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6/11*

New Swan River Trust Board

New Swan River Trust Board members have been working hard since their appointment on July 1.

Minister for the Environment Dr Judy Edwards appointed Charlie Welker as chairman for a three-year term, replacing Geoff Totterdell after nine years of dedicated service to the Trust.

Rod Willox was appointed deputy-chairman and replaced Noel Robins, who passed away on May 22 after a traffic accident.

Other new Trust Board members are Dr Bruce Hamilton who replaces Pat Hart, and Neil Foley who replaces Ray Stokes.

The change at the top coincides with the start of changes throughout the organisation, with the Trust currently undergoing a functional review and legislative changes.

Mr Welker has many years experience at senior level in environmental and planning agencies in WA and Victoria, and spent seven years with the WA Environmental Protection Authority including more than two years as its full-time deputy-chairman, before becoming a Principal of Welker Environmental Consultancy in 1994.

He also has extensive experience in senior management, project management, policy formulation and environmental impact



New Swan River Trust Board: Neil Foley, back left, Dr Bruce Hamilton, Dr Brian Martin, Tim Mather, Cr Marion Blair, front left, chairman Charlie Welker, and Rod Willox. Absent: Cleve Flottmann.

assessment of a variety of water management project proposals in WA, and was a senior staff member of the previous Department of Conservation and Environment and the WA Planning Commission.

Great reviews for Great Gardens



Hundreds of gardeners have given their green thumbs-up to the Great Gardens workshops.

The free Great Gardens workshops are designed to get the maximum out of metropolitan gardens with the minimum impact on the environment by using fertilise wise and water wise practices and establishing gardens that suit the local soils and climate.

Minister for the Environment Dr Judy Edwards launched the workshops at the Swan-Canning Cleanup Program Community Forum on September 14.

The workshops are a new initiative of the Swan-Canning Cleanup Program in partnership with the Nursery and Garden Industry Association and the Water Corporation. They are delivered by experts from Landcare Solutions.

Workshops in Fremantle, Melville and Bayswater were well supported, with 629 people attending the first six sessions.



The Great Gardens team: Wendy Yorke, back left, John McWilliams, Garry Heady, Chris Ferreira, front left, Sabrina Hahn and Neville Passmore.

There are only a few places remaining for the workshops scheduled for Gosnells, Kalamunda, South Perth, Leederville, Armadale, Wanneroo, Mundaring and Subiaco from the end of September through to November.

City of Melville Mayor Katherine Jackson opened the Melville workshops and was extremely supportive of the initiative.

"Great Gardens is an excellent opportunity to encourage people to be more aware of their environment and have a beautiful garden," she said.

Feedback from the Fremantle, Melville and Bayswater workshops indicated most participants found the workshops fun, entertaining and presented in a way that was highly satisfactory.

At least 80 per cent of participants wanted more detailed courses, there was a significant number of requests for handouts, and a majority of participants

continued on page 3...

Inside

2 Swan Alcoa Landcare Program

3 Community Forum success

4 Riverplan now under review

New name for landcare program

The Swan Alcoa Landcare Program (SALP) has replaced the Swan Catchment Urban Landcare Program (SCULP).



The name was changed to reflect Alcoa World Alumina Australia's significant contribution of \$1.25 million to the program since its inception in 1998, and its continuing support.

SALP responds to a growing demand for funding from community groups for on-ground revegetation and rehabilitation projects.

The program has funded \$1.65 million of projects across the metropolitan area, which includes \$400,000 from the Swan River Trust since 1999.

The Trust and Alcoa now provide \$250,000 and \$200,000 per annum respectively to SALP, and in-kind support and additional funding from project partners substantially increases the total value of SALP.

Swan Catchment Council manages the program with support from staff at the Swan Catchment Centre and the Trust.



More people than ever before attended the annual Swan-Canning Cleanup Program Community Forum, ensuring the Swan River Trust's sustainability messages reached a broad audience.

Despite inclement weather, hundreds of people visited the large marquee in Forrest Place between 10.30 am and 5 pm on Sunday, September 14.

The forum was the launching pad for the Cleanup Program's annual video and the Great Gardens Workshops.

Record crowd at community forum

Speakers included Minister for the Environment Dr Judy Edwards, City of Perth Lord Mayor Dr Peter Natrass, new Swan River Trust Board chairman Charlie Welker, with a traditional welcome by Aboriginal Nyoongar Elders Doolann-Leisha Eatts and Walter Eatts.

The forum showcased the 20 Cleanup Program projects and included program partners.

Department of Environment programs such as Airwatch, WasteWise, Ribbons of Blue and Captain Cleanup were on show, along with displays by the Department of Fisheries,

City of Perth, Water Corporation, Millennium Kids and Earth Carers.

The ever-popular Drain Game kept children occupied while parents collected information about sustainable environmental practices such as fertilise wise and water wise, alternative cleaning products and the free Great Gardens workshops.

The Trust's new calico bags were also very popular and many of the re-useable 'showbags' were brimming with a bounty of information when people left the forum.

Environmental restoration and protection focus for SALP

Revegetation projects have received about 40 per cent of the total Swan Alcoa Landcare Program (formerly Swan Catchment Urban Landcare Program) funding in the past three years.

During the same period about \$253,000 was contributed towards weed control, with projects focusing on protection and enhancement of waterways and important bushland areas.

protect waterways and remnant bushland vegetation damaged by stock.

Based on an estimated average cost of 80 cents per seedling, SALP has contributed about 537,500 seedlings totalling \$430,000 to catchment and waterways revegetation projects in the Swan Region.

Fencing was also a major focus of SALP community projects, with \$238,000 allocated during the three-year period.

SALP funding adds value to projects and provides community groups with the leverage to negotiate increased financial and in-kind support from other stakeholders.

The average cost was \$1300/km, enabling about 180 km of fencing to be erected to

As a result, the total value of SALP-funded projects including partnership contributions is estimated to be \$3.3 million.

Bannister Creek volunteers hard at work planting vegetation as part of SALP



Community projects supported

Community involvement is crucial in Swan Alcoa Landcare Program projects.

All projects involve partnerships between community groups and local councils, other local sponsors or State Government agencies.

Funding is available for a wide range of activities, such as retention, restoration and management of bushland, wetland and riverine vegetation, as well as protection and enhancement of surface and ground water quality.

Projects previously funded include the creation of a living stream from an urban drain, fencing the Ellen Brook, weed control in Shenton Park Bushland, revegetating saline land in Woollooloo and controlling bamboo infestations in Darlington creek lines.

To find out more or to get involved, visit the Swan Catchment Centre website at www.wrc.wa.gov.au/swanavon, or phone the Centre on 9374 3333.

Video calls for volunteers

"You can make the difference" is the new Swan-Canning Cleanup Program video launched at the Community Forum in September.

The video's shift in focus from the river system to the catchment is recognition of the broader issues facing the system such as groundwater contamination, salinity and use of chemicals such as pesticides and fertilisers.

Many people are concerned about the health of the river and this video is designed to provide them with practical ways to help reduce the problem by getting involved. Suggestions include joining a catchment group, holding a Corporate Care Day and participating in a learning circle.



Quintin George in the new Swan-Canning Cleanup Program video encouraging people to get involved to help keep our rivers healthy.

Extra funding for Swan-Canning Cleanup Program

An increase of \$1.2 million funding was announced by the State Government for the Swan-Canning Cleanup Program in June.

The funds have been allocated as follows:

- \$750,000 for stripping nutrients from key drains such as the Mills Street Main Drain;
- \$250,000 for community environmental education;
- \$150,000 for the Swan Alcoa Landcare Program, taking the Swan River Trust's contribution to \$200,000 for the year; and
- \$50,000 for the Great Gardens Workshops.

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felt that the information provided would help them become more sustainable.

The metropolitan program is modelled on the hugely successful rural program Heavenly Hectares, which is designed for people living on more than one hectare of land.

To register for the free workshops, visit the Great Gardens website at www.greatgardens.info or call the Great Gardens hotline on 9335 6856.

Fremantle workshop: Guest presenter Sabrina Hahn discussing the garden design created by Wildflora.



Draft Riverplan under review

A wide range of community members had their say on the new policy document that discusses the future of the Swan and Canning rivers.

Public submissions about Riverplan, the mechanism for implementing the Environmental Protection (Swan and Canning Rivers) Policy 1998, closed on October 24.

Riverplan is designed to ensure values of the Swan and Canning rivers are restored, maintained and protected by managing the activities that affect them through the implementation of an environmental management framework.

The Swan River Trust will be the single body accountable to the Environmental Protection Authority (EPA) for coordinating management and implementing the Environmental Protection Policy (EPP).

Riverplan also proposes partnerships and memoranda of understanding with State agencies and local governments, together with the establishment of specific environmental values and measurable

environmental quality criteria to strengthen the Swan and Canning rivers EPP.

The Department of Environment is in the process of reviewing the feedback from community and industry groups, local governments, other agencies and individuals.

The department received a mix of responses, some dealing with specific issues such as pollution, while others were much broader and addressed the entire river system.

A report on the submissions and the Government's response to them will be released with the amended Riverplan in early 2004.

The draft version of Riverplan is available on the Swan River Trust website at: www.wrc.wa.gov.au/srt/Riverplan/index.html or by contacting Jess Dorricott in the Environmental Protection Authority Service Unit on 9222 8668.



Charlie Welker, left, Minister for the Environment Dr Judy Edwards, Ray Wallis, Darryl Miller and Jessica Dorricott at the Riverplan launch in July.

Algae brochure



Dead fish on the Aquinas Bay shore in May.

Due to the *Karlodinium micrum* algal blooms and resulting fish kills in the Swan and Canning rivers from April to June, the Trust postponed the June issue of RiverView and redirected resources to deal with the immediate situation.

A detailed brochure on algae in the Swan-Canning Estuary is included in this issue of RiverView.

The Trust is keen to continue publishing RiverView and welcomes feedback via the contact details below.

What's on in October and November



OCTOBER

- 1 Gosnells Council Reception Centre, 2120 Albany Hwy, 9-12 noon.
- 12 Kalamunda Agricultural Hall, Canning Road, 9-12 noon.
- 16 City of South Perth Civic Centre, Cnr Sandgate St and South Terrace, South Perth, 1-4 pm.
- 17 City of South Perth Civic Centre, Cnr Sandgate St and South Terrace, South Perth, 9-12 noon.
- 23 Town of Vincent Administration Centre, 244 Vincent St Leederville, 1-4 pm.

NOVEMBER

- 2 Armadale Administration Centre Function Room, 7 Orchard Ave Armadale, 1-4 pm.
- 3 Armadale Administration Centre Function Room, 7 Orchard Ave Armadale, 6-9 pm.
- 4 City of Wanneroo Civic Centre, 23 Dunbar Road, Wanneroo, 1-4 pm and 6-9 pm.
- 13 Shire of Mundaring Civic Centre, 7000 Great Eastern Hwy, Mundaring, 6-9 pm.
- 16 Palms Function Centre, cnr Rokeby Road and Nicholson Road Subiaco, 1-4 pm.
- 17 Palms Function Centre, cnr Rokeby Road and Nicholson Road Subiaco, 9-12 noon.

Bookings essential. Visit: www.greatgardens.info or phone the Great Gardens Hotline 9335 6856.

OCTOBER

- 1-4 Drain Game at Royal Perth Agricultural Show.
- 29 PricewaterhouseCoopers Cool Night Classic fun walk and run from 5.30 pm at Barrack St Jetty to Matilda Bay. This year SCCP hopes to win the prize for the biggest team.
- 25 Drain Game at the Giddegannup Show.

NOVEMBER

- 1-9 Frog Week.
- 9 Drain Game at Nuts about Nature adult environment education day, Whiteman Park.
- 10-16 National Recycling Week.



Level 3 Hyatt Centre
87 Adelaide Terrace
East Perth WA 6004
Phone: (08) 9278 0400
Fax: (08) 9278 0401

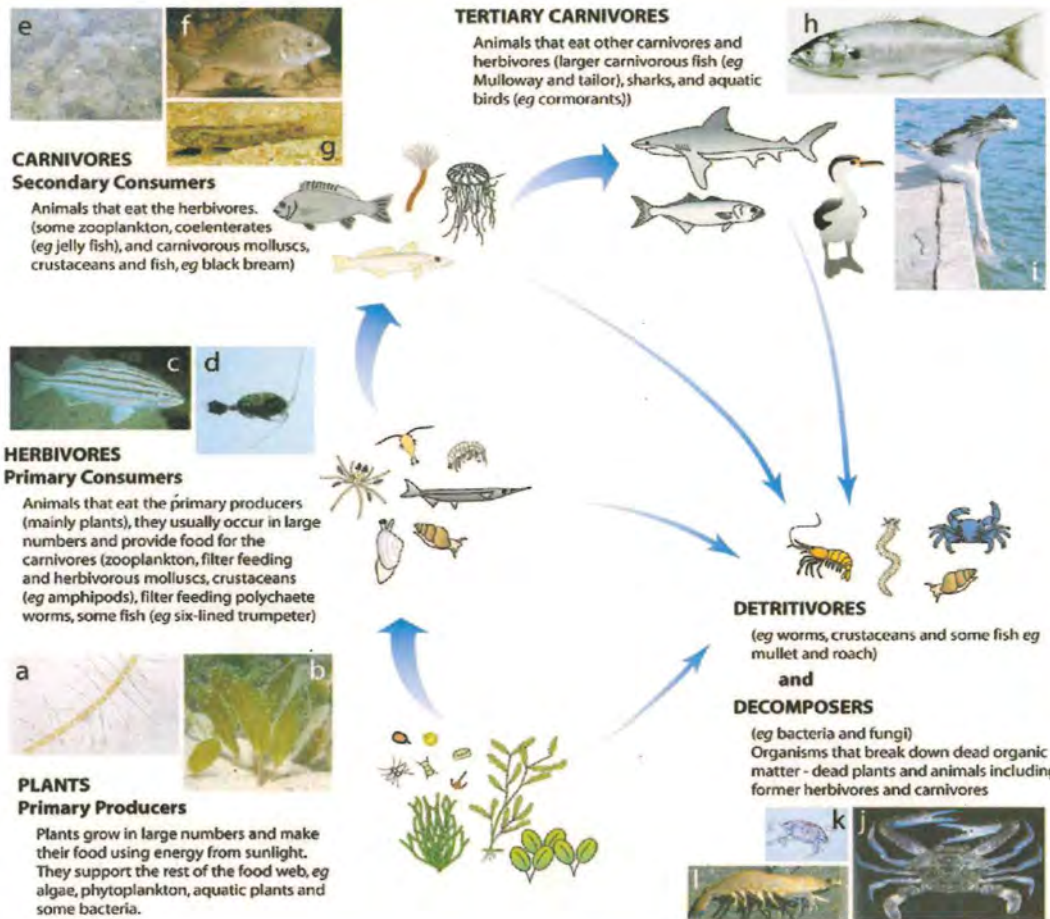
ISSN 1324-0404

Website: www.wrc.wa.gov.au/srt
Email: srt@environment.wa.gov.au

Protecting the Swan-Canning river system for the future

Algae are aquatic plants that are a natural part of the Swan and Canning system, as they are in waterways throughout the world. They include microscopic plants called phytoplankton and large plants often referred to as macroalgae and seaweed. Algae are important because they oxygenate the water and form the basis of the food web that supports all other aquatic life.

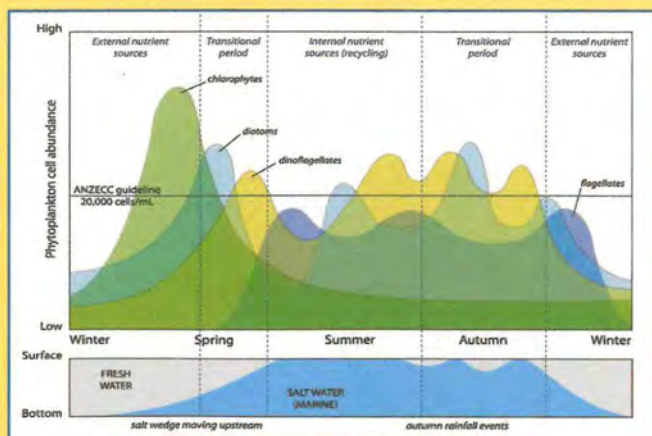
When human activity alters the balance of the natural system, for example increasing nutrients and changing the flow of water, algae often respond by growing rapidly in vast numbers and becoming a nuisance. Most algal blooms are harmless. On occasions however, they are toxic and because of the health risk to people, waterways may be closed to recreational use.



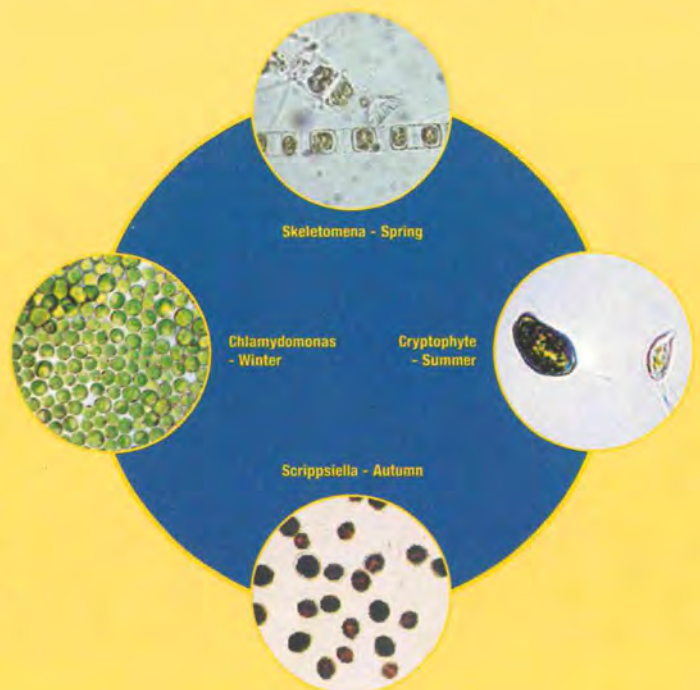
The Swan - Canning system is naturally susceptible to algal blooms that mainly occur in the middle and upper Swan and Canning Rivers. This is because it is surrounded by poor sandy soils that allow nutrients to leach quickly into the groundwater and river system. The hot summers, seasonal river flow and poorly flushing tides result in calm, slow moving water for long periods of time. These factors combined with Perth's abundant sunshine create ideal conditions for algal growth.

A TYPICAL SEASONAL ALGAE CYCLE

A successional pattern of algal growth occurs every year influenced by the timing of rainfall, nutrient inputs during the year and seasonal movement of seawater (the salt wedge) into the entire tidal portion of the system.



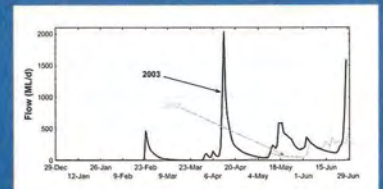
Phytoplankton can reproduce very rapidly, doubling their numbers in two hours to a few days under favourable conditions.



KARLODINIUM MICRUM BLOOM SURFACE SCUM
A dinoflagellate bloom of *Karlodinium micrum* commenced in early April and continued until the end of June.



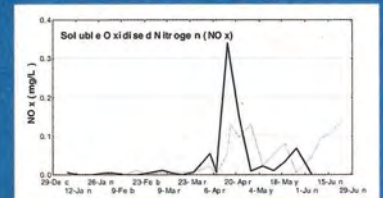
KARLODINIUM MICRUM is highly adapted to estuarine conditions. It can move up and down the water column with its flagella (tail) to find food, light and shelter. It uses the energy from the sun like most plants, but when nutrients are in short supply, it can also eat other algae to get the energy that it requires.



WATER FLOW DATA - the trigger for the bloom was rainfall in April that resulted in runoff from the catchment carrying nutrients into the Swan and Canning rivers, followed by prolonged calm, sunny weather between April and June.

FISH KILL 2003

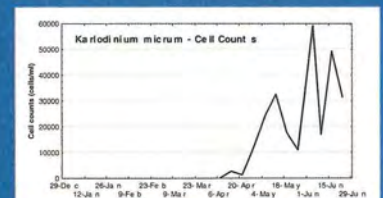
DATE	RIVER	LOCATION	DOMINANT FISH SPECIES EFFECTED	ESTIMATED NUMBER OF FISH COLLECTED	ESTIMATED TOTAL NUMBER OF DEAD FISH
7-04-03	Swan	Redcliffe Bridge to Ascot	Black Bream	300	
2-05-03	Swan	Guildford to Rivervale	Black Bream	20	
22-05-03	Swan	Bayswater to East Perth	Black Bream	6,000	
27-05-03	Swan	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



OXIDISED NITROGEN - 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 estuary. This is the form of nitrogen that is readily used by plants for growth.

FISH KILL IN AQUINAS BAY

Karlodinium micrum also has a very effective protection mechanism. It can produce a toxin to prevent other plankton from eating it. This toxin is also fatal to fish and other gill-breathing animals. The affected fish swim 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 stop swimming and die.

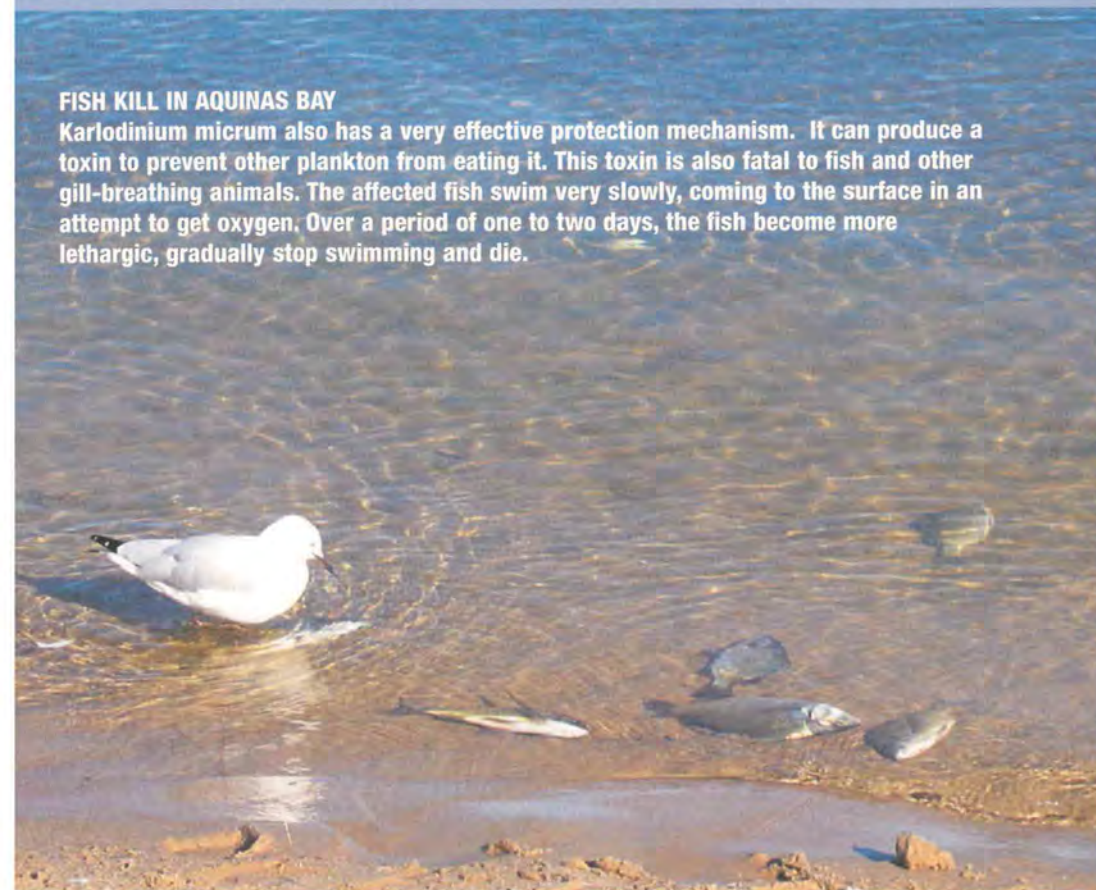


CELL COUNT DATA - the abundance of *Karlodinium micrum* increased after this event from extremely low levels to over 100,000 cell/ml at some sites in the estuary. The bloom started in the middle Swan estuary, moved into Perth Waters, then developed in the lower Canning and above Kent Street Weir.

The *Karlodinium micrum* bloom killed thousands of fish in both the Swan and Canning rivers between April and June.

The bloom killed a wide range of fish in all sizes including black bream, Perth herring, mulloway, flathead, flounder, mullet and Swan River gobies.

Towards the end of June, several weeks of heavy rainfall reduced salinity levels in the estuary. This resulted in the collapse of the algal bloom and no further fish kills occurred.





Judy Edwards MLC
Minister for the Environment

“THE SWAN - CANNING CLEANUP PROGRAM IS THE KEY MANAGEMENT STRATEGY TO REDUCE NUTRIENTS ENTERING OUR RIVERS.”

The work of the Cleanup Program received a major boost in June 2003 with an injection of \$1.2 million for both immediate and long-term river protection strategies that extend the existing Action Plan.



The Swan - Canning Cleanup Program action plan was launched in June 1999 to tackle the increasing incidence of algal blooms in the Swan and Canning rivers. This major environmental program is managed by the Swan River Trust in partnership with other State Government agencies, local government and community based catchment groups. It works to a four point Action Plan.

ACTION PLAN

1. Support Integrated Catchment 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 SWAN - CANNING CLEANUP PROGRAM IS:

SUPPORTING INTEGRATED CATCHMENT MANAGEMENT TO REDUCE NUTRIENT INPUTS

- Catchment group funding
- Swan Catchment Centre
- Heavenly Hectares seminars for landowners
- Ribbons of Blue/Waterwatch WA
- Local Government environmental management policies & guidelines
- Constructed wetlands and improvements to drains
- Communication Strategies to increase community involvement

An additional \$150,000 for community-based nutrient reduction works for the Swan Alcoa Landcare Program. Alcoa has committed \$600,000 over the next three years in support of the Government's contribution.

\$50,000 for a new Great Gardens Strategy to provide practical workshops for homeowners to better manage their gardens and minimise nutrient loss.

IMPROVING PLANNING AND LAND-USE MANAGEMENT TO REDUCE NUTRIENT INPUTS

- Improving laws to protect the catchment
- Land use planning strategies
- Improving land management to reduce nutrient run-off
- Cleaner Production training for industry

Riverplan - the environmental management framework to protect the Swan and Canning Rivers. This gives the Swan River Trust the responsibility to manage implementation of the Swan-Canning Environmental Protection Policy.

A new Swan River Audit Team will assess government agencies and assist local government to ensure these activities are consistent with the Swan-Canning Environmental Protection Policy, including the assessment of nutrient management plans and general river impacts.

MODIFYING RIVER CONDITIONS TO REDUCE ALGAL BLOOMS

- Caring for the Canning river Management Plan
- Improving water quality through oxygenation
- Phoslock™ applications
- Restoring vegetation to filter nutrients

A new \$750,000 nutrient intervention program to strip nutrients from key drains through the use of Phoslock™ sediment traps, bio-filtering systems and drain retro-fitting.

MONITORING RIVER HEALTH, FILLING CRITICAL GAPS IN KNOWLEDGE AND REPORTING PROGRESS TO THE COMMUNITY

- Measuring performance and tracking river health trends
- Establishing short and long term water quality targets
- Sediment nutrient cycling study
- Using computer models to support decision making
- Reporting progress to the community
- Continuing to expand knowledge and understanding of the river systems

An additional \$250,000 to extend community education campaigns providing householders with more information about how everyone can make the difference - by getting involved and helping to keep our rivers healthy.

The Cleanup Program's community awareness, education and involvement campaign increases community knowledge and skills about river and catchment issues, and generates community and corporate involvement in activities that contribute to the protection of the Swan and Canning rivers.

HELP KEEP OUR RIVERS HEALTHY

- Take part in a Great Gardens Workshop
- Make your garden Fertilise Wise, as well as Water Wise
- Join a Catchment Group and volunteer to help with on-ground restoration projects
- Join a Swan River Learning Circle - discover more from a Swan River Action Kit or an Education Kit
- Attend a Heavenly Hectares seminar to learn how to better manage your rural property
- Take part in wetland weeding or planting as part of a Corporate Care Day
- Recycle your waste at home and at work
- Keep waste out of drains
- Get involved with the Ribbons of Blue/Waterwatch WA program
- Develop an Environmental Management System for your workplace or club
- Use Cleaner Production management practices to save your profits and save our rivers
- Be a river-friendly boat user
- Fish for a healthy river
- Get in touch with the Swan River Trust for more information and to receive the quarterly newsletter RiverView



FOR MORE INFORMATION, PLEASE CONTACT

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