Management Area.

Table 3: Reported complaints and incidents 2002-2003

Complaint/Incident	2002-2003
Oil slicks/spills	28
Offensive odour	2
River discolouration	4
Industrial discharge/dewatering	13
Sewage discharge	16
Herbicide/pesticide spraying	5
Chemical spills	3
Waste dump	16
Foaming	5
Watercraft nuisance	3
Algal blooms	10
Aquatic deaths	15
Destruction of vegetation	15
Unauthorised development	20
General complaints	108
TOTAL	**278**

Pollution control

As part of its general role to protect and manage its Management Area the Trust operates under delegated powers to control pollution under Part V of the *Environmental Protection Act (1986).*

The Trust's pollution control strategy has three components:

- Assessing whether activities near the waterways could be causing pollution
- Working with other agencies, the community and industry to develop and implement ways of preventing pollution
- Responding to pollution incidents to establish and deal with the source and to ensure that pollution that has occurred is cleaned up

The Trust continues to support small industry training and education through the Swan-Canning Industry Project (see page 41).

Table 4: Pollution complaints and incidents by category 2002-2003 (TBA)

Pollution Complaint/Incident	5 Year Average	2002-2003
Oil slicks/spills	23	28
Offensive odour	5	2
River discolouration	8	4
Industrial discharge/dewatering	10	13
Sewage discharge	12	16
Herbicide/pesticide spraying	1	5
Chemical spills	7	3
Waste dump	18	16
Foaming	2	3

The 2002-2003 period saw a general increase in the number of pollution complaints with a total of 90 received, compared with 72 last year. The greatest increase in complaints was in the area of industrial discharge/dewatering, with no complaints received in 2001-2002 compared with 13 this year. Complaints relating to herbicide/pesticide spraying also increased considerably, up from 1 last year to 5 this year, with most of them received during the fishkill.

Pollution response

The Trust's pollution response activities include the containment and clean up of minor oil spills in the Swan-Canning river system. They also assist other agencies operating under the Western Australian Hazardous Emergency Management Plan (WESTPLAN - HAZMAT) and the Western Australian Marine Oil Pollution Emergency Management Plan (WESTPLAN – Marine Oil Pollution).

The Trust's field operations staff are trained and equipped to provide a rapid response to pollution incidents. Their function is to contain and deal with small incidents and, in the case of major incidents, to contain the pollution and help other agencies with specialised resources to deal with the problem. A Pollution Response Plan setting out the operational and management procedures for dealing with pollution incidents guides the Trust's response to pollution incidents.

Oil spills

There have been no incidents this year resulting in major contamination of the Swan-Canning river system from petrol and oil spillage. However, 28 minor incidents of oil slicks in the river were reported. Several events required Trust field staff to attend and clean up. The most significant incident involved the spillage in September 2002 of about 500 litres of bitumen from an industrial premises into a Water Corporation drain in Cannington. The drain discharged into a wetland in Beckenham that in turn discharged directly into the Canning River. The spill had a significant impact on the wetland and also posed a threat to the Canning River. The Swan River Trust, with assistance from the Department for Planning and Infrastructure and Fire and Emergency Services Authority (FESA), cleaned up the bitumen over three-days. The company responsible for the spill paid for the full cost of the clean up, and the Department of Environmental Protection is investigating whether further enforcement action is necessary.

Incidents such as these highlight the need for staff to be properly trained and adequately equipped for pollution response operations. They are also an example of how staff from several different agencies can work together effectively to achieve common outcomes.

Complaints were also received about spillage's at Barrack Street jetty, with oily bilge discharge and improper refuelling practices responsible for several minor spills. The Trust, the Department for Planning Infrastructure and Shell, have been working together to improve refuelling practices and raise awareness among boat operators and staff at Barrack Street jetty.

Sewage contamination

There were 16 complaints received about sewage spills into the Swan and Canning rivers in 2002-2003, but only five were confirmed. There were two significant sewage spills into the Swan River that resulted in it being closed for a short period by the Department of Health. In January 2003, a blockage in a sewer main in Nedlands resulted in an estimated 50 000 litres of untreated sewage being discharged into the river near the QANTAS boat ramp in Crawley. As the location of the sewage discharge in the Swan River is popular with recreational river users, the Department of

Health closed the river between Jo Jo's Restaurant and the QANTAS boat ramp for two days until bacteriological testing confirmed that it was safe for human contact.

Of confirmed complaints, four involved Water Corporation facilities and infrastructure and 1 incident originated from a private sewerage drain, resulting in a small amount of sewage entering the river. Inspection and water quality testing found that no long term impact was caused as a result of the incidents and no enforcement action was deemed appropriate.

Table 5: Total sewage spill incidents 2002-2003

Date	Location	Estimated Quantity (kL)	Cause	Environmental hazard assessment
14/8/02	King William Street Branch Drain, Bayswater	Less than 5kL	Blockage of sewer main by tree roots	Low – Most of the discharge was recovered from the drain. Small volume discharged into river with no visible impact or discolouration.
28/9/02	Aquarama Marina, East Fremantle	0.5kL	Blockage in private sewer main	Low – Most contained on site. Some discharge into the river with no visible impact or discolouration.
14/1/03	Qantas Boat ramp, Crawley	50kL	Sewer blockage	Significant - River in the area was closed to public for two days.
14/4/03	Clayton Street, Bellevue	0.1kL	Sewer blockage	Low – Very small volume discharged into drain that empties into Helena River. No visible impact or discolouration.
26/5/03	The Esplanade, Mount Pleasant	Up to 50kL	Sewer main collapsed	Significant – River between Deepwater Point and Canning Bridge closed for 2 days. Sampling showed sewage dissipated quickly.

Dredging

Analysis of sediment at the Perth Flying Squadron Yacht Club prior to routine sediment removal around the slipway found that there were significant levels of Tributyltin (TBT) antifouling present. The analysis was requested by the Trust as a result of high levels of antifouling being detected at other yacht clubs. The sediment was removed with strict conditions placed on the approval. The sediment is now being stored and remediated on-site prior to its removal.

Pollution investigations

Bayswater Groundwater

Ongoing investigations into contaminated groundwater in Ashfield / Bayswater are being carried out by the Department of Environmental Protection with the assistance of the Swan River Trust and other agencies. Assessment of groundwater under a former fertiliser plant in Bayswater owned by CSBP found that it was acidic and had elevated levels of heavy metals. The plume of contaminated groundwater is moving slowly towards the Swan River and passes under residential areas that utilise the groundwater for watering gardens.

CSBP is currently working with the Department of Environmental Protection in developing a management plan for the contamination. The contamination is well outside of the management area but the Swan River Trust is providing logistical and technical support to the agencies involved, and monitoring any developments so possible impacts on the river can be mitigated

Fish deaths, Bayswater

During April 2003 a number of dead fish, predominantly black bream, were found in the Swan River between the Redcliffe Bridge and Garratt Road Bridge. Pathology analysis of the affected fish showed that the cause of death was suffocation due to rupturing of the gill cells of the fish from the algae *Karlodinium micrum*. Water from the river and adjacent drains was also tested for chemical contamination but were found to be clean.

Supporting Integrated Catchment Management

Reducing levels of nutrients getting into waterways from existing catchment activities and restoring the environment will enable long-term improvements to water quality entering the Swan-Canning river system. These actions rely on the majority of people living in the catchment individually carrying out their activities in a manner that minimises impacts on water quality.

Direct support to integrated catchment groups

Catchment groups are a key part of the Swan-Canning Cleanup Program (SCCP) in achieving the collective community action necessary to effectively improve water quality discharging to the Swan-Canning river system. These groups worked throughout the year to raise public awareness, form partnerships with local government and industry, develop relationships with school groups to take catchment management into the class room, develop management plans for catchments and undertake on-ground restoration work.

In 2002-2003, $425 000 was allocated by the Trust to assist various catchment groups with operational costs such as employment of coordinators, project officers, education officers, administration support and office supplies. The funding targets the priority catchments highlighted in the SCCP Action Plan. By providing support for the logistical components of catchment groups' operations, SCCP aims to give groups security to pursue other funding opportunities and allows officers' to work directly with community members and local authorities in implementing on-ground activities.

In 2002 –2003 this funding was allocated as follows:

In 2002 –2003 this funding was allocated as follows:

- $52 400 to Armadale-Gosnells Landcare Group
- $45 503 to Bannister Creek Catchment Group
- $69 523 to Belmont-Victoria Park Catchment Group
- $32 359 to Blackadder-Woodbridge Catchment Group & Susannah Brook Catchment Group

- $41 082 to Canning Catchment Coordinating Group
- $69 253 to Canning Plain Catchment Group
- $65 500 to Ellen Brook Integrated Catchment Group
- $49 110 to North East Catchment Committee

As well as supporting established catchment groups, the funds also foster community involvement in other SCCP priority catchments. The Trust employs a full time SCCP Catchment Management Officer who coordinates administrative and financial support to the catchment groups, oversees monitoring and reporting on catchment management projects and represents the Trust on key committees and catchment management groups.

2002-2003 has been a landmark year for catchment groups with progress to a regional delivery model for natural resource management. As part of this model catchment groups have worked to review catchment boundaries. During the year North East Catchment Committee and Ellen Brockman Integrated Catchment Groups have formed and strong progress has been made in forming a new alliance among the South East Catchment Groups. The new arrangements will enable further focusing and coordination of efforts to reduce nutrient outputs to the rivers. Facilitator and Coordinator positions are also being identified for funding requirements and their roles in the region post June 2003.

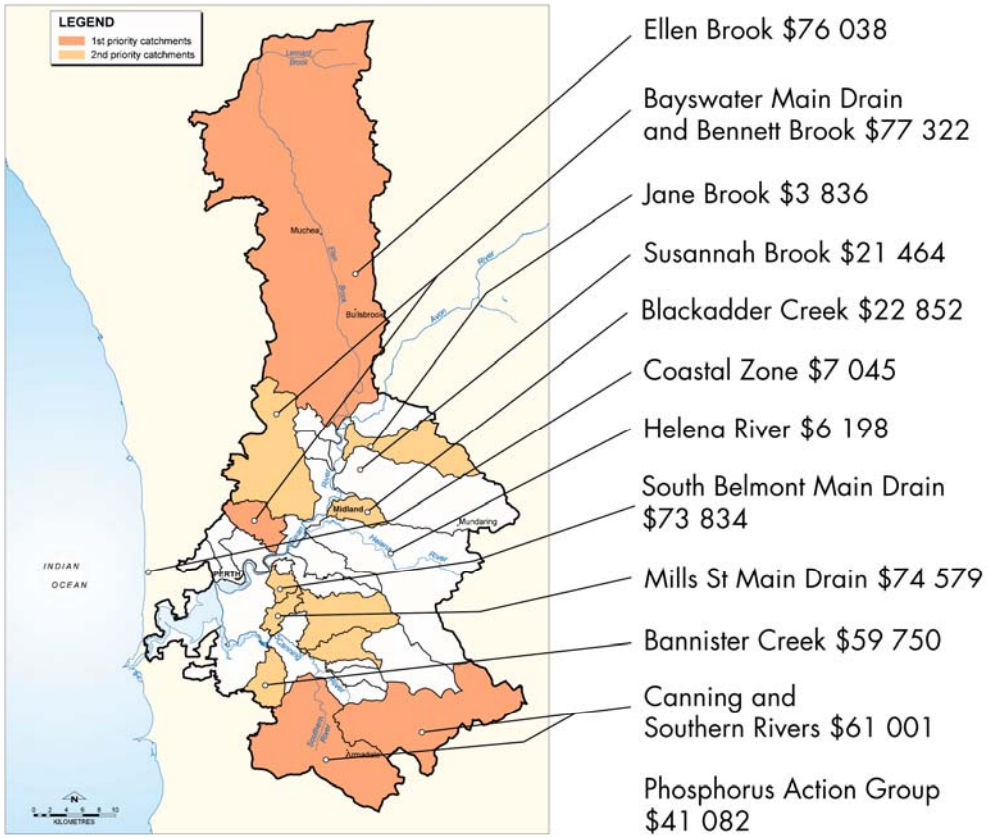


Figure 8: Swan-Canning Cleanup Program and SCULP direct support for priority catchment groups by sub-catchment 2002-2003.

The Water and Rivers Commission's Swan Catchment Centre

The Trust assists through its Cleanup Program the Swan Catchment Centre to support community and catchment groups in integrated catchment management and natural resource management in the Swan region. The Swan Catchment Centre provides strategic support to catchment groups, particularly those that meet SCCP priorities with a range of expertise and skills, including community development and support, environment education and resources, training, technical advice and funding advice through a range of opportunities.

The Swan Catchment Centre works on regional natural resource management delivery (NRM). Trust support for the Swan Catchment Centre enables essential information, support and resources to be provided to over 250 community conservation groups in the Swan-Canning catchment. This year it included:

- Completion of 2002 program evaluation of Skills for Nature Conservation (SFNC). Planned 2003 program and release of 'new look' SFNC training calendar for 2003 and completed Coordinators information manuals for SFNC to standardise the program operations.

- "Mapping the Catchments" review was completed to review catchment group boundaries in the Swan Region. Development of a subregional approach and collaborative work between catchment groups will more effectively and efficiently use available resources. This will result in natural resource management coordinating structure in the region, which complements SCCP objectives.

- Supported information needs of catchment and community groups, including insurance, employment arrangements, future regional NRM delivery through the Swan Catchment Council.

- In 2002-2003 550 people have participated in learning circles, training and forums directly, and the Education Officer supported four learning circles, training and forums using the Swan River Action Kit and community education program.

- Established and coordinated the Swan Catchment Council Environmental Education Working Group. The role of this group is to provide strategic advice and input in the accreditation process of the Swan NRM Regional Strategy, to ensure the environmental education component is educationally sound, comprehensive and of high quality.

- Initiated and coordinated the development of the "Waterwise Catchments Initiative" along with Water Corporation, in recognition of the International Year of Fresh Water, in consultation with catchment groups and Ribbons of Blue. The initiative will continue to be coordinated by the Swan Catchment Centre.

Restoration training and on-ground works

Clearing, stock access to foreshores, loss of watercourse vegetation and poor fertiliser and waste management practices have led to high nutrient inputs from rural and semi-rural catchments. Similarly, the loss of native vegetation, increased stormwater discharge due to an increase in impervious surfaces, excessive fertiliser use, and poor residential and industrial practices contribute to nutrient inputs from urban areas within the Swan-Canning catchment. In particular, the

degradation of foreshore areas has compromised their ability to slow water movement, take up nutrients and filter out suspended sediments.

Farm and property planning

The Property Planning Project continues to be extremely effective in raising awareness and increasing the adoption of Best Management Practices in the predominantly small landholdings in the semi-rural areas of the Swan-Canning catchment.

The Heavenly Hectares seminars, which introduce small landholders to concepts of sustainable land management, continue to attract large numbers of participants, with 852 people attending this year. These concepts are then demonstrated to small landholders in the field with field walks held on specific topics, such as pasture establishment, weed management, horse management and fencing techniques. Participation at field walks has been good, with 284 people participating in field walks and a farm tour at Kelmscott Senior High School Agricultural Wing.

Several planning workshops were held during the year. Landholders applied seminar knowledge to their individual properties to develop property plans. For those unable to participate, a user-friendly small farm website has also been developed and guidelines for developing a plan are on the website.

There is also a continual thirst for knowledge about agricultural issues from small landholders. A series of Farmnotes specifically for small landholders has been developed, so that such issues and solutions are put into context for small landholders. These are also on the website http://www.agric.wa.gov.au/smallfarm.

Swan Catchment Urban Landcare Program

The Swan Catchment Urban Landcare Program (SCULP), a joint initiative of Alcoa World Alumina Australia and the Trust, directly funds community groups for restoration and environmental protection projects. The projects not only contribute to improving the ecological integrity of foreshores and catchments but also serve as important awareness raising activities for the broader community. All projects involve partnerships between community groups and their local councils, other local sponsors or state government agencies.

In 2002-2003 SCULP funds were provided to 60 groups to implement a total of 109 separate restoration projects. These groups shared $411 000 in funding for revegetation and rehabilitation, which was the greatest annual allocation to date. The projects fund on-ground work to be carried out by catchment groups, local councils, other environmental groups and volunteers. Collectively over the past four years alone, over 130 groups over the Swan Region have benefited from SCULP funding and have initiated over 250 on-ground projects.

The Swan Catchment Council administered the 2003 SCULP process. Community members play a vital role in assessing and selecting projects, which are consistently of a very high quality. SCULP funding adds value to existing projects and enables community groups the leverage to negotiate increased support from other stakeholders. Contributions of both cash and in-kind labour from project partners and community means that the total value of these projects is far greater than the SCULP contribution. Since 2001 SCULP has provided approximately $1.1 million but with partner contributions, this has resulted in projects worth approximately $3.3 million.

Caring for the Canning River

The Canning River system, which includes the Southern River and Wungong Brook, is a significant natural asset of the southern suburbs of Perth. It is an important ecological corridor, which provides a source of drinking water as well as recreational opportunities to the people of Perth. It is also of substantial cultural and spiritual significance to Aboriginal communities and historical significance to people in the Canning catchment. However, reduction of flows, sedimentation of river pools, loss of riparian vegetation, weed invasion, elevated nutrient levels and industrial contamination has degraded the Canning River system. Intense, often toxic, algal blooms have been regularly recorded in the river system since 1994.

River management plan

The Minister for the Environment and Heritage launched the final version of "Caring for the Canning, a plan to revitalise the Canning Southern and Wungong Rivers" in August 2002. Since then focus has been on implementation of the plan. A process has been defined for the development of environmental water provisions, in consultation with key stakeholders.

An important partnership with the Swan Catchment Council has been developed for this project. Little is known on how to develop and implement environmental water provisions as part of overall river management. Therefore, the Council has identified the project as a mechanism to fill gaps in knowledge in this area.

The Water Corporation has also contributed to this project, providing important funds for the identification of ecological values and their water requirements for Bickley and Munday brooks.

Oxygenating the Canning River

Intervention measures in the Canning River are necessary to ameliorate the symptoms of eutrophication until reductions in nutrient loss from the catchment are achieved.

Oxygenation works by enhancing natural processes to reduce nitrogen and carbon levels in the water and to suppress phosphorus release from the sediments. Replenishment of oxygen also reduces noxious odours and sustains aquatic life in the weir pool where very low oxygen levels in the water are a common summer occurrence.

Oxygenation by itself is not sufficient to prevent oxygen blooms. However, the results indicate that the frequency and intensity of bloom activity is lower and the river is a healthier environment when oxygenation is used (see Figure 9).

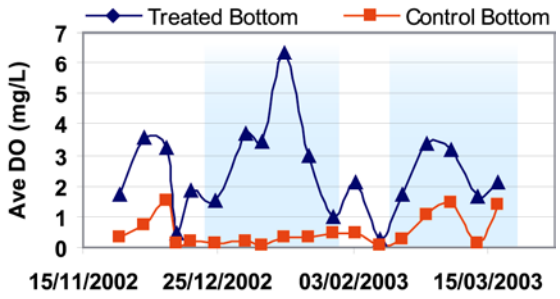
The success of the oxygenation trials in the Canning River since 1997 has led to the adoption of this technique to reduce the occurrence of algal blooms in the Canning River. As in last year's application, two oxygenation plants treated 2.3 kilometres of the Canning River upstream of the Kent Street Weir. Phoslock™, a phosphorus binding clay, was also applied to 1 500 metres of the oxygenated area and is a companion treatment with oxygenation (see Water Information section, page 35).

The oxygenation plants work by drawing water low in oxygen from the river bottom, mixing it with oxygen and then distributing the oxygenated water over the treatment area. This year the

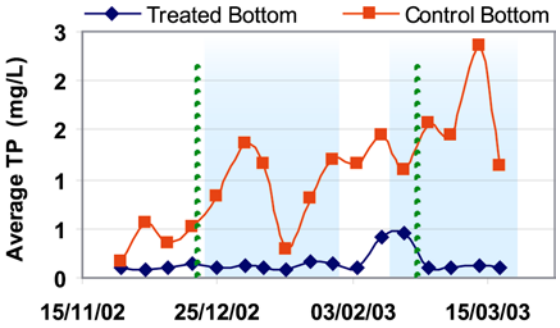
oxygenation plants were operated from December to April. To keep operational costs to a minimum, the plants were operated intermittently and only at night.

During the year 2002-2003 the oxygenation plant was operated in a stand by mode to enable a quick response to low oxygen events. Additional oxygen was purchased following summer rain and the operation of the plant increased to meet the high oxygen demand. The plants will operate throughout the summer of 2003-2004.

Graph 1



Graph 2



Graph 3

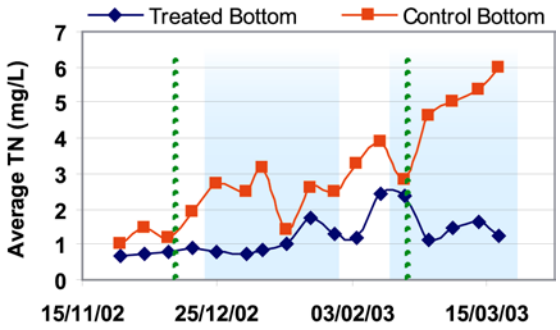


Figure 9 The light blue highlighted areas indicate the period when the oxygen plants were switched on. The dissolved oxygen level at the bottom of the water column is higher in the treated area than the control (Graph 1). This has the desired outcome of reducing total phosphorus (Graph 2) and total nitrogen concentrations (Graph 3).

Removing nutrients from tributaries

Removing nutrients from waterways before they enter the Swan and Canning rivers is an important part of the Swan-Canning Cleanup Program.

Artificial wetlands

The design of a constructed wetland for a site on the Swan Coastal Plain was completed this year. The main aim of the wetland is to treat nutrients from urban stormwater whilst also providing aesthetic and ecological values.

Based on this site-specific design, best practice principles for the design of wetlands on the Swan Coastal Plain have been prepared. These principles essentially recommend integrating the constructed wetland's features with the local site's existing topography and hydrology to create a vegetated ephemeral wetland as a series of channels and billabongs treating low flows and an overflow swale, or floodplain area for higher winter flows.

Although the Albion development is now delayed, other sites will be sought on the Swan Coastal Plain to develop a wetland incorporating the design principles developed in this project.

Drain retrofitting – Mills Street Main Drain

The Mills Street Main Drain is a SCCP priority catchment, contributing high concentrations of nutrients to the Swan-Canning river system. Extensive sampling of drainage water, sediment and groundwater throughout the catchment showed the spatial and temporal variability of nutrient enrichment and contamination, with results highlighting the need to treat both base flow and the first flush. Results from this sampling program will become available in the report "Nutrient and contaminant assessment for the Mills Street Main Drain catchment", which is soon to be released.

Expert streamlining advice and sampling results were used in the development of the "Drainage improvement framework for the Mills Street Main Drain catchment" draft report. This draft report, which is soon to be released, recommends drain retrofitting key areas by redesigning basins and streamlining sections of the drain with the main aim of improving water quality whilst also providing associated benefits such as ecological and aesthetic functions. The recommendations primarily target the removal of nutrients in low flow summer and autumn conditions, when delivery of nutrient rich water into warm, low oxygenated, stagnant receiving waters can trigger algal blooms. The streamlining recommendations are designed to enhance the drainage system's natural nutrient stripping and retention processes. Basic principles include increasing the flow path, thereby increasing detention times allowing for sedimentation and filtration, and revegetating the banks and in-stream sections of drains and basins.

The findings from this project have contributed towards the development of the Canning Plain Catchment Management Plan.

Statutory mechanisms

Better management of new activities and new approaches to managing the land in the Swan-Canning catchment can have a great effect on reducing the nutrients entering the river system. The Swan-Canning Cleanup Program (SCCP) has started a number of projects to develop new policies, statutory mechanisms and drain licensing to achieve better management.

Local Government Natural Resource Management Policy

The Local Government Natural Resource Management Policy Development Project consolidated the policies and guidelines produced by the project so far into the Natural Resource Management (NRM) Manual. These include:

- Stormwater Best Management Practice Guidelines
- Water Sensitive Urban Design Planning Policy
- Guidelines for Pollution Prevention from Small to Medium Enterprises (SME's)
- Guidelines for Animal Industries and Erosion and Sedimentation
- Erosion and Sediment Control Policy and Guidelines.

The stormwater management plan risk assessment process advocated in the Stormwater Best Management Practice Guidelines is currently being piloted in the development of a Catchment Management Plan for the Canning Plains Catchment in association with the Canning Plains Catchment Group, the Water and Rivers Commission and the Water Corporation.

Over 30 people from local government attended an overview and introductory training session following the formal launch of the NRM Manual on 12 November 2002. Evaluation of this introductory session indicates that more training is required, particularly for planners and engineers. (The manual has been provided to all local authorities in the Swan-Canning catchment.)

As well as further policy and guideline development, training will become a major focus of the NRM project in its third year. A program of capacity building for local government staff to assist in the implementation of the policies and best management practice guidelines is in development.

Planning and policy

The land use planning process is identified in the SCCP Action Plan as one of the best opportunities to improve the health of our rivers. The Western Australian Planning Commission and local governments guide land use planning in the Swan-Canning catchment. This guidance can help improve the quality of water from our catchments by ensuring land activities are correctly located in the landscape and by improving land management practices.

2002-2003 has seen significant improvements to the Statement of Planning Policy framework for environment and natural resource management. The Trust also engaged a consultant, to prepare a project brief to achieve the Action Plan's land use planning goals. Implementation of this project in 2003-2004 will be a significant step for the program.

Investigation into licensing drains

Perth's drainage network system has an essential role in stormwater conveyancing and even managing groundwater levels. However drains such as the Mills Street Main Drain, are some of the most significant nutrient sources to the Swan-Canning river system. There are opportunities to improve drainage water quality before it leaves the catchment and also make better use of our precious water within the catchment.

The Swan River Trust recognises the importance of drains with Recommendation 6.4 of the Action Plan being to "Investigate licensing of drains discharging into the Swan-Canning Rivers as a tool for controlling nutrient inputs".

The Trust believes engagement of all players, the clarification of roles and creation of an appropriate institutional framework and legislation is required to improve drainage management.

In 2002-2003 the Trust became a member of the Drainage Reform Group. The group comprises a range of stakeholders in local government including the Water Corporation, local governments and the Water and Rivers Commission. The Group is preparing a drainage reform package for Government, which aims to make recommendations on the institutional and other reforms needed for better drainage management.

Community Awareness, Education and Involvement

Communicating with stakeholders

Public understanding of the importance of protecting and managing the river system is vital to the Swan River Trust's work. Specific information is provided through the Trust's website, talks and presentations, participation in public events, and the production of environmental reports and information leaflets for shoreline residents, community groups, boat owners and recreational anglers which make sure people know and care about the Swan-Canning river system.

Market research

The Trust's sixth annual telephone survey was conducted this year to assess the community's awareness of the Trust, its role, perceptions of the state of the river, and people's satisfaction with how it is managed. The survey of more than 400 people indicated little change in awareness of the Trust compared to the 2002 results (79% versus 82%) with overall satisfaction with the Trust's management of the river and surrounding areas consistent with the 2002 results (67% versus 66%).

The major issues of concern were primarily related to environmental factors, including rubbish in the river and algal blooms. This result reflects the expansion of the survey in 2002 to include an assessment of awareness and knowledge of the Swan-Canning Cleanup Program (SCCP). This year's results indicated that 67 per cent of respondents were aware of SCCP. Additional priorities identified for improvement were sufficient car parking and recreational facilities, as well as security of users. The appropriateness of developments around the rivers was also highlighted as a priority for the community. These results form the basis for assessing performance of the Trust (see Performance Indicators section on page 72).

The survey continues to build on a benchmark study conducted in 1998. However, for the first time, weighted data was included, based on the relative population numbers for the 'adjacent' and 'outside' sample areas that more accurately reflects the Perth metropolitan community attitude as a whole. Both the unweighted and weighted results were calculated to enable a comparison with previous year's results.

Trust review

To inform the public of the findings of the Machinery of Government Taskforce Review of the Swan River Trust a communications plan was implemented. Strategies included stakeholder emails and letters, a media statement and internal staff communications. A special insert was distributed in the December edition of the Trust's newsletter 'Riverview' and a direct link to the review Ministerial media statement was included on the Trust's website homepage. For more information on the Review of the Swan River Trust see page 19.

Website upgrade

As a result of the Trust's public review, public notification of development applications received has been available on the Trust's web site since March 2003. Another new initiative, introduced at the same time, is a public comment and review period (available on the website) relating to the Trust's recommendations on development applications. The public have fourteen days to comment on applications that require the Minister's approval.

Further upgrades to the Trust's website will occur in the coming months and will be placed on the Trust's own domain at http://www.swanrivertrust.wa.gov.au.

Presentations

Trust staff made numerous presentations during the year to technical conferences, corporations, interested community groups, educational institutions and schools, as well as at environmental educational workshops and to public groups. These presentations featured a wide range of subjects including the ecology of the Swan and Canning rivers, their historical and cultural background, the effects of algal blooms and nutrient input, as well as on the Swan-Canning Cleanup Program, and its community awareness programs.

Public participation

Raising the public profile of the Swan River Trust this year included increased representation at a number of public events that focus community attention on the Swan and Canning rivers. These included;

- co-sponsorship with the City of Perth of the Lord Mayor's Cup Corporate Rowing Challenge, organised by the West Australian Rowing Club
- the Perth Dive, Fishing and Boat Show at the Burswood Dome, attracting more than 22 500 people during the 5 day event
- sponsorship of the Royal Freshwater Bay Yacht Club's annual Leighton Invitational Offshore Yacht Race. Open to all river-based yacht clubs, the overall winner was presented with a perpetual Swan River Trust trophy
- the Trust presented more than ten Caring for the Canning trophies at South of Perth Yacht Club on National Try Sailing Day
- sponsorship of the Autumn River Festival
- participation in the Perth Flower and Garden Show
- sponsorship of the water regatta as part of the Australia Day celebrations
- participation in the Conservation and Landcare exhibit at the Perth Royal Agricultural Show.

Each of these events presented the opportunity for positive media exposure for the Trust, as well as the distribution of public information to a specific target audience.

A continuing link with the eight river-based yacht clubs was maintained during the year. Detailed information on 'How To Be A River-Friendly Boat User' was available at the annual opening of season events, giving members and their families and crews, the opportunity to increase their knowledge about the work of the Trust.

Publications

The Trust's quarterly newsletter 'RiverView' updates stakeholders on progress with both the work of the Trust, SCCP, and the activities of community groups involved in river management and protection. This year the Trust also published:

Technical reporting

RiverScience has been developed to communicate the science behind the Trust's Cleanup Program to a wide audience interested in the understanding the causes of the problems in the Swan Canning Estuary and Catchment. These reports have replaced the larger technical reports as the means to disseminate scientific information. More detailed technical reports will continue on a less frequent basis.

Two technical reports on water quality prior to the implementation of SCCP were completed.

- Seasonal water quality patterns in the Swan River Estuary, 1994-1998.
- Seasonal water quality patterns in the Canning River Estuary, 1995-1998

Two RiverScience issues have been published.

- River Science Issue 8, Seasonal Nutrient Dynamics in the Swan Estuary, 1995-2000
- River Science Issue 9, Seasonal Nutrient Dynamics in the Canning River and Estuary, 1995–98
- Five additional Riverscience issues have been completed this year awaiting final publication approval form the SRT.

Four progress reports on implementation of SCCP intervention actions were published.

- The Swan estuary Oxygenation project: A prototype mobile oxygenation barge for improving water quality, a summary report, March 2003
- The Swan estuary Oxygenation project: A prototype mobile oxygenation barge for improving water quality, March 2003
- The Canning River Oxygenation project: Improving water quality in the Kent Street Weir pool with artificial oxygenation, 1999-2002, a summary report, June 2003
- The Canning River Oxygenation project: Improving water quality in the Kent Street Weir pool with artificial oxygenation, 1999-2002, June 2003.

Three intervention project completion reports were printed.

- Water Quality Targets for the Swan-Canning Estuary - Implementing the Swan-Canning Cleanup Program Action Plan, March 2003
- Drainage Improvement framework for the Mills St Main Drain catchment- Implementing the Swan-Canning Cleanup Program Action Plan, March 2003.
- Nutrient and contamination assessment for the Mills St Main Drain catchment - Implementing the Swan-Canning Cleanup Program Action Plan, March 2003.

General

- Swan-Canning Cleanup Program (general introductory brochure), August 2002
- Caring for the Canning: A plan to revitalise the Canning, Southern and Wungong rivers (final), August 2002
- Swan-Canning Cleanup Program: Action Plan Implementation 2002, August 2002

Motivating behavioural change

One of the core tasks of the Swan River Trust is to raise awareness about issues affecting the river and by increasing community involvement and the development of community skills in river and catchment restoration projects.

The Swan-Canning Cleanup Program (SCCP) public awareness campaign continued to successfully reach an increasingly wider community to raise awareness of river and catchment issues, reinforcing the Cleanup Program's key specific message 'HELP KEEP OUR RIVERS HEALTHY'.

The dedicated campaign works across three major community target audiences, rural, urban and industrial, developing knowledge and skills to enable the community to take action. New strategies were developed this year to specifically engage focused target audience groups, and to generate increased community and corporate involvement in activities that contribute to the protection of the Swan and Canning rivers.

Corporate involvement in the catchment

The Trust's Corporate Care Day Program continued to connect the corporate sector with the community in the catchment. It gives businesses the opportunity to contribute to environmental restoration projects, as well as for corporate staff to learn first hand about river management issues. The success of the Corporate Care Day Program is evident as businesses are now approaching the Trust for annual involvement as part of their own corporate community contributions.

For the first time this year an environmental calender was produced featuring unique colour photographs of the Swan River carrying environmental messages focused on helping to keep our rivers healthy. In celebration of the International Year of Freshwater 2002, this was a new community marketing initiative of Ross and Galloway, with support from the Trust and the Cleanup Program. 27,000 calenders were distributed to Melville residents. Ross and Galloway also worked with SCCP staff to promote the Cleanup Australia Day Community activities at Point Walter and to manage a schools environmental poster competition in June.

Natural Resource Management Policy manual

A new guide produced as an initiative of the Trust's Cleanup Program was released in November 2002 to help local governments preserve the Swan and Canning rivers. The manual produced by the Eastern Metropolitan Regional Council (EMRC) includes sections on land use, urban design and stormwater and land management. The 13 councils within the Swan Canning catchment use it to enable local government to implement natural resource management principles and provide strong leadership to the communities they serve.

Environmental education

The popular Drain Game was featured at more than 24 public events. It is an entertaining interactive game that teaches people how to dispose of their rubbish properly, not letting it go down the drain into the river. The accompanying children's activity sheet was distributed to a wider audience,

reinforcing the concepts of the game and carrying river management messages into households and schools.

Media exposure

More diverse media coverage was achieved this year. This provided the Trust with valuable opportunities to positively increase its public profile and address particular river management issues to specific audiences as well as to engage public involvement. SCCP featured in an increased number of metropolitan and community press articles and received extended radio and television coverage as a result of the program's increased involvement with community and corporate events. Feature articles appeared in the West Australian, the Environmental Health Journal, the InterSector Magazine, the City of Belmont's Bulletin, Australia Small Farmer Magazine, WA Gardener Magazine, the Geraldton Guardian, and the Community Press.

Community support

The Cleanup Program supported the Phosphorus Action Group to produce a new community resource, a 'Fertilise Wise Guide'. This guide advises gardeners on appropriate fertiliser types and application rates for Perth soils and was launched at the Perth Flower and Garden Show 2003. As part of a strategy being developed with the Nursery and Gardeners Industry Association and the Water Corporation the guide will feature through a series of workshops within selected suburban areas.

An increasing number of community groups and external organisations are requesting the Trust's involvement with their own events, particularly for the use of the Drain Game and in doing so are also taking SCCP messages out into the community.

Public participation

The public profile of the Swan River Trust and it's Cleanup Program continue to be represented throughout the year at an increased range of public and audience specific events, focused around the Swan and Canning rivers. Detailed information was widely distributed to a more targeted audience and Trust staff had the opportunity to talk to members of the public about river management issues during these events, which included:

Table 6 : Community awareness events table 2002-2003

Type of event	No.
Ministerial launches	1
Public event participation	28
Talks and Presentations	20
Drain Game	24
Sponsorship Activities	7
Corporate Care Days	2
Charity event participation	3
Annual Community Forum	1

The diversity of these events provide an extended public platform to present the work of the Trust and the Cleanup Program to new audiences, as well as to gain positive media coverage. A significant increase in public interest was recorded at these events and increased numbers of volunteers taking part is evidence of the success of these strategies.

Information exchange

More than 116 stakeholders and members of the public attended the Trust's Cleanup Program annual community forum, officially launched by the Minister for the Environment and Heritage. For the first time the forum was presented as a trade show format featuring more than 20 Cleanup Program projects. New community links were established with the Gnangangarran Maarman indigenous group who were featured on the SCCP 2002 video and summary brochure.

A new SCCP householder brochure was printed this year to present introductory information about the Cleanup Program to the general community. This new resource was widely distributed and offers the public a call to action requesting further information regarding the work of the Cleanup Program and how to get involved.

Evaluation

Each of the Trust and the Cleanup Program's community relations activities were evaluated this year for the first time and data gathered for program monitoring processes. The detailed figures have revealed the diverse extent of the Trust's activities within the community and the increasingly wider distribution of influence.

On going strategies

Experience shows that to be effective in maintaining behaviour change, awareness campaigns need to be sustained and continually reinforced, with considerable emphasis on involvement within a wider variety of activities including training and practical support for community groups.

The SCCP public awareness campaign has increased the boundaries of its influence this year by participating in a more specific range of public activities, and developing particular community knowledge and skills. The campaign also achieved a wider distribution of more specific information to target audience groups in support of community groups and partner organisations, and will continue to build on existing relationships as well as establishing new networks.

Ribbons of Blue

Ribbons of Blue/Waterwatch WA is an environmental water quality monitoring network which, through environmental education, raises awareness, develop skills and understanding about water quality in catchment context leading to on-ground action for a better environment.

Continuing its support for the program, the Trust through it's Cleanup Program provided $120 000 in 2002-2003 to help deliver community education outcomes and organise training and data workshops. SCCP also assists with funding for two Swan Regional Coordinators and a State Environmental Officer to help convey the Ribbons of Blue/Waterwatch WA message at a school

and community level. Currently 85 schools and 25 community groups are registered and actively involved in the Ribbons of Blue/ Waterwatch WA program.

In 2002-2003 the Swan Region reviewed its Ribbons of Blue program and restructured the program's Strategic and Operational Plan. The restructure of the program defined roles and responsibilities more clearly, thus using limited time and resources more efficiently.

The Ribbons of Blue network in the Swan Region continues to grow and strengthen. The Swan Region's focus will continue to be on school groups, and with the extra support from SCCP to accommodate community and local government groups needs.

Output Measures

OUTPUT 1: Collect water information to support state planning, agencies and community

Output description: Provision of research and information for estuary and river restoration and management

	2001-2002 Actual	2002-2003 Target	2002-2003 Actual	Reason for variation
Quantity				
Area of waterway and catchment monitored km^2	2116	2116	2116	NA
Number of R&D projects	3	7	7	NA
Quality				
Extent to which the monitoring network covers the waterway and catchment	88%	90%	92%	NA
Reliability of monitoring information	95%	95%	95%	NA
Per cent of project milestones met	100%	80%	100%	NA
Level of community satisfaction with water cleanliness	68%	70%	70%	NA
Timeliness				
Per cent waterway and catchment monitoring reports completed on time	93%	80%	94%	NA
Projects completed on time	3	3	4	NA

OUTPUT 2: Regulate riverside development

Output description: Assess applications for development, planning schemes and policy

	2001-2002 Actual	2002-2003 Target	2002-2003 Actual	Reason for variation
Quantity				
Management area subject to development control policy and advice (km^2)	69	69	69	NA
Number of development applications assessed	205	NR	224	NA

	2001-2002 Actual	2002-2003 Target	2002-2003 Actual	Reason for variation
Quality				
Ministerial acceptance of recommendations and conditions on development	99%	100%	100%	NA
Level of community satisfaction with land development and landscapes around the river reflecting community expectation	74%	75%	74%	NA
Timeliness				
Average number of days to process planning and development applications	59	NR	54	NA
NR = not reported				

OUTPUT 3: Management plans

Output description: Prepares management programs (often jointly with local government) for the management of the waterways and the management area. Includes catchment management plans.

	2001-2002 Actual	2002-2003 Target	2002-2003 Actual	Reason for variation
Quantity				
Production of management plans and strategies	1	0	0	NA
Quality				
Stakeholder acceptance of management plans and strategies	N/A	75%	71%	NA
Level of community satisfaction with availability of public access to rivers and provision of sufficient facilities for community use	73%	75%	71%	NA
Timeliness				
Plans prepared within timeframe	1	0	0	NA

OUTPUT 4: Protection of waterways and foreshores

Output description: Maintenance and restoration of waterway and foreshores. Audit and enforcement of the Act and regulations.

	2001-2002 Actual	2002-2003 Target	2002-2003 Actual	Reason for variation
Quantity				
Length of foreshore subject to regular maintenance and restoration (km^2)	146	146	146	NA
Management area subject to waterway and foreshore protection (km^2)	69	69	69	NA
Area of the waterway and catchment impacting on water quality management (km^2)	2116	2116	2116	NA
Quality				
Length of foreshore scheduled for maintenance and restoration as percentage of total foreshore	41%	41%	41%	NA
Per cent of sub-catchments within phosphorus input target	67% (93%)	67% (93%)	73% (93%)	NA
Per cent of sub-catchments within nitrogen input target	33% (93%)	33% (93%)	47% (100%)	NA
Level of community satisfaction with the condition of the waterway and foreshores	68%	70%	69%	NA
Timeliness				
Per cent of achievement of scheduled maintenance and restoration program completed on time	100%	100%	100%	NA
Mean time taken to resolve complaints (days)	1.2	1.5	0.9	NA
Per cent of water quality improvement projects achieving milestones on time	93%	93%	92%	NA

Performance Indicators

Opinion of the Auditor General

AUDITOR **GENERAL**

INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

SWAN RIVER TRUST
PERFORMANCE INDICATORS FOR THE YEAR ENDED JUNE 30, 2003

Audit Opinion
In my opinion, the key effectiveness and efficiency performance indicators of the Swan River Trust are relevant and appropriate to help users assess the Trust's performance and fairly represent the indicated performance for the year ended June 30, 2003.

Scope
The Board's Role
The Board is responsible for developing and maintaining proper records and systems for preparing performance indicators.

The performance indicators consist of key indicators of effectiveness and efficiency.

Summary of my Role
As required by the Financial Administration and Audit Act 1985, I have independently audited the performance indicators to express an opinion on them. This was done by looking at a sample of the evidence.

An audit does not guarantee that every amount and disclosure in the performance indicators is error free, nor does it examine all evidence and every transaction. However, my audit procedures should identify errors or omissions significant enough to adversely affect the decisions of users of the performance indicators.

D D R PEARSON
AUDITOR GENERAL
November 12, 2003

4th Floor Dumas House 2 Havelock Street West Perth 6005 Western Australia Tel: 08 9222 7500 Fax: 08 9322 5664

Certification of Performance Indicators

We hereby certify that the Performance Indicators are based on proper records, are relevant and appropriate for assisting users to assess the Swan River Trust's performance, and fairly present the performance of the Swan River Trust for the year ended 30 June 2003.

CHAIRMAN MEMBER

DATE: 30 October 2003

The Swan River Trust's Role

Outcome

Conservation and management of the Swan-Canning river system.

Objectives

The key objective of the Swan River Trust is to conserve or enhance the environmental quality of the Swan-Canning river system managed by the Trust, against standards consistent with the community's long-term expectations.

Goals

As a result of the Trust's work towards the achievement of its outcome and key objective, these goals are sought:

- The system is clean and healthy and accessible to the public through the provision of foreshore reserves and public amenities.
- The system is used in a sustainable manner, which retains the balance between conservation and development and reflects community values.

The Trust is not directly responsible for many factors, which affect the health and good management of the system it is required to manage. For example, it cannot directly control a land use or industry in the catchment, which pollutes a river or estuary, nor does it have the responsibility for deciding where this industry in located. However, the Trust wants to consider all factors, which affect the waterways in its report and performance indicators. In other words, it must be recognised that in reporting on the Outcome and Goals above, many of the inputs are not under the Trust's control.

Key Effectiveness Indicator 1

Key Effectiveness Indicator 1 is the extent to which management water quality targets are achieved in the Swan-Canning estuary and catchments. The Effectiveness Indicators are:

- total nitrogen (N) and total phosphorus (P) concentration in 15 tributaries of the Swan-Canning catchment compared to target levels.
- chlorophyll-*a* (chl-*a*) concentration and dissolved oxygen (DO) saturation in surface waters of the Swan-Canning estuary compared to target levels.

Excess N and P entering the Swan-Canning river system have contributed to nuisance and toxic algal blooms. Controlling nutrients entering the system from the catchments is essential to decrease the frequency of algal blooms and prevent further deterioration in estuarine water quality.

The catchment targets are for the median total nitrogen and total phosphorus concentrations in fifteen of the Swan-Canning tributaries. In recognition of the long timeframes required for catchment management to affect nutrient levels in tributaries, both short and long-term targets have been developed.

Estuarine targets are based on the fifth-percentile dissolved oxygen and the 90th-percentile chlorophyll-*a* concentration in surface waters. Compliance with the estuary targets for the lower, middle and upper basins of the Swan River arm of the estuary and the middle basin of the Canning River arm of the estuary are presented.

The Swan-Canning catchment targets

The Swan-Canning Cleanup Program's short and long-term targets for N and P concentration in tributaries are shown in Table 7

Table 7: Cleanup Program nitrogen and phosphorus targets for tributaries of the Swan-Canning estuary.

Target	Total N concentration	Total P Concentration
Short-term	2.0 mg/L	0.2 mg/L
Long-term	1.0 mg/L	0.1 mg/L

Monitoring in the Swan-Canning catchment

The fifteen Swan-Canning tributaries are sampled fortnightly between the months June to November (many tributaries cease to flow after November and only commence to flow with June rainfall). Reporting against the 2003 Key Effectiveness Indicators uses data collected up to and including November 2002. The data from the three previous years, or a total of about 30 samples, is used to compare total N and P concentrations in the tributaries with the Cleanup Program targets.

Currently, N and P concentration in some tributaries are above both the short and long-term targets, others are passing the short-term but failing the long-term target, and some are failing both targets. If a tributary is already passing the short-term target it will be assessed against the long-term target. If the tributary is passing both the short and long-term target then it will be assessed to ensure that its' water quality is not degrading.

Performance 2003: Swan-Canning catchment targets

Data presentation

The data from each of the monitored tributaries are compared to the targets in Tables 8 and 9. The colour of the cells in the Tables indicate which target the catchment is being compared with. A black cell indicates that the tributary failed the short-term target in the previous year and was therefore assessed against the short-term target in the current year. Grey means that the tributary has passed the short-term target but failed the long-term target and is therefore being assessed against the long-term target. A white cell means that the tributary has passed both targets, and the data are being used to make sure that the tributary continues to meet its long-term target.

Key to interpreting the Catchment Performance Indicator results in Table 8 and 9.

	Tributary is being assessed against short-term target
	Tributary is being assessed against long term target
	Tributary meets both short-term and long term targets and is being monitored to ensure it continues to meet its long term target

The numbers in the cells of the Tables show how the data are interpreted by the Trust to conclude that the relevant targets have been achieved or not. The number within the brackets is the maximum number of 'high' samples expected to occur if the target is met (derived statistically by calculating the probability of various outcomes). The number outside the bracket is the actual number of samples from the tributaries that were found to have higher concentrations of nitrogen or phosphorus than the target levels shown in Table 7. If the number outside the bracket is higher than the number inside the bracket the Trust has concluded that the target has not been achieved.

Table 8: Compliance of monitored tributaries discharging into the Swan-Canning estuary with short and long-term nitrogen targets.

Tributary	1999	2000	2001	2002	2003
Ellen Brook	(11) 16	(12) 19	(12) 18	(12) 17	(12) 11
Mills Street Main Drain	(11) 20	(12) 17	(12) 13	(12) 12	(12) 28
Bannister Creek	(11) 13	(12) 14	(12) 10	(12) 30	(12) 29
Bayswater Main Drain	(11) 30	(12) 32	(12) 30	(12) 27	(12) 24
Southern River	(11) 27	(12) 29	(12) 26	(12) 23	(12) 22
Bickley Brook	(11) 26	(12) 27	(12) 25	(12) 21	(12) 17
Bennett Brook	(11) 24	(12) 24	(12) 22	(12) 21	(12) 22
Yule Brook	(11) 18	(12) 17	(12) 16	(12) 18	(12) 14
Blackadder Creek	(11) 22	(12) 20	(12) 16	(12) 14	(12) 12
Canning River	(11) 17	(12) 19	(12) 15	(12) 12	(21)6
Helena River	(10) 15	(11) 15	(11) 13	(11) 14	(10) 10
South Belmont Main Drain	(11) 15	(12) 11	(21) 5	(21) 5	(21) 4
Avon River	(20) 14	(21) 14	(21) 14	(21) 10	(21) 4
Susannah Brook	(18) 10	(19) 11	(19) 10	(18) 9	(18) 5
Jane Brook	(19) 11	(20) 11	(19) 8	(19) 7	(20)6
Short-term target met(%)	80	80	87	93	100
Long-term target met (%)	20	27	27	33	47

* Colour indicates the target the particular tributary assessed against.

Table 9: Compliance of monitored tributaries discharging into the Swan-Canning estuary with short and long-term phosphorus targets.

Tributary	1999	2000	2001	2002	2003
Ellen Brook	(11) 29	(12) 32	(12) 30	(12) 30	(12) 28
Mills Street Main Drain	(11) 16	(12) 15	(12) 11	(12) 29	(12) 26
Southern River	(11) 8	(12) 26	(12) 25	(12) 27	(12) 29
South Belmont Main Drain	(11) 17	(12) 16	(12) 17	(12) 19	(12) 17
Bannister Creek	(11) 21	(12) 22	(12) 19	(12) 17	(12) 12
Yule Brook	(21) 8	(21) 4	(21) 7	(21) 11	(21) 11
Bayswater Main Drain	(21) 8	(21) 11	(21) 12	(22) 10	(21) 7
Bickley Brook	(21) 9	(21) 5	(21) 6	(21) 6	(21) 7
Blackadder Creek	(20) 3	(21) 1	(21) 2	(21) 2	(21) 3
Jane Brook	(19) 0	(20) 1	(19) 2	(19) 2	(20) 1
Avon River	(20) 2	(21) 1	(21) 0	(21) 0	(21) 1
Bennett Brook	(21) 5	(21) 2	(21) 0	(21) 0	(21) 1
Canning River	(21) 0	(21) 0	(21) 0	(21) 0	(21) 1
Helena River	(19) 0	(20) 0	(20) 0	(20) 0	(19) 0
Susannah Brook	(18) 0	(19) 0	(19) 0	(18) 0	(18) 0
Short-term target met (%)	87	87	93	93	93
Long-term target met (%)	67	67	67	67	73

* Colour indicates the target the particular tributary assessed against.

Results 1999 -2003

The data in Tables 8 and 9 covers a five-year period going back to 1999. This allows trends in the achievement of targets for each tributary to be assessed over time. With effective management the concentration of nitrogen (N) and phosphorus (P) in the Swan-Canning tributaries will be maintained or begin to decline.

Total nitrogen concentration

There has been an improvement in N concentrations in the Swan-Canning tributaries over the last 5 years (see Table 8).

In 1999 80 per cent of the tributaries had achieved their short-term target. That number has now risen to 100 per cent with all tributaries achieving the short-term target for the first time in 2003. Bannister Creek first met the short-term target in 2001, with Mills Street Main Drain following in 2002 and Ellen Brook in 2003.

The number of tributaries passing the long-term target has also improved since 1999. In 1999 20 per cent of tributaries were passing the long-term target, now 47 per cent are doing so. South Belmont Main Drain met the long-term target for the first time in 2000. In 2002 Canning River met the target and in 2003 Blackadder Creek and Helena River met the long-term target.

Total phosphorus concentration

Similar to N, there has been an improvement in P concentrations in the Swan-Canning tributaries during the 1999 to 2003 reporting period (see Table 9).

In 1999, 87 per cent of tributaries were meeting the short-term target (with Southern River passing the short-term target for the first time that year). In 2001 Mills Street Main Drain achieved the

short-term target, bringing the percentage of tributaries passing to 93 per cent. Ellen Brook is the only tributary whose P concentrations remain higher than the short-term target.

In 1999, 67 per cent of tributaries were meeting the long-term P target. That number remained unchanged until 2003 when Bannister Creek achieved the long-term target for the first time, bringing the percentage of tributaries achieving the target up to 73 per cent.

The Swan-Canning estuary targets

The key performance indicators used by the Swan River Trust for the Swan-Canning estuary are the concentration of chlorophyll-*a* and dissolved oxygen in surface waters (the top metre of water) (Table 10). The estuary targets for the middle and upper basins represent only the first management objective for chlorophyll-*a* and dissolved oxygen. Once these targets have been achieved new targets will be set in a series of benchmarks until quality in the basins is considered acceptable and the Trust will then aim to maintain water quality rather than further improve it.

Table 10: Cleanup Program chlorophyll-a and dissolved oxygen targets for the Swan-Canning estuary.

Estuary Basin	Chl-*a* Target (µg/L)	Surface DO (% saturation)
upper Swan	19.98	81.2
middle Swan	8.75	75.1
lower Swan-Canning	3.55	82.1
middle Canning	11.67	49.1

Monitoring in the Swan-Canning estuary

To calculate compliance with the estuary targets, a sample is taken weekly between January and May from each of the four estuary basins. This usually results in 20 samples being collected per basin per year which are then pooled with the previous two years of data to give a total of 60 samples with which to test compliance. In calculating compliance for 2003, data collected up to and including May 2003 was utilised.

Performance 2003: Swan-Canning estuary targets

Data presentation

The monitoring data from each of the estuary basins are compared to the targets in Table 10. The estuary target system does not use the long/short-term system used for the tributaries, there are only two possible outcomes, a pass or a fail. With the estuary results, black cells means the target is not met and white cells means the basin meets the target (Tables 11 and 12).

Key to interpreting the Estuary Performance Indicator results in Table 11 and 12.

	Target not met
	Target met

The numbers in the table cells are interpreted the same as for the tributary results. The number within the brackets is the maximum allowable number of samples which can exceed the target before failing, the number outside the bracket is the actual number of samples that exceeded the targets. For chlorophyll-*a* an exceedence is when a sample has a higher concentration than the

target, for dissolved oxygen, an exceedence is when a sample has a lower saturation than the target. If the number outside the bracket is higher than the number inside the bracket the Trust has concluded that the target has not been achieved.

Table 11: Chlorophyll-a concentration in the basins of the Swan-Canning Estuary compared to the targets.

Basin	2001	2002	2003
upper Swan	(2) 15	(2) 18	(2) 25
middle Swan	(2) 18	(2) 18	(2) 18
lower Swan-Canning	(9) 6	(9) 4	(10) 3
middle Canning	Not assessed	Not assessed	(3) 8

Table 12: Dissolved oxygen saturation in the basins of the Swan-Canning Estuary compared to the targets

Basin	2001	2002	2003
upper Swan	(0) 21	(0) 20	(0) 33
middle Swan	(0) 14	(0) 11	(0) 7
lower Swan-Canning	(5) 7	(5) 2	(6) 4
middle Canning	Not assessed	Not assessed	(1) 5

Results 2001 - 2003

Chlorophyll-a concentration

The lower basin of the Swan-Canning estuary has met the Cleanup Program chlorophyll-*a* target in all three years (Table 11). Monitoring in the middle and upper Swan basins showed that between 15 and 25 samples contained more than the target level of chlorophyll-*a*, and in the middle Canning basin eight samples contained more. Neither the middle or upper basin of the Swan estuary, nor the middle basin of the Canning estuary met their target.

Oxygen saturation

In 2001 monitoring in the lower basin returned seven samples below 82.1 per cent saturation. The maximum number of samples that can be below 82.1 per cent saturation and still meet the target is five (Table 12). Therefore the lower basin did not meet the oxygen target in 2001. In 2002 and 2003 the lower basin met its target with only two and four measurements being lower than 82.1 per cent. The lower estuary therefore passed its target in 2002 and 2003. The middle and upper basins of the Swan estuary had between seven and 33 exceedences, with both failing their targets of zero exceedences for 75.1% and 81.2% saturation respectively. The Middle Canning estuary had five samples greater than the target and hence failed its target in 2003.

Significance of results

Swan-Canning catchment

The nitrogen and phosphorus concentrations in the Swan-Canning tributaries are low to moderate and have fallen over the 1999 to 2003 reporting period. Nitrogen concentrations in the South Belmont Main Drain, the Helena River, the Canning River and Blackadder Creek fell below 1.0mg/L meeting the Trust's long-term target. Bannister Creek, Mills Street Main Drain and Ellen Brook's nitrogen concentrations all fell below 2.0mg/L, meeting the Trust's short-term target. Phosphorus concentrations fell below 0.1mg/L in Bannister Creek meeting the Trust's long term target and fell below 0.2mg/L in Mills Street Main Drain and Southern River, meeting the Trust's short-term phosphorus target.

These results are encouraging. However it is possible that the results reflect climate change and drier winters as nutrients entering the Swan-Canning tributaries from the catchments tend to be relatively low during periods of low rainfall (the last few years have all had below average rainfall). It is significant that phosphorus levels in Ellen Brook remain high. This tributary discharges directly into the upper Swan River and has a significant influence on phytoplankton growth in the middle and upper basins of the Swan estuary. Viewing the 2003 data (28 of 30 samples having phosphorus concentrations greater than 0.2mg/L), it is unlikely that Ellen Brook will meet it's short-term target soon.

Swan-Canning estuary

The water quality in the lower estuary basin is consistently good, the estuary targets were developed so that the lower basin of the Swan-Canning estuary would meet the chlorophyll-*a* and dissolved oxygen targets unless water quality changed for the worse. Water quality in the middle basins of both the Swan and Canning estuary and the upper basin of the Swan estuary is currently unacceptable. The targets are designed so that the basins will fail until there is an improvement in water quality. Initially when designing and setting the targets, the main concern is to ensure that the targets are set at levels that are not within current natural variation. This is because natural variation may influence the compliance decision when the intent is that the targets measure only real and persistent changes in quality. To date, the compliance scheme, the data and the targets are generally performing as expected. However, it is apparent that the target levels for oxygen in the lower basin are within or too close to the upper bounds of natural levels. Although there is no reason to suspect a real decline in water quality, the lower basin did not meet the Cleanup Program target in 2001. The target levels may have to be reviewed and possibly adjusted slightly to better account for natural variation.

Phytoplankton, and to some extent oxygen, in the estuary during summer is primarily influenced by the seasonal and long-term store of nutrients in the bottom sediments. This means that there will be a lag between achieving SCCP's catchment targets and seeing the desired change in the estuary. The length of the time between fixing the catchments and seeing the benefits in the estuary is not currently known and is the subject of on-going research.

There is no evidence that phytoplankton biomass or oxygen in the middle or upper estuary basins has improved this year from the previous reporting period. It is unlikely that the improvements in nutrient levels in the tributaries reflect a decrease in the amount of nutrients entering the estuary that is large enough to significantly affect phytoplankton biomass and frequency of blooms. On the positive side nor is there evidence that the quality of water in the lower basin has declined this year.

Key Effectiveness Indicator 2

The extent to which the planning and development recommendations of the Trust are accepted and implemented.

Measure: Level of acceptance of conditions recommended by the Trust for developments.

Placing conditions on approved developments works toward maintaining the balance between conservation and development, and reflects the community's values which is consistent with the Trust's desired outcome.

This data reflects the percentage of recommendations made by the Trust that are accepted by the Minister. Development requiring Ministerial approval is dealt with under Part 5 of the *Swan River Trust Act 1988* and under Clause 30A(1) a of the *Metropolitan Region Scheme*.

The Trust makes recommendations to the Minister on applications received that either commence development within or that may affect the management area. The Trust's recommendations aim to ensure that development complements the rivers' amenity and does not have a detrimental impact on the environment. The Minister determines refusal or approval of the Part 5 applications, and in the case of Clause 30A applications whether the recommendation is acceptable to be forwarded to the Minister for Planning and Infrastructure.

Table 13: The percentage of recommendations made by the Swan River Trust that are accepted by the Minister.

Year	1997 – 98	1998 – 99	1999 - 2000	2000-2001	2001-2002	2002-2003
% Accepted	96%	100%	99%	100%	99%	100%
% Modified	2%	0%	0%	0%	1%	0%
% Rejected	2%	0%	1%	0%	0%	0%

Key Effectiveness Indicator 3

Key Effectiveness Indicator 3 is the extent to which the Swan River Trust management of the river and surrounding areas is viewed by the community. In early 2003 a consultant commissioned by the Trust conducted a telephone poll of 404 Perth residents to ascertain their views on the condition of the rivers and the facilities provided. The telephone survey was conducted using a random selection from the Perth White Pages to include suburbs within the Swan-Canning Catchment only.

Assessment of the survey data about community satisfaction on the condition of the river and facilities provided is calculated using weighted data averaged over 16 survey questions. Satisfaction responses received from the survey included good and adequate.

The methodology was primarily consistent with that used for the research project since 1999, to allow for the continual tracking of the performance of the Trust in relation to the organisation's key objectives. However, as a value added service the consultant to the Trust has extended the analysis in 2003 so as to correct the significant over sampling of residents who live within 1 kilometre of the river. By applying weights to the data, based on the relative populations of the "adjacent" and "outside" sample areas, the results for 2003 reflect the Perth Metropolitan community attitudes as a whole.

adjacent respondents	those living less than one kilometre from the river,
outside respondents	those living more than one kilometre from the river.

Swan River Trust benchmark for results are consistent with previous surveys. The measures have been compared to previous surveys conducted in 1998-1999, 1999-2000, 2000-2001 and 2001-2002.

Measure: Level of community satisfaction with the availability of public access to the Swan-Canning river system.

Survey	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
Level of satisfaction	67%	70%	71%	75%	69%

Note: that of the 404 residents surveyed 21 per cent were undecided on the above measure.

Measure: Community assessment of whether sufficient facilities are provided for their use.

Survey	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
Level of satisfaction	64%	68%	68%	72%	67%

Note: that of the 404 residents surveyed 19 per cent were undecided on the above measure.

Survey questions in all five years assessed satisfaction with the following aspects of public access; navigation aids, pedestrian walkways/cycle paths, car parking, information and signage, jetty and public boat ramp number and access to shoreline reflecting community needs.

There is a +/-5% error factor in the survey results and the significance of changes within or close to this factor needs to be considered in relation to the trends rather than a single result. Therefore while the decrease in approval rating needs to be noted it is not necessarily a significant result.

Measure: Total number of pollution complaints/ incidents.

Year	Number of complaints
1998-1999	86
1999-2000	82
2000-2001	99
2001-2002	72
2002-2003	90
5 year average	**86**

The Trust works towards the sustainable use of the system while retaining the balance between conservation and development that reflects community values. This is a key management goal for the river system. Response to pollution complaints aims to reduce the impact of incidents and protect the waterways. Environmental quality, aesthetics, access and use are values placed on the Swan and Canning rivers by the community.

The 2002-2003 period saw a general increase in the number of pollution complaints with a total of 90 received, compared with 72 last year. The greatest increase in complaints was in the area of industrial discharge/dewatering, with no complaints received in 2001-2002 compared with 13 this year. Complaints relating to herbicide/pesticide spraying also increased considerably, up from 0 last year to 5 this year, with most of them received during the fishkill. Non-pollution related complaints were reports of algal blooms, destruction of vegetation, animal carcases, nuisance watercraft, illegal developments and general complaints.

Key Efficiency Indicators

OUTPUT 1: Collect water information to support state planning, agencies and community

Output description: Provision of research and information for estuary and river restoration and management

	2001-2002	2002-2003	2002-2003
	Actual	**Target**	**Actual**
Cost/unit			
Cost of waterway monitoring and reporting per km^2 of catchment and waterway	$391	$511	$400
Average cost per project of research and development	$141 000	$162,000	$154 189

Efficiencies were gained through an increase in the monitored area of catchment from $1683km^2$ to $2116km^2$.

OUTPUT 2: Regulate riverside development

Output description: Assess applications for development, planning schemes and policy

	2001-2002	2002-2003	2002-2003
	Actual	**Target**	**Actual**
Cost/unit			
Cost of development control policy and advice per km^2 of management area	$7 130	$7 391	$6 859

OUTPUT 3: Management plans

Output description: Prepares management programs (often jointly with local government) for the management of the waterways and the management area. Includes catchment management plans.

	2001-2002	2002-2003	2002-2003
	Actual	**Target**	**Actual**
Cost/unit			
Average cost of production of management plan or strategy	$56 000	$47 500	NA

The Landscape Precinct Policy Planning manual has been established as the key landscape management planning approach. No precinct policy plans were produced in 2002-2003. Preparation of precinct policy plans and also implementation of Riverplan are priorities for 2003-2004.

OUTPUT 4: Protection of waterways and foreshores

Output description: Maintenance and restoration of waterway and foreshores. Audit and enforcement of the Act and regulations.

	2001-2002	2002-2003	2002-2003
	Actual	**Target**	**Actual**
Cost/unit			
Cost of maintenance and restoration per km^2 of foreshore	$4 924	$3 736	$4 959
Cost of waterway and foreshore protection per km^2 of management area	$2 777	$2 156	$2 371
Cost of water quality improvement projects per km^2 of waterway and catchment	$1 320	$1 582	$1 099

The level of foreshore maintenance has been extended with implementation of the Riverbank program and a comprehensive foreshore maintenance program. The 2002-2003 results reflect the cost of delivering this level of service.

The cost of water quality improvement projects was significantly less as costs associated with Swan Canning Urban Landcare Program (which is delivered by Swan Catchment Council on a calendar year cycle) were not incurred in 2002-2003. Significant costs anticipated for the Swan-Canning Cleanup Program evaluation will also not be incurred until 2003-2004.

Financial Statements

Opinion of the Auditor General

AUDITOR **GENERAL**

INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

SWAN RIVER TRUST
FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2003

Audit Opinion
In my opinion,

(i) the controls exercised by the Swan River Trust provide reasonable assurance that the receipt, expenditure and investment of moneys, the acquisition and disposal of property, and the incurring of liabilities have been in accordance with legislative provisions; and

(ii) the financial statements are based on proper accounts and present fairly in accordance with applicable Accounting Standards and other mandatory professional reporting requirements in Australia and the Treasurer's Instructions, the financial position of the Trust at June 30, 2003 and its financial performance and cash flows for the year ended on that date.

Scope
The Board's Role
The Board is responsible for keeping proper accounts and maintaining adequate systems of internal control, preparing the financial statements, and complying with the Financial Administration and Audit Act 1985 (the Act) and other relevant written law.

The financial statements consist of the Statement of Financial Performance, Statement of Financial Position, Statement of Cash Flows and the Notes to the Financial Statements.

Summary of my Role
As required by the Act, I have independently audited the accounts and financial statements to express an opinion on the controls and financial statements. This was done by looking at a sample of the evidence.

An audit does not guarantee that every amount and disclosure in the financial statements is error free. The term "reasonable assurance" recognises that an audit does not examine all evidence and every transaction. However, my audit procedures should identify errors or omissions significant enough to adversely affect the decisions of users of the financial statements.

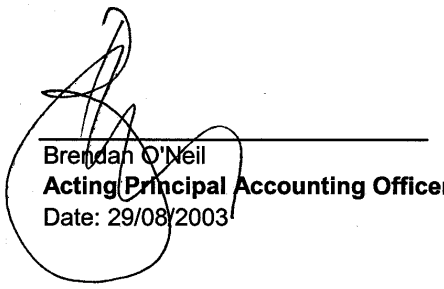
D D R PEARSON
AUDITOR GENERAL
November 12, 2003

4th Floor Dumas House 2 Havelock Street West Perth 6005 Western Australia Tel: 08 9222 7500 Fax: 08 9322 5664

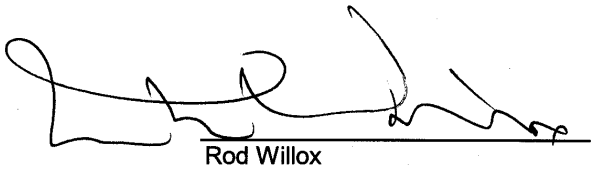
CERTIFICATION OF FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2003

The accompanying financial statements of the Swan River Trust have been prepared in compliance with the provisions of the Financial Administration and Audit Act 1985 from proper accounts and records to present fairly the financial transactions for the financial year ending 30 June 2003 and the financial position as at 30 June 2003.

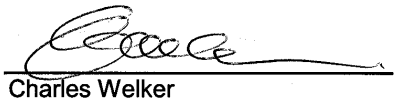
At the date of signing, we are not aware of any circumstances which would render any particulars included in the financial statements misleading or inaccurate.



Brendan O'Neil
Acting Principal Accounting Officer
Date: 29/08/2003



Rod Willox
Member
Date: 29/08/2003



Charles Welker
Chairman
Date: 29/08/2003

Statement of financial performance for the year ended 30 June 2003

SWAN RIVER TRUST
STATEMENT OF FINANCIAL PERFORMANCE
for the year ended 30 June 2003

	Note	2002-03 $	2001-02 $
COST OF SERVICES			
Expenses from ordinary activities			
Employee expenses	2	1,221,350	1,013,760
Supplies and services	3	2,557,951	3,123,430
Depreciation expense	4	61,758	46,272
Borrowing costs expense	5	11,637	12,468
Administration expense	6	154,024	297,005
Grants and subsidies	7	808,316	731,123
Capital user charge	8	47,761	39,385
Other expenses from ordinary activities	9	-	10,732
Total cost of services		4,862,797	5,274,175
Revenues from ordinary activities			
Revenue from operating activities			
Commonwealth grants and contributions	11	-	28,350
Revenue from non-operating activities			
Proceeds from disposal of non-current assets		44,655	7,956
Other revenues from ordinary activities	12	166,767	118,139
Total revenues from ordinary activities		211,422	154,445
NET COST OF SERVICES		**4,651,375**	**5,119,730**
REVENUES FROM STATE GOVERNMENT	13		
Output appropriations		5,079,000	5,185,000
Contribution from State Government Agency		-	81,041
Resources received free of charge		16,370	26,815
Total revenues from State Government		5,095,370	5,292,856
Total changes in equity other than those resulting from transactions with WA State Government as owners		**443,995**	**173,126**

The Statement of Financial Performance should be read in conjunction with the accompanying notes

Statement of financial position as at 30 June 2003

SWAN RIVER TRUST
STATEMENT OF FINANCIAL POSITION
as at 30 June 2003

	Note	2002-03 $	2001-02 $
Current Assets			
Cash assets	23(a)	373,833	213,194
Restricted cash assets	14	20,000	10,000
Receivables	15	129,720	91,297
Amounts receivable for outputs	16	135,000	85,000
Other assets	17	454	492
Total Current Assets		659,007	399,983
Non-Current Assets			
Amounts receivable for outputs	16	57,000	71,000
Property, plant and equipment	18	561,687	431,458
Total Non-Current Assets		618,687	502,458
Total Assets		1,277,694	902,441
Current Liabilities			
Payables	19	65,129	143,745
Interest bearing liabilities	20	46,722	49,191
Other liabilities	21	20,000	10,000
Total Current Liabilities		131,851	202,936
Non-Current Liabilities			
Interest bearing liabilities	20	113,796	119,453
Total Non-Current Liabilities		113,796	119,453
Total Liabilities		245,647	322,389
NET ASSETS		**1,032,047**	**580,052**
Equity	22		
Contributed equity		76,000	68,000
Accumulated surplus		956,047	512,052
TOTAL EQUITY		**1,032,047**	**580,052**

The Statement of Financial Position should be read in conjunction with the accompanying notes

Statement of cash flows for the year ended 30 June 2003

SWAN RIVER TRUST
STATEMENT OF CASH FLOWS
for the year ended 30 June 2003

	Note	2002-03 Inflows (Outflows) $	2001-02 Inflows (Outflows) $
CASH FLOWS FROM STATE GOVERNMENT			
Output appropriations		4,952,000	5,029,000
Capital contributions		8,000	68,000
Contributions from State Government Agencies		-	81,041
Holding account drawdowns		91,000	-
Net cash provided by State Government		5,051,000	5,178,041
Utilised as follows:			
CASH FLOWS FROM OPERATING ACTIVITIES			
Payments			
Employee costs		(1,221,350)	(1,051,016)
Supplies and services		(2,777,578)	(3,478,090)
Grants and contributions		(808,316)	(731,123)
Borrowing costs		(11,599)	(12,391)
Capital user charge		(47,761)	(39,385)
GST payments on purchases		(366,279)	(400,087)
Receipts			
Other receipts		169,600	131,047
Commonwealth grants and contributions		-	28,350
GST receipts on sales		15,987	9,076
GST receipts from taxation authority		322,393	356,341
Net cash used in operating activities	23(b)	(4,724,903)	(5,187,278)
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds from sale of non-current physical assets		44,655	7,956
Purchase of non-current physical assets		(191,987)	(83,950)
Net cash used in in investing activities		(147,332)	(75,994)
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayment of borrowings		(8,126)	(7,947)
Net cash used in in financing activities		(8,126)	(7,947)
Net increase/(decrease) in cash held		**170,639**	**(93,178)**
Cash assets at the beginning of the financial year		223,194	316,372
CASH ASSETS AT THE END OF THE FINANCIAL YEAR	23(a)	**393,833**	**223,194**

The Statement of Cash Flows should be read in conjunction with the accompanying notes

Notes to the financial statements for the year ended 30 June 2003

SWAN RIVER TRUST
NOTES TO THE FINANCIAL STATEMENTS
for the year ended 30 June 2003

1 SIGNIFICANT ACCOUNTING POLICIES

The following accounting policies have been adopted in the preparation of the financial statements. Unless otherwise stated these policies are consistent with those adopted in the previous year.

General Statement

The financial statements constitute a general purpose financial report which has been prepared in accordance with Accounting Standards, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board, and Urgent Issues Group (UIG) Consensus Views as applied by the Treasurer's Instructions. Several of these are modified by the Treasurer's Instructions to vary application, disclosure, format and wording. The Financial Administration and Audit Act and the Treasurer's Instructions are legislative provisions governing the preparation of financial statements and take precedence over Accounting Standards, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board, and UIG Consensus Views. The modifications are intended to fulfil the requirements of general application to the public sector, together with the need for greater disclosure and also to satisfy accountability requirements.

If any such modification has a material or significant financial effect upon the reported results, details of that modification and where practicable, the resulting financial effect, are disclosed in individual notes to these financial statements.

Basis of Accounting

The financial statements have been prepared on the accrual basis of accounting using the historical cost convention, except for certain assets and liabilities which, as noted, are measured at fair value.

(a) Output Appropriations

Output Appropriations are recognised as revenues in the period in which the Trust gains control of the appropriated funds. The Trust gains control of appropriated funds at the time those funds are deposited into the Trust's bank account or credited to the holding account held at the Department of Treasury and Finance.

(b) Contributed Equity

Under UIG 38 "Contributions by Owners Made to Wholly-Owned Public Sector Entities" transfers in the nature of equity contributions must be designated by the Government (owners) as contributions by owners (at the time of, or prior to transfer) before such transfers can be recognised as equity contributions in the financial statements. Capital contributions (appropriations) have been designated as contributions by owners and have been credited directly to Contributed Equity in the Statement of Financial Position.

(c) Grants and Other Contributions Revenue

Grants, donations, gifts and other non-reciprocal contributions are recognised as revenue when the Trust obtains control over the assets comprising the contributions. Control is normally obtained upon their receipt.

Contributions are recognised at their fair value. Contributions of services are only recognised when a fair value can be reliably determined and the services would be purchased if not donated.

(d) Revenue Recognition

Revenue from the sale of goods and disposal of other assets and the rendering of services, is recognised when the Trust has passed control of the goods or other assets or delivery of the service to the customer.

(e) Acquisition of Assets

The cost method of accounting is used for all acquisitions of assets. Cost is measured as the fair value of the assets given up or liabilities undertaken at the date of acquisition plus incidental costs directly attributable to the acquisition.

Assets acquired at no cost or for nominal consideration, are initially recognised at their fair value at the date of acquisition.

(f) Depreciation of Non-current Assets

All non-current assets having a limited useful life are systematically depreciated over their estimated useful lives in a manner which reflects the consumption of their future economic benefits.

Depreciation is calculated on the straight line basis, using rates which are reviewed annually. Expected useful lives for each class of depreciable asset are:

Plant and Equipment	5-7 years

(g) Cash

For the purpose of the Statement of Cash Flows, cash includes cash assets and restricted cash assets net of outstanding bank overdrafts. These include short-term deposits that are readily convertible to cash on hand and are subject to insignificant risk of changes in value.

(h) Receivables

Receivables are recognised at the amounts receivable as they are due for settlement no more than 30 days from the date of recognition.

Collectability of receivables is reviewed on an ongoing basis. Debts which are known to be uncollectable are written off. A provision for doubtful debts is raised where some doubt as to collection exists and in any event where the debt is more than 60 days overdue.

(i) Payables

Payables, including accruals not yet billed, are recognised when the Trust becomes obliged to make future payments as a result of a purchase of assets or services. Payables are generally settled within 30 days.

(j) Interest-bearing Liabilities

Bank loans and other loans are recorded at an amount equal to the net proceeds received. Borrowing costs expense is recognised on an accrual basis.

(k) Employee Benefits

All employees performing the functions of the Trust are employees of the Water & Rivers Commission. Therefore the Trust has no liability in relation to employee benefits. Liability for employee entitlements rest with the Water and Rivers Commission.

(l) Resources Received Free of Charge or For Nominal Value

Resources received free of charge or for nominal value which can be reliably measured are recognised as revenues and as assets or expenses as appropriate at fair value.

(m) Valuation of Non Current Assets

The Trust has a policy of reporting land at fair value. Certain non-current assets have been revalued from time to time as disclosed in the financial statements. Increments are taken to asset revaluation reserve. Decrements have been offset against previous increments (if any) relating to the same assets and the balance (if any) charged against profits.

Other assets are recognised at cost.

(n) Comparative Figures

Comparative figures are, where appropriate, reclassified so as to be comparable with the figures presented in the current financial year.

(o) Rounding

Amounts in the financial statements have been rounded to the nearest dollar, or in certain cases, to the nearest thousand dollars.

	2002-03 $	2001-02 $
2 EMPLOYEE EXPENSES		
Salaries	1,036,718	1,049,981
Salaries on-costs	184,632	194,914
Change in employee benefits	-	(231,135)
	1,221,350	1,013,760
3 SUPPLIES AND SERVICES		
Services contracted to other state departments	1,794,175	2,253,718
Consultants and contractors	622,420	603,878
Repairs and maintenance	26,660	55,877
Other	114,696	209,957
	2,557,951	3,123,430

	2002-03 $	2001-02 $
4 DEPRECIATION EXPENSE		
Plant, machinery & equipment	61,758	46,272
	61,758	46,272
5 BORROWING COSTS EXPENSE		
Interest paid	11,637	12,468
6 ADMINISTRATION EXPENSE		
Lease rental payments	54,830	63,371
Other staff costs	26,938	42,684
Communications	15,619	15,901
Consumables	56,637	175,049
	154,024	297,005
7 GRANTS AND SUBSIDIES		
Expenses incurred for the year	808,316	731,123
8 CAPITAL USER CHARGE		
	47,761	39,385

A capital user charge rate of 8% has been set by the Government for 2002-03 and represents the opportunity cost of capital invested in the net assets of the Trust used in the provision of outputs. The charge is calculated on the net assets adjusted to take account of exempt assets. Payments are made to the Department of Treasury and Finance on a quarterly basis.

9 OTHER EXPENSES FROM ORDINARY ACTIVITIES		
Carrying amount of non-current assets disposed of	-	10,732
10 NET GAIN/(LOSS) ON DISPOSAL OF NON CURRENT ASSETS		
Gain on disposal of non-current assets		
Plant and equipment	44,655	7,956
Loss on disposal of non-current assets		
Computing equipment	-	(1,548)
Plant and equipment	-	(9,184)
Net gain/(loss)	44,655	(2,776)
11 COMMONWEALTH GRANTS & CONTRIBUTIONS		
National Heritage Trust Fund	-	28,350
12 OTHER REVENUES FROM ORDINARY ACTIVITIES		
Sundry revenue	166,767	118,139

	2002-03 $	2001-02 $
13 REVENUES FROM GOVERNMENT		
Appropriation revenue received during the year:		
Output appropriations [(a)]	5,079,000	5,185,000
	5,079,000	5,185,000
Contributions received from other government agencies		
Water and Rivers Commission [(b)]	-	81,041
Resources received free of charge [(c)]		
Determined on the basis of the following estimates provided by agencies:		
Office of the Auditor General	11,500	11,000
Department of Land Administration	539	693
Crown Solicitors Office	4,331	15,122
	16,370	26,815

(a) Output appropriations are accrual amounts reflecting the full cost of outputs delivered. The appropriation revenue comprises a cash component and a receivable (asset). The receivable (holding account) comprises the depreciation expense for the year and any agreed increase in leave liability during the year.

(b) During the financial year 2001/02 the Trust received unspent funds for activities formerly administered by the Water & Rivers Commission now undertaken by the Trust.

(c) Where assets or services have been received free of charge or for nominal consideration, the Trust recognises revenues (except where the contribution of assets or services is in the nature of contributions by owners, in which case the Trust shall make a direct adjustment to equity) equivalent to the fair value of the assets and/or the fair value of those services that can be reliably determined and which would have been purchased if not donated, and those fair values shall be recognised as assets or expenses, as applicable.

14 RESTRICTED CASH ASSETS		
Current		
Developer Bonds	20,000	10,000

The cash held in this account is to be used in repaying bond monies.

15 RECEIVABLES		
Trade debtors	24,841	17,674
GST receivable	104,879	73,623
	129,720	91,297

16 AMOUNTS RECEIVABLE FOR OUTPUTS		
Current	135,000	85,000
Non-current	57,000	71,000
	192,000	156,000

This asset represents the non-cash component of output appropriations. It is restricted in that it can only be used for asset replacement or payment of leave liability.

	2002-03 $	2001-02 $
17 OTHER ASSETS		
Prepayments	454	492
	454	492
18 PROPERTY, PLANT AND EQUIPMENT		
Plant and equipment		
At cost	556,022	487,048
Accumulated depreciation	(249,972)	(267,590)
	306,050	219,458
Plant and equipment under construction		
Construction costs	43,637	-
	43,637	-
Freehold land at fair value [(a)]	212,000	212,000
	212,000	212,000
	561,687	431,458

(a) The revaluation of freehold land was performed in June 2000 in accordance with an independent valuation by the Valuer General's Office. Fair value has been determined on the basis of current market buying values. The valuation was made in accordance with a policy of regular revaluation. Note that prior to 2001 land was carried at a mixture of cost and valuation. On the initial application of AASB 1041 (AAS 38) in 2001 land was revalued to fair value.

Reconciliations

Reconciliations of the carrying amounts of property, plant and equipment at the beginning and end of the current financial year are set out below.

2003	Plant and equipment	Plant and equipment under construction	Freehold Land	Total
	$	$	$	$
Carrying amount at start of year	219,458	-	212,000	431,458
Additions	148,350	43,637	-	191,987
Disposals	-	-	-	-
Revaluation increments/(decrements)	-	-	-	-
Depreciation	(61,758)	-	-	(61,758)
Carrying amount at end of year	306,050	43,637	212,000	561,687

19 PAYABLES		
Trade payables	140	-
Accrued expenses	64,989	143,745
	65,129	143,745

		2002-03 $	2001-02 $
20 INTEREST BEARING LIABILITIES			
Borrowings from WA Treasury Corporation			
Balance of Loan 30 June 2003	Current:	46,722	49,191
	Non-current:	113,796	119,453
		160,518	168,644
21 OTHER LIABILITIES			
Developer bond		20,000	10,000
		20,000	10,000
22 EQUITY			
Contributed equity			
Opening balance		68,000	-
Capital contributions [(a)]		8,000	68,000
Closing balance		76,000	68,000

(a) Capital Contributions have been designated as contributions by owners and are credited directly to equity in the Statement of Financial Position.

Accumulated surplus		
Opening balance	512,052	338,926
Change in net assets resulting from operations	443,995	173,126
Closing balance	956,047	512,052
Total equity	1,032,047	580,052

23 NOTES TO THE STATEMENT OF CASH FLOWS

(a) Reconciliation of cash

Cash at the end of the financial year as shown in the Statement of Cash Flows is reconciled to the related items in the Statement of Financial Position as follows:

Cash assets	373,833	213,194
Restricted cash assets	20,000	10,000
	393,833	223,194

(b) Non-cash financing and investing activities

During the financial year, there were no assets/liabilities transferred/assumed from other government agencies not reflected in the Statement of Cash Flows.

	2002-03 $	2001-02 $
(c) Reconciliation of net cost of services to net cash flows used in operating activities.		
Net cost of services	(4,651,375)	(5,119,730)
Non-cash items:		
Depreciation expense	61,758	46,272
Resources received free of charge	16,370	26,815
Net (gain)/loss on sale of non-current assets	(44,655)	2,776
(Increase)/decrease in assets:		
Receivables	(7,167)	12,908
Other assets	38	77
Increase/(decrease) in liabilities:		
Payables	(78,616)	109,409
Provisions	-	(231,135)
Other liabilities	10,000	-
Net GST receipts/(payments)	(27,899)	-
Change in GST in receivables/payables	(3,357)	(34,670)
Net cash used in operating activities	**(4,724,903)**	**(5,187,278)**

24 COMMITMENTS OF EXPENDITURE

The Trust has no commitments of expenditure at 30 June 2003.

25 CONTINGENT LIABILITIES AND CONTINGENT ASSETS

The Trust has no contingent liabilities and contingent assets at 30 June 2003.

26 EVENTS OCCURRING AFTER REPORTING DATE

No events have occurred after reporting date which would materially impact on the financial statements.

	2002-03 $	2001-02 $

27 EXPLANATORY STATEMENTS

a) Significant variations between actual revenues and expenditures for the financial year and revenues and expenditures for the immediately preceding financial year

Details and reasons for significant variations between actual results with corresponding items of the preceding year are detailed below. Significant variations are considered to be those greater than 10% and $200,000.

	Note	2002-03 Actual $	2001-02 Actual $	Variance $	Variance %
COST OF SERVICES					
Expenses from ordinary activities					
Employee expenses	(i)	1,221,350	1,013,760	207,590	20%
Supplies and services	(ii)	2,557,951	3,123,430	(565,479)	(18%)
Depreciation expense		61,758	46,272	15,486	33%
Borrowing costs expense		11,637	12,468	(831)	(7%)
Administration expense		154,024	297,005	(142,981)	(48%)
Grants and subsidies		808,316	731,123	77,193	11%
Capital user charge		47,761	39,385	8,376	21%
Other expenses from ordinary activities		-	10,732	(10,732)	(100%)
Total cost of services		4,862,797	5,274,175	(411,378)	
Revenues from ordinary activities					
Commonwealth grants and contributions		-	28,350	(28,350)	(100%)
Proceeds from disposal of non-current assets		44,655	7,956	36,699	461%
Other revenues from ordinary activities		166,767	118,139	48,628	41%
Total revenues from ordinary activities		211,422	154,445	56,977	
NET COST OF SERVICES		**4,651,375**	**5,119,730**	**(468,355)**	

Explanation of Variances

(i) Employee expenses

The variance is due to the write-back of the Provision for Employee Benefits that was recognised in the financial statements of the Water and Rivers Commission in 2001-02. It was found that since the staff carrying out the functions of the Trust were Water and Rivers Commission employees, then the Commission should bear the liabilities in relation to employment benefits for those employees.

	2002-03 $	2001-02 $

(ii) Supplies and services
The variation in expenses is mainly due to cost reductions in the areas of advertising, printing, and a reduction in costs associated with the Canning Oxygenation project. In addition, there was a reduction in expenses relating to the Constructed Wetlands Project and the cessation of the Sediment Nutrient Cycling Program.

b) Significant variations between estimates and actual results for the financial year
Details and reasons for significant variations between actual results with corresponding items of the preceding year are detailed below. Significant variations are considered to be those greater than 10% and $200,000.

Output	Note	2002-03 Actual $'000	2002-03 Estimate $'000	Variance $'000	Variance %
Collect water information to support state planning, agencies and community		1,118	1,184	(66)	(6%)
Regulate riverside development		459	510	(51)	(10%)
Management plans		20	95	(75)	(79%)
Protection of waterways and foreshores		3,054	3,356	(302)	(9%)
		4,651	5,145	(494)	

Explanation of Variances

No significant variance.

	2002-03 $	2001-02 $

28 FINANCIAL INSTRUMENTS

(a) Interest Rate Risk Exposure

The following table details the Trust's exposure to interest rate risk as at the reporting date:

			Fixed interest rate maturities				
	Weighted average effective interest rate	Variable Interest Rate	Less than 1 Year	1 to 5 Years	More than 5 Years	Non-Interest Bearing	Total
2003	**%**	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**	**$'000**
Financial Assets							
Cash assets		-	-	-	-	374	374
Restricted cash assets		-	-	-	-	20	20
Receivables		-	-	-	-	130	130
		-	-	-	-	524	524
Financial Liabilities							
Payables		-	-	-	-	65	65
WATC/Bank loans	6.62	-	62	59	40	-	161
		-	62	59	40	65	226
2002							
Financial assets		-	-	-	-	314	314
Financial liabilities	6.87	-	65	60	44	144	313

(b) Credit Risk Exposure

The Trust does not have any significant exposure to any individual customer or counter party. Amounts owing by other government agencies are guaranteed and therefore no credit risk exists in respect to those amounts. In respect of other financial assets the carrying amounts represent the Trust's maximum exposure to credit risk in relation to those assets. All financial assets are unsecured.

The following is an analysis of amounts owing within the categories of government and private sector:

Western Australian Government agencies	665	17,553
Private Sector	24,176	121
Commonwealth Govt - ATO (GST)	104,879	73,623
Total	129,720	91,297

(c) Net Fair Values

The carrying amounts of financial assets and financial liabilities recorded in the financial statements are not materially different from their net fair values, determined in accordance with the accounting policies disclosed in note 1 to the financial statements.

	2002-03 $	2001-02 $

29 REMUNERATION OF MEMBERS OF THE ACCOUNTABLE AUTHORITY AND SENIOR OFFICERS

Remuneration of Members of the Accountable Authority

The number of members of the Accountable Authority, whose total of fees, salaries, superannuation and other benefits for the financial year, fall within the following bands are:

$	2003	2002
0 - 10,000	3	3
10,001 - 20,000	1	1

The total remuneration of the members of the Accountable Authority is:	29,115	28,713

The superannuation included here represents the superannuation expense incurred by the Authority in respect of members of the Accountable Authority.

No members of the Accountable Authority are members of the Pension Scheme.

Remuneration of Senior Officers

The number of Senior Officers other than senior officers reported as members of the Accountable Authority, whose total of fees, salaries, superannuation and other benefits for the financial year, fall within the following bands are:

$	2003	2002
80,001 - 90,000	-	1
90,001 - 100,000	1	-

The total remuneration of senior officers is:	96,739	89,186

The superannuation included here represents the superannuation expense incurred by the Trust in respect of senior officers.

One senior officer is a member of the Pension Scheme.

30 RELATED AND AFFILIATED BODIES

The Trust does not provide any assistance to other agencies which would deem them to be regarded as related or affiliated bodies under the definitions included in Treasurer's Instruction 951.

	2002-03 $	2001-02 $

31 SUPPLEMENTARY INFORMATION

Write Offs

The Trust had no write-offs during the financial year.

Losses through theft, defaults and other causes

The Trust had no losses through theft, defaults and other causes during the financial year.

Gifts of Public Property

The Trust had no gifts of public property during the financial year.

32 OUTPUT INFORMATION

	Collect Water Information		Regulate Riverside Development		Management Plans		Protection of Waterways and Foreshore		Total	
	2003 $000	2002 $000	2003 $000	2002 $000	2003 $000	2002 $000	2003 $000	2002 $000	2003 $000	2002 $000
COST OF SERVICES										
Expenses from ordinary activities										
Employee expenses	100	19	285	280	17	20	819	696	1,221	1,015
Supplies and services	1,011	1,102	170	158	4	30	1,373	1,833	2,558	3,123
Depreciation expense	15	11	6	4	-	-	41	31	62	46
Borrowing costs expense	3	3	1	1	-	-	8	8	12	12
Administration expense	27	51	11	24	-	2	116	220	154	297
Grants and subsidies	3	2	2	-	-	-	803	729	808	731
Capital user charge	12	8	5	4	-	-	31	27	48	39
Other expenses from ordinary activities	-	3	-	1	-	-	-	7	-	11
Total cost of services	1,171	1,199	480	472	21	52	3,191	3,551	4,863	5,274
Revenues from ordinary activities										
Commonwealth grants and contributions	-	6	-	3	-	-	-	19	-	28
Proceeds from disposal of non-current activities	12	2	4	1	-	-	29	5	45	8
Other revenues from ordinary activities	41	26	17	11	1	1	108	80	167	118
Total revenues from ordinary activities	53	34	21	15	1	1	137	104	212	154
NET COST OF SERVICES	1,118	1,165	459	457	20	51	3,054	3,447	4,651	5,120
REVENUES FROM GOVERNMENT										
Output appropriation	1,222	1,177	500	463	23	53	3,334	3,492	5,079	5,185
Contribution from State Government Agency	-	18	-	7	-	1	-	55	-	81
Resources received free of charge	3	7	2	2	-	-	11	18	16	27
Total revenues from Government	1,225	1,202	502	472	23	54	3,345	3,565	5,095	5,293
CHANGE IN NET ASSETS	107	37	43	15	3	3	291	118	444	173

Reporting Requirements

Under arrangements provided for by Section 31 (2) of the *Swan River Trust Act* the Water and Rivers Commission provides the Trust with corporate services. Water and Rivers Commission outcomes for Disability Services, Equal Employment Opportunity, Cultural Diversity and Language Services, and Youth are applicable to the Swan River Trust and can be found in the Water and Rivers Commission Annual Report.

Conflict of interest

The Trust has procedures for identifying, preventing and resolving conflicts of interest. These procedures are outlined in the Swan River Trust Meeting Procedures 1996 and the Swan River Trust Code of Conduct 2000. Cr Marion Blair and Mr Timothy Mather both declared a conflict of interest on one occasion when considering matters before the Board, and did not vote on those occasions.

Freedom of information

The Trust received four applications for information under the provisions of the *Freedom of Information Act 1992*. Of these one was given full access and three applications had edited access. Fees totalling $120 were received for the processing of these applications.

Advertising and marketing

Expenditure incurred by the Swan River Trust during 2002-2003 in relation to section 175 ZE of the *Electoral Act* was as follows:

Class of Expenditure	Expenditure	Name of Person/Agency where annual payment was greater than $1 600
Media advertising agencies	$25 333	Media Decisions & Seven Network Operations
Advertising agencies	$6 623	Marketforce Productions
Market research organisations	$10 750	Patterson Market Research
TOTAL EXPENDITURE	$ 42 706	

Corporate Governance

The Board

The Board of the Swan River Trust is accountable for the performance of the Trust and is responsible for its corporate governance. The Board formulates strategic direction, establishes policies, provides advice on development applications to the Minister for the Environment and Heritage sets the budget and programs and monitors achievements against agreed targets and outcomes.

Written reports on the Trust's activities and financial statements are provided to the Board each month, and performance evaluations are carried out on 31 December and 30 June each year.

The four Board members appointed by the Minister for the Environment and Heritage are appointed for three year terms. The term of appointment of the other four members is at the discretion of the Minister or agency nominating them. The Board meets twice a month, while its River Management Committee holds monthly meetings. The River Management Committee, which reports to the Board, comprises four Board members, five agency representatives and two advisers.

The Board operates in accordance with the *Public Sector Management Act 1995*, the Swan River Trust Code of Conduct 2000 and the Swan River Trust Meeting Procedures 1996.

Remuneration for the Board includes an annual fee of $17 100 for the Chairman and sitting fees for members of $176 for half day meetings. No full day meetings were held during 2002-2003.

In 2002-2003, there were 23 Board meetings, with attendance by Board members shown below:

Member	Number Attended	Maximum Possible Attended
Geoff Totterdell	21	23
Noel Robins (deceased May 2003)	15	19
Ray Stokes	18	23
Brian Martin	12	23
Pat Hart	19	23
Timothy Mather	20	23
Marion Blair	16	23
Cleve Flottmann	13	23
Rod Willox (temporary replacement for Noel Robins)	4	4

The Minister for the Environment and Heritage accepted the retirement of Chairman Geoff Totterdell as of 30 June 2003 and appointed Mr Charlie Welker as Chairman for a three year term from 1 July 2003.

Strategic plan

The Strategic Plan developed by the Trust for 1999-2000 remained relevant and continued to be applied in 2002-2003.

Internal audit

The Water and Rivers Commission provides corporate services for the Trust. The Trust relies upon the internal audit of the Water and Rivers Commission for assurance of compliance with the *Financial Administration and Audit Act*, Regulations and Treasurer's Instructions.

Asset management

The Trust has assets worth approximately $1 277 694 under its control, and has undertaken the following steps to ensure effective management of those assets. We have complied with all Treasurer's Instructions, have carried out a stocktake, undertaken capital asset planning, and complied with all relevant accounting standards.

Risk management

Swan River Trust operations are covered under Water and Rivers Commission risk management strategies.

Performance monitoring and reporting

The Swan River Trust provides written monthly reports on its activities and financial statements to the Board. Additionally, performance is evaluated at 31 December and 30 June each year. Annual performance is reported to the Minister and Parliament in the Trust's Annual Report. In accordance with the Financial Administration and Audit Act (FAAA) 1985 Section 62 (1) the Swan River Trust is required to submit a draft copy of the Annual Report to the Minister by 31 August 2003. In accordance with Section 65.2b of the FAAA an extension to 31 October 2003 was approved by the Minister for the Environment on 3 August 2003.

Code of conduct

Swan River Trust staff operate under a Code of Conduct, as required by the Western Australian Public Sector Code of Ethics. Because staff are provided by the Water and Rivers Commission, the Trust has adopted the Department's Code of Conduct.

All staff have access to the Code of Conduct on the Intranet and are regularly reminded of its application.

Customer service charter

In delivering its services, the Trust seeks to:

- Involve stakeholders and the community
- Be professionally objective on the basis of the best scientific information and professional advice available
- Make sure our services are cost effective
- Respond to enquires promptly and courteously
- Return calls within 24 hours if telephone enquires cannot be dealt with immediately
- Meet deadlines for responses to statutory referrals
- Maintain an average development application processing time of no more than 60 days
- Ensure people reporting pollution and making complaints are advised of the outcome of their complaint
- Ensure that all information is, to the best of our knowledge, accurate and up-to-date
- Uphold the Freedom of Information Act
- Consider the needs of people with disabilities and other special needs.

Ministerial directions

Under Section 7 (3) of the *Swan River Trust Act 1988*, the Minister may give directions in writing to the Trust, generally with respect to the performance of its functions. The Trust is to give effect to any such direction. No such directions were given by the Minister during the period under review.

Industrial agreements

Swan River Trust staff are provided by the Water and Rivers Commission and are subject to industrial agreements negotiated with the Department.

Executive remuneration is paid in accordance with public service conditions, and reflecting the Water and Rivers Commission industrial agreements.

Workers' compensation statistics

The Department provides the Trust with the staff and corporate services necessary for the Trust to carry out its functions therefore reporting workers' compensation statistics are covered within the Water and Rivers Commission Annual Report.

Compliance with legislation

In the performance of its functions, the Swan River Trust has exercised all reasonable care to comply with the following relevant written laws, as amended from time to time:

Swan River Trust Act 1988

Freedom of Information Act 1992

Public Sector Management Act 1994

Financial Administration and Audit Act 1985

Equal Opportunity Act 1984

Aboriginal Heritage Act 1972-80

Conservation and Land Management Act 1984

Control of Vehicles (Off Road Areas) Act 1978

Disability Services Act 1993

Environmental Protection Act 1986

Fisheries Act 1905

Government Employees Superannuation Act 1987

Heritage of WA Act 1990

Industrial Relations Act 1979

(Employment Acts) 1991

Interpretation Act 1984

Jetties Act 1926

Land Act 1933

Local Government Act 1995

Local Government by-laws

Marine Act, Health (Food Standards) (General) Regulations 1987

Marine and Harbours Act 1981

Metropolitan Region Town Planning Scheme Act 1963

Minimum Conditions of Employment Act 1993

Native Title Act 1993

Navigation Act, Navigable Waters Regulations

Occupational Safety and Health Act 1984

Parliamentary Commissioner Act 1971

Pollution of Waters by Oil and Noxious Substances Act 1987

Public and Bank Holidays Act 1972

Rights in Water and Irrigation Act 1914

State Supply Commission Act 1991

Town Planning and Development Act 1928

Water Corporation Act 1995

Water and Rivers Commission Act 1995

Workers' Compensation and Assistance Act 1993

Charlie Welker, Chairman

Rod Hughes, A/Manager