



Joint Select Committee

upon the

Sydney Water Board

R E P O R T

April 1994

Parliament of NSW

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LIST OF SUBMISSIONS

MINUTES OF PROCEEDINGS

MEMBERSHIP OF COMMITTEE

LEGISLATIVE COUNCIL

The Hon. Patricia Forsythe, M.L.C.

The Hon. Jenny Gardiner, M.L.C.

The Hon. Richard Jones, M.L.C.

The Hon. Andrew Manson, M.L.C.

The Hon. Edward Obeid, M.L.C.

The Hon. John Ryan, M.L.C.

LEGISLATIVE ASSEMBLY

Dr Peter Macdonald, M.P.
(Chairman)

Ms Pam Allan, M.P.

Mr Andrew Humpherson, M.P.

Mr Craig Knowles, M.P.

Mr Stephen O'Doherty, M.P. (appointed 9 August, 1993)

Mr Michael Richardson, M.P. (appointed 13 September, 1993)

* Mr Barry Morris, M.P. (discharged 9 September, 1993)

* Mr Tony Packard, M.P. (resigned 27 July, 1993)

CONSULTANT TO THE COMMITTEE

Mr Michael Mobbs

COMMITTEE SECRETARIAT

Ms Ronda Miller - Clerk to Committee

Ms Catherine Watson - Project Officer

Ms Kendy McLean - Assistant Committee Officer

FOREWORD

"We never know the worth of water, till the well is dry"
Thomas Fuller

The preparation of this Report has been no easy task and I thank my fellow Committee Members and the staff for their hard work and effort. The fact that the document is some months overdue reflects both the complexity of the issues and the extent of the Terms of Reference.

As Chairman, I make no apologies for the time taken, but merely hope that the recommendations which have been laboured over are taken seriously and acted upon by Government. If that is the case we will have significant improvement to our rivers, oceans, harbours and estuaries by the next millennium.

I welcomed the task of Chairman for several reasons, not least being that my introduction into politics ten years ago was as a medical practitioner and part of the community protest over the pollution of Manly Warringah's beaches and air from the Water Board's sewage treatment plant at Manly.

The Water Board is one of the largest public utilities in Australia and reigns over a massive expanded system of pipe-based technology providing water, disposing of waste water and to a lesser extent, managing stormwater. In my view, it is relatively efficient in its task of delivering water, but clearly inefficient and ineffective in its management of disposal of waste water - predominantly sewage.

Concerns regarding sewage disposal heightened in the late 80's and the Greiner Government commissioned the Camp, Dresser, McKee Report out of which grew an acknowledgment that a major program of improvement was needed and so evolved the Clean Waterways Program. This vision, "a social contract", raised great expectations but lack of progress and doubt about its future resulted in the establishment in mid 1993 of this Inquiry. It is fair to say that in the last 5 years, improvement has been limited and a clear direction of the Program is lacking. During the latter part of the Inquiry in March 1994, the Minister responsible for the Sydney Water Board produced a document "Choices for Clean Waterways", which indicates that the Clean Waterways Program is optional, rather than a firm commitment.

Sydney is a city surrounded by water, with world famous beaches, a harbour second to none and a complex system of rivers, lagoons and estuaries. Its reputation is built on an image of sun and surf so it is ironic that one of the major environmental concerns facing the Government and the community is water degradation. Our major river system, the Hawkesbury Nepean, is so polluted it is described as a "dead river", sewage polluted stormwater regularly enters our harbour at hundreds of points and three major deep water ocean outfalls pump

essentially raw sewage into the sea at a rate of 1 billion litres a day. Much of the system is aging with hundred year old pipes in the ground and it is clear that the population increase exceeds the capacity of the existing sewerage system.

At the heart of the problem has been a lack of accountability from the Water Board and competing agencies whose activities affect water quality. The public should be trusted with the truth. Parliament must play a stronger role both as an auditor and a watchdog and it is with this in mind that many of the recommendations by the Committee were formulated.

Improvement in accountability can take a number of forms. Parliament should exercise more scrutiny through a Capital Works Audit Committee examining the environmental impact of public works. The community should have access to information, including pollution trends by public agencies, a stronger role in catchment management and encouragement to be involved in demand management. Avoidance of overlapping responsibilities can be achieved through clearer delineation between the regulator, operator and manager. At the same time as recommending the establishment of an Office of Water, the Committee sees a stronger licensing role for the EPA, particularly in the areas of stormwater, sewer overflows and industrial waste.

The Water Board has been described as operating in a "regulatory vacuum". Very few water quality standards have been gazetted under the Clean Waters Act. There has been a lack of regulation and co-ordination between the various government agencies along with inter-agency rivalry, with water quality the victim.

The Government has already indicated its intentions to corporatise the Water Board mid 1994. Just what improvements this will make is uncertain. If it was to allow for more competition with de-monopolisation and encouragement of alternative technologies, this would be welcomed, but the experience of the Hunter Water Board suggests otherwise. If it must happen, it should certainly be preceded by appropriate amendments to legislation clarifying environmental goals and setting very clear programs for pollution reduction. The prospect of a corporatised Board driven by the economic model and able to escape environmental obligations is chilling.

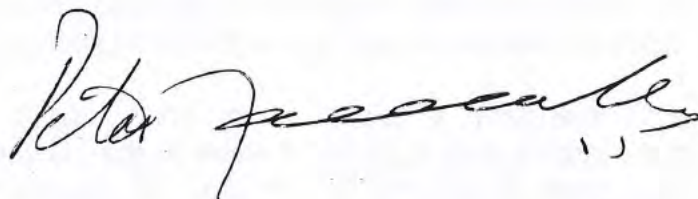
The biggest single capital works expenditure in the Water Board's history will be the contracting out of water treatment plants to cleanse Sydney's water. That decision making process, shrouded in secrecy, reflects the lack of accountability which characterises so many of the failures of the past. Relying on the medical analogy that says "better to prevent the illness than to treat the disease", it does appear that cleaning up the catchment would have been a cheaper and preferable option to the building of these enormously expensive \$3 billion treatment plants.

Many of the findings do relate to changing the way the Board operates and how it interacts with the community, government and other bureaucracies. However, I see

us as having arrived at the banks of our Rubicon. We need to cross into a new technological era, with the Water Board moving away from its centralised pipe-based system to one of decentralisation, innovation and beneficial re-use. Go and ask the man or woman in the street what to do with our sewage - the answer will be "don't pollute our rivers and oceans but re-use it for some land-based purpose".

This Committee does not have all the answers, but it has attempted to highlight the range of problems and difficulties we face and translate these into workable and practical recommendations. Those supported by the majority of the Committee appear at the end of each chapter followed by dissenting opinions and views by Government members. The Australian Labor Party have compiled a commentary which appears at the end of the Report.

There should be nothing political in good management of our water. It is time the community, through its Parliament, made it clear that existing laws must be complied with, improved environmental outcomes are not optional and old traditions should be replaced by innovative technology and inter-agency co-operation.

A handwritten signature in black ink, reading "Peter Macdonald". The signature is written in a cursive style with a long horizontal stroke at the end.

Dr Peter Macdonald MP
Chairman

SUMMARY OF RECOMMENDATIONS

The following abridgment of the recommendations has been prepared by the Chairman. It should be noted that the Committee actually voted on the unedited recommendations which appear at the end of each Chapter. These abridgments are in no way intended to alter the detailed recommendations.

1. The Clean Waterways Program must continue with quantified environmental goals, including demand management and catchment management, and provide for a clearer distinction between capital and non-capital expenditure. Any changes should be made available for public consultation and then publicly reported. The Program should be incorporated into the Board's operating licence.
2. The EPA should co-ordinate all aquatic monitoring programs within its State of the Environment Report.
3. The EPA should continue environmental monitoring of the Board's ocean outfalls subject to peer group review and on-going analysis of results.
4. The EPA should review trade waste discharge guidelines to initially reduce domestic levels and ultimately prohibit any such discharges into the ocean. Further, the EPA should plan the phase-out of all toxic pollutants consistent with US and European standards and to progressively licence accordingly.
5. The EPA should mandate a program to bring about environmental improvement in the quality and quantity of water in the Hawkesbury-Nepean river having clear goals to be met in the next 12 months with particular regard to algae outbreaks, gravel extraction and sewage disposal.
6. The EPA should ensure that the relevant government agencies are made clearly accountable in relation to water quality goals and pollution discharge volumes through bi-annual public reporting.
7. The Government should set stringent goals, in particular for all public sector agencies and local government, to achieve the reduction of rural and urban run-off .
8. The EPA should licence stormwater pollution.
9. The RTA should be accountable through its design, construction and maintenance of roads for a progressive reduction in run-off of water and pollution.
10. The Northern Sydney Ocean Outfall System (NSOOS) to be de-volumed by 30% through the interception device.

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11. The Board should report upon the feasibility of a new connection moratorium in NSOOS.
 12. The Board should progressively de-volume sewage discharges to rivers and oceans and include a clear program to achieve this in its annual reports.
 13. All public sector capital works programs should be reviewed by a parliamentary committee with regard to the environmental impact of such programs.
 14. All senior officers of state and local government should be held accountable through performance measures for decisions affecting both the quality and quantity of water run-off. In particular, the EPA is to account for the effectiveness of its pollution licencing system (where applicable).
 15. All state and local government budgets should clearly link capital works programs with environmental outcomes.
 16. Regulatory reform should be implemented to improve water management including the rationalisation of legislation, uniformity of standards, clarity of reporting mechanisms and the separation of regulator and operator.

An Office of Water should be established and given the power to direct other agencies including the Board and be accountable directly to Parliament. Such an Office would be responsible for the overall management of the water cycle.

17. All catchment management committees and trusts would report to the Office of Water.
 18. In the development of a draft memorandum of understanding between the EPA and the Board, there should be provision made for public participation.
 19. Details of all developer charges should in future be readily available and published in annual reports by all public agencies.
 20. Local government section 94 plans should in future include water pollution reduction measures and require contributions from joint venture developments involving government.
 21. Pollution prevention should be a first priority for all government agencies.
 22. The Office of Water should commission and audit all water extraction licences to identify the degree of degradation and the impact of pricing policies and make public recommendations regarding alterations to licence conditions to bring about improvement in river and groundwater conditions.
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23. All public sector bodies responsible for water, sewage and drainage functions should be administered by one Ministry.
 24. Specific performance measures for both Board SES Officers and Appointed Board Members should include progressive pollution reduction, the meeting of demand management goals, improved wastewater treatment, increased levels of beneficial re-use and the de-voluming of sewage flows.
 25. The Sydney Water Board Act should be amended to provide for: the attainment of the objectives of the Clean Waterways Program; the Board's primary role to be a service provider; self-funding; implementation of least-cost planning; introduction of user pays for both water and sewage; de-monopolisation and enhancement of competition; encouragement of decentralisation; and promotion of beneficial re-use.

The Act should also clarify the responsibilities of the Minister and the Board and prescribe for Appointed Board members to have relevant qualifications.

The implementation and use of alternative technology should be regulated and monitored by the Department of Health.

The Board's access to the use and flow of water should be determined under its operating licence granted by the Office of Water which must include licences from the EPA with strict standards regarding discharge to receiving waters.

26. The Department of Health should facilitate the introduction of individual sewage disposal.
27. The Board should provide a free water audit to all customers.
28. The additional costs of the water treatment plants should not be passed on to customers. There should be a Government Pricing Tribunal assessment. The Water Treatment Plants at Woronora and Illawarra should not proceed until a cost benefit analysis is published. The Board should publish the whole of the contracts already agreed to but delete commercially confidential details.

Information should be provided by the Board through annual auditing procedures and details included on customers bills relating to the performance of the water treatment plants, all related annual expenditure by the Board and particulars of contractual compliance.

Any future such contracts should prevent price fixing, the establishment of a private monopoly, the provision of insufficient government guarantees and should allow for public scrutiny of all elements of the contract.

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29. The boundaries of catchment management bodies must reflect the whole of the relevant catchment and all catchment trusts should be given a concurrence role for both public and private developments. Development of catchment management plans must allow for public participation and annual reporting which details achievements in the improvement of quality and quantity of water flows.
 30. The EPA should comply with the POE Act and set standards as required under pollution Acts to reduce any discharge to waters to harmless levels. The EPA must immediately publish a strategy applying the precautionary principle in its licences and must set progressively higher standards in Sydney's rivers and tidal waters through its powers under the existing Acts. Further, the National Water Quality Management Strategy should not be adopted in their present form.
 31. Standards must be set by the EPA following public comment for all Board sewage discharges using powers under the Clean Waters Act.
 32. The EPA must licence all new or existing developments in the following categories: land development under the Urban Development Program in the Board's area; all Part V development; and other development nominated by both the Office of Water and the EPA. All existing development must also be progressively licenced. All such licences must set pollution reduction goals equal to strictest international standards which allows for human consumption and recreational use.
 33. The Board should formulate a program of comprehensive sludge management which prohibits marine dumping and encourages re-use.
 34. The EPA should delegate its powers to local government to police scheduled premises for non-compliance with EPA licence conditions.
 35. All sewage surcharges and overflows should be licenced to allow for progressive pollution reduction and ultimate elimination.
 36. The Board should facilitate the introduction of compost toilets.
 37. The Board should be permitted to co-generate electricity from sewerage emissions.
 38. Local council's powers to reduce the impact of dog excreta on waterways should be increased.
 39. Any tenders by public agencies should include design specifications encouraging demand management.
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40. All public agencies should be encouraged to harvest rainwater from public lands and buildings.
 41. The Public Finance and Audit Act should be amended to ensure that any dividends required by Treasury and certified by the Board do not impact on the Board's planned capital works program, particularly in relation to the Clean Waterways Program. Further, Treasury must establish a clearer dividend policy and the basis of all annual dividend calculations should be provided in writing to the Board.
 42. The Board should improve accountability of SEL expenditure particularly in relation to the Clean Waterways Program. Customers should be kept informed of various Board expenditure through an itemised account.
 43. The Board should make arrangements for secondment and training of their staff with its outside contractors.

TERMS OF REFERENCE

The Joint Select Committee upon the Sydney Water Board was set up by Parliament to consider and report upon the following terms of reference with regard to the Sydney Water Board:

- (a) the operation and effectiveness of the Clean Waterways Program with regard to its objectives;
- (b) the credible and independent regulation of water quality and quantity with particular regard for environmental factors;
- (c) the recommendations of the Government Pricing Tribunal inquiry into water pricing;
- (d) improvements to accountability and efficiency to the Water Board through changes to institutional arrangements within the Board;
- (e) the Water Board's longer term strategies for catchment management and demand management and the impact of the proposed water quality treatment plants;
- (f) the current and projected environmental standards for discharge to receiving waters in terms of whether they reflect community needs and with regard to their affordability;
- (g) long term strategic planning of Sydney's waste water treatment including urban drainage, decentralisation and beneficial re-use;
- (h) the existing capital structure and the future capital needs having regard to the impact of the payment of the \$200 million in dividend payments to consolidated revenue on the Board's capacity to fund capital works and environmental improvements, including the impact of borrowing by the Board in or outside Loan Council guidelines to fund capital works;
- (i) an account of expenditure upon the special environmental service charge;
- (j) the use of consultants, professional services and contractors by the Board as defined by the Office Public Management; and
- (k) any matters relating to or arising out of the above terms of reference.

TERMS AND ABBREVIATIONS

ACM	Australian Chamber of Manufactures	DOP	Department of Planning
Agency	A government department or statutory authority	DWR	Department of Water Resources
AWT	Australian Water Technologies P/L	Demand management	A chain of strategies which aim to reduce water use. An example of demand management ("DSM" or "least cost planning" as it is also called) is where a "customer's demand for showers can be met by either adding to water supply capacity or making the existing delivery system more efficient. A water supplier rebating the cost of a new shower rose that gives the same shower using less water is an example of DSM."
Board	Sydney Water Board	Environment protection legislation	The Acts administered by the EPA and defined in the <u>Protection of the Environment Administration Act</u> , particularly that Act, the <u>Clean Waters Act</u> , the <u>Clean Waters Regulation</u> , <u>Environmental Offences & Penalties Act</u> .
BOO	Build, own, and operate	EPA	Environment Protection Authority
BOO(T)	build, own, operate, transfer whereby the private operator builds, owns and operates the project for a fixed term. Ownership of the project may or may not be transferred to the Board at the end of the term depending upon the agreement and the negotiations between the Board and contractor at the end of the term.	GBE	Government Business Enterprise
CAC	Community Audit Committee	GTE	Government Trading Enterprise
Catchment management	a "catchment" is any area in which all natural flows reach a common point. Catchment management seeks to manage all the flows in a catchment and to influence both quality and quantity of the water.	Grey water	Used water, eg. from sinks, laundries.
Catchment Management Committee	A body operating under the <u>Catchment Management Act</u> with legal capacity and power to raise money by levy eg. Hawkesbury-Nepean Trust but no power to direct any person or body to do anything	HWC	Hunter Water Corporation
CDM Report	Camp, Dresser and McKee Report	Inner budget agency	A body receiving its primary income from consolidated revenue through the state budget eg. EPA. see also, outer
CWA	Capital Works Audit	Least cost planning	Producing the desired outcome in the least
CWP	Clean Waterways Program		
CWU	Capital Works Unit		

	expensive way, usually through non-engineering solutions eg. deferring a new dam by harvesting rainwater & reducing demand		Potable water Drinking quality water
			Public Sector Government departments, statutory authorities, state owned corporations, local government
Ministerial Corporation	The Water Administration Ministerial Corporation created by the <u>Water Administration Act 1986</u>	PWD	Public Works Department
MSB	Maritime Services Board	Regulator	A body which controls by rules
National Water Quality Guidelines	Guidelines (draft) proposing a mechanism for setting water guidelines and standards	Riparian	River bank
NHRMRC	National Health and Medical Research Council	RTA	Roads and Traffic Authority
NSOOS	Northern Sydney Ocean Outfall System	SEL	Special Environmental Levy
Operator	An agency that provides a service or carries out works, such as the Sydney Water Board	SEP	Special Environmental Program
Option P	The primary planning document upon which the CWP is operating outlining expenditure and pollution reduction targets.	Sludge	Sediment deposited during the treatment of sewage
Outcome	Visible and practical results.	STA	State Transit Authority
Outer budget agency	A body which generates its own income but may receive grants, subsidies from government eg RTA, SRA, Water Board	Water quality treatment plants	Plants to filter water after it leaves Sydney Water Board dams for delivery to customers
Precautionary principle	Defined in the <u>Protection of the Environment Administration Act s6</u> : "... if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation"		

"a The operation and effectiveness of the Clean Waterways Program with regard to its objectives"

a Clean Waterways Program

Summary

What is the "Clean Waterways Program"?

Serious problems require prompt action

- Long term effect of ocean disposal of sewage effluent
- Suggested action
- Mussel watch

Ocean outfall pollution

Fishing industry

Conclusions by the majority of the Committee

Recommendations 1-12

Minority Comments - Government Members

SUMMARY

The Clean Waterways Program can essentially be seen as a social contract between the NSW government and the citizens of Sydney. The community has contributed the Special Environmental Levy of \$492 million. The Sydney Water Board should, therefore, be obliged to perform the additional work needed to address sewerage pollution problems under the \$7 billion, 20 year Program.

The environmental, commercial and service objectives of the Clean Waterways Program were originally based upon a document named "Option P". The majority of the Committee are concerned that: expenditure is falling behind the original "Option P" targets; environmental targets in "Option P" have either been virtually abandoned or their implementation deferred; and the Board appears to be failing to adequately account for the operation of the Program in its public reports.

What is the Clean Waterways Program?

In summer 1988-89 a media campaign and community concerns regarding

waterways pollution, particularly beach pollution, resulted in an independent review of the Board's Beach Protection Program by Camp, Dresser & McKee (CD&M) in March 1989.

Among its conclusions, this Report nominated that there was inadequate treatment of wastewater prior to discharge to waterways, particularly at ocean sewage treatment plants, and that the Water Board was lacking a strategic approach to management of its wastewater assets.

In April 1989 the Government approved a Special Environmental Levy (SEL) of \$80 per customer per year for five years. These proceeds were to fund a (then) \$393 million program of capital works, the Special Environment Program (SEP), announced in August 1989. Priorities for the SEP were determined through a call for submissions and through a series of public forums during the winter of 1989.

The CD&M Report also recommended a \$4-5 billion program to supplement the Beach Protection Program. Cabinet authorised the Board's major environmental programs and in December 1989, in recognition of the fact that the CD&M reforms did not sufficiently take future urban growth and stormwater drainage problems into account, the Clean Waterways Program (CWP) was announced as an enlarged \$6.25 billion, 20 year program. Work commenced on this Program in early 1991.

The Clean Waterways Program was in effect based on a business plan that was known within the Board at the time as "Option P". Option P, however, had been developed before the Board had collected any scientific information to quantify more clearly the impact of its activities on water quality, relative to the impact of other sources of pollution.

The Water Board has said that Option P was not based on a proper understanding of the Board's environmental impacts and that part of the program of works outlined in Option P was actually to "instigate investigations so that targets and indicators could be established on better information in later plans".

If the Sydney Water Board has abandoned "Option P", as would appear to be the case, it should produce a document to inform its own Board Members and the public precisely what the Clean Waterways Program now comprises.

In a letter to the Committee of 12 October 1993, Mr Paul Broad, Managing Director of the Sydney Water Board, explained to the Committee that:

"The 1990 - 2010 Business Plan, and Option P which it embodied, was one of the Board's first responses to the recommendations of the Camp Dresser McKee Report. The Plan initiated a program of investigation, data gathering, performance monitoring, and works which were not only designed to achieve the expectations outlined in Option P, but more importantly were designed to

refine Option P itself. In fact, the program initiated by Option P by necessity was a program designed to refine the targets contained in Option P according to additional information and results of analysis gathered and performed."

Such financial expenditure targets need to be flexible depending upon the way the Board interprets the planning parameters underpinning the CWP. However, it was felt that more evidence could have been provided regarding the achievement of, or progression towards, Option P's environmental and financial targets. This information could then have been incorporated within the CWP Annual Report. Further, no evidence was received to demonstrate that any Option P target has been or will be accomplished at a lesser cost than was agreed to by the Government at the approval stage.

The primary focus of the CWP was to develop a strategic plan for the management of wastewater assets and their impact on the environment. In order to attempt to strike a balance between community demands for quick action to address obvious problems and demands for a planned strategic approach to pollution management, the Board determined that the Program should be comprised of both the Early Action Program (EAP), which was partly funded by the SEL and partly funded by core funds, and a strategic planning process to develop the broader 20 year plan for wastewater asset management (see **Table 1, Dissection of Twenty Year Preferred Business Plan, p.4**).

The Clean Waterways Program was originally conceived in 1989 in response to the Camp, Dresser, McKee Report where it was recommended that an expenditure of \$20 billion was required to clean up Sydney's waterways. The Program was originally described as a "social contract" between the Government and the public. This was translated into Option P which was initially to be funded at \$10 billion and subsequently downsized to \$7 billion.

Over the 5 years of the CWP, the Water Board has issued many documents outlining the clean waterway issues and tabling data collated by consultants. However, in the course of its inquiry, the Committee has received tabulated evidence that Option P, as a \$7 billion program, has been considerably underfunded. For example, in 1993 it was estimated \$500 million should be spent on Option P but only \$300 million was actually spent (see graph outlining Total Option P, p.10).

It appears to the majority of the Committee that the document "Choices for Clean Waterways", a discussion paper released by the Board in March 1993, abandons the original concept of the Clean Waterways Program due to the fact that there is no expression of any Government commitment to the CWP nor is a total expenditure figure given.

TABLE ONE "Extracted from the Board's original plan for Option P"

DISSECTION OF TWENTY YEAR PREFERRED BUSINESS PLAN

MAJOR CATEGORIES	PARTICULAR PROJECTS	TARGET DATE	TOTAL (\$m)
<u>WATER</u>			
System Expansion	Welcome Reef Dam	2010	1810
Improved Quality	1987 NHMRC	1994/1998	770
	Future Guidelines	-	
Renewals		-	440
		TOTAL	3020
<u>WASTEWATER</u>			
System Expansion	Backlog Sewerage	1998	2440
Protect Ocean Waters	<i>Major Ocean Plants</i>		720
	65% sewage sludge removal	1991	
	75% sewage sludge removal	1996	
	<i>Minor Ocean Plants</i>		
	90% sewage sludge removal	2005	
River Quality	Nepean-Hawkesbury Plants	1995	460
Blue Mountains Streams	Blue Mountain Streams	1996	160
Sludge Management/Reuse	End sludge to sea	1993	240
Reduce Overflows	Reduce Overflows by 25%	1998	1680
	Reduce Overflows to 1 p.a. in 50 locations	2010	
		TOTAL	5700
<u>STORMWATER</u>			
Upgrade Existing Board Systems			600
New Sector Development			80
Additional Catchments			640
		TOTAL	1320
	GRAND	TOTAL	10,040

It seems to the majority of the Committee that there is no longer any Government commitment to clean up waterways. Instead the community will be obliged to make an informed choice using information in the document. This is particularly difficult as the majority of the Committee consider that the tables in the document are basically flawed as there is no proper costing for innovative options - eg. wetlands and decentralisation. For example, in the discussion on p45 of the document of the decentralisation concept in relation to on-site disposal, the costing figures selected make decentralisation appear to be the most expensive of all the options canvassed. It should be explained that this option is in fact still half the cost of the traditional system.

Further, it appears to the majority of the Committee that a 12 month consultation process represents unacceptable delay of implementation. It is particularly alarming that the document proposed that the Hawkesbury-Nepean sewerage stream be diverted and transferred to the ocean outfalls.

It is considered that the Clean Waterways Program should not be optional. The Government has committed itself to the Program and, as such, both it and the Water Board are obliged to meet proper environmental standards under the existing laws. Compliance with these standards should not be seen as an optional matter for the community to decide.

Option P was one of several options formulated by the Water Board in response to the recommendations of the Camp Dresser McKee Report which found that additional measures such as the upgrading of sewage treatment plants and processes, alleviation of sewer overflows and community education were warranted. The Board ultimately adopted Option P as the preferred option, and this option was embodied in the first Business Plan produced in 1990.

The founders of the CWP, Hon Tim Moore (then Minister for the Environment), Mr Bob Wilson (then Managing Director for the Board) and Mr David Harley (then Chairman of the Appointed Board) told the Committee of their "vision" for Sydney's waterways achievable through the CWP. Mr Wilson emphasised that he considered the CWP as a social contract between the Board and its customers:

"In 1989 the Board prepared an Option P which was about how the Board would operate and how its capital would be developed. That was affordable then and it was done to ensure that we planned everything for the future, and we had a contract with the community at the end of that process. Option P was endorsed by the Capital Works Committee of Cabinet and announced by Premier Greiner, so obviously it was a Government initiative. The ownership belongs to the people". (Hansard, 16 September 1993, p.2)

Messrs Harley, Moore and Wilson submitted that Option P sought to use innovative solutions to reduce the investment burden of fixing up the sewerage system.

Option P sought to solve the sewerage and drainage problem by a properly planned investment of \$7 billion and a further \$4 billion to solve the water supply and urban problem over the next 20 years.

"The size of Option P and its investment plans was such that the Water Board could not rely on the weak regulatory mechanisms and by default would have to protect its investment and do much of the work itself....the Board was supported by the government to pursue this direction and it developed into a series of programs to clearly define its accountability. There were four programs - Clean Waterways Program, Water Resources Program, Drinking Water Program and Urban Development Program - all of which had elements of developing standards and statutory planning which were in fact the domain of other regulators." (Messrs Moore, Harley and Wilson's submission, 'Doing the Vision Thing', p.7).

Mr Harley went on to say in evidence before the Committee that:

"The vision is not set in stone. The vision is a moving, living thing". (Hansard, July 15 1993, p.60)

The Water Board adopted a number of objectives for the Program:

- * Improve sewage treatment capabilities so that the effluent produced is of an appropriate quality to be either used beneficially or disposed of in an environmentally acceptable way;
- * Increase the reliability of the operation of sewage treatment plants so that plant by-passes which lead to raw sewage discharges are reduced to a minimum;
- * Eliminate the incidence of sewage overflows in dry weather;
- * Reduce overflows from the sewerage system in wet weather and minimise the damage they cause to the environment;
- * Provide sewerage services to all existing properties to reduce the pollution of waterways caused by run-off from on-site sewage disposal systems;
- * Manage stormwater systems so that pollution of the waters into which they flow, as well as any flooding they cause, is minimised;
- * Improve the management of sludge and other wastewater and stormwater residuals so that they may be beneficially used or disposed of in an environmentally-sound manner;
- * Reduce the impact of odours and emissions from the Board's sewage treatment and disposal activities to an acceptable level;
- * Encourage source control and waste minimisation.

Since 1991, the Board has produced Annual Reports for the Clean Waterways Program and the Special Environment Program. In these reports the Board has reported upon its activities and processes. The reports do not list measurable, objective goals and without them it is difficult to assess achievements and

performance of the two programs.

In evidence before the Committee, The Hon Robert Webster, Minister for Planning, reaffirmed the Government's commitment to the \$7 billion CWP:

"We (the Government) do not resile from any commitment to the much needed environmental works that will protect our waterways." (Hansard, August 26 1993, p.97)

During the course of the Committee's inquiry, however, the Government's commitment to the CWP has been questioned. While the Committee received evidence of the achievements of the CWP such as monitoring programs, increased sewage treatment and improved sludge management, concern was expressed as to whether enough has been done within the formative years of the program. Based on evidence received many projects identified in Option P to protect rivers and tidal waters appear to have either been deferred or are substantially behind their target dates (see **Table 2, Option P: Status of Projects**).

In order to meet Option P targets, an average annual expenditure of \$350 million on capital works is required. However, the Committee found that only \$300 million was spent in 1992/3 and only \$260 million is predicted to be spent in 1993/4. This amounts to an average annual expenditure for the last two years of \$280 million which is approximately half the Option P requirement.

In his letter to the Committee of 12 October 1993, Mr Paul Broad told the Committee that this type of direct comparison between targets and objectives outlined in Option P and subsequent capital works programs cannot be made. However, this statement appeared to conflict with the evidence given to the Committee by Board member, Dr Judy Messer and with SEL accounting requirements.

In the absence of information with which to measure the achievement of Option P targets, the Committee was only able to review the evidence it received regarding the Board's pollution output and the present condition of Sydney's waterways.

As previously discussed, the Clean Waterways Program was primarily a response to concerns about sewage pollution. Therefore, if the volume of sewage presently being discharged into Sydney's waterways is actually increasing and treatment not improving, the effectiveness of the CWP can be questioned.

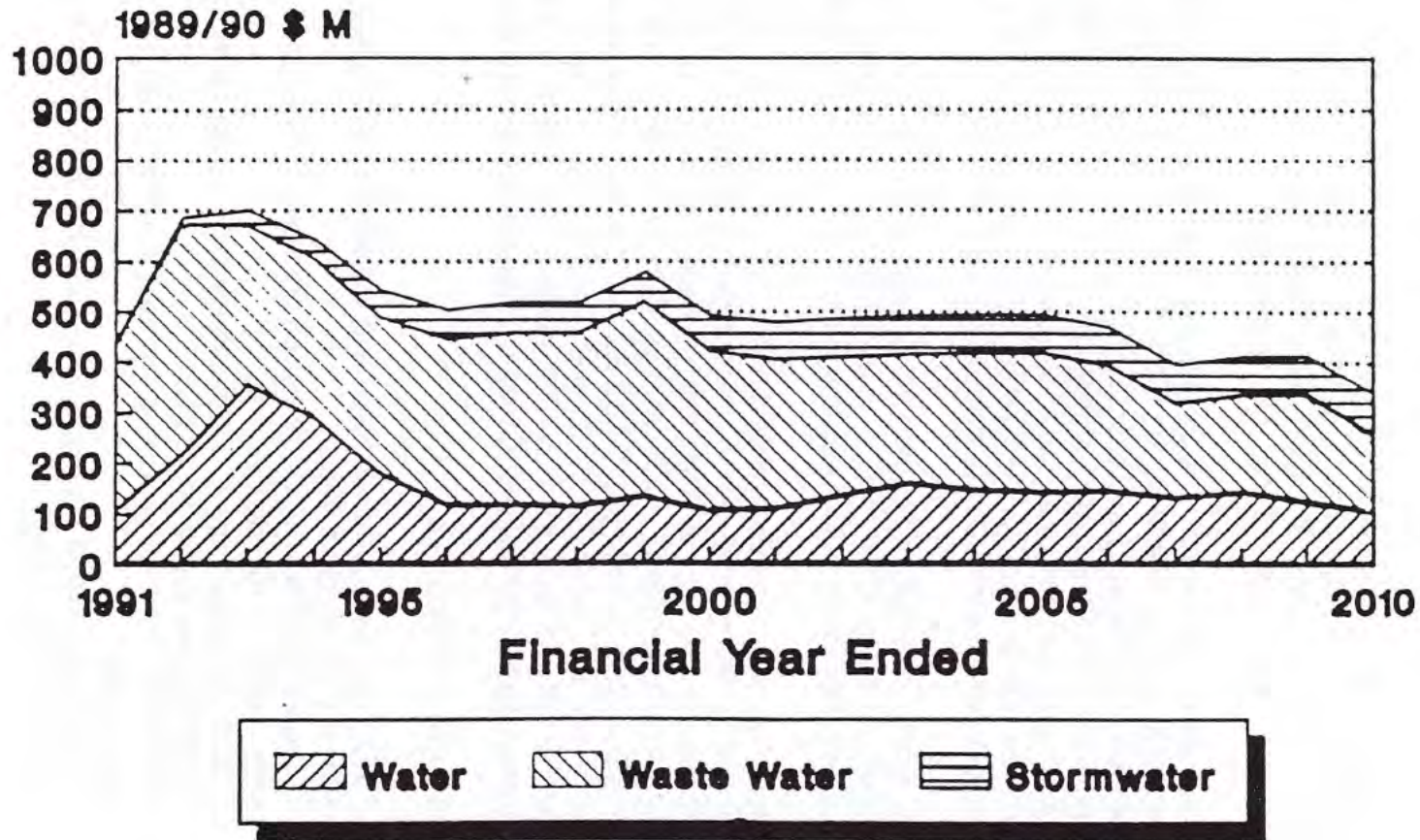
The EPA, through its licensing system, should be encouraging the Sydney Water Board to decrease the infiltration of stormwaters into the system during wet weather.

TABLE 2

Option P: Status of projects

OPTION P	ACTUAL SITUATION
<ul style="list-style-type: none"> ■ For major ocean plants: "65% SS removal 1991" "75% SS removal 1996" <p>Expenditure upon major ocean plants is listed as "\$720m"</p>	<p>North Head 39% Malabar 63%, Bondi 49%.</p>
<ul style="list-style-type: none"> ■ For minor ocean plants: "90% SS removal 2005" 	<p>4 Plants: Secondary Treatment 3 Plants: in excess of 60%.</p>
<ul style="list-style-type: none"> ■ For river quality: "Nepean-Hawkesbury plants 1995 \$460m" 	<p>All plants already meet licence conditions.</p>
<ul style="list-style-type: none"> ■ For sludge management/reuse: "end sludge to sea 1993 \$240m" 	<p>All sludge disposal to ocean ceased before 1993. At Malabar, disposal of sludge temporarily resumed (7 July – 28 October 1993) because of equipment breakdown. The volume discharged represented 10% of the sludge previously discharged on a yearly basis.</p>
<ul style="list-style-type: none"> ■ Capital works expenditure: 1990/91 1992/93 – \$350m 1993/94 – \$350m 	<ul style="list-style-type: none"> ■ 1992/93 expenditure on Clean Waterways Programme: \$254m capital plus \$46m SEL operating = \$300m ■ 1993/94 projected expenditure on Clean Waterways Programme: \$260m capital and operating. Final outcome is likely to be less, due to slowing of growth and improved efficiency.
<ul style="list-style-type: none"> ■ Overflows: Reduce to 25% by 1998 Reduce to one per annum from 50 locations by 2010 – \$1.68b 	<ul style="list-style-type: none"> ■ Significant smoke testing to provide source control; half a million houses tested; 24% found defective and being rectified ■ 170 km of sewer rehabilitated ■ 4400 house service lines rehabilitated.
<p>"The target we are now looking at is to reduce flows to the two-year level, so that the two-year storm can be contained within the system....we are looking at that and trying to estimate what is the cost associated with it. If that is the best use of the money, or it might be better to use it in some other aspect of the program" (Hansard, Dr Robinson, 10 September 1993, p62)</p>	

TOTAL OPTION P Capital Expenditure Program



NOTE: INCLUDES DEVELOPER FINANCED WORKS

Also of particular concern to the Committee is the fact that while the Board has publicly stated that Sydney's sewage system is presently operating beyond its projected capacity, the volume of sewage flowing into the ocean outfalls, particularly the northern sewer line, has actually increased.

The Board has recognised for many years that sewer overflows are one of its major problems. It was estimated in a Board publication, **Forum Feedback**, in October 1990, that over 90% of these are a result of cracked and broken pipes. Illegal connections produced about 10% of the volume in the pipes.

In this same publication, the Board was said to have calculated that it could cost-effectively reduce overflows by 50%. However, the Committee received evidence from the Board during the course of its inquiry which indicated that its pipes were continuing to leak and that significant sewage overflows were still occurring. It is therefore of concern that, as indicated in Table 2, the Board appears to have deferred its targets for reducing sewer surcharges and thus not remedied problems which were identified many years previously.

The Committee has attempted to review evidence put forward as to the actual success of the CWP in relation to its objectives. It has been agreed that one critical objective was to encourage source control and waste minimisation.

There has been considerable debate within the Committee as to whether this objective is being achieved. Figures supplied to the Committee by the Board have been interpreted by some Members of the Committee to mean that loads of trade waste in discharges at some coastal STPs have risen. The majority of Committee Members have concluded that loads of the five trade waste substances for six ocean sewage discharges generally appear to be increasing (figures are not available for the Board's other 29 plants); see **Table 3, Estimated Amounts of Mercury, Organochlorines, Grease, Phenols & Chromium Discharged**.

This Table indicates that:

- * Mercury: three of six plants have increased discharges; the total up from 207 kilos a year to 230 a year;
- * Organochlorines: three of six plants have increased discharges; up from 68 kilos a year to 151 kilos a year;
- * Oil and Grease: five of six plants have decreased their discharges; down from 11,190 tonnes a year to 10,540;
- * Phenols: three of six plants increased; up from 30,076 kilos a year to 44,088 kilos a year;
- * Chromium: five of six plants increased but total down from 11,408 kilos a year to 11,300 kilos a year.

ESTIMATED TOTAL AMOUNTS OF MERCURY, ORGANOCHLORINES, GREASE
PHENOLS & CHROMIUM DISCHARGED (See Notes below)

	Mercury		Organochlorines		Oil and Grease		Phenols		Chromium	
	1/4/91 to 31/3/92 kg/yr (calc)	1/4/92 to 31/3/93 kg/year (calc)	1/4/91 to 31/3/92 kg/year (calc)	1/4/92 to 31/3/93 kg/year (calc)	1/4/91 to 31/3/92 est tonnes/y	1/4/92 to 31/3/93 est tonnes/y	1/4/91 to 31/3/92 kg/year (calc)	1/4/92 to 31/3/93 kg/year (calc)	1/4/91 to 31/3/92 kg/year (calc)	1/4/92 to 31/3/93 kg/year (calc)
Sewage Treatment Plants										
Bellambi *	2	25	3	0	240	160	210	780	27	230
Port Kembla *	0	15	4	0	160	100	220	200	31	80
Bondi	30	23	4	11	1,300	1,000	5,900	4,200	990	1,800
Cronulla	6	5	1	1	600	360	3,140	1,600	190	1,040
Malabar *	150	158	30	80	5,490	5,120	20,600	37,300	7,720	5,350
North Head*	19	4	26	59	3,400	3,800	6	8	2,450	2,800
Warriewood	-	-	-	-	-	22	-	-	-	-

Notes: All discharged quantities were extrapolated from the EPA Licence Compliance Reports as per the EPA's 13 day monitoring requirements using reported plant flows on the sampling day and the corresponding analytical concentrations data.

* These plants reported that, during 1991-2 and 1992-3 EPA Discharge Licence Compliance Reporting Years, there were major improvements in the analytical and sampling procedures (the latest was in October 1992). These improvements have resulted in noticeable changes in the analytical results and hence the estimated yearly discharges.

No reporting or monitoring is required by the EPA Discharge Licence at other plants.

The Committee acknowledges that there have been significant successes in the Board's trade waste policy and that many other factors such as stormwater and illegal dumping contribute to water pollution levels. The Minister for Planning and Housing, the Hon Robert Webster MLC, wrote to the Committee on 12 November 1993 citing significant successes of the Board's trade waste policy:

"The results of this comprehensive testing program [160,000 analyses of substances throughout the waste-water system conducted from November 1989 to May 1993] show significant reductions in the mass levels of Suspended Solids, Grease, Phenols, Cadmium, Chromium and Lead. These reductions have been statistically justified by using a method developed by the CSIRO.

Other substances for which analyses were undertaken - pesticides, chemical compounds, mercury and other metals - demonstrate greater statistical variability. There is enough data, however, to show that there have also been meaningful downward trends in the mass levels of these substances. For your information, the Water Board has found that organochlorine pesticides are so low they are almost beneath detectable limits, at less than one kilogram per day.

The evidence for these reductions extends beyond sampling. Industrial and commercial customers are discharging significantly less into the sewers. In fact, in June 1993 these customers were invoiced for an average of 300 wet tonnes a day less waste than in the same period in 1988/89."

However, the Committee still remains concerned regarding the present methods and amounts of trade waste disposal into sewers.

Regardless of differing views within the Committee on the foregoing evidence, the Committee still felt it is essential that sewage discharge volumes and pollution concentration levels be crucial to the setting of any of the Board's performance measures. It is therefore important that such information be readily available to all interested parties. It is recommended that such trends be provided in comparative form in the following:

- * EPA Annual Reports for all NSW operators licensed to discharge sewage pollution;
- * Sydney Water Board Annual Reports;
- * Individual pollution licences.

Serious problems require prompt action

As previously discussed, it was primarily public concern about the serious

environmental problems regarding water quality which led to the establishment of the Clean Waterways Program. Such concerns continued to be expressed throughout the Committee's inquiry. Many submissions to the Committee strongly supported the discontinuation of sewage discharge into rivers and oceans¹. While the Board presently appears to have a limited capacity to predict the impact of its sewage pollution, the data it does possess appears to indicate that there are still significant water pollution problems. To illustrate the serious nature of these, extracts from the Board's research and some of its recommendations are provided below:

Long term effects of ocean disposal of sewage effluent

- *"There is increasing public awareness and concern that nutrient enrichment of oceanic waters by sewage effluent may trigger plankton blooms and may have other detrimental effects. The Water Board does not yet have sufficient information to counter such arguments."*
- *"Mercury was the only heavy metal with concentrations in fish which exceeded the NHMRC Heavy metal concentrations were highest in fish caught near Malabar and the mouth of Sydney Harbour."*

Suggested action:

- *"Increase source control by tightening of Trade Waste Policy."*
- *"Discourage use of environmentally persistent organochlorines. ... HCB is stored by ICI at Botany as an intractable waste, the relatively high concentrations found around the Malabar cliff face outfall suggest it is getting in to the sewage system."*
- *"Chlordane is the organochlorine of most concern currently and is likely to remain so for the future. Source control is difficult due to diffuse sources of input to the sewer system."*

Mussel Watch

- *"Results show that the deep water outfall at Malabar is a significant source of silver, lead, chlordane and HCB. Elevated concentrations have been measured in mussels exposed to the effluent field for periods of 2 to 3 months."*

¹Submissions opposing the continued use of ocean outfalls were received from groups including: Coalition Against Ocean Outfalls; Surfrider Foundation; Australian Conservation Foundation; Nature Conservation Council.

- *"these materials should be targeted in both trade and domestic source control methods. Further reductions in suspended solid loads may also assist in minimising the amounts of these materials accumulating in the environment."*²

Ocean outfall pollution

Ocean outfall disposal has the potential to transmit disease by pathogens in the marine environment and in droplets borne by the wind as well as by water. Studies show that bacteria tend to concentrate in the surface film of the sea. Bubbles carry bacteria to the surface and add to the bacteria already there. Therefore there will be a high concentration of pathogens in the jet drops and this creates a health hazard if it is carried by wind. For example, windborne pollution before the deep ocean outfalls were commissioned caused the loss of 300 Norfolk pine trees at Manly³.

The risk to recreational users of beaches polluted by sewage is now well established. Studies by the NSW Department of Health show a 2.54 increased risk of symptoms, particularly respiratory and gastro-intestinal, in pollution levels exceeding 300 coliforms.⁴

Although it is acknowledged that the beach pollution problem has improved, it was argued in many submissions to the Committee that the concept of ocean outfalls is no longer acceptable, that "dilution of pollution is not a solution". Some submissions strongly supported mandatory zero pollution goals for all existing outfalls and the retention of the 85% solids removal target set by Option P, having regard to other priorities in Option P. Apart from the discharges affecting beach environments, it is of particular concern that some major fishing resources are located in the area where the sewage plumes flow from the ocean outfalls .

The Committee received submissions and oral evidence from the Sydney Coastal Council raising doubt about the effectiveness of the Beachwatch Environmental

² Information taken from summaries of SWB research projects (Supplied to the Committee by the SWB in September 1993).

³ Norfolk Island pines are well adapted to growing in seafront conditions as, in normal circumstances, their foliage seems able to resist the excessive uptake of sodium chloride. However, it has been confirmed in glasshouse trials that surfactants, which become entrained in airborne seaspray after discharge from ocean outfalls enhance foliar uptake of salt. Source: **"The Impact of Surfactants on Norfolk Island Pines Along Sydney Coastal Beaches Since 1973"** *SPPC Environmental Pollution (Series A) 41 (1986) 153-164.*

⁴ *Relative Risk of Reporting Symptoms by Swimming Status & Pollution Level, Beach User Study Sydney 1989-90, Manly Beach*

Monitoring Program (EMP). It was noted that the EMP could be considered inadequate as the level of beach pollution is not really known. Concern was also raised about the amount of resources devoted to the program.

Despite the EPA's Environmental Monitoring Program, both the EPA and the Board have a limited ability to predict environmental impacts from ocean outfalls:

"With respect to predictions about ocean water quality offshore from one of our discharges, monitoring of the ocean has shown its immense variability over time in response to changing oceanographic and climatic conditions. Unfortunately, it is not within the Board's capability to provide any realistic, static prediction on a location specific basis for the ocean, although the Board has done some work on the relative sources of ocean pollution." (Mr Paul Broad, Managing Director, Sydney Water Board, undated letter to the Committee, received Wednesday 15 September 1993)

The Committee was disappointed that there was no information available providing an analysis of deep water outfalls although the EPA submission did note the public availability of the series of technical reports from the EMP and the further results in September 1993. The Committee is concerned that the Water Board continues to discharge 1 billion litres of sewage per day (which has only received partial primary treatment) into the Pacific via its three major headland treatment plants. The community should be provided with an urgent report regarding the current state of the ocean outfalls. EPA monitoring should continue until there is unequivocal evidence that it is not significantly affecting marine life.

Fishing industry

There is currently little knowledge regarding the impact of sewage pollution on the fishing industry (see **State of the Environment Report 1993, Table 4, p.16**). On the issue of the possible affect of sewage on fishing, the Committee was told:

"it is probable that the Board is having a substantial impact upon the fishing industry. Not all waterway problems are the responsibility of the Board. For example, although the Sydney sewage outfalls are major sources of the organochlorine pesticide chlordane, the role of the Environment Protection Authority in failing to seek stricter controls on this chemical is a more pertinent avenue of concern than seeking answers from the Board which is well aware that sewage systems were never designed to dispose of such substances."
(Ocean Watch submission, 7 September 1993, p.1)

However, the majority of the Committee agreed that it also needs to be recognised that chemical control and banning of chemicals is a national issue which is currently being overseen by the National Registration Authority for Agricultural and

STATUS OF KNOWLEDGE OF NSW FISH SPECIES

Species or Species Group	Status of Knowledge for		Species or Species Group	Status of Knowledge for	
	Management	ESD		Management	ESD
OVERFISHED:			Redfin Perch (F)	Inadequate	Inadequate
Australinn Bass (F)	Incomplete	Incomplete	Red Spot Whiting	Incomplete	Inadequate
Murray Cod (F)	Incomplete	Incomplete	Scallop (E/M)	Incomplete	Incomplete
Gemfish	Incomplete	Inadequate	Sweep	Inadequate	Inadequate
Yellowtail Kingfish	Inadequate	Inadequate	Silver Biddy (E/M)	Inadequate	Inadequate
Blue Mackerel	Inadequate	Inadequate	Hairtail (E/M)	Inadequate	Inadequate
Macquarie Perch (F)	Inadequate	Inadequate	Sea Urchin	Inadequate	Inadequate
Redfish	Incomplete	Inadequate	Turban Snails	Inadequate	Inadequate
Eastern Rock Lobster	Inadequate	Inadequate	UNCERTAIN:		
Snapper	Inadequate	Inadequate	Australian Anchovy	Inadequate	Inadequate
Southern Bluefin Tuna	Incomplete	Incomplete	Barracouta	Incomplete	Inadequate
Abalone	Incomplete	Incomplete	Bonito	Inadequate	Inadequate
FULLY FISHED:			Balmain Bug	Inadequate	Inadequate
Yellowfin Bream (E/M)	Incomplete	Incomplete	Freshwater Catfish (F)	Incomplete	Incomplete
Blue Swimmer Crab (E/M)	Inadequate	Inadequate	Grey Banded Cod	Inadequate	Inadequate
Mud Crab (E)	Inadequate	Inadequate	Drummer	Inadequate	Inadequate
Spanner Crab	Incomplete	Incomplete	Southern Congor Eel	Inadequate	Inadequate
John Dory	Inadequate	Inadequate	Mixed Flounder spp.	Inadequate	Inadequate
Mirror Dory	Inadequate	Inadequate	Mixed Garfish (F/M)	Inadequate	Inadequate
Dusky Flathead (E)	Inadequate	Inadequate	Hapuku/Hapuka (Polyprion spp.)	Inadequate	Inadequate
Sand Flathead	Inadequate	Inadequate	Red Morwong	Inadequate	Inadequate
Tiger Flathead	Incomplete	Inadequate	Longtom	Inadequate	Inadequate
River Garfish (E)	Inadequate	Inadequate	Golden Perch (F) (Callop)	Incomplete	Inadequate
Sea Garfish	Inadequate	Inadequate	Silver Perch (F)	Incomplete	Inadequate
Short Beaked Garfish	Inadequate	Inadequate	Pilchard/Herring Mix	Inadequate	Inadequate
Groper	Inadequate	Inadequate	Endeavour Prawn	Inadequate	Inadequate
Chinaman Leatherjacket	Inadequate	Inadequate	Royal Red Prawn	Incomplete	Inadequate
Ling	Inadequate	Inadequate	Tiger Prawn	Inadequate	Inadequate
Jack Mackerel	Inadequate	Inadequate	Sergeant Baker	Inadequate	Inadequate
Spanish Mackerel	Inadequate	Inadequate	Silver Trevally	Incomplete	Inadequate
Sea Mullet (E/M)	Incomplete	Incomplete	Brown Trout (F)	Adequate	Adequate
Mulloway (E/M)	Inadequate	Inadequate	Blue Spot and Silver Warehou	Inadequate	Inadequate
Ocean Perch	Incomplete	Inadequate	Sharks and Rays		
Pipi	Inadequate	Inadequate	Angol Shark	Inadequate	Inadequate
Gronzyback Prawn (E)	Inadequate	Incomplete	Banjo Shark	Inadequate	Inadequate
Eastern King Prawn (E/M)	Incomplete	Incomplete	Blacktip Shark	Incomplete	Inadequate
School Prawn (E/M)	Inadequate	Incomplete	Carpal Shark	Inadequate	Inadequate
Australian Salmon	Inadequate	Inadequate	Endeavour Dogfish	Inadequate	Inadequate
Sydney Turban Snail	Inadequate	Inadequate	Fiddler Ray	Inadequate	Inadequate
Taranglin	Inadequate	Inadequate	Ghost Shark	Inadequate	Inadequate
Tailor	Inadequate	Inadequate	Greeneye Dogfish	Inadequate	Inadequate
Tarwhine (E/M)	Inadequate	Inadequate	Gummy Shark	Adequate	Inadequate
Blue-eyed Trevalla	Inadequate	Inadequate	Hammerhead Shark	Inadequate	Inadequate
Rainbow Trout (F)	Adequate	Adequate	Mako Shark	Inadequate	Inadequate
Skipjack Tuna	Incomplete	Incomplete	Numb Fish	Inadequate	Inadequate
Yellowfin Tuna	Incomplete	Incomplete	Port Jackson Shark	Inadequate	Inadequate
Sand Whiting (E/M)	Inadequate	Inadequate	Prickly Dogfish	Inadequate	Inadequate
Octopus (E/M)	Inadequate	Inadequate	Saw Shark	Inadequate	Inadequate
Squid (E/M)	Inadequate	Inadequate	School Shark	Adequate	Inadequate
Cuttlefish (E/M)	Inadequate	Inadequate	Southern Calamari	Inadequate	Inadequate
Flat-tail Mullet	Inadequate	Inadequate	Latchet		
UNDERFISHED:			Cockles (E)		
Carp (F)	Incomplete	Incomplete	Red Mullet (E/M)		
Long-finned Eels (F)	Inadequate	Inadequate	Beach Worms		
Short-finned Eels (F)	Inadequate	Inadequate	Abalone	Inadequate	Inadequate
Blue Grenadier	Incomplete	Inadequate	Yellowtail (E/M)	Inadequate	Inadequate
Jackass Morwong	Adequate	Inadequate			

(F – freshwater; F/E – estuarine and freshwater; E – estuarine; and E/M – estuarine and coastal mixes)

Veterinary Chemicals and in NSW this involves other government regulatory authorities such as the Workcover Authority and the Department of Agriculture.

Notwithstanding this, the majority of the Committee believe that NSW should take the lead in this area and that progress to date has been too slow.

The Committee also received evidence that substantial changes in freshwater flows, by sand and gravel dredging, have a large effect on the marine environment.⁵

The Committee has noted some international developments relating to the control of water pollution. In February 1994 President Clinton proposed to overhaul the 1972 Clean Water Act, including a plan to reduce agricultural and industrial water pollution and a provision to ban industrial use of chlorine or chlorine compounds. The Nations discharging pollutants to the North Sea have also set binding targets to end pollution of the North Sea, particularly toxic pollutants such as chlorine and chlorine compounds (see, Oslo & Paris Conventions for the Prevention of Marine Pollution, Paris 21-22 September 1992 and the North Sea Conference, the Hague, March 7 and 8, 1990.).

Conclusions by the majority of the Committee

In conclusion, the CWP can be seen as a social contract between the State Government and the public. After 5 years of the SEL, Water Board customers will have paid an estimated \$492 million and the NSW Government is equally obliged to honour its undertakings as part of that contract. It would appear on the evidence that the Committee received that the Board is presently failing to properly account for the operation of the CWP in that its public reports contain inadequate, poorly defined or non-existent goals which therefore defy ready scrutiny and analysis.

Expenditure on the CWP also appears to be currently falling behind Option P schedules. However, it is acknowledged that some of these problems are due inherently to the fact that there is no principal body responsible for managing the rivers and tidal waters and the virtual regulatory vacuum within which the CWP has had to operate since its inception.

A major problem is that the CWP essentially focuses only on that pollution which is under the Water Board's control. Therefore, it cannot address many key environmental issues directly affecting the health of Sydney's rivers and tidal waters. These include the amount of water the Board should be permitted to draw off the Hawkesbury river, urban and rural run-off controls or the quantity of water the river needs to sustain its environmental health.

⁵ *State of the Environment Report: Status of the Knowledge of Fish Species*, p.131

Recommendations

- 1(a) The Clean Waterways Program should continue. Quantified, measurable environmental goals and implementation programs should be published by May 1995 for comment during a two month display period after which a public meeting of the appointed Board should be held to determine the form and goals of the Program for the next 15 years and the quantified environmental goals to be achieved in the next twelve months.
- (b) Measurable demand management and catchment management goals should be integrated with the Clean Waterways Program and included in the document published in May 1995. The Program should be approved by the Water Administration Ministerial Corporation within the terms of the final operating licence it issues to the Board in the first half of 1994.
- (c) The 1994 and following annual reports of the Board should distinguish between capital and non-capital expenditure upon the Clean Waterways Program and capital and non-capital expenditure on other projects. Annual reports should show, in consistent language and format, the link between capital and non-capital expenditure and environmental outcomes. Board members are to sign the Clean Waterways Program Annual Report.
- (d) Any alteration to the Clean Waterways Program should occur after, not before, the Board has consulted its customers and obtained the Water Administration Ministerial Corporation's approval to the changes to its operating licence.

For recommendations about making the Clean Waterways Program a statutory duty for the Board, see also Recommendation 24.

Co-ordination of environmental monitoring programs

- 2 As part of its statutory obligation under the Protection of the Environment Administration Act to coordinate the activities of all public authorities that relate to its legislation the EPA should coordinate aquatic monitoring programs by listing in its State of the Environment Report in 1995 and thereafter the monitoring programs being conducted by local and state agencies, including the Hunter Water Corporation.

Ocean monitoring

- 3(a) By 1995 the Board of the EPA should call for public tenders for a peer group to review all the results obtained from the environmental monitoring program for the Sydney Water Board's ocean outfalls. The Minister administering the EPA should choose the successful tender upon the recommendation of the EPA Board. This peer group should recommend whether or not ocean monitoring, or parts of it, should be discontinued, resumed or continued. The whole of the peer group's report should be published within 3 months of completion of peer assessment, without amendment, by the Board of the EPA within one month of it being provided to the EPA Board.
- (b) The components of the program that do not include the taking of cores and which relate to transitory or ephemeral environmental impacts, particularly any research involving mussels, should continue at least until the results are published from analysis of the first two years of monitoring. Any such non-core sampling that was in place that has been discontinued should be immediately resumed and the results made available to the peer group conducting the review.

Ocean discharge

- 4(a) The 1993 draft ocean discharge guidelines issued by the EPA should be withdrawn and amended for public display after having incorporated standards that require (in measurable terms) the reduction and eventual prohibition of discharge of trade waste substances to the ocean. Display should include the local council offices in the Board's area. The guidelines should be given statutory force by 1995.
- (b) The discharge of industrial wastes (as defined in the Board's Trade Waste Policy) which exceed the "domestic" level should be prohibited after December 1994. From 1994 the Board should annually increase charges for discharge of trade waste to its sewers to provide an increasing incentive to customers to reduce and eventually end such discharges.
- (c) The EPA should publish in 1994 a plan to phase out the use of all toxic pollutants, including organochlorines and other hazardous chlorine substances. This plan should match international best practices in the United States and Europe and include other pollutants as contained in the February 1994 announcement by President Clinton to amend the Clean Water Act 1972 (US) and the Oslo & Paris Conventions for the prevention of marine pollution, Paris 21-22 September 1990, and the North Sea Conference, the Hague, March 7 and 8, 1990. Such plans
-

should be formulated following consultation with the Commonwealth EPA.

- (d) By the end of 1994 the EPA should obtain from licensees timetables for the phase out of these substances, and all other toxic pollutants. These timetables should be forthwith published and incorporated as licence conditions in any licences issued. Licences should include industrial, government and local government authorities, and bodies providing water, sewage and drainage services.

The Hawkesbury and Nepean Rivers

- 5(a) In relation to the Hawkesbury and Nepean rivers the EPA Board should publish in 1994:

(i) Mandatory targets for environmental improvement in the quality and quantity of the waters in the rivers;

(ii) The priorities it proposes to allocate for regulating the transportation, collection, treatment, storage and disposal of waste together with any associated implementation measures and proposed environmental outcomes;

(iii) The programs by which the EPA and the Regional Algal Co-ordinating Committee propose to control and prevent where possible blue-green algae outbreaks in the Hawkesbury-Nepean River;

(iv) A summary of the pollution reduction programs it is applying or intends to apply to pollution of the rivers together with the measurable environmental outcomes being sought in the next 12 months.

- (b) The EPA Board should publicly determine in 1994 whether a moratorium should be imposed by the EPA, or any other agency, upon new sand and gravel extraction until such time as the EPA has produced and published scientific research that concludes blue-green algae is not likely to result from such existing development. The EPA should also publicly determine whether a similar moratorium should be recommended to other consent authorities involved in new development.

Pollution trend reporting

- 6 The EPA shall progressively report on the performance of relevant government agencies against agreed water quality goals on a two yearly basis. The reports shall be public and be included in the bi-

annual State of the Environment Report.

Wherever possible the Reports should include:

- (a) The total annual weight or volumes of pollution; and
- (b) Quantified predictions of the weight or volumes of pollution for the forthcoming reporting year.

Rural and urban run-off

- 7(a) By 1995 the government should apply a single set of environmental goals for water quality to all relevant government bodies whatever their status and whether they are incorporated, inner or outer government budget bodies. The goals should be at least as stringent than those found in regulations applying to the private sector.
- (b) All public sector agencies and local government (particularly the large landowners such as the Roads and Traffic Authority, the State Rail Authority and the Department of Conservation and Land Management), should be encouraged to manage their land and buildings so that the quality of run-off is not lowered and the quantity of water run-off is not increased due to their existing and proposed works.

Stormwater licences

- 8 By 1995 the EPA should licence stormwater pollution. The licences should apply to all relevant public agencies or bodies, including local government, and should be strictly limited to the pollution over which each body has reasonable powers and resources to control. The licences should encourage the use of best management practices such as the implementation of rainwater harvesting, on-site detention and other devices to reduce the volume of stormwater flow and to prevent the generation of pollution at source.

Run-off from roads

- 9 By January 1995:
 - (i) To the extent that the contents and use of the RTA Stormwater Manual for the construction of roads affects the use and flow of water, the Manual should be approved by the Water Administration Ministerial Corporation.
 - (ii) The RTA should design, construct and maintain roads so they do not increase either the amount of water run-off or the level of pollution presently entering or leaving the RTA's roads. As part of the

implementation of this recommendation the RTA should report annually upon the amount of water and pollution entering or leaving its roads. The EPA's next State of the Environment Report should also incorporate data about such pollution and any trends.

(iii) The RTA should install and clean sediment traps on its roads. The pollution trapped and cleaned out should be measured, along with the costs incurred, and be made a specific matter for annual reporting by the RTA.

Interception of sewage in the Northern Sydney Ocean Outfall System (NSOOS)

- 10 Any land that has been purchased by the Board to intercept sewage in the NSOOS should be maintained in the ownership of the Board. Consistent with stated Sydney Water Board policy of a 30% reduction of sewage from the NSOOS, the Board should call for tenders proposing the construction of an interception device on land that has been purchased by the Board.

Moratorium for new connections to the NSOOS

- 11 The Sydney Water Board should report upon the feasibility of a moratorium being placed upon the addition of new sewage connections to the NSOOS in 1995, other than connections within existing serviced areas.

(See also related recommendations in Chapter d)

General reduction in sewage pollution

- 12 After accounting for variations in both discharges to waters and leakage into or out of its pipes caused by rain, the volume of sewage discharged by the Board to the rivers and oceans, and the weight of pollutants in the sewage, should be reduced each year. In 1994 the Board should commence planning for that outcome. The Board should aim to end sewage pollution to the ocean and rivers. While this is a long term goal, it is one which should be set for the Board to report on each year in its annual reports. In its 1995 annual report the Board should state progress and trends in the reduction of the discharges and leakages in the year to date, and anticipated progress and trends in the forthcoming reporting year (See also Recommendation 25 relating to the proposed amendments to the Board's Act).

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

Water Board performance according to objectives

All Government Members on the Committee considered that there was actually ample evidence put forward to show that the Board had:

- . kept to the environmental objectives of the Clean Waterways Programme,
- . made full allocation of the Special Environmental Levy to environmental projects,
- . met all but one target of "Option P",
- . had, in fact, met some targets in "Option P" ahead of time, and
- . had reported on its progress in the Clean Waterways Programme in a consistent fashion, although it was felt that it was in a format which was not readily understood by members of the public.

Evidence to support these contentions of the minority of the Committee is listed clearly in Appendix M1. These members wish to place on record their protest at the exclusion of this evidence and its implications from consideration by the majority of the committee in the main body of the report.

Government Members were somewhat puzzled that some members of the Committee seemed to think that the Board should have already achieved, in only five years, everything that it had projected it would achieve in twenty. They considered that the Board had a right to object to being called to account on certain activities in Option P for not having met target dates that were still several years in the future.

In particular these members could not agree with the majority report which concluded that the Board appears to have deferred its targets for reducing sewer overflows. They did not see how Table 2 provided supporting evidence for this majority assertion, given that the target date for the surcharge reduction is still four years off and, in any case, ought to be subject to refinement depending on the results of environmental monitoring.

The Government Members of the Committee also noted evidence that the Board had in fact met all targets of Option P either on time or, in some instances, ahead of, their due date. There is only one exception to this: they have not met the goal as prescribed in Option P of "65% solids removal in effluent at the major ocean treatment plants by 1991". (See below for explanation.)

The Programme's success in reducing pollution

Government Members took issue with the assertion that the effectiveness of the CWP could be questioned simply because volumes of sewage being discharged had increased and treatment was not improving (see p. 9 of the majority report).

There was substantial evidence that not only had treatment been enhanced but bathing water quality on the beaches had improved as a direct result of these enhancements.

For the ocean treatment plants, improvements in licence compliance were quite clear and statements about improvements in effluent quality were provided. The Water Board submission, for instance stated that solids capture at North Head alone had increased from 9% at the start of the CWP to more than 39% now and at Malabar had increased to 63%. For the inland treatment plants, the submission showed marked improvements in nutrient removal. These assertions were confirmed by the EPA in its submission, relevant extracts of which are provided as Appendix M2.

Expenditure for expenditure's sake versus expenditure for better environmental outcomes

There has been considerable debate about the wisdom of spending up to \$1 billion on the single objective of 65% solids removal at the major ocean plants, as specified in Option P, without first being sure of the environmental outcome of such expenditure. Part of the programme of works in Option P was to conduct monitoring to further quantify the environmental improvement that may be achieved from each increment of expenditure.

Where such massive sums of money are to be expended on a single activity, as they are in the case of the 65% solids removal activity, the Government members are keen to see necessary monitoring continue so that decisions about priorities for expenditure can be made in the light of clear knowledge of the amount of water quality improvement, if any, they will bring. In two years' time ocean monitoring programmes will be completed. This will mean that, for the first time, the Board will be able to quantify the water quality improvements that can actually be gained from such expensive treatment upgrades. Government Members consider that the community should be given the opportunity to choose whether it wishes to wait to see the outcomes of this monitoring before a decision is made to fund this work as a priority over and above more apparent needs in the inland rivers.

The role of "Choices for Clean Waterways"

Government Members believed that the discussion document, "Choices for Clean Waterways", far from abandoning the Clean Waterways Programme, provides a useful introduction to the complex issues the Water Board is attempting to resolve as it goes

into the second five years of the Programme. Members could not see the reason for cutting off debate on the issue, especially when it is apparent that some very expensive works could be undertaken before we could be reasonably certain of the amount of improvement they will lead to. Discussion is even more important when there is a serious question as to whether further upgrades will lead to any environmental benefit at all.

Government Members agree with the Board's often stated philosophy of wanting to invest funds in places where the community will get the "biggest bang for the buck". Discussion with the community on priorities for expenditure and on the impact of the various methods of achieving water quality goals is a legitimate activity which could lead to better use of the community's funds in the manner that the community wanted.

It should be noted that the Minister for Planning, the Hon Robert Webster, MLC, recently announced that in the first four years of the Clean Waterways Programme, \$1.08 billion has been spent on waterway improvements.

Far from abandoning the Programme, the Board is sticking closely to the intent and letter of Option P.

The Board's performance on the programme should be measured not in terms of mere expenditure but in terms of environmental outcomes.

Clear evidence was received as to the reasons for apparent "under-expenditure". Sydney has not grown at the pace expected when Option P was designed. So fewer works have had to be constructed as pollution has not occurred at the rate originally anticipated.

The evidence received in this regard is quite strong. When Option P was designed, expenditure on servicing new growth was estimated at approximately \$150 million per year. Last year the Board was required to spend only \$18 million on servicing new growth. The under-expenditure clearly reflects the slower growth pattern of the city and the corresponding slowing of the rate of pollution increase that was expected in 1988. For evidence on this point, see Appendix M3, a letter from the Managing Director of the Water Board to the Chairman of the Joint Select Committee, especially Mr Broad's response to "Question 2" from Dr Macdonald.

Misuse of data in evidence on trade waste

Government Members contest strongly the scientific validity of Table 3 and the conclusions drawn in the majority report about heavy metal, organochlorine, oil, and grease discharges listed on page 11. The wilful misrepresentation of the figures, despite the qualifications listed as footnotes, makes a farce of environmental auditing and could call into question the purported qualifications of the person (or persons)

who attempted to assume an audit role on behalf of the Committee.

The data in Table 3 was derived by calculations involving the concentrations and flow of sewage effluents as measured from samples. The purpose of the sampling was for the EPA to determine whether the Water Board had complied with conditions in the EPA licence for the STP. The sample programme consisted of 54 samples taken from major ocean outfall sewage plants conducted on 13 days over a two year period.

Whilst these procedures were quite adequate for the purpose for which they were collected, the data is far too limited to be used to calculate reliably total discharges over a year.

Firstly, many of the readings were below the limit of analytical detection. Secondly, sewage quality varies widely from day to day and at various hours within any given day. This means that results from only a few samples will skew the results, making such figures statistically invalid.

It is worth pointing out that the data was supplied in this form by the Water Board in response to a particular request of the Committee's consultant for information apparently only on licence compliance. The Committee's consultant did not actually specify that he was looking for data upon which to make valid conclusions about performance on trade waste reductions. It has since been pointed out to him that more accurate data was available for determining levels of trade waste discharge, based on 160,000 tests using a methodology specially designed for the Board by the CSIRO's Division of Mathematics and Statistics. This data clearly shows a verified overall downward trend in contamination from trade waste. This evidence is shown in Appendix M3 in the graphs and in that part of the letter from Paul Broad which responds to Dr Macdonald's question 3. Figures were provided in the Annual Reports of the Clean Waterways Programme submitted in evidence and they also show a clear downward trend for the same substances cited above.

The information in Appendix M3 was offered to the Committee consultant by the Water Board but it has not been included in the majority report. Further attempts by Government Members of the Committee to have trade waste data considered by the whole Committee was voted down by the majority. Regrettably, this table was one of the items contained in the draft report which was leaked to the media prior to the report being finalised.

Misuse of "research findings" in evidence

Government Members did not consider the "extracts from the Board's research" on p. 13 of the report as being representative of evidence submitted by either the Board or the EPA on environmental research and its outcomes.

On the contrary, these "extracts" constituted research at all. Rather, they are largely

outdated summary status reports of work in progress that were prepared by a Water Board contractor (AWT) who regularly provides services in the field of environmental monitoring. One purpose of these summaries was to build various cases for more monitoring that might be done by that contractor.

A great deal of other evidence on the sources of ocean pollution was provided which showed clearly that heavy metal contamination of waterways comes predominantly from diffuse sources. This fact is acknowledged by the majority of the Committee itself later in the report in Section G.

CONCLUSIONS BY GOVERNMENT MEMBERS OF THE COMMITTEE

Government Members were strongly of the view that the success of the Clean Waterways Programme should be measured in terms of its environmental outcomes, not purely in terms of dollars spent.

These members also believed that significant evidence was submitted in the form of annual reports and other supplementary information to show that:

- . the Board has been reporting annually on the progress of the programme in consistent terms; and
- . targets in "Option P" have largely been kept to, except in the case of the target for solids removal at the large ocean treatment plants.

These members recommend that Option P be reviewed regularly in the light of any new information and that targets for the Clean Waterways Programme be the subject of community debate, bearing in mind the fact that it is the people of Sydney who will have to pay for these extremely expensive projects.

Government Members acknowledge that over the past five years customers have paid \$1000 each toward environmental works under the Clean Waterways Programme. The adherence to the original \$7 billion programme would necessitate the expenditure of a further \$6000 per customer. It is felt that seeking public comment on this via "Choices for Clean Waterways" is an appropriate step to confirm the willingness of the public to pay.

This is particularly the case in view of the Government Pricing Tribunal's recommendation 5.1 which states:

" Major capital expenditure to improve environmental quality should not be undertaken without evidence about the willingness of customers to pay for such improvements. Water suppliers should not assume that price increases would be forthcoming automatically, should they decide to go ahead with capital expenditures in the absence of such information".

These members also concluded that Option P should be reviewed, in consultation with the community in the light of scientific information now gathered, and that its targets should be reformulated so that they are expressed more in terms of environmental outcomes and less in terms of lists of activities.

ALTERNATIVE RECOMMENDATION - GOVERNMENT MEMBERS

The Government Members believe that, given the importance and complexity of this issue, the Board should inform its customers of the options for achieving clean waterways and their benefits, costs and risks. The Board should then proceed, as already planned, to conduct an extensive public involvement process to review the Clean Waterways Programme. This course of action is in line with the findings of the recent meeting of the Council of Australian Governments and it is the only way to ensure that this long programme continues to meet the changing needs of customers and the environment over the next fifteen years.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

1.(a) Government Members support the Clean Waterways Programme continuing, but we believe that quantifiable, measurable goals should be developed by the EPA as environmental regulations following public consultation.

1.(b) Government Members dissent from this recommendation. The SWB already has a Catchment management policy which was formalised in 1993.

1.(c) Supported

1.(d) Supported, but only to the extent that the recommendation encourages consultation with customers. The recommendation for approval of the Clean Waterways Programme by the Water Administration Corporation does not make any sense, the programme should be approved in its final form by the Government.

2. Supported.

3(a). Government Members dissent from this recommendation. Government Members support the proposal for peer review of the results of the EMP, but dissent from the proposed method of review since there is an advisory committee in existence already for this purpose.

3(b) Government Members dissent from this recommendation. There is no point in resuming monitoring which has no scientific value. The cost of resuming the monitoring programme at the ocean outfall sites is significant (for example the potential costs of continuing the oyster monitoring at previous levels could be in the

order of \$547,000/year. Resumption of this programme might prevent other monitoring programme such as those conducted in the Hawkesbury Nepean River from taking place.

4(a) Government Members dissent from this recommendation. Ocean discharge guidelines should be withdrawn by the EPA and public comment sought on them. However the recommendation calls for specific provisions to be included which should be dealt with in the public consultation process. The Majority recommendation simply makes a mockery of a public consultation phase.

4(b) The thrust of this recommendation is supported by Government Members but the proposal to increase charges for Trade Waste Discharges will have to be subject to approval from the independent Government Pricing Tribunal.

4(c) and (d). The thrust of this recommendation is supported with regard to the desirability of phasing out the use of toxic substances but with the qualification that the Committee did not receive any evidence on this matter. This recommendation was added to the Report at a very late stage by the Committee Consultant. These comments also apply to Recommendation 4.(d)

5.(a) (i) Supported.

5 (a) (ii) Supported.

5 (a) (iii) Supported

5 (a) (iv) Supported

5(b). Government Members dissent from this recommendation.

The EPA should publicly advise the Planning Authorities of the water quality impacts of proposed future development and sand and gravel extraction in rivers so that Planning Authorities can determine whether development moratoriums are needed and the social and economic consequences of such moratoriums.

6. Government Members dissent from this recommendation.

First it will be a bureaucratic nightmare, and its likely costs are unknown. The environmental impact of all of this gratuitous reporting by Government agencies will be seriously undermined because it will not apply to the private sector. Government Members welcome the recently introduced State of the Environment Report, and suggest that options be explored whereby it can make relevant reports which will help reduce storm water runoff.

7(a). Government Members dissent from this recommendation.

Whilst it is reasonable to expect Government agencies to report on the manner in which their activities impact on water quality goals, it should be recognised that setting uniform standards for reporting will be almost impossible because different government agencies affect water quality differently.

7(b). Government Members dissent from this recommendation.

The wording of the recommendation is bizarre, because the amount of stormwater runoff is largely determined by the forces of nature. Government Members appreciate the fact that measures can be taken to control the effect of runoff, but the blanket imposition of a requirement to continually reduce runoff is an impossible target. If the Government took this recommendation seriously it could never construct another road or building.

8. Supported

9(i), (ii), and (iii) Government Members dissent from these recommendations. The comments made for recommendation 7(b) are applicable to this recommendation also. Government Members note that the RTA has developed a Stormwater Management Manual and recommend that all future road construction should utilise best management practices to minimise stormwater pollution and runoff.

10. Government Members dissent from this recommendation.

Government Members support the acquisition of the land in question so that consideration can be given to the feasibility of constructing an interception device. We will not support yet another recommendation from the Labor Party that the Government ignore the requirements of the Environmental Planning and Assessment Act in the construction of public works. The residents of the area concerned should be consulted before they have a major sewage treatment plant constructed in their vicinity.

11. Supported.

12. Government Members support the thrust of this recommendation. Nevertheless it must be pointed out that while the SWB can undertake to eliminate the pollution caused by its discharges, this will not guarantee pollution free waterways. This is because there are many other sources of pollution than sewage treatment plants (ie stormwater pollution). This recommendation is typical of the fundamental flaws which are contained in the Majority Report. It frequently attempts to set specific targets and means for pollution reduction without any consideration as to their cost benefit and whether the public is willing to pay for them.

"b The credible and independent regulation of water quality and quantity with particular regard for environmental factors"

b Regulating Water

Summary

The need for change

Existing powers which control water

The proposed "Office of Water"

A Proposed Model for the Office of Water

Outcomes must be accounted for

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Recommendations 13-21

Minority Comments - Government Members

"..... when you find a fuzzy border, you may expect to find politicians grazing there in greater numbers than elsewhere in the system." Warm and Dry; the Evolution of Greinerism, Speeches and Papers written by Gary L Sturgess, 1982-1992, p.241

The Committee suggests that "fuzzy borders" also create problems for bureaucrats and the environment.

SUMMARY

Sewage pollution and water management are essentially inseparable issues.

Functions which affect water quality should be allocated to public institutions according to whether their primary role is to manage, regulate or operate.

Ideally, each body should only perform one of these functions. However, where a body does perform more than one function, additional accountability obligations should apply.

Current regulatory arrangements and accountability obligations prevent flexibility and change within the NSW water industry generally and the Sydney Water Board specifically.

The need for change

There has been much criticism that the regulation of NSW's water, sewage and drainage is fragmented and ineffective. The Government Pricing Tribunal, in its report on the Sydney Water Board, has called for new institutional arrangements. In 1993 the Government also established a Cabinet Sub-Committee to review the water industry which is due to report. It is clear that without improved regulation, significant financial and environmental gains are unlikely to be won or then maintained. Some of the current regulatory problems facing the rivers and tidal waters are:

- there are no uniform laws or body of administration;
- no single agency has over-riding control and several different agencies are responsible for various parts of the waterways;
- there are no existing goals for achieving desired environmental outcomes.

Within the Sydney region a variety of government agencies have a role in water management. For example, the Public Works Department controls development in tidal waters; the Department of Water Resources (DWR) determines water usage in non-tidal waters and the Maritime Services Board determines development where the bed of the river or harbour has been placed under the Board's control.

In relation to trade waste disposal, the Sydney Water Board licenses customers discharging to its sewers in the Sydney and Illawarra metropolitan areas. However, for the rest of NSW, including the rivers which form part of the Sydney Water Board's catchments, the NSW Public Works Department handles the trade waste licensing. All licence fees for Sydney's trade waste, except for DWR fees, then go into three statutory environmental trusts.

The result is unproductive inter-agency rivalries with the actual health and unified management of the river receiving a low priority. Consequently, assigning responsibility and monitoring accountability is currently very difficult.

Several government agencies have strong and conflicting powers to control many activities affecting the use and flow, as well as quality and quantity, of water. For example:

- * The **EPA** (and before this, its predecessor, the State Pollution Control Commission) can direct "any government agency to take or refrain from taking any action...." Protection of the Environment Administration Act 1992
- * **DWR/Ministerial Water Corporation and local councils**...have power to control urban and rural drainage (the DWR uses the Water Administration Act and local councils use the Local Government Act).

In practice, however, unless the EPA, DWR or local councils receive a licence application, or are obliged to exercise some alternate power central to their statutory role, they do not choose to exercise such powers.

In its first two years of operation, the EPA has not used its power to direct other agencies to protect the state's waters.

Overall, more than six state government agencies and ministerial portfolios have powers to control the use and flow of water. Many different agencies take water from the rivers. For example, pumping licences, dams, water services, drainage, and polluting projects are approved by local councils, water boards, the Department of Water Resources, the Environment Protection Authority and others. Other users of the rivers and tidal waters are set out in the table on the next page (see **Table 5, Water Users, Regulators and Items that Affect Water, p.34**).

The Committee considers it a legitimate expectation that the Department of Planning regulates other agencies to adhere to the basic principles of the Environmental Planning and Assessment Act in terms of balancing economic, environmental and social outcomes. It is noted that the recent amendments to Part V of the EPA Act will give the Department adequate power to do this.

In order to develop more effective institutional arrangements, the Committee considers there is a need to use existing resources while still avoiding further complication of any existing administrative and institutional arrangements. At the same time, specific outcomes must be developed for all agencies which directly affect water quality and clear and certain mechanisms should then be put in place to ensure these outcomes are achieved.

Currently a large number of authorities act as regulators. The three primary regulators are: the EPA which controls environmental regulations; the Government Pricing Tribunal which regulates pricing; Treasury which regulates finance and the Department of Planning which co-ordinates planning. Other more minor regulators include: the Department of Health; the Department of Water Resources; the Department of Public Works and local government.

Although the Water Resources Council was established in May 1989 to promote greater co-ordination and co-operation between the many different organisations within the NSW water industry, the Council's primary role appears to have been to act as a Ministerial adviser.

TABLE 5 Water Users, Regulators and Items that Affect Water

Regulators	Water Users	Ministerial Portfolios
local councils, Public Works Department, Land & Water	sewage operators	Public Works
Department of Water Resources	pumping operators	Land & Water
local councils, EPA	licensed polluters	Environment, Local Government
Public Works Department, Public Works Board	developers/subdividers/ domestic & commercialin the countryin Sydney	Housing
Agencies	Items affecting water	Ministerial Portfolio
EPA, Health	compost toilets	Environment, Health
RTA, Councils	cars, roads	Transport & Roads, Local Government
Treasury	dividends	Treasurer
Government Pricing Tribunal	pricing of water	Premier

It is submitted that in the four years that the Council has had to co-ordinate the management of NSW waterways, it has proved to be both a political and environmental disappointment.⁶ It is suggested that the Council therefore be replaced.

However, given that a system requiring co-ordination between agencies has failed, how can "turf wars" between competing institutions be overcome to allow all agencies to work together towards achieving uniform goals for water quality and water quantity?

⁶ The Committee notes the Minister for Land and Water Conservation, Mr Souris has supported a recommendation by the Chairwoman of the Council, Ms Meredith Hellicar, that it be replaced. Ms Hellicar was quoted as saying that the Council was "probably fatally flawed, it was as far as anyone could go at the time". (Sydney Morning Herald, 26 November 1993)

Existing powers which control water

The strongest power over water has been given to the "Ministerial Water Corporation", a statutory corporation under the Water Administration Act which is administered by the Minister for Land and Water Conservation. This power is set out in **Table 6, Powers of the Ministerial Corporation.**

TABLE 6 Powers of the Ministerial Corporation

Functions of the Ministerial Corporation

The Ministerial Corporation has, and may exercise, the functions... .. conferred or imposed on a public authority... instead of by the public authority

(a) construct or maintain works...

(i) co-ordinate the activities of persons having functions with respect to water resources;

(j) integrate the management of water resources with the management of other natural resources;

(k) review, and monitor the efficiency of, proposals and projects relating to the development or use of water resources...

(o) develop and manage water catchment areas as sources of water supplies and co-ordinate:

(i) development schemes for water catchment areas; and

(ii) the management of water catchment areas .. ."; s 11

Control of use and flow of water

(1) The right to the use and flow, and to control,

(a) the water in rivers and lakes;

(b) the water conserved by any works;

(c) water occurring naturally on the surface of the ground; and

(d) sub-surface water,

is vested in the Ministerial Corporation . . ." s 12

Water Administration Act 1986

It is obvious that to achieve effective water management, the Corporation must be able to direct all agencies having a major impact on the use and flow of water.

Further, it is clear from the evidence given to the Committee by the Sydney Water Board that the Board does not consider itself bound by Corporation instructions.

In the absence of a single manager of the state's water resources, the effective operation of the Board is impeded by denying it a clear framework for the provision of its services. For example, the omission from the draft operating licence between the Department of Water Resources and the Sydney Water Board of any requirements of the Environment Protection Authority, including any environmental standards, illustrates the fragmented and ultimately futile approach being taken to managing the use and flow of water in the Board's catchments.

This omission is of particular concern to the Committee as the Government Pricing Tribunal specifically recommended the inclusion of such standards in operating licences (GPT Recommendation 6.1). The draft operating licence was submitted to the Committee some two months after the Tribunal's recommendation had been published and two years after a similar operating licence with EPA licences in it had been made for the Hunter Water Corporation.

Further, it is argued that mere regulation is not a substitute for over-arching management for the following reasons:

- Neither the State Pollution Control Commission, when it existed, nor the current Environment Protection Authority have shown themselves to be either willing or able to accept responsibility to direct those agencies accountable for the quality and quantity of the whole of the water resources;
- The EPA's licensing functions prevent it developing or maintaining both the institutional will and capacity to manage the whole of the water resources;
- The regulatory and standard-setting functions of the EPA will be put at risk if it also assumes a management role.

The proposed "Office of Water"

The Office of Water should have limited but highly focused powers. It should exercise the powers presently held by the Ministerial Water Administration Corporation under the Water Administration Act which would be expanded to apply to all government agencies. The Office of Water will be obliged to deliver water quality and quantity goals for all government agencies. The Office will consult with existing agencies to develop priorities for works and administration in catchments including urban and rural run-off.

Therefore, all authorities will keep their existing powers and responsibilities except where they overlap the narrow, reserved power of the Office of Water to have ultimate control over the use and flow of water.

To inform the Office of Water as to whether or not an agency is meeting its water management goals and environmental standards, it is proposed that these agencies be obliged to provide the Office with all relevant data both upon request and in their annual reports. Further, the proposed capital works audit and the reporting requirements established as a result of Government Pricing Tribunal recommendations will also act to regularly inform both the Office of Water and the public.

In order to maintain the separation between environmental regulation and water management, the Office of Water will have no power to direct the EPA. Pollution standards will continue to be set by the government as has been the case under the pollution laws.

Further, it is suggested that the Office of Water should not contain a representative membership from other state or local government agencies as it has no representative functions.

A Proposed Model For the Office of Water

The Office of Water's principal responsibility generally will be to the community, not to the government, nor individual regulators and operators.

The Office shall independently and transparently allocate the use and flow of the State's water resources, including tidal waters. It should issue licences which incorporate individual regulators' requirements. The Office would be able to report directly to Parliament and have power to inquire, audit and initiate its own inquiries to ensure the proper synthesis of environmental, economic and social goals.

The Committee expects that, dependent on administrative and statutory reorganisation of the current portfolio of Land and Water Conservation, the Office of Water may function effectively in that portfolio. Parallel reorganisation will also be required in other portfolios such as Public Works, Planning, Housing, Environment, and Transport.

It is essential that the Office of Water be able to influence all development activities that effect the use and flow of water within each catchment. Due to their advisory and community development role, catchment management committees should appropriately be placed under the administration of the Office of Water.

In order to increase public access to information, it is suggested that all annual

reports of the Office of Water should include a section concerning the annual state of the environment reports from local councils.

The relationship of the proposed Office of Water to other agencies and to Parliament is illustrated in **Table 7, The Office of Water, p.39.**

Outcomes must be accounted for

In order to increase environmental accountability, public administrators should be required as part of the terms of their employment to publicly report pollution trends affecting land, sea and air. It is proposed that Senior Executive Service Officers be requested in writing by their government employer to do this. It should be clarified that it is the failure to provide the information, not the fact of the pollution, that is central to the satisfactory performance of the employment contract.

Such a system should therefore act to inform the public whether the Sydney Water Board and all the other public sector agencies which affect water resources are ensuring:

- that the levels of water, air and land pollution do not exceed standards set by government;
- that regulatory standards are set at a level that actually protects the public health
- that water services are provided at the least cost to customers; and
- that those who use water pay their share of the costs.

A Joint Standing Committee on the Environmental Impact of Capital Works

The Committee further proposes that a Joint Standing Committee on the Environmental Impact of Capital Works should be established. This Committee would be created by a resolution of both houses of Parliament.

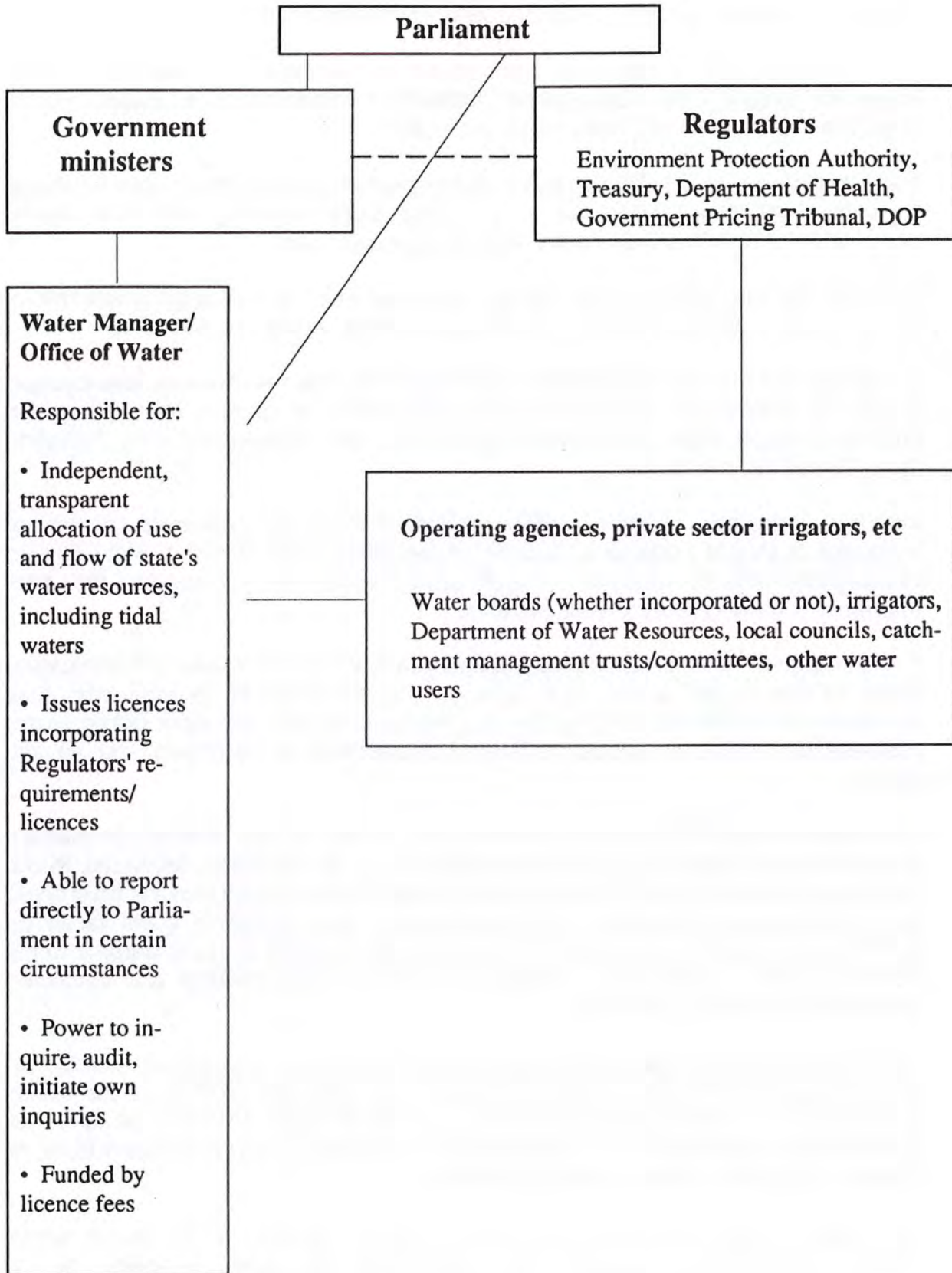
It is submitted that such a Committee would offer a valuable way to achieve significant economies in public expenditure.

In November 1887, a Public Works Committee of Parliament was established by the then Premier, Sir Henry Parkes. The Committee continued to operate until 1930. It has never been formally abolished and it is still provided for in the Public Works Act; ss7,21.

Currently, the Australian Parliament has a Parliamentary Standing Committee on Public Works which has operated for the last 56 years. It has power to inquire into

Table 7

The Office of Water



and report to the Parliament on each public work referred to it.

(Other states have comparable committees; for example, in response to the Fitzgerald Inquiry, the Queensland Parliament established a Public Works Committee to examine particular projects in 1989.)

It is anticipated that a NSW Environmental Impact of Capital Works Joint Standing Committee will have the ability to scrutinise both recurring and new capital expenditure of both inner and outer state budget agencies.

It will be the role of the Committee to comment only on the appropriateness of capital works projects vis-a-vis their anticipated effect on the environment.

It is proposed that the Committee would report during the Autumn (pre-Budget) session of Parliament and make recommendations in relation to existing and proposed capital works programs of inner and outer budget agencies, including State Owned Corporations.

After the Committee makes its recommendations for improvements to projects or programs, it should become a decision of the government (or for a State Owned Corporation) how to respond to such advice either when preparing the state budget or reviewing programs or projects.

It is anticipated that the Committee's primary task would be to examine the capital works of the public sector, the State of the Environment Reports and their compliance with relevant existing planning instruments, and any other public sector business which aims to reduce the level of degradation of the state's land, air and water.

It is expected that the proposed Committee will dictate its own priorities to enable it to address the critical issues facing the state's land, air and water resources. Public sector agencies will need to plan their programs to ensure they may be scrutinised by the proposed Committee. It is expected that any additional costs faced by public sector agencies as a result of the exposure of capital works programs to the Committee will be offset by a reduction in environmental damage and increased economy in capital expenditure.

The Environmental Impact of Capital Works Committee should be enabled to conduct audits from time to time as it sees fit as adequate auditing of the capital works system in NSW is crucial. Of the current \$5.9 billion dollars to be spent on public sector capital works, about \$5 billion is allocated to recurring expenditure, or projects that have previously been approved.

The system urgently requires a neutral party to critically audit capital works projects. Alternatively, it would be appropriate for such a review to be

commissioned by the NSW Premier's Department at its absolute discretion and at the expense of the party being reviewed.

The independent reviews of capital works provided to the CWU and the Cabinet subcommittee should include an assessment of the following matters:

- (i) Whether a proposal implements recommendations or proposals by the Government Pricing Tribunal relating to the use, pricing or other aspects of the water industry, particularly if the proponent is a water authority.
- (ii) An opinion identifying the impact the proposal is expected to have on the demand for water, the quality of any run-off from the project and its quantified impact on the current quality of any water resources.

The benefits of relating public sector capital works to determinations of the Tribunal include the more efficient use of water. These benefits are all the more likely to be won if there is just one body responsible for the use and control of all the state's water.

Assumptions about the way water is used underpin most projects whether the project is carried out by an inner or outer budget agency. Yet, central government's decision-making system in NSW, involving the Capital Works Unit ("CWU") and the Cabinet Capital Works Subcommittee, does not address either specific regulatory or unstated development standards for water, land or air. This is because both the CWU and the Subcommittee focus on particular projects, not standards or outcomes desired for the resources or the whole of the capital works program. The process is similar for outer budget agencies. However, the cost of a project, its design and its specifications, are direct results of prevailing development standards, including both formal and informal regulatory standards regarding water quantity and quality.

The decision by either an outer or an inner budget agency to undertake capital works is a planning function. Water quality, water capacity and demand management are essential planning issues for most capital works projects. Proposals for a freeway, a hospital or a school involve fundamental assumptions about the amount of water that is to be used for the project, the amount and the quality of the run-off.

If, for example, the RTA applies a design standard that allows run-off to carry chemicals from its roads (asbestos from brake linings, oil, etc) into watercourses, and eventually into catchments used by water supply authorities, then that "standard" contributes to the quality of the stored water. In turn, the "standard" may contribute to the need for treatment of the water. That is, the design of the road may create pollution which must be treated at a cost to the water authority and its customers.

Further, the present jurisdiction of the Public Accounts Committee and the Auditor-General does not extend to joint venture entities such as the Rouse Hill project involving the Land & Housing Corporation (a public body) and private sector partners. It is recommended that these two jurisdictions should be expanded to take on supervision of the fiscal propriety of the capital works program for both inner and outer budget agencies as well as joint ventures. Thus, when the proposed Capital Works Audit is implemented, the Public Accounts Committee will then be equipped to review matters referred to it arising from that Audit. It is anticipated that there will be no duplication of fiscal auditing by the Environmental Impact of Capital Works Standing Committee.

Recommendations

Joint Standing Committee on the Environmental Impact of Capital Works

- 13 A Joint Standing Committee on the Environmental Impact of Capital Works should be established by way of the resolutions of both Houses of NSW Parliament in 1994.**

This Committee should be required to review the capital works programs of the public sector, including the Hunter Water Corporation, in light of the EPA's State of the Environment Report, the relevant Regional Environment Plans and the pollution trends affecting water.

The Committee should also be required to assess the environmental and financial impact of its recommendations.

Public Sector Performance Indicators

- 14 General indicators for urban and rural run-off**

The Chief Executive Officer of state agencies and the General Managers of local councils, should be given performance measures requiring them to implement measurable annual improvements to the quality and quantity of urban and rural run-off from the land and buildings owned or managed by the agency they administer.

- (b) Performance indicators for the EPA**

In 1994 performance measures should be set for the Senior Executive Service officers in the Environment Protection Authority which link assessment of their performance to the reduction of pollution implemented through EPA pollution licences.

(c) Performance indicator for water management

A performance measure should be set for Senior Executive Service officers employed in bodies which affect the use and flow of water which requires prompt, effective compliance with any direction of the Ministerial Water Administration Corporation. The Premier should issue a direction requiring the measure to be implemented in 1994.

Environmental impact of state and local government budgets

15(a) Both state and local government should state in quantified form in their annual budgets the significant environmental outcomes intended by capital works and administrative expenditure. Budgets should state whether capital works programs will meet environmental standards that have been enacted by the Environment Protection Authority or which it has published in draft form.

(b) Chief executive officers of public sector agencies should certify both in submissions to the Capital Works Subcommittee of Cabinet and in the annual report of the agency they administer:

(i) that the program complies with environmental standards in force at the time the certificate is given; and

(ii) whether the program will worsen the current level of water pollution, whether or not a standard is in place.

Regulatory reform

16(a) The Government should urgently review the Acts (presently over 50) and powers to control the use and flow of water. The review should reduce the number of Acts, simplify the licensing and administration of water and, in particular, remove the overlapping powers and the gaps that have been identified in this report and by the Government Pricing Tribunal. Powers to manage the use and flow of water which are presently held by several agencies should be clarified, as well as and any gaps so that government, agencies and citizens are in no doubt:

(i) That all the regulatory gaps and overlaps are removed;

(ii) Which standards are initiated or managed by which agency;

(iii) That any agency which affects the use and flow of water is obliged to publicly account each year for its impact upon water pollution and quantity;

(iv) That a body exercising water, sewerage or drainage functions does not have powers to set standards for the quality or quantity of its discharges to waters or the waters it extracts from rivers or groundwaters; and

(v) That a body whose primary function and administration is regulatory, such as the EPA, Treasury or Department of Health, should not also allocate rights to the use and flow of water.

- (b) Institutional arrangements should be changed so that one body is principally responsible for co-ordinating activities of government which have an impact on water quality and quantity. The body should report directly to the Parliament and its charter should include ensuring that the recommendations of this Report are implemented.

As the State's ownership and control of the use and flow of water is vested in the Corporation, it has a resource management role of principal importance. By 1995 the functions and administration of the Ministerial Corporation should be clearly and publicly separated from the functions and administration of the Department of Water Resources. The DWR should focus on operations. The Corporation's powers should be exercised by the Office of Water through the operating licence. The Corporation should co-ordinate public sector activities.

- (c) The Ministerial Water Administration Corporation (the "Ministerial Corporation") should be made accountable under the Water Administration Act for rights it grants to persons to the use and flow of water. In particular, the Corporation should publicly account each year in a consistent, readily understood form for the amount and quality of water licensed to be extracted, the amount of water extracted in fact, and the amount of water left in the rivers and groundwaters. The Act should be amended accordingly in the next session of Parliament. Operating fees charged by the Ministerial Corporation for rights it grants to the use and flow of water should fund its operations.

- 17 By 1995 all catchment management committees and trusts should report to the Ministerial Corporation and in the next session of Parliament amendments should be made to the Water Administration Act to implement such reporting obligations.

- 18 The draft "Memorandum of Understanding" between the EPA and the Sydney Water Board regarding pollution controls should be published for public comment before it is finalised and the Ministerial

Corporation should comment on the draft. The Memorandum should be referred to in each EPA licence granted to the Board. The Memorandum and EPA licences should be identified and incorporated in the operating licence to be granted to the Board by the Ministerial Corporation in the first half of 1994.

Developer charges

- 19 Any public agency or body, including the Hunter Water Corporation, that provides a water, sewerage or drainage service should make available to the public a document in relation to its services showing the method of charging, the costs of infrastructure, any subsidies relating to the infrastructure or its services, and the disposition of the moneys received from subsidies or charges. This information should be published in annual reports in a form that enables ready comparison of the charges, costs and subsidies from year to year across local government areas.

Section 94 plans

- 20 Local government should introduce section 94 plans from 1995 which are catchment based and cover more than one council boundary. The plans should provide for contributions for public amenities and services relating to water pollution that are needed as a result of private sector development. The Water Administration Ministerial Corporation should ensure, in cooperation with the Department of Planning, that such plans are implemented and, for this purpose, councils should report in their State of Environment reports. Where public sector agencies participate in private sector projects, such as the Rouse Hill project, Crown immunity should not apply and such entities should contribute to section 94 funds. In the next session of Parliament the Environmental Planning and Assessment Act should be amended to enable such plans to be made.

Pollution prevention

- 21 All government agencies, particularly regulatory agencies such as the Environment Protection Authority and the Department of Health, should make their first priority the removal of pollutants at the point of use or creation. The agencies should aim to prevent pollution in preference to controlling it after it has been created.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

Government Members acknowledge that gaps and overlaps in the regulatory framework for water lead to outcomes below the desired standard. This is why the Government established the Cabinet Sub Committee on the management and regulation of water -- to examine improvements that might be made to the regulatory framework for water.

The Government has not yet released the findings of this Sub Committee. So the Joint Select Committee has put forward its own views which the Government Members of the Joint Select Committee generally endorse, particularly these findings:

- There is lack of clarity in the roles of the various regulatory agencies;
- There needs to be an overarching planning framework within which water quality goals and objectives can be set and which guides development in catchments.

Government Members disagree strongly, however, with the model proposed by the other Members of the JSC to deal with these problems. In particular, Government Members object to the fact that the model of the Office of Water appears to exclude public participation.

In a pluralist industrialised society there will always be competing water interests which should have the right to make their views known when water quality goals are being set. This is not to suggest that the community should settle for a poor water quality standards. Rather, we propose that each interest should be able to state its views publicly and that the community should be fully informed of the costs associated with achieving particular water quality standards. For example, is it reasonable that before the turn of the century each water body in Sydney should be in pristine condition when achieving this standard within that timeframe will raise every consumer's water bill by thousands of dollars?

It may be, of course, that such expenditure is demanded by the community and that the community is willing to pay. This is not a decision however, that should be taken by bureaucrats, but by the community at large. The release of the Government's paper "*Choices for Clean Waterways*" is a step in this process.

The Majority Report states that "*the Office of Water's principal responsibility generally will be to the community, not to the Government, nor individual regulators and operators*". But there is no mechanism through which the community can express its views. In an administrative sense, Government Members cannot support a proposal that suggests a Government Agency should not be accountable to the Government but to the "*community*" in some form. The regular election of the Government is the

community's expression of its will. How, aside from being responsible to the elected Government, is the Office of Water to determine what the community's will is and how is "community" defined? To be representative the definition must be broad, covering the plurality of interests that exist in society, including individuals, interest groups, industry, etc. In a democratic society it is the height of arrogance to propose that the community will is clearly definable, without a process of public input, and equally arrogant to suggest that such definition can be made by bureaucratic appointees.

The Majority Report also proposes that an environmental impact of Capital Works Joint Standing Committee be established to review the environmental impact of the State's Capital Works Programme. Once again, the Government Members have no objection to the proposal conceptually, although the Committee's Terms of Reference need to restrict it to examining the Capital Works Programme on a long term scale, not a project by project basis. Individual projects cannot be examined in isolation from a Department's or Government's, total Capital Works Programme. A particular project may have an environmental cost, but be more than compensated for by the total Capital Works Programme over more than one year.

Finally, Government Members disagree with Recommendation 18 of this Report. The Memorandum of Understanding between the Board and the EPA specifies conditions for data exchange, negotiation structures for licences, and pollution reduction programmes, etc. It is a document to define the relationship between the Corporation and the EPA, not a licence. Licences granted by the EPA should be the paramount regulatory tool. Government Members are concerned that if the Memorandum of Understanding becomes part of the licence the environmental standards set under the licence could be weakened.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

13. Supported subject to Parliamentary approval.

14(a), (b) and (c). Government Members dissent from these recommendations.

We support the inclusion of provisions into the contracts for SES officers which measure their performance in regard to pollution reduction programmes. However the manner in which these recommendations are drafted totally ignores the fact that no matter how hard they try, public servants cannot control natural events such as levels of rainfall. The jurisdiction for these matters is slightly higher than the NSW public service.

15(a) and (b) Supported, but it is recognised that there may be certain practical difficulties for implementation.

16, 17, and 18. These recommendations are supported in so far as they attempt to clarify relationships between the various Government agencies concerned with regulating water use. This specific matter is currently the subject of a Cabinet Subcommittee. Government Members feel that it is prudent to review these suggestions in light of Cabinet's eventual recommendations.

19. Supported.

20. Supported.

21. Supported.

"c To take into account the recommendations of the Government Pricing Tribunal Inquiry into water pricing"

c Government Pricing Tribunal

Summary

The Tribunal, the Board and the Inquiry

Major pricing issues

User pays

Developer charges

Demand management

Residential flats

Discussion of the Government Pricing Tribunal's recommendations

Minority Comments - Government Members

SUMMARY

In this section the Committee notes the recommendations of the Government Pricing Tribunal about water pricing. In particular, the Committee notes that:

- the Tribunal considers demand management pricing to be an essential part of water pricing policy; and
- the Tribunal has convened a working party to resolve differences between the Board, the Hunter Water Corporation and the Public Works Department over the preferred method of calculating developer charges.

The Committee's recommendations on demand management are in Reference e and their comments on developer charges are in Reference b.

The Committee considers it essential for bills and brochures to:

- explain what the various costs are so that customers may know where, and how, they may cut their bills;
 - offer customers real opportunities to save money (eg discounts for water efficient devices, free water audits), so they may more effectively
-

manage the ways they use water.

The Tribunal, the Board & the Inquiry

The Government Pricing Tribunal pursues two main tasks:

1. It makes annual determinations of maximum bills for water, electricity and public transport. The Government decides the price but cannot set a price above that which is recommended. It may set lower prices;
2. It conducts broad ranging inquiries to recommend the policies to be adopted by water, energy and transport bodies when setting their prices.

The Tribunal's annual determination on the maximum prices to be charged by the Sydney Water Board in the next three quarters to July 1994 was made in July 1993.

Some recommendations from the Tribunal's October 1993 Final Report about pricing policies are set out below.

Major pricing issues

- *"The Tribunal is concerned that bills will become unacceptably high and environmental outcomes will be poor unless there are improvements in the way in which standards are set and the institutional framework within which the industry operates... These issues are particularly important for the Sydney Region. "User pays" is not the problem. In fact, better usage price signals to consumers could help ease the pressure on bills. Rather, the problem is one of ensuring that regulators set standards that take into account the community's preferences and priorities and willingness to pay for particular levels of quality."*

The Committee considers that setting a price for water that reflects the true costs of the water is the first step towards water conservation. When water is underpriced it is undervalued and overused.

The implementation of a "user pays" pricing policy is significant way to prevent over-use of water.

User Pays

Under a "user pays" system a customer's water bill contains several distinct parts

including: a usage component to which the "user pays" pricing policy applies; an "access" component for providing the service; and a property tax component.

Although the usage component of bills will increase, the total billing amount is proposed to remain approximately the same. From January 1995 the Special Environmental Levy that has been paid under current bills will no longer be imposed. However, the Levy is effectively kept because the new billing amounts will be as high.

The Committee considers it essential that customers' bills disclose, in a straightforward manner, the itemised costs of the water and waste for which customers are being asked to pay. Recommendations about customer's bills are made in Reference a, above, and Reference h, below.

Developer charges

"The Tribunal proposes that developer charges should:

- *involve full cost recovery...;*
- *cover infrastructure expenditures which can be clearly linked to the development...;*
- *be applied to existing and fringe areas alike .."*

Following publication of its Interim Report on water pricing policies, the Tribunal received comments from the Hunter Water Corporation and the Public Works Department which propose disparate methodologies for calculating developer charges. The PWD method is favoured by Gosford and Wyong Councils.

To ensure consistent guidelines for development throughout the region from Newcastle to Wollongong, the Tribunal has convened a working party to consider how its recommendations on developer charges should be implemented. The Tribunal foreshadows the release of the working party's Report for comment in April 1994. The Tribunal will take any conclusions into account in determining prices for the next round of pricing determinations.

The Committee was concerned that additional measures could be taken over and above the Tribunal recommendations to clearly differentiate prices which are established on broad economic, financial or environmental grounds from those which emerge as a consequence of individual agreements in special circumstances.

This type of situation occurs due to the fact that a Minister is able to charge below the minimum price determined by the Tribunal only with the agreement of the Treasurer. The Committee expects that such an agreement would set out in a

public document the costs to the government and the extent of any subsidies.

Currently agencies subject to the Tribunal's determinations are required to include in their annual reports particulars of the implementation (or otherwise) of Tribunal determinations. The Tribunal will also require the agencies it is regulating to report to it concerning the implementation of the Tribunal's determinations.

It is submitted that the Tribunal may also be required to undertake an audit of agreements which establish developer contributions and report as to whether they are consistent with the principles established in its determinations.

In making its annual determinations, the Tribunal could consider the outcomes of the annual audit of the Hunter Water Corporation and audits of other water agencies as they become available following the implementation of the Committee's recommendation that such audits become the annual practice of water agencies.

Further to this, it is submitted that additional accountability and reporting devices are required to ensure that developers are being charged correctly for the water, sewerage and drainage facilities provided to their development. To deal with this problem the accounts of public sector agencies could be extended to include a certificate that developer contributions are consistent with Tribunal determinations.

The Committee also considers that there is a need for parallel arrangements for those organisations which are not currently under the Government Pricing Tribunal's jurisdiction. Clearly, the development industry and the state's water resources should be covered by a single set of pricing policies. It is recommended that the Tribunal's jurisdiction should be extended accordingly.

Demand management

In its report the Tribunal regards "demand management" as "an important part of providing water, sewerage and drainage services at least cost". An example of demand management ("DSM" or "least cost planning" as it is also called) used by the Tribunal was where "a customer's demand for showers can be met by either adding to water supply capacity or making the existing delivery system more efficient. A water supplier rebating the cost of a new shower rose that gives the same shower using less water is an example of DSM."

While the user pays system should have a direct influence on demand management, the Committee does note, as previously raised by the Chairman of the Committee, Dr Peter Macdonald MP with the Sydney Water Board, that under the "user pays" system, water usage cannot be influenced in the case of individuals in blocks of units with a shared meter so there can be little incentive to conserve water.

The Tribunal devoted a chapter of its report to this subject. The Committee's recommendations are in Reference e.

Residential flats

There are approximately 350,000 residential flats in Sydney of which about 58% are owner-occupied.⁷ Many of these blocks of flats have only one meter. The Committee suggests that the Board and the GPT immediately investigate practical, cost-effective and affordable measures by which the owners or tenants of residential flats may be given more power to control their water usage bills.

The Board and the GPT should consider demand management options such as the fitting of individual meters for residential flats, dual occupancies and other buildings which are not individually metered. There should be an investigation conducted by the Board and the GPT of solutions that make the installation of new meters financially attractive. Consideration should also be given to the allowance of a sufficient time period over which these new meters are paid for.

By 1995 a regulation should be made to apply to all new residential buildings requiring that individual meters be provided.

Any rebates such as outlined above may be the subject of CSO's.

Discussion of Government Pricing Tribunal recommendations

The Committee wishes to endorse several Government Pricing Tribunal proposals dealing with demand management which are contained in its Report into Water Related Services.

The Committee agrees with Government Pricing Tribunal (GPT) recommendations 4.1, 4.2, 4.3, and 4.5 which proposes that water suppliers look to adopt least cost planning options incorporating both demand and supply-side options and that these be instituted where cost effective. Water efficiency should further be encouraged by provision of more detailed information to customers and by way of rebates for the installation of more efficient appliances.

The Committee also felt that GPT recommendations 9.9, 10.4, 10.5, 10.7 and 10.8 relating to more cost-effective regional charges and a more equitable recovery of

⁷ *Australian Bureau of Statistics figures collated for the Committee by the Department of Planning, 12 April 1994*

costs from developers were desirable.

Further, the issues of individual metering for all new premises, payment of the water usage component charge by tenants and more effective pensioner rebate targeting outlined in GPT recommendations 14.1, 15.1, 15.2 and 15.3 are endorsed.

In relation to the future role of the Government Pricing Tribunal, the Committee believes that its Act should be extended to cover all local authority water supply services but that its role generally should be limited to developing broad principles of pricing (GPT recommendations 17.1 and 17.2)

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

This section of the Report is marred by the arbitrary selection of Government Pricing Tribunal Recommendations referred to in the final pages.

Such partiality is common to the Report as a whole, but the selectivity shown in the choice of GPT Recommendations is instructive in that it well illustrates the tendentiousness of the Report. The ploy is to select the bits that fit with the line to be pushed and to ignore the inconvenient bits that do not fit with that line.

It is significant that the 15 proposals noted for attention exclude the vital Recommendation 5.2 which requires water suppliers to investigate the willingness of customers to pay for capital expenditure to meet standards. If one were serious about examining the structure of the water industry, the issue of "willingness to pay" could hardly be glossed over.

"d Improvements to accountability and efficiency to the Water Board through changes to institutional arrangements within the Board"

d Institutional arrangements of the Board

Summary

What does the Board do - and, why?

The Board is not a "natural" monopoly

Outcomes, not technology, should drive water services

How should the Board operate in the future?

An "efficient" Board and an "effective" one

Should the Board be "corporatised"?

The Hunter Water Corporation: successes & failures

- Some problems

- Some achievements

Making the Board more publicly accountable

- Current public perceptions of the Board

- The Appointed Board and the Minister

Recommendations 22-27

Minority Comments - Government Members

SUMMARY

Within this Chapter the Committee concludes that:

- any present "natural" monopoly the Board has over the supply and removal of water is due primarily to their pipe-based system;
 - in the future, the Board should concentrate on becoming a provider of services relating to water, sewerage and drainage and thus move away from the provision of pipe-based infrastructure;
 - corporatisation of the Board under the State Owned Corporations Act will not necessarily make the Board any more administratively efficient or publicly accountable.
-

What does the Board do - and, why?

The Board has three primary roles: to provide water; to drain stormwater; and to dispose of sewage and wastewater.

In response to public health concerns and with regard to a need to separate drinking water from wastewater, a centralised pipe-based technology has developed over the last 100 years. A number of places throughout the world use more than one technique to perform these tasks.

Such examples include Los Angeles, California USA, where sanitation districts supply an annual average of 63 million gallons per day of reclaimed water to local customers. This tertiary treated effluent meets drinking water standards. It is retailed at 45% - 65% of the potable water rate, and is used on parks, golf courses, food crops, and groundwater recharge. In New Jersey, USA, an office park development with over 1,100 workers uses approximately 62% less water than comparable commercial buildings through on-site water recycling. Some Queensland councils (eg. Caloundra, Brisbane) meet local garden watering needs by permitting homeowners to divert water used in dish and clothes washing machines to gardens. Drinking water is supplied from decentralised sources such as rain tanks in Adelaide, from filtration plants in suburbs in US and Japanese cities.

The removal and discharge of sewage has traditionally been achieved by the use of pipe-based infrastructure. It is undeniable that this system has contributed to major environmental damage in rivers and tidal waters, particularly due to lack of structural integrity within the pipes and inadequate treatment.

While the environmental impact of the extended sewage outfalls is currently uncertain due to their relatively short period of operation, preliminary indications from research by both the Water Board and the CSIRO indicates that there are serious environmental risks to the ocean environment.

Due to the extent and complexity of its pipe-based infrastructure, it is understandable that the Board may be financially driven to affirm this technology as the basis of any future technological expansion. Currently pipe-based assets of the Board are estimated at a "written down current replacement cost" of \$10 billion. The Board owns 20,160 km of water mains; 16,640 km of sewage-carrying pipes; 158 water pumping stations and 590 sewage pumping stations. (1992 Annual Report #104, p,97.)

The Committee is firmly of the belief that the use of alternative technology should be encouraged wherever possible in the interests of achieving long term cost effective benefits.

The Board is not a "natural" monopoly

Many parties argued before the Committee that the Water Board has a natural monopoly over the supply and removal of water. The majority of the Committee was not convinced that the present monopoly over water enjoyed by the Board was, in fact, "natural" but rather a product of its present pipe-based system. If rain falls without discrimination on roofs across the city and not just on Water Board dams, it can be argued that the Board does not necessarily have a natural monopoly over this resource.

The cost and environmental impact of retaining such a monopoly are substantial. There is a clear public interest to be served by identifying that cost, its environmental impact and the options for financial savings and environmental protection. As the figure on the following table shows, unless the shortcomings in the system are addressed it will inevitably lead to the death of the Hawkesbury Nepean rivers (see **Table 8, Total discharge of treated sewage into Nepean Hawkesbury, p.58**).

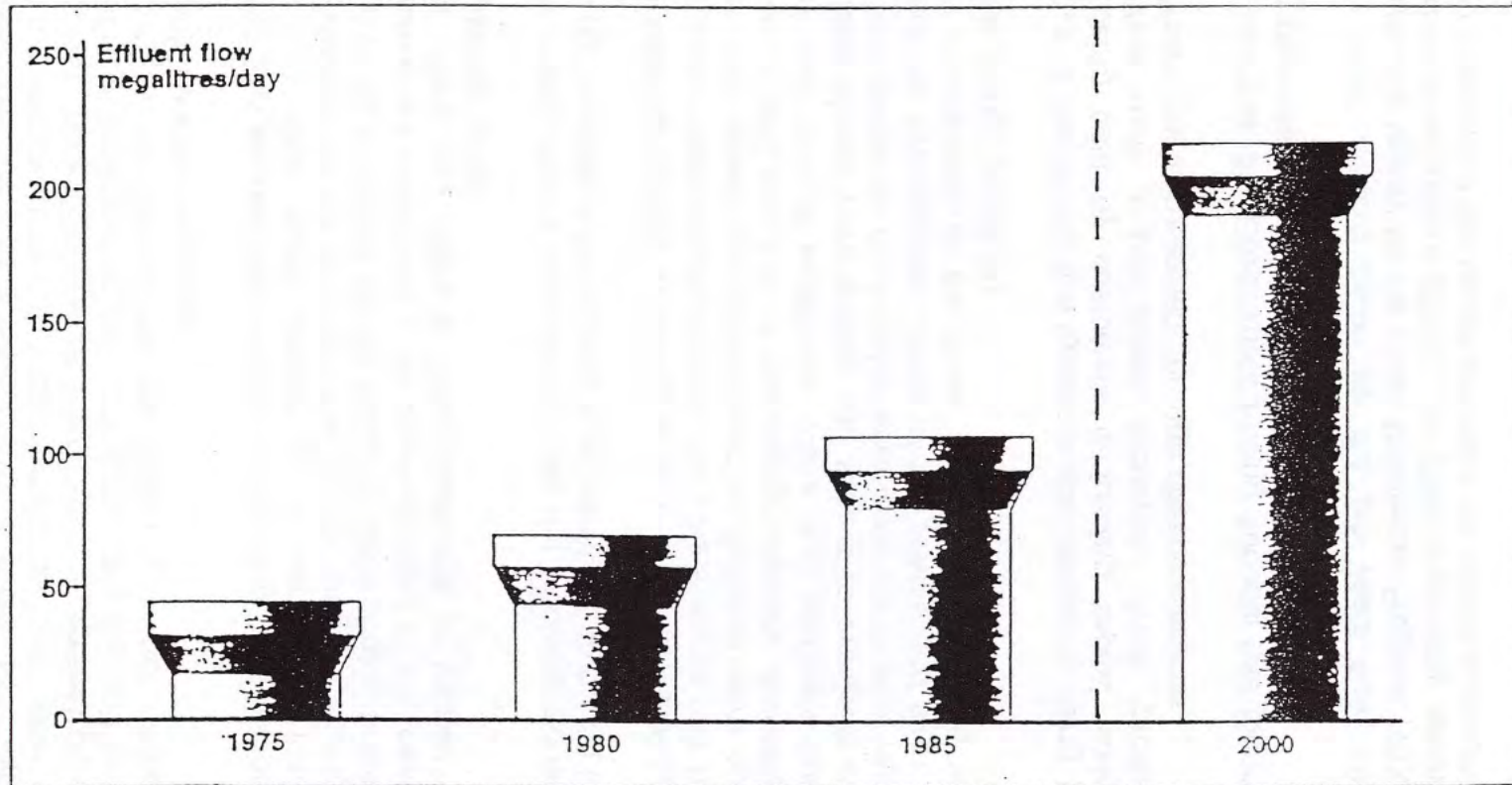
Messrs Harley, Moore and Wilson gave the following evidence to the Committee regarding the state of the board's pipe infrastructure during their administration:

"In 1988 the Sydney sewerage system was a mess. Population growth without the concomitant amplification of the pipe systems had been allowed to occur. The main sewers had deteriorated so that they were operating at somewhere between 50% and 10% of their design capacity. Amplification due in the 1960s had been put off indefinitely. There was sediment build up in the sewers. Smaller sewers were leaking and subject to overflows during rain events. The sewers owned by households were generally in poor repair... Little was known about the hydrographic profile of the sewers and even less about the quality and constituents of the flows." (Moore/Harley/Wilson submission "Doing the Vision Thing", pp.23,24)

The price of maintaining this system is also constantly rising. Much of the increased price being paid by customers is funding capital works that maintain and strengthen such a pipe-based monopoly. What "profits" there are go to government, not to customers through cheaper services.

As an example, the Government Pricing Tribunal has found that, by affirming its current pipe-based technology, the Board will spend:

"in the order of \$5.3 billion for the ten years from 1993/4 to 2002/3. This expenditure is largely for the Clean Waterways Program (43%) asset renewal (23%) and urban development (22%)... the SWB is currently reviewing its business plan and the outcome of the review will affect the capital expenditure forecast." (Working



TOTAL DISCHARGE OF TREATED SEWAGE
 INTO THE NEPEAN - HAWKESBURY RIVER

Party Report, Water, Wastewater and Stormwater Demand, Engineering and Cost Issues, Government Pricing Tribunal, June 1993, p.27)

The Tribunal further estimated that for the next ten years:

"there will be a 42% increase in total water and sewerage charges (or 46% increase in total bills including drainage) for residential customers, resulting from the reduced cross-subsidy and higher standards. On the other hand, non-residential customers would benefit from the reduction in cross-subsidy and average bills would decrease by 22% in 2002/03" (GPT Report, p.35)

Instead, the Committee proposes reforms that aim to produce "effective competition, with minimal need for on-going regulatory intervention" as advocated by the recent inquiry into government monopolies (The Hilmer Report, particularly Chapter 10). This Report noted that:

"... where it is intended to keep the business in public ownership, but to open a market to new entrants, restructuring the incumbent may reduce its capacity to dominate new entrants, and thus encourage competitive entry... in this case, optimal results require a clear separation of management and control between the new entities." (Hilmer Report, p.223)

However, as the Report points out, the potential benefits of separating possible competitive activities will depend in part on the contestability of the market. The costs and benefits of alternative reform options need to be evaluated carefully in the context of each industry with such elements as economies of scale and scope of a particular industry and the costs of transition need to be considered.

Reorganising the Board so that its regional offices are catchment-based may provide opportunities to introduce competing technologies. If, for example, rainwater and re-used water can become the dominant source of supply for individual households or small local groups, particularly where customers and developers can receive a financial rebate for disconnecting from the Board's services, then the Board will become just one of various sources of water services.

Obviously, the ability to have competing service providers is far greater in new areas.

Therefore, the majority of the Committee propose a series of reforms designed to make the Board a water service provider.

The majority of the Committee further propose that customers should be advantaged by the installation of more efficient equipment aimed at weakening the dependence of the Board and its customers upon the current inflexible pipes infrastructure.

Outcomes, not technology, should drive water services

In its evidence to the Committee, the CSIRO advised that in the future land-based sewerage will become the norm and work is proceeding apace on this. However, much better information is needed regarding the capacity of natural systems to absorb our wastes.

All NSW public sector agencies are obliged by statute to adopt a precautionary approach in the management of any polluting activities that they undertake:

"... if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation"; Protection of the Environment Administration Act 1991 s6(2).

The Committee questions whether a system which essentially treats rivers and oceans as waste bins, relying on the environment to absorb poorly treated effluent, can be considered to be taking a "precautionary" approach.

How should the Board operate in the future?

It is submitted that in the future the Board should concentrate on providing services relating to water, sewerage and drainage but not necessarily provide the water, sewage or drainage.

Similarly, the Board, if it were to operate primarily as a water service provider, need not necessarily supply pipe infrastructure. Instead the Board could concentrate on areas such as establishing markets for waste; reducing and disposing of waste at source and providing incentives to customers to handle their own waste.

Thus, rain and shower water ("greywater"), instead of drinkable water, could be recycled through toilet cisterns, or put to industrial uses, used in fire fighting hydrants etc. Further research is recommended into the use of recycled water in air conditioning equipment.

About 55% of Melbourne's sewage is processed through lagoons. The lagoons sustain businesses which generate a profit for Melbourne Water of over \$3 million per annum. The Werribee lagoon treatment system in Melbourne is generally accepted as operating at 25% - 33% of the cost of the conventional sewage processing plant used by the Sydney Water Board; for more details, including an outline of an \$11 million environmental study by the CSIRO which has given an environmental "all clear" for the Werribee system, see **Appendix I**, below.

The Committee was also interested in sewage treatment including microfiltration. This type of treatment produces an effluent quality which is pure enough to enable recycling of such water. The concept of distributive processing also allows sewage treatment activity to move away from ocean discharge to multiple small plants distributed throughout the city region (for further information, see **Water in Australia, p.51**).

The Board should be directed to allow alternative technologies such as rainwater tanks to be robustly tested in the market place. Furthermore, the Board should participate in and promote private industry by selling its services and water efficient equipment to customers. In References e and g below, recommendations are made on this issue.

As an example of an attempt that has been made to unwind a water operator's monopoly, the Committee looked at the Hunter Water Corporation. Reduction of this Corporation's monopoly has been given the force of law within that agency's operating licence. The Committee's views on the successes and failures of that corporation's are outlined in the section below headed "Hunter Water Corporation: successes and failures" and in **Appendix c**.

To ensure the Sydney Water Board aims for improved water quality and quantity, the Committee has included a common thread in any proposals for change. Accountability and incentive devices are proposed to inform Parliament annually regarding monopoly reduction.

An "efficient" Board and an "effective" one

The future direction of the Board, and many other water agencies, is only partly resolved by asking, what do customers and the government expect of the Board and are these expectations compatible?

Public submissions to the Committee overwhelmingly raised concern about the Board's impact on the quality and quantity of the water in the rivers and oceans as well as advocating a more "efficient" agency, one that gave valuable services to customers in return for reduced costs. However, if the Board were merely to reduce employees to appear economically efficient, these environmental outcomes are not likely to be achieved.

The Committee prefers an approach that focuses on effectiveness gains over efficiency gains.

"Focusing on efficiency rather than effectiveness also tends to alienate public employees. When governments stress the cost of each unit of work, they often develop a green-eyeshade mentality that belittles the intelligence and skill of

their workers. Most employees want to be effective. Most will gladly do what is necessary to increase their organisation's impact. But if their superiors concentrate solely on their efficiency - on how quickly they do each unit of work - they will begin to feel as if they are on an assembly line." (Osborne, Gaebler, Reinventing Government, p.352)

Should the Board be "corporatised"?

The Committee closely examined the case for corporatisation. The Board is a monopoly. It is currently subject to strict Ministerial and Parliamentary supervision. Its pricing policies are supervised by the Government Pricing Tribunal. Many parties who submitted to the Committee argued for corporatisation of the Board to distance it from governmental interference.

The Hon Robert Webster, Minister for Planning and the Managing Director of the Water Board, Paul Broad also argued before the Committee that corporatisation was a preferred method of making the Board more competitive and accountable:

"I think corporatisation has the distinct advantage over other internal reform options in that it says to the Board quite plainly, you will go out of business if you don't perform. It makes performance a matter of survival." (Hansard, August 26 1993, p.99)

Under the State Owned Corporations Act, a corporation is created by an Act of Parliament. The Act requires the corporation to comply with an operating licence and a statement of corporate intent. These instruments contain the corporation's environmental, commercial and other obligations and are not applicable to private companies.

However, there was concern expressed by many witnesses regarding the lack of definitive clarity of the term "corporatisation". For example, Bruce Grimshaw from the Australian Services Union explained to the Committee:

"It depends what you mean by corporatisation. There are several definitions. If by corporatisation it is simply meant that the Board would be able to operate without interference by government, then that is a sound proposition. If, however, it means to corporatise and be a contracting-out organisation and simply administer the contracts and ultimately at the end of the day sell all the bits off - we are opposed to it." (Hansard, July 20, 1993, p.64)

The Board's Managing Director has made clear to the Committee that the Board's primary goal is a structure that allows for accountability and value to customers for the services provided:

"The objective of corporatisation is to make the Water Board and the Government more accountable. Corporatisation will help to remove obscurities in the Board's role and the roles of other players in the water industry, and will provide a statement of outcomes, through instruments such as the customer service contract, that can be articulated to the community. The community and the Government, members of which would be the shareholders in the corporatised organisation, will then be able to measure whether the Board achieved the outcomes expected of it." (Letter by the Managing Director, Paul Broad, to Committee, 23 August 1993)

In this respect, the Hunter Water Corporation has been held up by the Government as the great water agency corporatisation success story. For example, the Hon Robert Webster, Minister for Planning, told the Committee:

"We have had the valuable experience with the Hunter Water Corporation being corporatised. That Corporation has now achieved a community satisfaction of 90% - a far cry from the days when it was the subject of community outrage and made headline news on a regular basis in the mid-1980s. We now have to improve on that if we are going to go ahead for Sydney." (Hansard, August 26 1993, p.99)

Therefore, the Committee has attempted to review what it considers to have been the impact of corporatisation upon both business and the environment within the Hunter Water Corporation's jurisdiction.

The Hunter Water Corporation: successes & failures

The following outlines the Corporation's achievements and problems.

Appendix c "The Hunter Water Corporation: successes & failures" gives further details relating to the summary points made below.

Some problems

The Committee heard that the following problems had arisen from the transformation of the Hunter Water Board into a Corporation:

- 1 The Corporation is unwilling to invest in the extension of the sewerage system to new areas unless such extensions produced an economic rate of return for the organisation. Where such returns are not available, and the Government considered provision of sewerage a priority, the Corporation seeks a subsidy from the Government for carrying out the work. For example, the Corporation's major capital works sewage project, the Hunter Sewage Project, is being funded

in approximately equal shares by the Corporation and by the State Government. The current 1993/4 state budget shows that this year the Corporation will contribute \$25 million while the State will contribute \$23.5 million to the project (Budget Paper No. 4, 1993, pp.58,69).

Such an arrangement, as long as it is conducted openly and in full knowledge of the community, means that a corporatised body is not placed in the position of having to cover costs of uneconomic investments from its core funds, thus diverting funds from other priorities, such as asset maintenance and renewal and meeting environmental standards.

Concern arises, however, that alternatives to reticulation or alternative service providers have not been given the opportunity to bid against the corporatised body prior to a subsidy being provided. Mechanisms need to be put in place to ensure this occurs as the Committee was not convinced that this opportunity was provided in the Hunter Water Corporation's case.

Therefore it seems apparent that the SOC Act does not create sufficient accountability mechanisms for disclosing the payment of state subsidies to SOCs for capital works programs nor for disclosing whether the corporation has allowed competition to occur.

- 2 Competition has yet to appear against the Hunter Water Corporation.

In Reference g, below, the Committee outlines why competition is practicable in water, sewage and drainage.

- 3 Demand management has mainly relied on the use of user-pays.
- 4 The Corporation has committed itself and its customers to a single technology - pipes and water-based sewerage.

Proven alternatives are outlined in References f and g, below.

- 5 The scope of audit of environmental performance and services is too narrow.

The mid-term review, prescribed by the Corporation's licence, will be a report to the Minister on the operation and impact of the Hunter Water Board (Corporatisation) Act and the licence. The Committee expects that the Minister will publish the review and ensure it deals with these concerns raised by the Committee.

Some achievements

The Committee considered that there are at least seven desirable gains achieved by the Hunter Water Corporation experiment. It did not appear to the Committee, however, that any of these are necessarily dependent upon corporatisation for their implementation.

- 1 Greater accountability for land use decisions
- 2 Greater openness by management
- 3 Greater rationalisation of middle and senior management numbers
- 4 Greater public auditing of service and environmental performance
- 5 Additional accountability for developer charges
- 6 Partial constraints on dividend payments
- 7 Application of user pays to the public sector.

The Committee considered that one of the most encouraging outcomes of corporatisation has been the application of the user pays principle to all Corporation customers. It is apparent that the implementation of such a system has made local councils and other agencies more prudent in their use of water. On a quid pro quo basis, the Corporation has begun to pay its way regarding services it uses from other agencies, such as council rates, etc.

However, two issues arise out of the points above:

- The outcomes of the mid-term review of the Corporation appear to be prejudiced by the deficiencies of the audit; and
- Corporatisation has made the Corporation and the government more accountable but only to a limited extent.

The Committee therefore considered that corporatisation can be seen to have made the Hunter Water Corporation and the government slightly more accountable than the Sydney Water Board but this difference cannot be considered particularly significant.

In fact, the majority of the Committee considers that all the achievements outlined above are possible without corporatisation.

To some of the Committee, it appeared that none of these alleged problems arising from corporatisation were insurmountable and would not be a barrier to corporatisation within the proper framework.

To ensure the Board is accountable and provides services in an ecologically sustainable way along with other government agencies, the Committee proposes a range of measures without which incorporation may not take place. Each of the following measures should be part of any reforms to the Board. If the Board is to

be incorporated, the reforms must be in place at the time of incorporation.

The majority of the Committee believed that the following reforms should be initiated:

1. Stage II legislation for the EPA must include target dates for phasing out pollutants in line with international best practices.
2. The Ministerial Water Corporation, or an Office of Water, must have control over water resources. The PWD and DWR should lose their overlapping powers.
3. The Sydney Water Board should only be incorporated after amendments are made to: the State Owned Corporations Act, the Environment Protection Authority's proposed Stage II legislation, the legislation administered by the DWR, the Department of Public Works, the Treasury, the Government Pricing Tribunal, and the Department of Health. Amendments to the State Owned Corporations Act and other Acts must:
 - structure the Board as a statutory corporation;
 - put all the environmental and commercial standards by which the Board is to operate in the Board's Act (including the CWP) and in an operating licence to be granted by the Ministerial Water Corporation/Office of Water which is tabled in Parliament with the Board's Act;
 - require the Treasurer to approve CSO payments for services or infrastructure which is non-commercial ie. s11 of the SOC Act should be amended;
 - apply the Freedom of Information Act;
 - re-introduce Ministerial accountability;
 - prevent the Board exercising regulatory powers to prevent competition and transfer such powers to the relevant regulator, whether it be the Department of Health, the Treasury or the EPA;
 - require the Board to manage its catchments, and to integrate its planning with the Department of Planning, Catchment Management Trusts and as required in the operating licence;
 - set performance measures for the Board which are directly linked to the nature of the Board's business. Thus, the Board's effectiveness will be measured by whether it has reduced the volume of sewage discharged to waters each year, by whether it has reduced the total loads of pollutants, by the cost-effectiveness of its technology and other measures;
 - set criteria for appointing Board members which are the same as the performance measures;
 - when the Board tenders for its own work, the Appointed Board must certify that the Board has had a fair and equal opportunity to lodge a tender prepared by persons other than those handling the tender process. A month after tenders are awarded, the contract must be published in full with only commercially sensitive information deleted as provided for by FOI legislation;
 - require the Auditor-General to audit the Corporation.

However, until the SOC Act and other legislation are amended, none of these

instruments will be sufficient.

Many parties, particularly community action groups, expressed concerns to the Committee regarding corporatisation of the Sydney Water Board as they considered that there was a real conflict between the public service role of a water authority and the push to reach high financial targets. Professor Bob Walker, of the School of Accounting, University of NSW, expressed such a view to the Committee:

"As I understand it corporatisation involves restructuring government agencies to emulate private sector agencies while still being under government ownership. It seems to me that this process would involve further emphasis on financial targeting as the dominant aim of the water authority rather than talking about the quality of service and service delivery. That is something which might be of concern. Experiences to date with corporatisation in Australia suggest that water authorities might be given financial targets which will, no doubt, encourage opportunistic behaviour in the choice of accounting practices to try and make that easier to achieve. One must ask if this is sending the right signals to an agency which is initially set up to provide services to the community." (Hansard, August 26, 1993, p.7)

Similarly, Mr Jeff Angel of the Total Environment Centre told the Committee:

"We oppose corporatisation of the Water Board because we do not believe that such public resources should be under the control of a narrowly based organisation with a narrow commercial objective. A public resource should be managed in terms of meeting the public interest - both present and future." (Hansard, August 26, 1993, p.23)

The Committee also has reservations about whether corporatisation of the Board would mean a strong focus on commerciality and free market principles and whether the social, environmental and other "underpriced" benefits may be overlooked.

The Committee is concerned about the disadvantage corporatisation brings in that major capital works would not be subject to the scrutiny of a central government capital works committee. Capital works of the corporation are only presented to the Minister. The government thereby loses the opportunity to ensure a "whole of government approach" is taken to managing limited resources; this issue is considered by the Committee in relation to the proposed Capital Works Audit in Reference b, above. This may be offset by the need for major capital works to comply with REPs and catchment management objectives.

Several witnesses before the Committee expressed concerns that corporatisation is often a stepping stone to privatisation. Mr Ken McDonell, a member of the Appointed Board told the Committee:

"I would think that reports so far are basically in support of corporatisation of the Board, not necessarily privatisation. But I would have say, just as my own personal view, that it could easily be used as the first stepping stone to privatisation". (Hansard, September 10 1993, p.5)

The Committee is very much opposed to privatisation of any Board which has a monopoly over water services. However, it was clear to the Committee that there are current problems within the Water Board which appear to be able to better resolved using a different operating framework than the one under which the Board presently operates. Two issues explored by the Committee were the public accountability of the Water Board and the role of the Appointed Board.

Making the Board more publicly accountable

Current public perceptions of the Board

From evidence given during the course of this inquiry the Committee has formed the view that the Board often appears to have poorly interpreted environmental, business and customer requirements placed upon it.

For example, Dr David Russell from the Centre for Waste Management and Pollution Control, University of NSW, gave evidence of a major research project into aspects of the public accountability of the Board's operations. This research tends to indicate that the community does not wish to formulate Water Board policy but is becoming increasingly insistent that all critical decisions be made with sufficient community consultation i.e. decisions should be made "in public" rather than necessarily "by the public".

The Committee is concerned about the current lack of transparency in the Board's decision-making processes. The Water Board does not appear to be adequately communicating to the public about the existence and detectability of pollution. There is a general public perception that pollution problems are only exposed via leaks to the media. In order to address such current problems, Dr Russell advocates the establishment of a funded "Community Monitoring Committee", to foster independent monitoring of pollution trends.

In fact, the Board's own research has highlighted this problem. For example, a study of residents of the Hawkesbury-Nepean region found that the Board has several public relations problems:

"a perceived incompetence... the Water Board is seen to have the negative qualities that all government departments are seen to have (mismanagement, wastage, lack of clear goals, hidden political agendas, etc)"

"the reliability of the information provided by the Board to the public, particularly in relation to pollution; information is either not provided or, when it is, is not felt to be trustworthy. (Universities are considered most trustworthy as a source of information about the river.)". (Reark Research Pty Ltd February 1993, p.41)

CHANGE provided the Committee in its submission with an example of what it considered to be actual "dis-information" by the Water Board. A pilot immunological study was conducted in 1991 in the Hawkesbury/Nepean river. The report found a positive correlation between exposure to river water and human illness. For instance, at Windsor and Wiseman's ferry, the increased odds for river users of developing symptoms was 6.3:1. The report was subsequently discredited, in June 1993, by a Water Board spokesperson at a public forum at Western Sydney University, saying it was flawed following peer review. This assertion turned out to be in error. Peer review had been provided by Professor Charles Kerr who, when questioned at the time, expressed concern, saying that while it was only a pilot study, it was of sufficient merit to warrant a larger study based on similar methodology.

The Appointed Board and the Minister

Problems clearly exist within the Board relating to the large degree of governmental interference. In a meeting with the Committee in July 1993, the Appointed Board expressed concerns about the lack of clarity of the role as dictated under the present legislation. Appointed Board members face significant statutory and common law obligations and yet all the Appointed Board's decisions may currently be overridden by the Minister for Planning. The problems caused by forcing a GTE to become commercially accountable while government still maintains ultimate financial control is highlighted in the demand for \$200 million in special dividends.

Under the current Act the Board may delegate its powers to the Managing Director and has done so to the current Managing Director, Paul Broad. However, the Appointed Board reserves the right to approve the following: capital expenditure over \$5 million, incurring of debt, submissions to the Government Pricing Tribunal, anything requiring approval of the Minister, any new business venture or sale of assets over \$5 million. However, the Committee notes that the Appointed Board did not view the Build Own Operate contracts but delegated that role to the Managing Director. Comment on this matter is made in Reference e, below.

Obviously, in a situation where the Appointed Board has statutory decision-making powers which are in turn subject to being overridden by the Minister, a real conflict arises between political interference and day-to-day business operations. There is little wonder that Members of the Appointed Board expressed the view to the Committee that, if the Water Board was to be nothing more than a quasi-government department, there is little need to appoint a Board in the first place.

The present institutional arrangements within the Board were further criticised by Graeme Richardson, a previous member of the Appointed Board and Chairman of Australian Water Technologies, in relation to the transfer of AWT Pty Ltd to the Public Works Department. Mr Richardson told the Committee that the new Managing Director aims to pare down the Water Board's responsibilities to concentrate solely on core business activities - water, sewerage and drainage. Mr Richardson said that this would diminish the Board's ability to market specialised environmental and technological expertise domestically and overseas. It was estimated that potential external markets for wastewater expertise, particularly in mainland Asia, could amount to \$300 billion.

"The world market for environmental purification products exceeds \$300 billion. It rivals aerospace and chemicals in terms of sheer size and outperforms them in terms of growth" (Denis Hanley, MEMTEC submission, July 1993, p.6)

Recommendations

22 In 1994 the Water Administration Ministerial Corporation should call for public tenders for an audit of the water extraction licences (some 1,500 are in force) for the rivers and groundwaters in the area of the Board's operations. The audit should be published in full in 1994 within one month of being provided to the Corporation, without alteration, and include recommendations on the following issues:

(i) Whether the environment of the rivers and groundwaters are being sustained or are degrading as a result of the current level of licensed extractions;

(ii) The impact on the use of water of the differences in pricing policies for water supplied by the Sydney Water Board to its customers and for water extracted from rivers and groundwaters under water extraction licences;

(iii) Whether the Government Pricing Tribunal's jurisdiction should be extended to include the price at which water is extracted from rivers and groundwater; and

(iv) Whether the amount of water being extracted under the licences should be reduced.

Administration of the Board

23 The Board, and all other public sector bodies carrying out water, sewerage and drainage functions in the state, should be administered

within the one ministry so that management and outcomes within this segment of the water industry may be more readily achieved.

Performance indicators for the Board

24 Commencing in 1995, performance measures for the Board, including Appointed Board members and senior executive service officers, should include the following key indicators:

(i) Whether the volumes and weights of sewage and pollutants discharged to rivers and tidal waters have been reduced or intercepted to meet quantified goals and the impact of rain upon these outcomes;

(ii) The amount of water used per person, the amount of water unaccounted for, and the impact of rainwater harvesting programs involving the Board;

(iii) The amount of water treated by primary, secondary, tertiary, wetland, lagoon or other categories;

(iv) The amount of water and sludge recycled in the current and preceding reporting years compared with the amount to be aimed for in the forthcoming reporting year.

(v) The construction of the interception facility on the NSOOS; and

(vi) The implementation of management and due diligence practices relating to interception of sewage and de-voluming of the sewage discharged to waters.

Structure and functions of the Board

25(a) The Sydney Water Board Act should be amended to require the Board to:

(i) Implement the objectives of the Clean Waterways Program

(ii) Operate so that its water, sewerage and drainage services are self-funding. Cost-effective, profit-making options should be the preferred outcomes from the technology chosen. No new infrastructure should be built unless it will be funded from the rates or other income to be generated by the use of the infrastructure. The Board's primary role should be to provide services relating to water but not necessarily all of the infrastructure, the water or the disposal of waste;

- (iii) Seek no subsidies from government, nor provide subsidies to a customer or other body, for infrastructure or other purposes, without an express exemption first being granted in writing by the Treasurer or as a result of an explicit determination of the Government Pricing Tribunal. No subsidy may be sought by the Board, nor proposed by its Minister, until the Board has called for public tenders or otherwise established by objective means that another body, or a customer, cannot provide a competitive or alternative service. The extent, justification and amounts of any subsidies approved by the Treasurer or the Tribunal should be disclosed in the annual budget papers presented to Parliament. A section in the budget papers should be allocated to provide a complete disclosure of subsidies to or by bodies exercising water, sewerage or drainage functions, including a state owned corporation;
- (iv) Implement demand management and least cost planning which should include the provision of infrastructure, water or waste services by on-site arrangements involving customers;
- (v) The Board should apply its user-pays charging system to both water usage and sewage disposal. The Board should provide financial incentives to customers who disconnect or reduce their use of the Board's sewers, at least equal in value to the reduction in the use of the sewer in the cost savings to the Board through avoidance or deferral of augmentation. The access charge for using an existing sewer should be reduced if the sewer is not used; pro rata charging should apply;
- (vi) Create no barriers to competition and, for that purpose, to minimise the need for customers to connect to the Board or to obtain the whole of their water, waste and drainage requirements from the Board;
- (vii) Rely less and less on their major river catchment for water supplies and as a receptacle of waste, and implement alternative supply sources and waste devices;
- (viii) End discharge of sewage to oceans and rivers except where the discharge waters are of potable quality;
- (ix) Hold public board meetings at which minutes and reports for all items discussed, except those relating to litigation, staff and commercially sensitive data, are freely available to the public.
- (b) The rights, duties and obligations of the Minister and the Board should be described in the amended Act. The Minister's power to appoint board members should be limited to appointing six persons who have demonstrated an ability to;

- (i) Reduce water pollution by implementing controls over water quality and quantity in urban and rural run-off;
 - (ii) Produce commercial profits;
 - (iii) Implement demand management and least cost planning;
 - (iv) Manage catchments so that they do not degrade from land uses, erosion or other impacts;
 - (v) Maintain the effectiveness and morale of employees of the Board; and
 - (vi) Implement innovative technological change.
- (c) The Minister's power to dismiss the Board should be defined to include the following circumstances:
- (i) Failure to implement the Clean Waterways Program or to adequately account publicly for measurable environmental improvements, or the lack of them under the Program;
 - (ii) Failing to implement the matters listed in (a), above, or failure to adequately account publicly for implementation;
 - (iii) Providing a misleading certificate or failing to use due diligence in the preparation of such a certificate in relation to dividends as required by Recommendation 41;
 - (iv) Attempting to bring undue influence upon a person conducting an external annual audit of the Board.
- (d) The Board should have no power to exert controls over the use and flow of water which overlap or conflict with the powers of the Ministerial Water Administration Corporation.
- (e) Only the Department of Health should have a power to prevent a citizen from installing or connecting a water saving or beneficial re-use device, or from disconnecting or electing not to connect to the infrastructure of the Board. The Department's regulatory function should be exercised having regard to whether the alternative connection or installation is likely to be more injurious to public health than the Board's. The Department's powers should be appealable by any person denied an approval and the appeal should be to the Land and Environment Court. The Land and Environment Court Act, the Sydney Water Board Act, the
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Pacific Works Act, the Local Government Act, and the Local Government (Water, Sewerage and Drainage) Regulation No. 270 should be amended in the next session of Parliament to give effect to this recommendation.

- (f) A system should be established in the amended Act by which water, sewerage and drainage systems provided by the Board, and alternative systems, are inspected for maintenance and operating outcomes. The system should ensure that water appliances, on-site disposal systems, etc operate according to their design specifications and the requirements of the Department of Health, which should administer it under wide powers to delegate. The statutory power to inspect or maintain systems should be a continuing one that should not be interrupted by the sale of a house or other development in which water, sewerage and drainage or other equipment was installed. The system should be as cost-effective and flexible as possible and include self-certification procedures. The funding should come through a levy upon the sale of appliances or facilities.
- (g) The Board should only have access to the use and flow of water under an operating licence issued by the Ministerial Water Administration Corporation under the Water Administration Act. The licence should include environmental standards and pollution licences issued by the Environment Protection Authority which relate to discharge to waters. There should be operating standards for the delivery and quality of water to the Board by the Corporation and by the Board to its customers. There should also be measurable standards in relation to capital expenditure and environmental outcomes.

Department of Health

- 26(a) The Department of Health should not oblige interstate manufacturers of new water, sewerage, or waste devices, such as compost toilets, to repeat health tests they have already met for health authorities in other states.
- (b) The Department of Health's administrative costs and procedures for dealing with waste and water appliances should be reviewed by the Minister for Health and the Ministerial Corporation and a joint report tabled in Parliament in 1995.

Free water audit:

- 27 The Board should trial a free water audit to customers in a selected region and report in the 1995 annual report upon the outcomes.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

Term of Reference 'D', which requires the Committee to enquire into "*improvements to accountability and efficiency to the Water Board through changes to institutional arrangements within the Board*", is highly significant.

It is of great regret to Government Members, therefore, that the results of this Inquiry are so poorly structured, illogical, and costly.

The key decision to be faced is whether or not the Sydney Water Board should be corporatised. Yet the summary of key findings appearing at the beginning of this chapter reaches no conclusion in this regard. The only recommendation made on corporatisation appears in one line on Page 65, where corporatisation is recommended. The Government Members therefore wish to state categorically that, for reasons outlined below, the Water Board should be corporatised, as a matter of urgency.

The fundamental flaws made in this chapter (as, indeed, in the whole report) is the conclusion that because the existing reticulation ("pipe based") system causes environmental problems, it should be scrapped. Government Members find it staggering that the Committee should endorse a finding that ignores the enormous environmental and health benefits accruing from the reticulated sewerage system. The proposed alternatives are as yet largely untried in urban areas and will be enormously costly, with uncertain environmental and health outcomes.

Government Members acknowledge that environmental problems associated with the operation of the reticulated sewage system need to be overcome. An improved regulatory framework, better treatment processes, and innovative technical solutions are needed to overcome these problems.

The Board should be opened to competition and not be unduly influenced by the political process. Competition will improve efficiency and allow viable alternatives to emerge. With a user pays pricing system (as recently implemented by the Government) in place and the removal of cross subsidies, alternative suppliers and technologies will be encouraged. If the community wishes to invest in alternative sewage systems, it should be free to do so, provided such systems are environmentally responsible and protect the community's health.

On the top of Page 60 of this Report the statement is made that "*the majority of the Committee proposes a series of reforms designed to make the Board a water service provider [rather than relying on a particular form of water and sewerage provision]*". These reforms are by no means clearly articulated in this report, nor are those that can be gleaned from the text necessarily viable. All that is proposed is that the Board is capable of being opened up to competition - as it is a natural monopoly - plus a

series of technologies that might lead to the installation of alternative sewage systems. Examining just a few of these proposals in detail, the Government Members of the Joint Select Committee find :

- The Werribee Sewage Treatment System in use in Melbourne would not be suitable for Sydney. The land required for treatment is enormous and is not available in this city. Even more importantly, Sydney's topography and geology are simply not suitable. Werribee would not work here. Yet until Government Members (and only Government Members) took the trouble to visit this facility, it was held up as the solution to all our problems. The other Members of the Committee preferred to rely on unsubstantiated advice from the Committee's consultant.
- Microfiltration will not lead necessarily to the decentralisation of the sewage system. Microfiltration to produce a supply of water pure enough to be used in industrial processes and other non-potable applications can only be used after the effluent has already been treated to a reasonably high standard. It is not possible to merely "bolt" a microfiltration unit to a sewage main to extract and treat the effluent for reuse. Primary and secondary stage treatment at least are required beforehand. This is land secondary treatment using existing technologies is land and capital intensive, inhibiting decentralisation opportunities.
- That there is no prohibition on the sale or purchase of rainwater tanks presently. It is up to the consumer to choose the type of water supply they wish to have.

Government Members have used the above examples to illustrate that there is no consistent or well thought out approach by the other members of the Committee to achieving their stated aim of unwinding the Board's dominance over the water supply market in Sydney. The alternatives proposed are not necessarily viable, nor has the case against reticulated sewage been proven to the extent that one would decide to abandon the system rather than improving its operation.

Proper regulation of a corporatised, competitive, organisation will produce significant environmental improvements at minimum cost to the community. The other members of the Joint Select Committee spent considerable time examining the alleged failures of the Hunter Water Corporation (and, it should be added, very little time examining the successes). These alleged failures and the Government Members comment on them are as follows:

- Claim: That alternative service providers have not been given the opportunity to bid against the corporatised body prior to a subsidy being provided for extensions to the sewage system by the Government and that competition has yet to appear against the Hunter Water Corporation.

Government Members have no objection to alternative service providers being given the opportunity to bid against the Corporation where appropriate. We question however the implication of the majority's findings that corporatisation has failed because competition has not arisen.

Earlier in this chapter, the ludicrous statement is made that because rain falls without discrimination across the Board's area of operations the Board cannot be said to have a natural monopoly. This statement shows a misunderstanding of the term "*natural monopoly*". A natural monopoly exists where the cost of participation in a market by an alternative supplier is so high as to prevent that supplier from entering it. It is entirely true that rain falls across Sydney without discrimination. The Board's business is to harvest that water via the construction of dams and reservoirs and to transport the stored water to consumers through pipes. It may indeed be that the cost of such infrastructure is so high as to prevent an alternative supplier entering the market. No alternative structures, though, are likely to lead to any greater competition than corporatisation.

- Claim: Demand management has relied mainly on the use of user pays. The Hunter Water Corporation has achieved more in demand management through the use of user pays than any other water authority in Australia.
- Claim : The Corporation has committed itself and its customers to a single technology
There is insufficient evidence in this Report to suggest that such technology should be abandoned.
- Claim: The scope of the audit of environmental performance and services is too narrow. This is not a failure of corporatisation.

The Committee also lists seven achievements of corporatisation, viz.:

1. Greater accountability for land use decisions.
2. Greater openness by management.
3. Greater rationalisation of middle and senior management numbers.
4. Greater public auditing of service and environmental performance.
5. Additional accountability for developer charges.
6. Partial constraints on dividend payments.
7. Application of the user pays to the public sector.

It comments that none of these benefits is necessarily dependent upon corporatisation for its implementation. This view may indeed be correct. But are any other alternatives likely to bring about these outcomes more efficiently or more quickly? Once again, the key advantage of corporatisation is the exposure of the organisation to competition and the setting of performance targets for it. Competition is undoubtedly the best method of improving efficiency and accountability. This Report does not come even close to demonstrating that alternatives to corporatisation will produce a better community outcome.

The Managing Director of the Hunter Water Corporation wrote to the Chairman of the Joint Select Committee responding to the claims of alleged failures of the corporation, but the evidence presented in this letter appears to have been ignored. The letter is attached as Appendix M4. It should also be pointed out that Appendix C of this report, which purports to be an analysis of the successes and failures of the Hunter Water Corporation, is actually an analysis put together by the Committee's consultant. The Government Members of the Committee believe insertion of this analysis as an appendix is intellectually dishonest as appendices are usually primary source documents not interpretations of evidence.

ALTERNATIVE RECOMMENDATION - GOVERNMENT MEMBERS

The SWB Act should be replaced by an Act which provides for it to be reformed into a government owned corporation in terms similar to the State Owned Corporations Act, 1989.

The Statement of Corporate Intent by Section 22 of the S.O.C. Act should include the following;

- (a) that the SWB is to supply water at the least cost to customers with the minimal environmental impact achievable by best practice management procedures and in accordance with hygiene standards set by the Department of Health,
- (b) that the SWB is to implement and encourage demand management of water in its policies, advertising, billing methods and technology utilised,
- (c) requirement to cooperate with Catchment Management Trusts,
- (d) a requirement to comply with statutory pollution control licences issued by the EPA and to participate in all relevant pollution reduction programmes promoted or initiated by government owned corporations and Departments, and
- (e) a requirement to encourage and permit open competition in all areas of service provision.

SCHEDULE OF GOVERNMENT RESPONSES TO MAJORITY REPORT RECOMMENDATIONS.

22. Supported.

23. Supported, but subject to remarks made earlier in relation to Recommendations 16, 17 and 18 with respect to the future report from the Cabinet Subcommittee.

24(i), (ii), (iii), (v), (vi). Government Members dissent from the thrust of these recommendations.

We dissent from Recommendation 24(i) for reasons already outlined in relation to Recommendations 14 (a), (b) and (c). Recommendation 24(ii) suggests that the SWB should be held accountable for the amount of water used by each customer and whether or not they choose to install a rain water tank. The Majority Report appears to have forgotten that NSW is a democracy in which people make these choices for themselves and they cannot be the subject of Government control. The SWB already reports on the matters which are the subject of Recommendation 24(iii). Recommendations 24(v) and (vi) relating to the NSOOS have been the subject of prior comments made in regard to recommendations 10 and 11.

24(iv). Supported.

25(a)(i). Government Members dissent from this recommendation.

It is hard to imagine how legislation to implement the Clean Waterways Programme could be drafted. Even if this were feasible, the Clean Waterways Programme should be the subject of regular public consultation. If it were somehow enshrined in legislation there would be no flexibility left to allow the Government to respond to changing environmental and community needs.

25(a)(ii). Supported.

25(a)(iii). Supported, provided this does not exclude making provision for Community Service Obligations such as pensioner rebates.

25(a)(iv). Supported, provided that the cost of this is covered by customer service charges and subject to approval by the Government Pricing Tribunal.

25(a)(v). The first part is supported subject to approval from the Government Pricing Tribunal. Government Members oppose the introduction of rebates for disconnection.

25(a)(vi). Supported in so far as it endorses the principle of competition, but Government Members do not agree that the SWB should be trying to discourage people from connecting its services. In most cases, connection to SWB services is in the best interests of public health.

25(a)(vii). Supported.

25(a)(viii). Government Members dissent from this recommendation on the grounds of cost. The recommendation suggests that the SWB should pay the enormous cost of treating sewage to drinkable standard and then throw it away. Evidently, according to the Majority Report, it is alright to use greywater on the garden but only drinkable water should be discharged into the sea.

25(a)(ix). Supported.

25(b)(i), (ii), (iii), (iv), (v), and (iv). Supported.

25(c). Government Members dissent from this recommendation. The grounds on which Board members can be dismissed should be the subject of parliamentary debate.

25(d). Supported.

25(e). Government Members dissent from this recommendation. Whilst it is appropriate for the Department of Health to be consulted on these matters, Health is not the only grounds on which alternative technology should be made. Environmental considerations must also be taken into account. Further the Land and Environment Court is not the appropriate venue for determining health regulations.

25(f). Government Members dissent from this recommendation. This would make the SWB into a quasi-regulatory agency. Additionally it not only reduces the competition from alternative technology, it even provides the SWB with the means to impede competition by introducing high levies to cover maintenance.

25(g). Government Members dissent from this recommendation. An operating licence was not designed to cover water extraction. Moreover, Government Members do not believe that it is appropriate to include environmental standards in the licence. This is because revocation of the licence is the ultimate sanction which the Government can impose on the Board, and this sanction is unlikely ever to be imposed for minor infractions to environmental standards. It is better for environmental standards to be law, and for the SWB to be the subject of legal action for environmental breaches.

26(a). Supported.

26(b). Government Members dissent from this recommendation.
This recommendation is superfluous once Recommendation 26(a) is implemented.

27. Government Members dissent from this recommendation.
A free water audit is already in place for low income earners and larger house holds with high water consumption. There seems to be no reason for a further extension of this service.

"e the Water Board's longer term strategies for catchment management and demand management and the impact of the proposed water quality treatment plants"

e Catchment & demand management

Summary

Total catchment management

The Board's catchment & demand management strategies

The proposed water treatment plants

Chronology

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Minority Comments - Government Members

"... the Sydney Water Board will pay approximately \$84 million p.a. for water treatment to the BOO(T) owners. This represents a 6% increase in the Board's total costs for provision of water services, currently standing at \$1.3 billion p.a." (Government Pricing Tribunal Inquiry into Water Pricing, 1993, p.112)

SUMMARY

In this section the majority of the Committee:

- **Assesses the impact of the water treatment plants on the Board's catchment and demand management strategies and concludes that:**
 - **the plants prejudice the Board's catchment and demand management strategies;**
 - **the decision to increase the Board's outgoings by an average \$50**
-

million per year for the next 25 years has yet to be justified on financial or environmental grounds.

The Committee noted that the additional payments for the water treatment plants are of the same order as the special dividends paid by the Board. By

contrast to those dividends, however, these additional payments create additional annual outgoings for the Board for the next 25 years.

A major recommendation of the majority of the Committee is that the Board not be permitted to pass on to customers the additional costs of the water treatment plants until the Government Pricing Tribunal has read the signed water treatment contracts and associated government guarantees and then determined publicly whether the Board is entitled to include those costs, wholly or partly, in customers' bills.

The majority of the Committee also recommends that the two water treatment plants for which contracts are not yet signed should not proceed until a cost/benefit study has been prepared for the proposed Water Manager by an independent auditor. The auditor should not have any links to the parties who have an interest in the existing or proposed plants.

Total catchment management

In their natural state, rivers and catchments provide a broad range of ecological services "free of charge". Vegetation helps clean a river of its pollution, a natural flood plain helps combat floods. Trees, not concrete, stabilise both river banks and river flows.

A catchment may be defined as any area in which all natural flows reach a common point. The land, air and water components of a catchment system are interrelated. Catchments are logical units for natural resource planning and management as they are systems of environmentally independent components whose boundaries are readily identifiable. Effective catchment management must balance the requirements of humans with the actual needs of rivers.

After 20 years of hugely expensive attempts to clean up pollution through point source controls, the Rhine remains a lifeless river that floods with increasing unpredictability. Just as the four nations on the Rhine (Switzerland, Germany, France and the Netherlands), are rethinking their strategy for managing the river, so too should other countries such as ours try to develop new ways to sustain their natural resources. A logical way appears to be an application of a catchment management approach which returns rivers back to their original state, with

meanders, backwaters, rapids, shallows, flooded forests and free passage for migrating fish (see, for example, *Towards Healthy Rivers*, November 1992, a wide-ranging account of Australian rivers with the CSIRO's preferred catchment management practices).

The Committee notes that section 4 of the Board's Act requires the Board to have regard to "the necessity for integrated catchment management and planning of land use" when providing its services. It was also clear that there was a common recognition among parties who submitted to the Committee that such an approach was essential. The Committee has therefore adopted the "total catchment management" approach throughout this report.

It is considered essential that the Water Board has clear present and future catchment and demand management strategies. If the Board does not get its catchment management right, Sydney is likely to continue to suffer long-term degradation of the water which is presently feeding its water supply systems. Similarly, if current and projected demand for water is not significantly reduced, the quality of Sydney's water supply will suffer due to insufficient settling periods within dams. The Board will also be faced with the significant financial and environmental cost of building another dam at Welcome Reef.

Both of the Board's catchment management and demand management strategies are untried. The catchment strategy is some six months old. The demand management strategy has existed for two years but the Government Pricing Tribunal has effectively found that it is yet to be implemented.

The Water Board's Catchment Management Strategy

The Board's Catchment Management Policy was formulated in April 1993, some 18 months after the Board had selected preferred tenderers for the water treatment plants (see the chronology, p. 86)

This policy proposes "catchment management plans". One to 2 year, and 2 to 5 year, work and action schedules with a review process are proposed. No plans were made available for the Committee's consideration.

The Demand Management Strategy

The Board's November 1991 Demand Management Strategy has five elements: pricing reform; communication; improved system operation; product support and research. Its objective is to reduce water consumption and, as a minimum, to permanently reduce per capita consumption by 5% by 1994/95, with a long term target of at least 15% by 2011.

This Strategy has been overtaken by the July 1993 determination of the Government Pricing Tribunal to introduce a user pays system for water pricing for the Board. That decision alone requires a major review of the November 1991 Strategy. In relation to this, the Tribunal's recommendations include:

- "that water suppliers develop a methodology to evaluate least-cost planning options which incorporate both demand-side and supply-side options." (p55)
- "that all water suppliers covered by this review explore and institute demand-side management programs where cost-effective." (p57)

Yet, the 1993 user pays pricing policy is expected to cut demand by 20% and so increase the time for water to be stored and sediment to fall out; that is, the new pricing policy will reduce demand by another 15% beyond that aimed for in the draft 1991 Demand Management Strategy.

It was obvious to the Committee that both user-pays and effective demand management practice need to work together as a dual system to reduce Sydney's water usage. There was a concern from various parties who submitted to the Committee that the Board needed to set demand management reduction targets. The Committee certainly received no information from the Board regarding the percentage of reduction it aimed to achieve. There is a real concern that the Board is committed to continuing its "big pipe-in and big pipe-out" approach.

Further, if the Water Board were to become a water service provider (as recommended in Chapter b of this Report) rather than a water service operator or seller, and implemented water conservation and recycling practices, significant reductions in water usage could be achieved using the following measures - recycling of treated stormwater and sewage effluent, rebates to encourage the use of water conservation devices such as dual flush toilets, rainwater tanks etc.

The Committee notes that Recommendations 4.4 and 4.5 of the Government Pricing Tribunal which recommend that water suppliers consider rebate schemes to customers who install water-efficient appliances where cost effective, provide customers with bills that clearly explain the bill's components and indicate how customers can reduce their bills by conserving water, have not yet been implemented by the Sydney Water Board.

The Proposed Water Treatment Plants

The Board proposes to build four water treatment plants - at Prospect, Macarthur, Woronora and Illawarra.

The Board's primary reason for building the plants is to provide filtered water to its

customers:

"At present, protection from water quality failure in the bulk supply system rests almost entirely on disinfection of the water prior to its distribution. Unfortunately, disinfection does not alleviate all water problems, particularly those associated with run-off (eg turbidity, suspended solids and colour)." (Sydney Water Board submission, 1E, p.17)

It is obvious that the health problems of concern to the Board arise from "run-off" problems in the catchments. Protection of water from pollution at the moment "rests almost entirely on disinfection", not on catchment management.

The management of the catchment influences all downstream water management and thus affects the Board's financial position. The necessity for water treatment plants is caused by catchment deterioration. The volume of sewage is a direct result of water usage and the demands customers make for water.

The most obvious alternative to building the plants was whether cleaner drinking water could have been achieved more economically by better catchment management i.e. cleaning the catchment and cutting erosion, farming, animal and other run-off generating uses.

In response to this question, the Board told the Committee that it had not undertaken a cost/benefit analysis as to whether it would be cheaper to clean the catchments than to build the water treatment plants. A cost benefit analysis of catchment clean ups requires an ability to predict the impact of a variety of clean up actions and the impact of current development. Currently the Board does not have the capacity to do this. It told the Committee that its predictive capabilities here are:

".. fundamentally geared at present to the Board's somewhat localised operational needs. For instance, they will tell us the impact of construction of a new sewage treatment plant at a certain location." (Letter from Paul Broad to Committee, 15 September 1993)

The following is a chronological history of the plants:

Chronology

A useful way to answer these issues is to consider the history of the plants:

April 1991 - Board invites five pre-qualified consortia to submit formal tenders by July 1992 for four water treatment plants. It is a condition of the invitations to tender that the tenders propose prices and conditions that will apply until

July 1993.

November 1991 - Board creates its demand management program.

November 1992 - Board announces three consortia have been awarded "preferred" status.

November 1992 - Board published environmental impact statements for four plants for which preferred tenderers have been selected.

April 1993 - Board creates its catchment management policy.

May 1993 - Board reaches agreement with Department of Planning to prepare a s117 direction under the Environmental Planning and Assessment Act to guide councils in the exercise of their planning and land use powers to help protect water quality throughout its catchments.

June 1993 - Board determined that two plants would be built but defers one other plant for further environmental assessment. Board determinations refer to criticisms in public submissions upon EISs of the Board electing to build water treatment plants before it has carried out a cost benefit analysis of catchment management options.

Note: By determining the tenders before July 1993 the Board ensured it kept the tenderers to the tender prices and conditions that were to expire by July 1993.

September 1993 - Board signs contracts for two plants.

The following observations may be made about these events:

- It appears that the Board had no catchment management policy until some two years after it had invited tenders and some five months after it had selected preferred tenderers for the projects. This policy appears to have been a response to public criticisms during the environmental assessment of the impact the projects would have on catchment management.
- The Board and the government approved the projects and selected preferred tenderers before commencing the environmental impact assessment process.
- The Board asked the public for their views after it had effectively decided the projects should proceed.

It is obvious that health problems of concern to the Board arise. Protection of water from pollution at the moment "rests almost entirely on disinfection", not on

catchment management.

" Urban water suppliers in the Sydney metropolitan region do not have comprehensive treatment provided. As all original catchment areas were uninhabited, raw water quality was high and treatment considered unnecessary. Disinfection is provided by chlorination and chloramination. However a number of factors have combined to make this situation unsatisfactory for the future. They include:

- the increasing age of substantial parts of the distribution system with consequent difficulty of maintaining and cleaning it;*
- increasing urbanisation and other developments which are beginning to affect some of the catchment areas; and*
- the open or unprotected nature of the system such as the Upper Canal, Prospect Reservoir and the Lower Canal."*

(Drinking Water Quality Economic Evaluation, document provided by Dr David Manzi, Sydney Water Board, p.7)

Further to this, the Committee received the following information from the Department of Health:

" The NSW Health Department has no evidence that the public health is at threat from the current supply system but there are many complaints relating to aesthetic problems with the supply due to the raw waters which are rich in iron and manganese, are soft and have low pH" (Letter to the Chairman of 2 September 1993, p.2)

Officers of CALM also submitted to the Committee that *"...the outlay of \$1.732 million per year for erosion control could eliminate the need for extra and expensive filtration processes."* (Branch office of CALM submission, p.56)

The management of the catchment influences all downstream water management and thus affects the Board's financial position. The necessity for water treatment plants is caused by catchment deterioration. The volume of sewage is a direct result of water usage and the demands customers make for water.

Understandably the Committee was concerned about the necessity to build these plants, which will cost the Board an estimated \$84 million annually, or whether there may not have been more financially and environmentally valid alternatives which had not been properly explored.

Dr David Manzi, the Water Board's North Western Region Manager, told the Committee:

"I cannot give you the costs of catchment management that give me a value

that tells me that the water is going to be this quality after we spend this much money on catchments. It is not possible to achieve that figure... when you are starting to talk about a particular quality in a particular catchment management process there is no way we can link the two. We are subject to storm flows and natural events." (Hansard, 4 August 1993, p.87)

In a study where the Board considered some options for providing clean water to its customers in the catchments at Prospect, Illawarra, Woronora and Macarthur, the Board did list catchment management as an alternative option to building water treatment plants for customers in two other catchments, the Nepean and Orchard Hills catchments; see the *Dwyer Leslie Study 1991* (this study is referred to in the Board's submission relating to reference e on page 16). The Board has built and is operating its own water treatment plant for the Orchard Hills catchment but has deferred a decision for the Nepean catchment. The catchment management option for the Orchard Hills area was not investigated (although it was costed) and was not recommended by the study which said:

"[The catchment management options] have not been investigated here as they must be considered as part of a much broader water/resources/health policy framework" (Board submission, p.E8)

However, as indicated, the option of catchment management was never considered or investigated in relation to the four water treatment plants which the Committee has considered.

Accordingly, neither the Board nor this Committee may express a view whether the plants are or are not the most economical solution.

The Committee also considered the financial and management impacts of building the water treatment plants. There was a concern expressed by many parties that the building of the plants did not involve real financial incentives to improve the catchments.

This argument was countered by both the Water Board and the Minister for Planning. The Hon Robert Webster MLC told the Committee that:

"I am aware that the Committee is concerned as to whether we need these plants at all and whether they will open the way for the Board to slacken its catchment management practices. I can assure the Committee that these plants will provide the Board with no such opportunity. Perhaps the strongest incentive of all will come into play in forcing the Board to look after its catchment when the treatment plants come on the line. It is called a business incentive. It will cost the Board dearly if raw water quality degrades, especially if a treatment upgrade is required." (Hansard, August 26 1993, p.98)

However, the Committee is concerned that the Water Treatment Plants only provide a real incentive for the Water Board to maintain catchment quality at its existing level, not to reduce pollution. The contracts and design of the plants are based on the raw water quality as the Water Board knows it at this point in time. The plants are to be designed to receive water which is on average as clean as that received by the Board into its reservoirs over the last 25 years. The Board has provided the consortia with data regarding this. In turn the consortia have based their estimates of their costs for the next 25 years on these predicted conditions. It appears that if the Board actually improves the quality of the water above the average quality for the last 25 years the Board will receive no real financial benefit. Thus, the treatment plants commit the Board to maintaining water quality for the next 25 years which is on average the same as they have been for the last 25 years.

The contracts appear to make it less likely that the Board will be able to implement least cost planning measures such as by recycling water through its storages instead of building dams.

The Committee is concerned that the payments for the water treatment plants will detract from the Board's financial capacity to pay for improvements to its catchments and that the contractual commitment by the Board to take water from the plants may cause the Board to downgrade or to defer beneficial re-use options.

At a total cost to the Board of over \$3 billion the contracts are one of the single largest commercial and environmental events for the Board at any time in its operations. The BOO contracts create a confidential long-term arrangement over a community resource.

The government has given guarantees to the two water treatment plant operators. Despite a request from the Committee, those guarantees have not been provided for viewing by the Committee and it is therefore unable to express an opinion about the contents of such guarantees. It is also not known what fee the Board has paid to the government for it to provide the private contractors with guarantees.

No justification or explanation was offered regarding the refusal to make the guarantees available to the Committee other than to claim confidentiality. The Committee has been offered no explanation of the legal foundation for the refusal to supply copies of the guarantees, or access to them. Given that the Parliament has specifically required the Committee to report upon the impact of the treatment plants, the failure to provide reasons for refusing access is unacceptable conduct by the Executive.

For instance, it may be the case that the provision of the guarantees will undermine any benefits won by the private sector building the plants. What is the impact upon the management of Sydney's water for the next 25 years, for example, if, when read with the contracts the guarantees contain matters which may conflict with the

powers, roles and duties of the Ministerial Water Corporation to control the use and flow of water in Sydney's rivers?

The Government Pricing Tribunal has said regarding the cost of the plants:

"It should not be assumed that the Tribunal will automatically pass any cost increases that result from these projects on to customers unless they can be shown to be justified on economic and environmental grounds." (Water Inquiry, Volume 2, p.114)

Having regard to the Committee's previous comments about the lack of financial cost benefit studies and the barriers posed by the plants regarding catchment management, the Committee recommends that the Government Pricing Tribunal inquire into the two contracts that have been signed before any of their costs are passed on to Board customers.

The Committee reviewed the role of the appointed Board members in the process and sought to establish the financial and environmental basis upon which appointed members of the Board determined to proceed with the water treatment plants. The evidence given to the Committee indicates appointed members of the Board were provided by Board staff with a limited opportunity to inform themselves of these issues:

"Mr McDonnell: ... Whenever these matters were raised in the board the economic analyses were distributed to board members and then handed back again..."

"Ms Allan: How long would you get to study the implications of such a document?"

"Mr McDonnell: Five minutes."

"Mr Obeid: How many pages?"

"Mr McDonnell: Generally only one page..."

(Hansard, 20 October 1933, p.12)

Some Board Members of the Sydney Water Board gave evidence to the Committee that Appointed Board Members have:

- Not read the contracts for the water treatment plants by which the Board will commit its customers to substantial additional annual costs. They have declined an offer by management to read the contracts;
- Delegated to the Managing Director responsibility to read the contracts, deciding upon their suitability and to sign them;
- Neither asked for nor proposed a system of audits to secure the public benefits proposed to be won through the contracts;
- Been determined to proceed with the plants on the basis of a brief reading of the other documents justifying the plants (the evidence is to the effect that

less than an hour of Board meeting time was made available to review such a document).

The Committee believes Board members should read these types of contracts before they are signed, including any guarantees, so they may ask more informed questions and assist management in deciding the impact of the contracts.

Given the statutory obligation upon the Board to integrate catchment management policies when providing its services, there can be no doubt that Board members have a duty to consider the impact of the contracts upon the Water Board's catchment management capabilities. The common law is concerned with whether directors fail to carry out their duty, not whether they err in their understanding of complex documents.

The Committee is not satisfied that there are incentives in the contractual arrangements that encourage the Water Board to deliver better quality raw supply to the treatment plants. The Committee has therefore requested an annual auditing system which will provide for performance measures based on the standard of water before and after treatment. Water quality and quantity targets in the contracts should be made a performance measure of the Board's Managing Director and the officer primarily responsible for the administration of the contracts.

As previously discussed the Committee is strongly of the view that the Board may have let key financial and environmental opportunities slip by due to its building the water treatment plants.

For example, the CSIRO has identified the importance of the riparian (river-bank) zone:

"as a buffer between rivers and their catchments; as a source of nutrients and sediments when disturbed; as part of the continuum from terrestrial and/or flood plain environments to aquatic environments, facilitation of the migration of animals, and protection and food for animals, as water levels rise and fall; and as part of the recreational amenity of rivers. The riparian zone is one of the most neglected environments in Australia... and largely ignored by policy makers because it falls between the neat categories of 'land' and 'water!'" (Towards Healthy Rivers, November 1992, p.68)

The CSIRO suggest *"a discount on local rates for landholders according to the seriousness of river condition and the state of fringing vegetation."* (Towards Healthy Rivers, p.80). The Committee proposes that the CSIRO's mechanism should be implemented in the next round of bills by water and other agencies in 1995.

The Hunter Catchment Management Trust, the Hawkesbury Nepean Catchment

Management Trust and the Upper Parramatta River Catchment Trust should each draw up their forthcoming budgets to provide for the implementation of rate rebates for riparian zone management.

For example, from a catchment management perspective it would be desirable to retain large undeveloped back yards adjoining creeks and streams and encourage dense plantings of suitable trees and shrubs. A rebate of \$23.90 per year (this year's Trust charge) would acknowledge the community benefit of a landowner managing the rear of their property in this way, but would not be sufficient to dissuade the landowner from selling to a developer wanting to cover the property with townhouses.

It is considered that there is little incentive for the Water Board to give a riparian zone rebate. It currently has no statutory responsibility for the condition of a waterway other than for the impact of its own operations, such as its sewage discharges. Where the Board does own land and leases it, however, the Board should immediately introduce rebates where the topography permits.

There is a risk that the offering of a rebate for management of a riparian zone may carry an implication of a right NOT to maintain it. So that the scheme offers sufficient encouragement to achieve the desired outcome - improvement and maintenance of the riparian zone - the rebate scheme must be part of a completely rounded pricing policy by each rating authority. Supplementary measures will include a charge if the zone is NOT maintained. Stream-side activities which profit by using the riparian zone, such as turf farming, need significant incentives to stop them farming to the water's edge.

Therefore there is a need for a total package of riparian and related land management policies. Again, implementation of rebates should not await the development of a total package. Action can prudently begin now and as experience is gained elements may be added to the package.

To ensure that owners of riparian land do not carry the burden of managing sediment passed down onto their land by landowners higher up, rebates and pricing policies need to be applied to a corridor or catchment that includes all land owners who affect the use and flow of water.

Of course, the pricing policies must not erode the current rating base of the various authorities.

It is submitted that the Board has also let key catchment management implementation opportunities pass it by.

Since 1987 the Board has had an express statutory obligation to "integrate catchment management and planning of land use" when delivering its services;

Water Board Act s.4. From the chronology provided above regarding the water treatment plants, it is clear that the Board only proposed an "integrated" approach to land use planning in 1993, after it was effectively committed to the plants. The Committee notes with concern that at the time of presenting this report to Parliament, some six years after the statutory obligation to integrate catchment management was created, and some two years after the Board selected preferred tenderers for the water treatment plants, the Board has yet to put in place an integrated catchment management plan.

Catchment management, if it is to succeed, must be firmly positioned as the basis for urban development strategies, not as an optional extra to be adopted in a token strategy after major decisions affecting the catchment have been put in place. As Mr Jeff Angel, of the Total Environment Centre, submitted to the Committee:

"Rather than water being an adjunct to planning, water should be right in the core of planning." (Hansard, August 26 1993, p.33)

In Reference b, above, the Committee proposed recommendations to overcome fragmented controls over the use and flow of water. These dealt with changes in the relationships between local councils, the EPA, the DWR and the Water Board. In this section the Committee makes recommendations that focus on implementing catchment management strategies that assume those fragmented controls over the use and flow of water have been removed.

If the recommendations made in this section of the Report are to succeed it is essential that there be a Water Manager with clear powers to drive the catchment management process. All government agencies that operate within the catchments must work towards a common set of goals for water quality and quantity.

A model draft total catchment management plan which was provided by the Hawkesbury-Nepean Catchment Management Council appears to cover many of the necessary objectives and principles and is in Appendix d for suggested adoption by catchment groups.

Submissions to the Committee also recommended that the task of catchment management within the Sydney region be clearly identified as the primary responsibility of a single minister or agency; that catchment management should no longer be split so that lines of accountability are blurred (there are five government bodies: DWR, Planning, EPA , CALM, Water Board).

Councils and catchment management

Any integration of catchment management within the present planning system must by necessity involve local councils as councils have broad powers and obligations

to deal with pollution and environmental impacts when determining development applications. The Land and Environment Court has determined that councils cannot avoid determining pollution impacts when they decide development applications (Jungar Holdings Case). The finding raises two associated issues:

- What conditions can a council impose in a development consent to manage pollution and water quantity in their catchments (under s.91 of the Environmental Planning and Assessment Act)?; and
- What monetary contributions or land can councils seek to be dedicated as a condition in a development consent (under s.94 of the EPA Act)?

Section 94 of the EPA Act stipulates that when money or land is sought from developers the following conditions apply:

"... where a consent authority is satisfied that a development... will or is likely to require the provision of or increase in the demand for public amenities and public services within the area the consent authority may grant consent... requiring
(a) the dedication of land free of cost; or
(b) the payment of a monetary contribution."

The Land and Environment Court has consistently held that the above words make it clear that a council's powers to require money or land from a developer under s94 are not limited to common issues such as car parking. Pollution monitoring is clearly a public service that councils may be required to carry out as a result of needs generated by development. Such monitoring may be partly funded by contributions sought under s94.

Robert Bell, of the Hawkesbury-Nepean Catchment Management Trust also expressed the view to the Committee that the developer, through s94 contributions could address demand and catchment issues:

"The developer, through s94 contributions, should provide artificial wetlands, re-use of stormwater systems, water efficient appliances, rainwater tanks etc. Once the development is completed, the management and maintenance of the development would come back under the control of the Water Board. Contracts between industry and the Board must include a water demand management program as part of the contract." (Hansard, September 10, p.77)

Conclusions

The impact on the Board's catchment and demand management policies of the water treatment plants are as follows:

- The Board has not carried out financial or scientific analysis of the work that needs to be done to cleanse the catchments and the cost of such work in comparison to building water treatment plants.
- Neither the Board nor the Committee has sufficient information or data to determine whether the treatment plants are, or are not, the most effective, or cheapest, means of providing customers with cleaner water.
- The contracts provide the Board with no financial incentives or benefits to cleanse the water in its catchments. The only financial incentive is to ensure the catchments do not deteriorate below an average point.
- Depending upon the costs of cleaning the catchments the contracts appear to have created a disincentive for the Board to introduce recycled water into the storages after it has been used by customers. If cleaner water in the catchments can be provided for a sum that is low enough to justify expenditure on recycling water then that option has not been lost to the Board and its customers.

Recycling is commonly used overseas but has yet to be introduced widely in Australia. The Board presently recycles greywater at one location and the Public Works Department is trialling dual reticulation at Wagga.

The plants fail to protect the public interest in the following ways:

- The sale of any interest in the plant is not prohibited in the event that it may lead to a cartel or other commercial arrangement which may prejudice the public interest.
- Price-fixing, price increases or other financial requests that represent a renegotiation of the basis upon which the tenders were accepted are not specified to be actions which void the contracts.
- While the Board is paying for the capital costs of the plants it will never own them at the end of the contractual term unless it elects to buy them at a negotiated price. Thus, the contracts oblige the Board to pay for infrastructure it will never own. In addition to this expense, it must pay for service and operation of the plants.

The fundamental public benefit sought to be achieved by the plants and the contracts under which they are being built is the delivery of cleaner, healthier water to customers. Thus, the quality of the water both before and after treatment is a fundamental issue for the Board and its customers. The Board should be publicly accountable for these matters both now and during the life of the projects.

Recommendations

Water treatment plants

- 28(a) The Board should not be permitted to pass on to customers the additional costs of the water treatment plants until the Government Pricing Tribunal has read the signed water treatment contracts and the government guarantees and then determined publicly whether the Board is entitled to include those costs, wholly or partly, in customers' bills. In reaching a determination the Tribunal should identify the impact upon costs arising from the significant technological and operational differences, if any, between the pilot water treatment plant which was designed, built and operated by the Board for two years before it called for the expressions of interest for the plants and those plants for which the Board has executed contracts.
- (b) The two water treatment plants for which contracts are not yet signed should not proceed until a cost benefit study of the plants has been prepared for the Water Administration Ministerial Corporation by an independent auditor, who should not have any links to the parties interested in the existing or proposed plants. The study should be commissioned following a call for public tenders and it should be published in full when it is provided to the Ministerial Corporation.
- (c) The Board should publish the whole of the contracts (except for intellectual or commercially privileged details) and tell customers in their bills the facts about the current and contracted water quality (ie schedules 9,10 and 11 of the contracts). The facts will include the 25 year mean quality of the water which is to be cleaned and upon which the calculation of the tariff is based. Quarterly bills will contain comparisons between the current water quality and the 25 year average.
- (d) The Board should publish immediately for public comment an annual auditing system and draft performance measures by which key senior executive staff may, on an annual basis, be held accountable for:
- (i) The success or failure of achievement of the water quality goals set out in the contracts;
 - (ii) the current state of the water and the quality and quantity of

water the plant operators have provided; and

(iii) The amount of money paid each year by the Board to each operator under the guarantee arrangements with the government.

The annual reporting, auditing system and performance measures should commence to operate contemporaneously with the plants.

- (e) Implementation of the quality and quantity targets in the contracts should be made a performance measure of the Appointed Board, the Board's managing director and the officer primarily responsible for administering the contracts.
- (f) Annual reports and external audits should specifically account for the success or failure of the plants to deliver the quality and quantity of water required by the contracts and any variations to or re-negotiations of the contracts, particularly any alterations to payment arrangements or ownership of the plants.

If the contracts for the other plants are to proceed they should differ from the existing contracts in at least the following respects:

(i) Prohibitions should be created to prevent: the creation by a water treatment operator of a price-fixing cartel; a single company controlling more than one plant; the sale of the plants by the Board (before or after any corporatisation) to a private owner(s).

(ii) All clauses relating to upgrades and assignment of interests in the plants, unforeseen circumstances and default should be made public; and

(iii) No government guarantees should be provided in relation to any aspects of the contracts.

- (g) The Board should not confine public scrutiny of the key elements of a contract allocating a public resource to a private interest either by signing a confidentiality agreement or by other means such as the making of a guarantee. Section 22B of the Public Authorities (Financial Arrangements) Act 1987 should be amended to make clear that a public authority or a state owned corporation must make public the contents of any guarantee it obtains from the government and that such guarantees will only be provided to & body exercising water, sewerage and drainage functions if:
- (i) The Ministerial Corporation determines that such a guarantee will

not prejudice the Corporation's control of the use and flow of water;
and

(ii) The Treasurer is satisfied that there is no fiscal alternative to the provision of the guarantee.

Catchment and demand management

- 29(a) The boundary of the Hawkesbury-Nepean Catchment Management Trust should be extended to cover the whole of the catchments into which the two rivers drain. Membership of the Trust should be altered to reflect the additional land and waters that have been included to give effect to this recommendation. In the next session of Parliament all Trusts should be given a power under the Water Administration Act to concur or not to concur to any development within Part 4 or Part 5 of the Environmental Planning and Assessment Act for the whole of the land within a Trust's area.
- (b) The Board should seek public comment upon its draft catchment plan, particularly from the Upper Parramatta River and the Hawkesbury-Nepean River Catchment Trusts, and implement a revised plan in 1994. The Board's plan is integrated with the plans of the Upper Parramatta River and the Hawkesbury-Nepean Catchment Trusts.
- (c) Commencing in 1994 catchment management trusts and the Board should report annually upon the achievement of quantified goals relating to the environmental outcomes considered of fundamental importance to the particular trust or the Board. The reports should enable comparison between yearly achievements and should include predictions and the goals to be achieved in each forthcoming year. Such reports should:
- (i) State in comparative form the quantified increase or decrease in urban and rural run-off, tree and vegetation cover;
- (ii) State in quantified form the existing water quality and quantity and the expected changes in the forthcoming reporting year;
- (iii) Name the developers or operators (including any local, state or federal government bodies) which failed to agree to requests by the Trust or the Board to protect the catchment, together with data of the quantified environmental damage resulting from such development;

(iv) Identify the environmental planning instruments reviewed and the quantified environmental goals to be achieved through the controls of those instruments.

- (d) Failure by a Trust or the Board to provide the annual information in (c), above, should be a ground upon which the Ministerial Corporation (in the case of the Trusts) or the Minister administering the Board may remove the members of the Board.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

Government Members strongly dissent from the irresponsible assertions made throughout this section about the drinking water treatment plants.

Essentially the majority report attempts to argue that health problems of concern to the Board are insignificant, and that they "arise from "run off" problems" in Water Board catchment areas. It suggests that the expenditure of sums of money as low as "\$1.732 million a year" on catchment management programmes "would eliminate the need for extra and expensive filtration processes". (This is quoted on page 88 from CALM officers from a CALM Branch Office but with no supporting argument to sustain it. The estimate has been rejected by CALM head office.)

Only by ignoring evidence can it be concluded that health concerns were not crucial.

The following evidence was ignored:

- (a) Sydney water does not meet 1987 health guidelines set by the National Health and Medical Research Council (NHMRC).

"While Sydney's water currently meets the 1980 National Health and Medical Research Council Guidelines, the goal is to meet the more stringent 1987 NHMRC guidelines by mid-1996. In 1989, 50% of the samples tested failed to comply with 1987 Guidelines. At the customer's tap these levels had fallen to 98% and 74% respectively." (Water Board Submission, page 17 of 1E)

- (b) These standards are currently being reviewed and are likely to be more stringent than the 1987 Guidelines.

(c) In late 1992, two dangerous gastroenteritis-causing protozoan parasites, giardia and cryptosporidium, were discovered in Water Board storages. The levels of cryptosporidium discovered were similar to those which caused public emergencies in the USA and the UK.

In "Doing the Vision Thing", Messrs Wilson, Harley and Moore refer (on pages 66 and 67) to their support for the water treatment plants by:

- warning of the detection of giardia and cryptosporidium
- noting that the Water Board had to increase alum and chlorine dosing in an inefficient manner
- inviting the private sector to assist in funding and developing solutions to the problem with drinking water quality
- undertaking investigations for water treatment plants to ensure the protection of Sydney's health.

The Government Members share the views of the authors of "Doing the Vision Thing" that there can be no compromise on the issue of high health standards for Sydney.

Demand Management

The charge that the Board is not interested in demand management is unsustainable. The Water Wise campaign has been in force for months and has received much publicity. There is already evidence of a drop in demand - over the last summer (the "bushfire summer"), there was a reduction of 10% compared to that of 1991/92, the previous summer when climatic conditions were similar.

The majority report also downplays evidence from other authorities on the impact on demand of pricing reform. By ignoring a main plank in the demand management strategy, it is relatively simple to imply that demand management is not taken seriously.

Catchment Management

There is a persistent claim in this section that the Board was not interested in catchment management until 1993 (e.g. page 84), whereas catchment management was conducted for decades as a matter of course. The even more pernicious claim is made that "the necessity for water treatment plants is caused by catchment deterioration" (page 86). The majority on the Committee simply ignored all other possible reasons which for given for introducing treatment for water.

The Board's ability to provide a consistently safe, reliable water supply depends on the performance of the whole system. The treatment plants are only one element of the water management system. The Board acts on the principle that the high quality water from catchments into dams reduces the need for expensive treatment later in the delivery process. Prospect reservoir management is currently under stress -

settling times are near their limits. Prospect Reservoir was designed in the 1880s to detain water in storage for 180 days ("Doing the Vision Thing", page 66), but today water is detained for approximately two days. It has been estimated that at least two months detention is recommended for minimal standards of turbidity settlement. The third element in the strategy, treatment, is now necessary and the Board has to maintain a clean distribution system. No single element of itself can be expected to deliver safe and secure water to the customer.

Treatment is no substitute for proper catchment management. Rather, treatment complements catchment management. There is a commercial incentive for the Board to protect its catchments. It will cost the Board more to deliver water if catchment management is not maintained.

The charge that a catchment management policy was not **formulated** until April 1993 (page 84) implies that there was no catchment management practice. Even the 19th Century legislation which established the Water Board provided for exclusion zones in catchments.

The claim that disinfection is seen as an alternative to catchment management (page 87) is false. Disinfection is used in storages and in the delivery system quite simply to protect public health. It is an essential element of the delivery system.

The majority conclusions ignore the main reasons for opting for the water treatment plants: health and customer complaints. The Board's actions to maintain water quality in storages, such as alum dosing to counteract turbidity, are not sustainable on a long term basis for health and environmental reasons and are also very expensive. The Board could not consistently deliver a reliable, safe water supply as measured by the 1987 NHMRC Guidelines (and these Guidelines are about to be upgraded). This assertion (p 4 of 1E of the Water Board submission) was never challenged in any representation to the Committee.

Despite the charge made in the majority report (page 83), the Water Board has supplied financial evidence about the water treatment plants indicating that two cost benefit studies had been done. The environmental reasons for opting for treatment plants are incontrovertible.

In all the rapture about the naturalness of rivers (page 83), it has to be admitted that this Romantic notion also contains some "nasties". Turbidity in rivers and storages is natural, as are bushfires, which also cause problems for water quality. Restoring things to some imagined pristine state - were that possible - would not eliminate all problems. Contamination from storm flows washing over ground and picking up and/or dissolving "polluting" compounds such as sediments, minerals, mulch from plant growth, animal droppings, dead animals, ash from bushfires and so on, means that reality is more complex than implied in the majority report. The majority conveniently ignored the complexities of the water cycle.

EIS and Tenders

It is not true (page 87) that the preferred tenderers were selected before the EIS process was commenced. The chronology on pages 86 and 87 is incorrect: the five pre-qualified tenderers were short-listed on 29 October 1991, not April 1991 - in April the Board called for expressions of interest.

So the Board conducted the EIS and tender processes in parallel and not in sequence. This involved a risk, but there was already a risk to health from the system running near its limits. There is also a risk, however, in doing the two in sequence and some debate over which should come first in the sequence. (See evidence from Dr Ross Woodward to JSC on 12 August 1993; Hansard p 187.) That risk was that the EIS would point up factors which would prevent one (or more) projects proceeding - and, in fact, two of the proposed plants were deferred, which suggests the Board was acting in good faith and not trying to railroad things through.

Cost-Benefit Analyses

The charge is that the Board did not do a cost benefit analysis of "catchment management" versus "treatment plants" (page 86). The implication is that the Board took the easy way out by neglecting management of its catchments.

There is no precedent for an analysis of this type. High variability in temperature or weather conditions, especially storms, nullifies all conclusions from such a study. It is iniquitous to link performance indicators of managers' jobs to raw water quality (without taking into account significant events over which they have no control, such as storm and tempest).

The Board did, however, do cost benefit analyses on:

- (i) "treatment plants" versus "a filter on every household tap", and
- (ii) "BOO plants" versus "Water Board construction and operation".

Government Members noted the evidence given by David Manzi that the cost of private sector building and operation of the water treatment plants over a twenty-five year period was t\$3,000 million compared to \$3,600 million if the Board constructed the plants themselves. The net present value of the projects was \$714 million versus \$807 million respectively.

Water Quality

There is no acknowledgment that it is an uphill battle for the Board to maintain its water supply, given increased development, urbanisation and population growth. Extra demand means that the consequences of natural events cannot be ameliorated,

as in the past, by a settling period in Board storages. It is not realistic to expect to improve raw water quality above the 25-year levels by catchment management practices alone.

There is a financial incentive for the Water Board to manage its catchments properly. The price it will pay for water treatment will increase if the raw water quality is allowed to deteriorate. There is a marginal incentive for the Board to provide improved raw water quality as it gets a discount in tariff for water of a quality better than that specified in the window.

Contracts

Government Members wish to dissociate themselves from the many attempts made by the majority of the Committee to compromise commercially sensitive information relating to the drinking water treatment plants.

The Government Members are not against the principle of open contracts, but stress the need for qualification. A commercial-in-confidence agreement is not a device to conceal for concealment's sake. The consortia have legitimate reasons to negotiate a commercial-in-confidence agreement with the Water Board over the water treatment plants.

The Public Accounts Committee (PAC) has looked at the general question of commercial in confidence matters in relation to private contracts for public infrastructure.

Recommendation 47 of the PAC's Report states that the way to handle the issue of commercial confidentiality and to achieve the appropriate level of disclosure is to issue contract summaries, an approach endorsed by the Auditor-General (pages 172 and 173 of volume 2 of his 1993 Annual Report).

It has to be acknowledged that there will be a cost to the Board in having open contracts: that will inevitably mean "**most-cost**" to the Board as each consortium will demand every concession already won by the other consortia.

The majority report implies that the Appointed Board was kept in the dark on the matter of the water treatment plants. The Government Members believe that it is not tenable (or credible) that the Appointed Board was ignorant of the significant terms of the BOO water treatment contracts. Presentations by Board staff were continually made to the Appointed Board, the contracts were discussed at Board meetings on approximately 20 occasions and were referred to an Appointed Board subcommittee, and there was an understanding that Board members could ask any follow-up questions they wished.

Government Members agree with the identification of central concerns but do not

agree with this Report's method of handling it. The lengthy section on riparian zone management is a case in point: it is highly dubious whether the system outlined on page 92 with its bureaucratic structure to manage a \$23.90 rebate per annum is a good idea.

Conclusions and Recommendations

This section has been framed to bolster a pre-existing position on catchment management and demand management which is anti any treatment plants. The majority report has been selective in the evidence presented and much relevant evidence has been ignored.

Government Members do not believe that the conclusions on pages 95 and 96 can be validly drawn. If the plants were to be returned to the Water Board at the end of 25 years (as in BOOT), residual risk of the asset is removed. The consortia would not be able to claim tax advantages for depreciation, operating expenses etc under those conditions, and the resulting increases would be reflected in a higher cost to the Board. The Board's analysis was that BOO could provide the Plants at a more favourable cost to the Board than any other method, but the option to takeover the plants (or renew the contract) at the end of the contract period has been retained.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

28(a). Government Members dissent from this recommendation.

The Government Pricing Tribunal will have to give approval to the SWB to pass on the cost of the drinking water programme to customers, but this will not require them to read the commercial-in-confidence sections of the contracts.

28(b). Government Members dissent from this recommendation.

It is not possible to do a cost benefit analysis for the catchment management option.

28(c). Government Members dissent from this recommendation.

The tariff is not based on average quality, but on calculations based on the highest and lowest water quality in the 25 year period.

28(d). Government Members dissent from this recommendation.

Future water quality cannot be predicted, for example there might be a major storm.

28(e). Government Members dissent from this recommendation.

This requires performance measures to be linked to the flawed Recommendation 28(d)

28(f). Government Members dissent from this recommendation.

28(g). Government Members dissent from this recommendation.

All of the above recommendations are essentially designed to deter the Sydney Water Board from contracting out the drinking water treatment plants to a private operator. In the view of the Government Members this would prevent the SWB from achieving its objects in the most cost efficient way.

29(a). Supported.

29(b). Government Members dissent from this recommendation. The SWB does not draw water from the Upper Parramatta River. The SWB only draws up Catchment Management Plans for the inner areas around its storages.

29(c). Supported, to the extent that it calls for open and full reporting. However Government Members dissent from the particular performance measures which have been specified in (i), (ii), (iii) and (iv). Most of them are bureaucratic nightmares with significant cost. Some require the Board to become a quasi-regulator.

29(d). Government Members dissent from this recommendation. This recommendation requires agreement to the specific performance measures outlined in the previous Recommendation.

"f to review the current and projected environmental standards for discharge to receiving waters in terms of whether they reflect community needs and with regard to their affordability"

f Environmental standards

Summary

Must action await standards?

What are the standards?

What standards have been proposed?

What standards reflect community needs?

Who should pay?

No new inquiry system

Recommendations 30-35

Minority comment - Government Members

Minority comment - Fluoridation

" . . . people felt that the Water Board preferred to keep them in the dark about the reality of the river's pollution, covering up or simply ignoring results that showed an apparent lack of success and telling the public that 'everything is fine'." (Reark Research Pty Ltd February 1993, a report commissioned by the Water Board, p.28)

SUMMARY

In this section the Committee concludes that all water quality standards set should aim to return rivers and tidal waters to harmless levels.

Must action await standards?

In their submission to the Committee, David Harley, Tim Moore and Bob Wilson told of the "regulatory vacuum" within which the Sydney Water Board operated

during their administration. Similarly, the present administration of the Water Board reinforced to the Committee that, in order for the Water Board to effectively carry out its duties and attain its goals for water quality an improved regulatory framework is necessary.

A holistic approach to catchment management which recognises and respects the interaction of all elements such as air, land, water and biodiversity cannot be realised until this issue is addressed.

The Committee is concerned that the EPA, as regulator, is failing to effectively implement and administer laws for a significant range of existing and future development.

The Clean Waters Act currently makes any form of pollution an offence, whether or not a specific regulatory standard has been set for receiving waters.

Under the present system as dictated by the Clean Waters Act, any pollution of waterways is only made lawful through the EPA licensing system. As such, urban and rural run-off largely takes place in breach of the Clean Waters Act and thus the majority of everyday activities which contribute to this form of pollution such as oil and grease discharge from cars, erosion and drainage of subdivision works, garden pesticides, agricultural and domestic fertilisers etc are in breach of this Act.

Similarly rain sewage surcharges from the Board's sewers in around 10,000 locations across Sydney are not licensed by the EPA and subsequently also in breach of the Act.

This lack of regulatory standards appears surprising as there is no deficiency within the present statutory powers to control either existing or future urban run-off pollution, whether it be through the Clean Waters Act or any of the several other Acts which confer relevant regulatory powers on government agencies. Both the volume and content of pollution may be readily controlled under such laws. For instance, the EPA currently licences only approximately 3,000 premises across NSW. Thus, most of Sydney's 25,000 industrial premises are operating under controls set in Building and Development Applications issued by local councils.

The Committee is concerned that, while the EPA has been given a statutory duty under its present legislation to set levels of pollution which are considered "harmless", there was a lack of information forthcoming from the EPA to demonstrate that it is in fact attempting to actually achieve this through its current licensing process.

The general absence of standards for the State's waterways, despite the clear existence of statutory powers to facilitate the process, suggests the EPA has failed

to implement its statutory goal to implement ecologically sustainable development through its licences and other activities.

In the last three years the number of prosecutions by the EPA has dropped by approximately 70% (down from 325 in 1990 to 37 in 1992 to 42 in October 1993). Further, according to statistics published by the Land and Environment Court, there appears to be an unacceptable extension of the time within which prosecutions are being commenced after a breach occurs .

The Committee was also concerned that the 1993 regulatory review required under s7(2) of the Protection of the Environment Act has been treated as a Cabinet document and thus is not publicly available.

In the light of this, it is thus considered that the EPA should be given a statutory obligation to involve the public in the review of the effectiveness of pollution regulations and their administration.

Overall, it was clear to the Committee that there was much to be done before Sydney's waterways were protected by the effective implementation and administration of regulations and standards by the one regulator, the EPA. The Board, and all other major players in the water polluting process cannot operate effectively and be held publicly accountable for their outcomes until they receive clear direction through the implementation of a strong regulatory framework.

The EPA urgently requires additional resources, the introduction of its Phase II legislation and a stronger board of management in order to effectively carry out its statutory duties.

As illustrated in the Board's 1993 report by Reark Research, there is a public perception that the Water Board has not been providing them with either adequate or reliable information about the quality of the state's water resources.

It is essential that government agencies restore public confidence in their ability to both implement and achieve publicly acceptable water quality standards.

The Committee was concerned to learn that during the course of its inquiry, at a time in which yet another algal outbreak had occurred, the Board and the EPA were proposing to lower the few environmental standards protecting Sydney's waters to allow the Board to continue the operation of its obviously inadequate current technology. Plants using the current technology which is incapable of meeting such standards are proposed at: Picton, Oaks/Oakdale, Karuah, Clarence Town and Tilligery (the communities involved are Picton, Moss Vale, Mittagong, Karuah and Bulahdelah) where waters presently are protected by a P Classification under the Clean Waters Act. As the EPA sees it:

"Compliance with the subsequent P classification can only be achieved by reconstruction or replacement of each [sewage] plant. . . ."; (EPA supplementary information, p.11)

Thus, it appears that the EPA proposes to alter standards to allow the existing sewerage technology to be built or to continue operating where standards presently do not permit it. This decision has been made before any environmental impact statement has been carried out and has pre-empted the introduction of alternative, less polluting technology.

Significantly, the option of using engineering solutions that are cheaper than the capital-intensive pipe-based technology appears not to have been explored.

The Committee expects that the environmental impact statements for the sewage plants will not canvass new technologies or alternatives to the Board's failed sewerage systems. The Committee also expects that the EPA will not consult the public regarding the amended regulations by which environmental standards will be lowered.

Such conduct is simply in conflict with the precautionary principle which the EPA is bound to apply. The Committee is most concerned by the EPA's narrow approach to the issue of sewage technology. It appears the standards will be shaped to cement the use of the current failed sewage technology rather than encouraging the Board to change their method of operation.

It is suggested that Parliament must give the Board and other government agencies effective power, reinforced by effective statutory obligations, to inform citizens about the extent of water, land and air pollution at the time it occurs. This issue is dealt with in Reference b, above.

However, any discussion about the desirable quality for Sydney's waters should not be mistaken as an opportunity for the Board to resile from the standards set in the Clean Waterways Program.

Because the health of the rivers and tidal waters is threatened by continuing major pollution, more wide-ranging and effective standards are required to control sewage and other pollution from urban and rural run-off.

The issue raised here is, therefore, what additional standards are needed to control the Board's sewage and the other pollution?

The outbreak of blue green algae on the Hawkesbury and Nepean Rivers was not predicted by the authorities. This incident reinforces recent general agreement within the scientific community that there is a real gap in knowledge about the cause of such outbreaks.

It appears that water quality data alone does not give a clear enough indication of the health of a water system. Thus, the amount of phosphorus or nitrogen does not clearly indicate whether or not a blue green algae outbreak will occur. Attention is now turning to identify biological indicators which give a better idea of the cumulative impact of pollution and of the overall health of the system.

Identifying the key indicators is an unresolved problem. Mussels and shellfish may be good indicators but there is little information about them from one water system to another. Another problem with using biological indicators is that water quality may only be one factor influencing their distribution - seasons, climates are relevant, too. As the CSIRO has pointed out:

"Nutrients have been shown to be vital to both the well-being and the ill-health of our rivers...But many other factors play a role in aquatic ecosystems other than nutrients . . . it is rarely possible to rank their significance" (CSIRO, Towards Healthy Rivers, November 1992, p.50)

Setting standards, and designing urban and rural development to meet those standards, is therefore an uncertain science but it is not impossible.

Enough data exists to say that waters are safe for humans to drink, to swim in or to have contact with. Enough is also known to enable development to be designed to achieve those standards.

The Committee's view is that there is no valid excuse for the environmental regulator, the EPA, the Board or any other public sector agency, for not exercising their statutory responsibilities to take prudent action to protect Sydney's waterways. (See **Appendix e, Areas which cannot presently sustain development**)

What are the standards?

The Sydney Water Board explained to the Committee that the process of regulation setting in Australia is currently "going through a renaissance" due to a general world-wide recognition of the environmental problems that occur as a result of the traditional command and control/technology based approaches being implemented without proper consideration of local conditions.

The **Industry Commission Report No. 26, Water Resources and Waste Water Disposal, 1992** warned of the dangers of committing operating organisations such as the Water Board to a spiral of rising costs. The Report also warned of an attendant inability to fund future infrastructure improvements to secure critical environmental improvements via the simplistic application of command and control approaches.

Presently, all standards are set by the government on the advice of the Environment Protection Authority. In its submission to the Committee, the EPA explained that, in the context of water quality, the term "standards" was actually a loosely used expression which covered the following different instruments:

- (1) Water Quality Objectives - these are catchment based and cover the various classes of use or environmental value for which water might be needed in the catchment and the scientific criteria required to meet these;
- (2) Technology Based Effluent Standards - these apply to various industries based on the ability of their technologies to deliver effluent of a particular quality;
- (3) Regulatory Standards - these are set under legislation the major example being the Clean Waters Regulations.

In NSW the EPA licensing system is the main instrument for implementing point source pollution control, reduction and remediation programs. This system is now also being applied to some non-point source pollution.

The Sydney Water Board argued the need for legislative change in the area of standard setting. It was submitted to the Committee that the primary piece of relevant NSW legislation, the Clean Waters Act 1970 and its accompanying regulations, are outdated.

One of the major difficulties associated with the regulations is that they only apply to the few waterways which have been classified under the Act. The vast majority of waters covered by the Clean Waterways Program such as the Nepean River downstream of the Warragamba River confluence, the Hawkesbury River, the Parramatta River and Sydney Harbour and all its tributaries are not currently subject to any statutory receiving water quality standards.

Further to this, the Board considered that the standards imposed under the regulations were "relatively antiquated" and could not be used as effective guidelines, particularly in regard to nutrients and some trace metals. The Board considered that in some instances they may actually exacerbate pollution problems by preventing the "lawful provision" of modern sewerage services to areas draining to certain classified waters.

The Committee was concerned about this regulatory void in which the Board currently appears to operate. There did not appear to be sufficient explanation given as to why additional classifications of waterways had not been made under the Clean Waters Act. It has been consistently argued by the EPA that it is dependent on its Phase II legislation to effectively carry out many of its regulatory duties. However, the Committee questioned whether the EPA has been sufficiently exercising the powers available to it under the Clean Waters Act. As previously stated, the EPA has chosen to use powers under the Act to lower the standards for

protected waters near Picton and other parts of the state to enable environmentally inadequate sewerage systems to discharge into waters.

In summary:

- Minimum, interim pollution standards have been set in the Clean Waterways Program for the Board's sewage.
- Scientific knowledge about water pollution is of incomplete value. Consequently, standard-setting will be an uncertain thing for several years, possibly decades.
- No formal legal pollution limits have been set for most of the state's rivers and tidal waters.
- The Board's sewage licences contain pollution limits that are not set to achieve a particular or nominated pollution standard for the waters receiving the pollution.

What standards have been proposed?

The EPA is currently preparing a draft exposure bill to consolidate and streamline the provisions of the Pollution Control Act, the Clean Waters Act, the Clean Air Act, the Noise Control Act and parts of the Waste Disposal Act. This piece of legislation, the Protection of the Environment (Operations) Bill, is expected to introduce new provisions relating to environmental standards, setting environmental auditing and lender liability. This bill is expected to be introduced into Parliament during 1994.

Both the Board and the EPA are now progressively adopting the **National Water Quality Management Strategy** approach to setting water quality standards. The Strategy has been adopted in draft form by the Federal and state governments in the Intergovernmental Agreement on the Environment. In their communique of 25 February 1994, the Council of Australian Governments, requested the bodies drafting the strategy, ARMCANZ and ANZECC *"..to undertake an early review of current approaches to town wastewater and sewage disposal to sensitive environments"* and said: *"It was noted that the National Water Quality Management Strategy is yet to be finalised and endorsed by governments"*

The Strategy recognises the need for modification of standards to suit local conditions and attempts to collate "a vast body of scientific information and management experience on the water quality required to sustain the range of environmental values that Australian waters may support." As a consequence these guidelines are considered to provide a firmer basis for informed community debate on specific management goals that takes into account environmental, social and financial costs.

The EPA proposes a means of setting water quality objectives consistent with this

Strategy. These objectives propose 22 classifications (or standards) for water quality with waters in a river being simultaneously covered by several or even all of these classifications. EPA classifications would set the water quality values to be protected.

The classification process would contain a number of steps. The first step involves selecting from the menu of environmental values which values are most appropriate to protect in that waterway. In large catchments the EPA considers that it may be desirable to consider rivers on a section-by-section basis to enable different environmental values to be assigned to each section if appropriate. These then become the water quality goals for that waterway. For each of these values there are different levels or classes of protection which may be chosen.

Having chosen the environmental values to be protected, the water quality parameters and criteria corresponding to each selected value are then tabulated and where the same parameter is selected more than once, the most stringent level applying to that parameter becomes the objective for the waterway. Social, economic and environmental impacts of the proposed water quality goals and objectives are then evaluated. Once this process has been finalised, a comprehensive water quality management program may be formulated and implemented in the catchment.

However the Committee was concerned that several key elements did not appear to be adequately explained in relation to this proposal:

- the ability of these draft environmental standards, and the plan-making procedure by which they are to be created, to be integrated with the existing land use plan-making system under the Environmental Planning and Assessment Act, nor the plan-making system for classifying community and other land under the Local Government Act;
- which individuals or agencies would actually select the "values", "objectives", and "goals" for the rivers;
- the financial and technological feasibility of implementing the standards;
- why the current water zoning system containing 6 zones is to be expanded to 22 zones;
- why the existing system has not been used to protect the state's waters for 14 years;
- what are the failures of the current water zoning system and how they are to be overcome by the proposed new system;
- why there appears to be no new zoning to include tidal waters;
- whether a river may have its environmental classification upgraded or downgraded and how this will be achieved;
- how consistently the standards would be required to be met;
- whether, before the standards-setting mechanism may be implemented, the EPA's Phase II legislation must be first set in place;

- why there is no reference to the EPA's current draft environmental standards proposed for tidal waters.

In the absence of answers to these questions, the Committee is concerned that the EPA's draft system may fail to provide timely, cost-effective standards. In addition, there appears to be the potential for divisive debate between citizens regarding issues such as:

- which classifications would be most appropriate for particular parts of a river;
- whether a classification should represent existing or preferred pollution levels;
- what scientific data supports any particular classification;
- whether waters adjacent to residential land should nonetheless be classified "industrial" because of industrial water pollution on the other side of the river or downstream or upstream;
- whether there would be a different application of these standards between public and private sectors and if this is appropriate;
- whether a particular classification proposes a greater or lesser level of pollution than is appropriate.

Thus, it appears this proposed EPA system is not adequately clear about environmental outcomes and in, particular, does not explain whether the proposed standards will make waters cleaner or dirtier. Implementation processes and costs are also unclear. Further, there is no explanation of why standards will not be included in plans such as REPs and LEPs being made under the present planning system or whether integration of the two systems is proposed.

The Committee was concerned about the general lack of exposure and public consultation about the standards. There was a general lack of discussion about them within the submissions the Committee received.

In a report from the CSIRO to the then Federal Minister for the Environment, the Hon. Ros Kelly, in November 1992, it was said that in relation to the development of the Australian Water Quality Guidelines:

"...We offer a commentary which to some extent differs from the thrust of the strategy... (it) is a deceptively simple procedure for several reasons. Firstly there is great diurnal and seasonal variability of water quality parameters in a water body. This idea of "normal" or average values therefore has little value"
(Towards Healthy Rivers, CSIRO consultancy report, No 92/44, November 1992, pp.58-59)

What standards reflect community needs?

The submissions the Committee received from the general public reflected the fact that they desire a quality of water within rivers and tidal waters which is at least

suitable for swimming. This is reflected by the implementation of programs such as Beachwatch, the Clean Waterways Program, and the introduction of the Special Environmental Levy. The Committee is concerned to avoid a standard-setting system that could result in technical, expensive and divisive debate regarding appropriate pollution levels.

To avoid this, standards must be set to reflect community expectations regarding water quality in rivers and tidal waters. Presently, there appear to be several legislative difficulties prohibiting this.

For example, the Clean Waters Act does not contain any statutory criteria regarding the pollution levels etc. that the EPA must force licensees to meet. However, it is clear from the Protection of the Environment Administration Act 1991 that any direct pollution of waters is an offence unless the EPA, in its discretion, grants an exemption and licenses it. In setting pollution levels for any licences it grants, the EPA is at all times required to apply the precautionary principle.

At present this system of pollution control creates various legislative obligations under the Protection of the Environment Act 1991. Firstly, both customers and developers must pay for the provision of information to demonstrate that the environment is unlikely to be prejudiced by maintaining the current level of pollution. Further, additional costs are created if existing development is causing sufficient pollution to require a pollution licence from the EPA.

It was clear to the Committee that given the impact that urban growth has on our waterways, land development must be linked to water and air pollution. For example, Robert Bell from the Hawkesbury Nepean Catchment Council told the Committee:

"I do not believe any government will really address the issue of urban population growth. Even if the environmental standards which satisfy the great majority could be reached, the sheer volume of the effluent, treated as it is, going into the Hawkesbury-Nepean system cannot possibly improve, if we accept that urban population growth will continue the way it is". (Hansard, September 3 1993, p.36)

The Committee believes that the goal for all NSW waterways should be one of restoring water to harmless levels. However, it is believed that this goal cannot be achieved unless both local and state government commence and continue a program to reduce existing pollution.

It is the intention of the Committee that both immediate and practical steps are to be taken to control pollution of all waters and that all standards set to achieve this are gradually tightened in order to eventually reduce pollution to negligible levels.

Initially, the standard of water quality which must be met should aim to arrest pollution at its current levels and thus prevent further deterioration. Therefore it is necessary to determine what these current levels are.

Where current levels of pollution are known, standards should be set within three months of the Committee's Report being tabled in Parliament. When existing levels of pollution have been established it is proposed that for one or more parts of a river or tidal waters the following new development should not take place unless it can be clearly demonstrate it does not have the ability to worsen existing air and water pollution levels:

- Development taking place under the Urban Development Program by which land is made available for residential development in the metropolitan area;
- Development within Part V of the EP&A Act and development that is designated under this Act; and
- Other development nominated by the Water Manager from time to time.

Further, existing development which comes within these categories must demonstrate within the next 12 months that it will decrease its current levels of polluting output unless it can be demonstrated that: there is no commercial alternative; no feasible options available to protect the environment by making the development "pollution neutral"; the cost of monitoring the impact on the water quality and quantity can be met.

This proposed system has the benefit of being simple and readily integrated with existing land use and other regulatory mechanisms. It also has the advantage of reflecting existing community demands and as long as all existing developments continue to reduce their current levels of polluting output the costs of cleaning the waters to a level of natural purity can be borne over time.

A proposal for implementing the system is outlined below in chapter g which discusses long term strategic planning (see also **Appendix g, Linking development to standards**).

The Committee rejects the costly and process-oriented multi-zoning classifications that are proposed by the draft SPCC and EPA documents as not representing a true reflection of community needs.

It is submitted that the EPA system is estimated to require a minimum of three years to implement environmental standards for those rivers suffering from serious pollution, such as the Hawkesbury and Nepean. It is unlikely that any standards will be in place for other Sydney waters until several years after that time. Further, if the system is seeking to rely on the EPA's Stage II legislation for its implementation, most of Sydney's waters may not have standards to guide their urban development until at least the year 2000.

It is further submitted that such a system will generate conflict into which various parties, including the Water Board, will be drawn. The proposed system also does not appear to have the ability to implement the EPA's statutory obligation to take a precautionary approach when setting standards.

The Committee is of the view that such systems are simply too administratively complicated to manage and delay the provision of acceptable water quality protection.

An analogy may be drawn with the process-oriented planning system which has given birth in the 13 years since the implementation of the EP&A Act to over 11,000 planning instruments which result in multi-zoned land use controls within NSW. Dozens of carefully drawn gradations for prohibited, permitted and regulated land uses have created an industry for plan-makers who are continuously engaged in revising and creating new plans to replace the old. The more development, the more plans are made to "control" this.

The state government and over 150 local councils have allocated vast resources to support land use plan-making processes. On average, plan-making agencies have made about 73 plans each, or over 5 a year for 13 years. After 13 years of three layers of plan-making, the system is more oriented to the process of making plans than to specific environmental outcomes.

To set up a similar, parallel urban planning system for water quality would impose a large additional burden upon the public sector and the community for environmental outcomes of dubious value. Thus, in the absence of any clear justification for the additional cost of such complex, time-consuming regulation, the Committee cannot accept the EPA's proposed system. The Committee is strongly of the view that the regulation of water quality and quantity requires integration with the general planning system and supports the use of the Environmental Planning and Assessment Act, particularly by way of regional and environmental plans, to integrate those quality objectives with land use decisions.

Who should pay?

The Government Pricing Tribunal, in its report into the Sydney Water Board, expressed the view that standards should not be set without regard to some assessment of costs and benefits. The Tribunal was strongly of the view that at the end of the day it is always the community which will foot the bill for environmental standards and that it should therefore have some say in the costs to be incurred, the priorities and the timing of achieving environmental outcomes.

This issue of the affordability of higher environmental standards for water quality was the subject of much discussion before the Committee. The Water Board was

strongly of the view that large capital expenditure and large annual operating and maintenance costs would be needed to meet stricter standards. The Board was strongly of the view that it could not meet these additional costs out of its present budget:

"The cost drivers in our business reflect the standards that are being set in various quarters which are having a major impact on what we should be doing in our capital works programs. Basically, our financial analysis tells us that we do not have the money to satisfy all those standards - the standards that people would like us to set.When organisations are asked to do more and more existing assets are run down. Basically, that is a debt to future societies." (Hansard, June 17 1993, Paul Forward, Director, Corporate Planning, p.33)

There was a diversity of views regarding the willingness of the community to pay for higher standards. Dr David Russell, Centre for Social Ecology of Water and Waste Management, University of Western Sydney, was strongly of the opinion that there was a general public willingness to pay provided that the setting of water quality standards was a transparent and consultative process:

"The public is very aware of the bottom line. They pay for everything anyway.....If we open up the process and make it transparent, people feel they can trust those who are doing the negotiating with, say, the EPA in setting the standards. A lot of difficulty fades when the genuine invitation is made: "We would like to set the standards with you, seeing you are the consumer" and then set up a process of how to do that and make that a transparent process with the economics, technology and the various qualities - drinkable, swimmable - being required." (Hansard, August 26 1993, p.50)

However, parties were equally certain that the community would not be favourably disposed towards any direct funding of higher standards and in the competition for existing financial resources, standards would be the biggest loser:

"Given all the following factors: the competition between improvement of environmental standards; the need for asset replacement, the elimination of cross-subsidisation; providing for urgent population growth; the requirement of a dividend and the adequacy of the resource level, the bottom line is the price that the consumer has to pay. The casualties will regrettably be environmental standards." (Hansard, September 3 1993, Robert Bell, Hawkesbury-Nepean Catchment Management Council, p.36)

It was the view of the Committee that significant savings would be made by the Board in their adoption of best management practices to achieve environmental outcomes. The devolution away from an expensive pipe-based system, for example, may well free up funds which could be directed into other areas. On a less quantifiable level financial gains can be made in areas such as increased

tourism and improved community health as a result of cleaner rivers and oceans. These overall savings to the State Government should be reflected in the dividend amounts required to be paid by the Board.

No new inquiry system

The Committee does not advocate the creation of another "Resource Assessment Commission", or other public inquiry system by which to canvass appropriate water quality standards. Such processes into the suitability of standards for individual rivers will drive government into further controversy as various environmental crises continue to overtake the inquiry process. It is also likely that the achievement of standards for the Hawkesbury Nepean catchment may be delayed for 10-20 years.

In the absence of credible, robust information, any inquiry into desirable environmental standards will face fundamental flaws in its decision-making process.

It is the view of the Committee that any attempt to set up another such mechanism would do nothing but create unnecessary duplication.

The current standards in the Clean Waters Act and the Protection of the Environment Administration Act must not be lowered by the EPA's proposed Stage II legislation. That legislation should not undermine or defer enforcement of those standards by the creation of a standard setting process that is complex or time-consuming. For example, one or more catchment committees or tribunals should not be created to set standards for water pollution and to regulate discharges. Such a body or bodies would duplicate or complicate the current jurisdiction of the Land and Environment Court to review amendments to the standards in the Clean Waters Act. If this occurs, then such a body appears likely to weaken the existing clear rights of citizens to object to proposed new or amended standards and to have the standards determined upon the scientific merits of the case.

Recommendations

Environmental Standards

30(a) The EPA should forthwith:

(i) Implement the precautionary principle in the Protection of the Environment Administration Act so that the EPA is able to carry out its statutory duty to maintain ecologically sustainable development;

(ii) Reduce the risks to human health and prevent the degradation of the environment by implementing the Act's requirement that the EPA reduce to harmless levels the discharge to waters of substances likely

to cause harm to the environment; and

(iii) Set standards as required by the Protection of the Environment Administration Act, the Clean Waters Act and the Environmental Offences and Penalties Act so that existing and future development does not harm or pollute waters within the meaning of those Acts.

(b) To ensure standards are set forthwith, and pollution of waters is prevented, as required by these Acts the following actions should be carried out by the EPA:

(i) The EPA should publish for comment in 1995 a document proposing the means by which it will apply the precautionary principle when setting and reviewing water pollution standards and conditions in licences to pollute waters. The document should propose performance indicators by which the EPA, the government and citizens may measure the implementation of the precautionary principle and environmental outcomes.

(ii) Where levels of pollution are known for those parts of Sydney's rivers and tidal waters for which standards have not yet been set then initial standards should be set by the EPA in 1994 using the existing powers in the Clean Waters Act and Clean Waters Regulation. These initial standards should allow no additional pollution above the levels of known pollution of the rivers and tidal waters. Where levels of pollution are not known then, until such time as they are and have set standards, the EPA should enforce the Act and the regulation so that persons or bodies polluting the waters are either obliged to be licensed or are prosecuted under the legislation.

(iii) Existing and new standards should be regularly altered so that the level of pollution of polluted waters is constantly reduced.

(iv) In 1995 the EPA should publish a review of the regulatory framework relating to the setting and alteration of existing and new standards for waters in the State, including waters in the Sydney metropolitan area, as provided for in the Protection of the Environment Administration Act s7(2) and (3). The review should propose a method for the regular alteration of standards for water pollution;

(v) The draft guidelines for water proposed by the National Water Quality Management System should not be adopted in their present form. The EPA should publish a discussion paper about the guidelines following completion of the actions listed in (i) to (iv), above.

Sewage standards

- 31 Prior to the proposed EPA Stage II legislation taking effect, preliminary standards for discharge to waters wherever the Board discharges sewage should be set by the EPA in 1995 using the existing powers to set standards under the Clean Waters Act. The standards should be advertised for comment before they are finally drafted and included in the Board's operating licence and in EPA pollution licences.

Existing and future development

- 32(a) As a matter of priority the EPA should not permit the following new or existing development to take place, or to continue to operate, without a licence from the EPA (unless, as required by the environment protection legislation, it can be demonstrated to the EPA's satisfaction that the development does not pollute waters):
- (i) Development under the Urban Development Program by which land is being made available for residential development in the Board's area;
 - (ii) Development within Part V and development that is designated under the Environmental Planning and Assessment Act; and
 - (iii) Other development nominated by the Water Administration Ministerial Corporation or the EPA from time to time.
- (b) Existing development in these categories seeking to continue to pollute waters should be licensed by the EPA either through the stormwater pollution licences recommended above or any other licensing mechanism appropriate to the particular category of development.
- (c) Where existing or proposed development obtains a new or renewed pollution licence the EPA should provide for inspection by any member of the public during office hours of any information that the EPA relied upon when granting the licence.
- (d) Interim standards should be set in 1995 which have as their goal the reduction of pollution in rivers and tidal waters to levels which are safe for humans to drink and for humans to swim in at all times of the year. For coastal waters where people do swim, the standard should at least equal the strictest international standards. Ample statutory powers exist for implementing such standards.
- (e) Environmental standards should be set for all the rivers and tidal

waters in the area of the Sydney Water Board requiring the waters to be made suitable for swimming at all times of the year by the year 1999 so that the waters of Sydney do not pose a health problem generally or, in particular, by the date the Olympic Games are to be held, 2000.

Sludge

- 33 From January 1995 the Board should not dump sludge to sea. In early 1995 the Board should publish a program in which it outlines how it will be able to overcome mechanical failures that may otherwise cause sludge to be dumped. The program should be part of a comprehensive sludge management program that accounts for the Board's beneficial reuse and other plans. If the Board asserts there are exceptional circumstances which compel it to dump sludge to sea, the appointed board members should propose solutions for acceptance or rejection at a public meeting of the appointed board. Prior to the meeting the Board should make freely available to the public the Minute it will rely upon at the meeting to determine whether to dump to sea.

Enforcement

- 34 In 1995 the EPA should delegate to local government its powers to enforce compliance by scheduled premises with EPA licences and to impose on the spot fines. In the next session of Parliament the Environmental Offences and Penalties Act should be amended accordingly.

Licensing of sewer surcharges

- 35 From 1995 all EPA licences to the Sydney Water Board should be extended to include sewage surcharges with a view to reducing their pollution levels, frequency and volume. The pollution reduction programs in the licences should set a date by which such surcharges should be ended. Paper copies of the certificates of compliance for the licences and the pollution reduction programs are to be displayed at local council offices within one month of the date by which such certificates are filed. Fees should escalate geometrically by reference to the volume and amount of pollution and should not have a ceiling.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

The need for water quality goals

Government Members have given detailed consideration to the "simple" system of standard setting proposed on p. 117, that is, taking existing levels of water quality as a standard and then obliging existing and future development in certain categories to prove that it is pollution neutral or will improve the quality of its discharges. Government Members' conclusion is that this "simple" system amounted to a more complicated and, in some cases, less effective re-work of the statutory process already in place under the Environmental Planning and Assessment Act. It amounts to a re-work of the Environmental Impact Assessment (EIA) process, minus the very vital and valuable public involvement parts of that process.

Government Members were very concerned about the possible effects of having this "simple" system as the *only* standard setting process driving water quality improvement programmes. We felt that the "simple" system provided no clear signals to polluters about the standards they might be expected to meet. It gave them no advance idea of clear water quality goals which they could then seek to achieve over time in the least cost way, using the tools of strategic planning, such as water quality monitoring, catchment planning and modelling and community consultation.

Rather than sticking to this "simple" version of the EIA process, it is necessary to strengthen the EIA process by ensuring that EISs are conducted within the context of clear water quality goals, total catchment and total water cycle studies and an understanding of the environmental values that the community might place on the waterways. Part of the reason we have water quality problems today is the application of this "simple" system of Environmental Impact Assessment without water quality goals.

The National Water Quality Management Strategy provides a sound, accessible and equitable process for setting goals in consultation with the community. To jettison this national approach would seriously disadvantage large organisations preparing cost-effective strategic plans for their future. In fact, loss of the national approach would act as a disincentive to the preparation of strategic plans per se.

Some non-Government Members in particular were concerned that the application of the National Water Quality Management Strategy's process for setting standards would somehow lead to lower standards. These members were at pains to discredit the National Strategy apparently without realising that it merely proposes a methodology for setting standards and assembles some tools, guidelines and information for standard setters. It does not actually prescribe standards themselves.

There was an alarming desire within the committee to dispense with public debate on

standards. This apparently arose from the fear that if people began to understand the cost of some standards vis-a-vis their benefits, they might choose a standard that is lower than those set for some classified waters in the Clean Waters Act.

The majority of members seemed to assume that the standards in the Clean Waters Act were the be-all-and-end-all and that only those standards could protect our waterways. Ample evidence was supplied of the complete incapability of standards in the Clean Waters Act to produce clean waterways, especially given that they prescribed no standard at all for something as crucial as phosphorus. The fact that they were based on English drinking water quality standards of the 1960s says much about their unsuitability for use in Australia as requirements for effluent discharge quality. It is apparent that the Clean Waters Act standards need a thorough review.

Since the National Water Quality Management Strategy proposes that standards be set using site specific analysis and water quality monitoring, this process seems to hold the best chance of reaching standards that will protect a waterway in accordance with the ecological, social and economic values that may be placed on it. By contrast, the Clean Waters Act standards are only designed to regulate point source discharges. Sticking to them will mean that regulators cannot control diffuse source discharges, which are responsible for at least 50% of the pollution in our waterways.

Government Members are very concerned about the simplistic assumptions which have been adopted in this chapter, and the conclusions which have been drawn from them.

The Report recommends that all river and tidal water in the Sydney Water Board area should be suitable for swimming and drinking in at all times of the year by the year 1999 (Recommendation 32(e)) There is no attempt to cost this ambitious recommendation.

At the very least, it would require the 7 billion dollar Option P, business plan, created in 1990 to be completed before 1999, even though this plan was originally scheduled to be completed by the year 2010. Let us presume that the 1 million Water Board customers were willing to pay an extra \$1,000 a year in water bills to achieve this. Even this effort would not achieve the stated objective.

Government Members wish to disassociate themselves from this cynical pipe-dream approach to setting water quality standards. We have to deal with the reality that the quality of life which we enjoy in Sydney in the latter 20 century has an effect on our rivers and beaches and there is a limit on the resources available to control that impact.

This limitation has been recognised by the Government Pricing Tribunal in its recommendation 5.1 of its report which states that

"Water supply authorities cannot assume they will be able to pass onto customers the cost of environmental works without information as to the customers willingness to pay."

The Clean Waters Act is not a realistic and workable standard for our waterways. There could be no better illustration of this fact than the changes which have had to be made to Clean Water regulations which govern the Hawkesbury-Nepean River and (Port Stephens) to allow connection of sewerage at Picton and The Oaks near Camden and Kuruah and Bulahdelah near Port Stephens (see page 109).

Because it is not possible to construct Sewage Treatment Plants which never break down or overflow it has been necessary to change the manner in which some stretches of classified waterways are regulated. Without these changes to enable legal licensing of the STPs, it is not possible to connect up the sewer. Currently these areas are serviced by septics which are almost certainly posing a greater environmental hazard due to leaching. Septics despite their environmental problems do not need to be licensed under the Clean Waters Act. Even though the classification of these waters has been changed, stringent conditions have been placed on the STP licence to ensure that the likelihood of sewer overflows is negligible.

Accordingly because of the sort of problems which can arise under the current unrealistic expectations of the Clean Waters Act, Government Members recommended that

Urgent action be taken to set standard under the proposed National Water Management Strategy.

Resource Assessment Commission

Government Members considered that the creation of a resource or catchment assessment commission was an issue worth investigating in more detail, especially if it would allow informed public debate on standards, in the full context of science and cost. We had difficulty understanding other members' resistance to "a Resource Assessment Commission or other public inquiry system" for standard setting.

ALTERNATIVE RECOMMENDATION - GOVERNMENT MEMBERS

Government Members believe that Government agencies should adopt the methodologies and processes for determining appropriate water quality objectives for each locality, as prescribed in the National Water Quality Management Strategy. Particular attention should be paid to the fact that the strategy stresses the need for site specific scientific assessment and public consultation to ensure that standards are developed to suit the needs of the waterway in question and which will sustain that waterway in accordance with its particular value, be it

ecological, social or commercial.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

30(a)(i). Supported.

30(a)(ii). Supported

30(a)(iii). Government Members dissent from this recommendation.

The standards outlined in the Clean Waters Act are in need of major review. Government Members recommend that water quality standards should be set using site specific analysis to determine water quality need as outlined in the National Water Quality Management Strategy. The process should involve public consultation.

30(b)(i). Government Members dissent from this recommendation.

The EPA should instead publish a discussion document on the process for obtaining public consultation in setting water quality objectives, how this process adopts the precautionary principle and what performance measures will be used to determine environmental outcomes.

30(b)(ii). Government Members dissent from this recommendation.

This recommendation proposes a system for setting water quality standards which is no more than the current Environmental Impact Assessment Process, as outlined in the EP and A Act, but without the public consultation component. Government Members would support the alternative recommendation that the EPA should publish, where available, information on existing water quality (levels of pollution) as a baseline for measuring and ensuring that further degradation does not occur.

30(b)(iii). Government Members dissent from this recommendation. Government Members would prefer a recommendation which required standards to be regularly reviewed in the light of changing water quality needs.

30(b)(iv). Supported. Government Members would prefer this recommendation to be strengthened by requiring the EPA to immediately release details as to how they will implement the national process for setting water quality standards.

30(b)(v). Government Members dissent from this recommendation.

It is not sufficient for the EPA to delay the release of details as to how they will implement the national process for setting water quality standards.

31. Government Members dissent from this recommendation.

The grounds for dissent are outlined in comments made in Recommendation 30(a)(iii)

32(a) and (b). Government Members dissent from this recommendation. The majority recommendation is designed to overcome one of the major inadequacies of the Clean Waters Act, which is that countless everyday activities, like driving a motor car, walking a dog, technically breach the law. The majority recommendation attempts to overcome this problem by seeking to licence all of these polluting activities. Government Members prefer the approach which is outlined in the National Water Quality Management Strategy. Whilst licences are an important regulatory instrument, they do not of themselves stop pollution, therefore they need to be complimented with a system of water quality goals.

32(c). Government Members dissent from this recommendation. It abrogates current rights to privacy of licensees which are prescribed in the Clean Waters Act.

32(d) and (e). Government Members dissent from this recommendation.

Essentially the standards set in these recommendations are unrealistic. Detailed comments have been made in the dissenting text.

33. This recommendation is superfluous, as the SWB stopped dumping sludge to sea in October 1992. Government Members however do support the recommendation in so far as it requires the SWB to have a strategy to avoid sludge dumping in the event of mechanical failure.

34. Supported.

35. Supported, but the cost of eliminating surcharges should be discussed with the community prior to any pollution reduction programme being agreed to.

MINORITY COMMENT - AUSTRALIAN DEMOCRAT

Hon R. Jones

FLUORIDATION

Committee Member Richard Jones, Australian Democrat, recommended that the fluoridation of Sydney's water supply under the Fluoridation of Public Water Supplies Act 1957 should cease and the Act be repealed. One kilogram of fluoride ion is added to each megalitre of water produced by the Water Board. Approximately 595 tonnes of fluoride ion is added annually to Sydney's water. Approximately 1% of this amount is ingested through drinking and cooking. 590 tonnes is wasted and discharged into the Nepean-Hawkesbury river system and via the ocean outfalls. No monitoring is being undertaken of the effects of this fluoride on the river and marine environments. The National Health and Medical Research

Council has determined that children aged two are ingesting fluoride at 14% in excess of the recommended dose, more than 50% of which is ingested as a result of fluoride in toothpaste.

Evidence was presented to the Committee of the risk of fluoride ingestion in relation to fluorosis and possible association with increased hip fractures. The current fluoridation program adds approximately \$1 million p.a. to the cost of Sydney's water. Richard Jones is of the view that fluoride medication should be voluntary, by way of tablets and toothpaste, assisted by a public health education campaign and not compulsory via the water supply.

"g long term strategic planning of Sydney's waste water treatment including urban drainage, decentralisation and beneficial re-use"

g Strategic planning

Summary

Long term strategic planning

Beneficial re-use

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SUMMARY

In this section the Committee reviews options for making Sydney's rivers and tidal waters cleaner at reduced costs to customers.

The Committee concludes there is readily available, tried and proven technology that manages waste more effectively than the Board's pipes and water-based sewage system.

The Committee recommends changes to the Board's statutory obligations to ensure that it has the statutory will to implement more cost-effective, environmentally prudent technology.

Long term strategic planning

One of the key findings of the 1989 Camp Dresser McKee report into the Board

was the lack of strategic planning. The Clean Waterways Program was initiated on the basis of that report. The Committee has expressed concern about the failure to adequately implement the Program (Reference a, above) and has noted fundamental planning defects such as the absence of clear goals, the absence of trend reporting and other indicators of poor strategic planning in References d, e, f and g.

The Committee's approach to "long term strategic planning" is based upon the assessment by the Camp Dresser McKee report and the evidence presented to it which is to the effect that there is too much sewage, and that sewage has made much of Sydney's rivers and waters too polluted for human and other uses. The only projections made by the Board are for the amount of sewage to grow.

Action to reduce the growth of sewage pollution is urgently required due to the serious damage to Sydney's rivers and tidal waters.

The Sydney Water Board's underground pipes system is failing or nearing the end of its design life. Its massive, water and pipes-based sewage system needs to be renewed unless alternatives are found. It has been estimated that the replacement of the wastewater system could cost up to \$10 billion. The choices facing customers are therefore to patch up a decrepit, failing pipe system, to decentralise to regional plants that use proven, sustainable technology, and to use alternative technology that is cheaper than the current capital-intensive system.

A strategy is needed to reduce the Board's sewage pollution. The strategy must involve the Board and the customers who use its services. Other water pollution caused by urban and rural run-off must be reduced at the same time. This other pollution is about half the pollution of the waterways (EPA, *State of the Environment Report 1993* p61). But the Committee considers that action by the Board is not to be deferred simply because other sources are also causing serious damage to the waters. If the Board wishes to assist reduce the other pollution it should draw attention in its annual reports to the different sources and trends of water pollution and compare the reduction of its pollution to the reduction of other pollution.

The Committee's preferred strategy includes the following elements:

- The Board to be given the long term goal of reducing sewage pollution until it is negligible or disappears. (The Committee notes that "pollution prevention" is a statutory goal of the EPA.)
- An assessment is to be made by the Board each year of the sources and amounts of sewage pollution;
- An assessment is to be made by the Board each year of the success or failure of the Board's methods of cutting sewage pollution.

Relevant questions to ask when choosing technologies and services to reduce the pollution include:

- Does the technology or service reduce the total amount and concentration of sewage pollution?;
- Must the Board provide the technology or the service? Can the service or technology be better provided by the customer or the private sector?;
- Which technology or service is the most effective or the cheapest way to reduce the pollution?

These questions are more likely to be accurately answered if the Board has first been given a statutory obligation to reduce its pollution and end its monopoly over waste services and technology. The Committee has recommended accordingly in **Reference d**, above.

As a key starting point, the Committee assessed the Board's current technology.

The Board's nineteenth century centralised pipes and water-based sewage system has been a useful method of dealing with sewage. The Committee's view is that its disadvantages can no longer be ignored. The Board's current sewage system:

- Provides systematic inadequate treatment of sewage before discharge to rivers and tidal waters;
- Generates major, increasing sewage pollution that is causing damage to most of Sydney's water systems;
- Loses nutrients that could be recycled for profit;
- Has enormous operating and reconstruction costs;
- Is a significant waste of drinking water in a dry rainfall country;
- Has high energy consumption;
- Has a constant need for "upgrading";
- Has ever-increasing costs;
- Is out-dated in the sense of being an "out of sight, out of mind", centralised system that prevents customers exercising personal responsibility and options to cut their costs.

If the Board were to propose such a system today it would not be accepted. It does not meet the EPA's statutory precautionary principle. Customers would not accept the costs of it.

The majority of the Committee proposes that alternative systems replace the current sewage system. The introduction of alternatives should be made part of the core business of the Board and will become a statutory obligation. There is a clear link between demand management and water conservation and strategic planning. Those links are explored below.

Beneficial re-use

In this section the Committee explores examples of cost-effective, environmentally prudent waste treatment technologies. The aim is to indicate the Committee's preferred approach to implementing long term strategic solutions to sewage pollution.

Sewage is not "waste"

The Sydney Water Board's pipeline infrastructure for water and sewage is approximately 40,000kms. In terms of the total infrastructure cost base, in excess of 80% of the replacement cost of this system is invested in headworks, dams and distribution pipes. Less than 20% is currently invested in treatment.

This massive pipe infrastructure, which is approximately twice as long as that in the City of Los Angeles, is used primarily to divert water from the major rivers surrounding the city and ultimately discharge it into the ocean. The Committee was concerned about the financial and environmental costs of such a system.

There are currently a number of innovative programs and technologies which offer an alternative to the discharge of sewage into oceans. The Committee, in particular, noted the advantages of the land-based ponding system at Werribee in Melbourne but noted that topographical factors did not make it a viable option for Sydney. (See **Appendix I**)

However, the Committee was impressed by the microfiltration system offered by Memtec and also noted projects currently being undertaken at Albury and Flushing Meadows.

Shower and bath water

An average family flushes over 95,000 litres of clean drinking water down the toilet each year.

At the current price of water under the Board's user pays system that water is worth about \$92.

By comparison, it costs about \$1700 to install an approved recycling device that will catch bath and shower water before it goes down the sewer and re-use it to flush the toilet.

A number of innovative systems are now available to re-use household and

industrial water such as Hydrosave. However the purchase and installation price of such systems is currently prohibitive.⁸

Clearly, the Board must take the initiative and bring down the price of such systems.

The options abound.

The only thing needed is the will. By briefly illustrating the options the Committee intends to demonstrate that the only thing preventing the Board reducing the volume of sewage and making Sydney's waters cleaner is will-power.

It is this conclusion which has led the Committee to recommend the Board be given statutory obligations to reduce the volume of sewage.

Implementation of strategies with the Department of Housing and the Office of Energy

Here are some ways the Board can cost-effectively implement water and sewage re-use.

Low income customers will benefit by having water efficient appliances and water re-use systems built in their houses. The Board should promptly join with the Department of Housing and the Office of Energy to:

- Ensure devices such as Hydrosave are built into units and houses as a matter of standard building practice;
- Change tendering and contract specifications to require the installation of rainwater tanks, water and energy efficient appliances, water re-use appliances;
- Offer the private sector the option of providing their own sewage and waste water system, including on-site devices such as compost toilets.

It is suggested that the Board should redesign its shop-fronts and ground floor

⁸The Committee notes that Lismore City Council is pioneering a revolutionary scheme to save on water use.

From 1st October for a trial period, any Lismore city water consumer who purchases locally an approved shower rose or a replacement 6/3 litre toilet pan and cistern, will get up to half their money refunded by Council. Coupons will be available from retail outlets on purchase which can be forwarded to Council for the refund.

Council expects that over 400 of its consumers will be able to participate in the trial within the allotted budget. This is expected to save the community about 18 million litres of water a year.

spaces where customers come to pay their bills. The aim is for the Board to give a clear message to its customers to take more responsibility for their own waste and water usage. The following equipment and information could be available on ground floor shop fronts:

- rainwater tanks;
- porous paving;
- washing agents that do not have phosphorus; compost toilets;
- equipment such as the Hydrosave, shower roses, etc.;
- a variety of low interest loans, refunds and other financial incentives to be included in customers bills so they may buy such equipment.
- where customers wish to get a package of energy efficient **and** water efficient appliances, the Board and the energy utilities should offer information on greater financial rewards.

Delivering services differently

Many of the services provided by the Board duplicate services provided by other utilities. Savings won by ending this duplication should be passed onto customers and allocated to environmental programs.

A duplication of services are provided by each of the local electricity councils, the Board and the gas utility. These utilities have almost identical customers, they serve the same households and have common maintenance, supply, road maintenance and other operations. Their services should be combined wherever possible to cut costs and improve the level of service. Activities common to water, sewage, drainage, electricity and gas utilities and which could be carried out by one person instead of three include: customer services, meter reading, billing, receipt of income and minor road-works.

In **Reference d**, above, the Committee has recommended that the Board be re-organised so that its regional offices are catchment-based. If the suggestions made here are adopted costs in the delivery of services will be cut. Any replication of services that may occur as a result of the Board being restructured into three or four smaller bodies will be overcome.

Planning to Prevent Pollution

It is essential that all future developments for Sydney, whether part of urban consolidation, urban renewal or urban expansion, will unite the holistic planning of the water catchment and airshed with the demands for industrial and domestic growth. Such planning will protect the community's capital investment program so

that appropriately designed infrastructure will prevent future environmental catastrophes.

To date no government agency including the Department of Planning, the Sydney Water Board or local government has implemented acceptable performance indicators or assessments to measure the environmental impact of their activities on water quality.

This is despite the fact that the Board clearly has the technical ability to inform both itself and other agencies regarding the impact of urban development upon future quality of Sydney's waterways. In evidence before the Committee the Board explained that this capacity was:

"..fundamentally geared at present to the Board's somewhat localised operational needs. For instance, they will tell us the impact of construction of a new sewage treatment plant at a certain location, compared with the impact of construction or upgrading of a plant at some other location, or compared to the impact of construction of better drainage systems." (Letter to the Committee, received 15 September 1993)

It is essential that such information is readily available and regularly used by all relevant public and private sector agencies.

Despite copious amounts of regulation, land use controls, common law decisions and environmental assessment during the last 30 or more years, the air and water environments of Sydney have degenerated into what is now a series of recurring crises.

All urban development must have common goals for pollution levels which recognise the interdependency of air, land, water and biodiversity. Key planning tools, such as the various Metropolitan Strategies, the Hawkesbury Regional Environmental Plan No. 20, and the "planning" controls of the 43 councils in the Board's area currently do not contain these.

It is also essential that the Department of Planning should have the responsibility of synthesising the competing economic, environmental and social interests of each of the regulators and the broader community view in accordance with the principles behind the Environmental Planning & Assessment Act.

The necessary legislative mechanisms to achieve this are currently available under this Act. However, the Department has yet to implement the full scope of its powers in this regard.

Further, if future management of water quality and quantity is to be effective all local and state government agencies which perform activities which directly impact

on this must state their water pollution goals in clear, measurable terms and be made accountable for their achievement.

The Committee believes that it is necessary to link the annual budgetary decisions regarding agencies' capital works spending to any water quality and quantity goals. This more focused approach will enable all relevant agencies to work towards achieving common water pollution goals.

The establishment of such clear, certain and publicly identifiable links between the public reporting obligations of agencies and the attainment of water quality and quantity goals will help make the public sector more accountable for their impact on Sydney's waterways.

Urban & rural run-off

Approximately half the pollution in Sydney's tidal and river waters is caused by urban and rural run-off.

About half of this pollution is the direct result of development that is either directly or indirectly controlled by local government (Pollution of Sydney Waterways, Sydney Water Board, Preliminary Draft June 1992). The level of pollution caused by urban run-off is high for heavy metals and organochlorines.

It is estimated that about 100 tonnes of dog excreta is deposited on Sydney's surfaces each day. This amount would fill about 10 tip trucks each day or a space as big as a three bedroom home. On this calculation a year's dung is about 365 three bedroom houses ie about the size of a small suburb like Chippendale. There are about 200,000 registered dogs in Sydney and the Department of Local Government estimates there are about two to five times that number in total.

The \$75 on-the-spot fine for an owner allowing their dog to defecate in a public place may only be imposed when the council inspector or a citizen witnesses the act, and fines are rarely imposed. A survey of 9 city and country councils showed their dog administration costs resulted in a net total loss of \$345,398 in 1992. It becomes apparent that dog administration may be a net cost to NSW councils and ratepayers exceeding \$6 million per annum ; see **Table 9, Schedule of Local Government Costs and Income, p.138.**

Various issues arise:

- What controls are there over the sources of pollution (eg for lead pollution the real wins will be found by reducing the amount of lead in petrol or by the use of gas in preference to petrol); and,
- What water harvesting or water retention devices are appropriate?

SCHEDULE OF LOCAL GOVERNMENT COSTS AND INCOME
FOR CONTROLLING DOGS: 1992

Item	Code
Income	
Registration fees	0351
Impounding fees	0352
Fines and Costs	0353
Sales of dogs	0354
Control of dogs; sundry income	0357
Expenses	
Registration Clerk - Salary	1261
Impounding and Control Expenses	1262

	0351	0352	0353	0354	0357	Total	1261	1262	Total	Net Cost
Dungog	3517	551	0	13	0	4,081.00	1765	13633	15,398.00	11,317.00
Parramatta	37321	0	0	1867	0	39,188.00	21371	82177	103,548.00	64,360.00
Woolongong	54380	15924	1054	2179	0	73,537.00	0	171308	171,308.00	97,771.00
Newcastle	47247	13531	8920	0	2541	72,239.00		140212	140,212.00	67,973.00
Lachlan	0	1498	0	0	0	1,498.00	2000	20127	22,127.00	20,629.00
Goulburn	8233	1762	0	1738	0	11,733.00	0	48682	48,682.00	36,949.00
Wingecarribee	17314	80	0	0	0	17,394.00	16577	24040	40,617.00	23,223.00
Burwood	7497	1080	190	0	0	8,767.00	0	24275	24,275.00	15,508.00
Casino	5994	1624	0	0	0	7,618.00	0	15286	15,286.00	7,668.00
Total	181,503.00	36,050.00	10,164.00	5,797.00	2,541.00	236,055.00	41,713.00	539,740.00	581,453.00	345,398.00

Related issues include:

- Should local government be licensed by the Environment Protection Authority for the discharge of pollutants from the drains? (Most local government drains drain to trunk or major drains that are owned by the Board and which then drain to Sydney's rivers and tidal waters.)
- Should local government bear the same civil and criminal responsibilities for pollution as do the public and private sectors? Thus should, say, local government officers be subject to prosecution for breach of the pollution legislation? Should the public have the right to seek injunctive or civil relief from the courts to stop councils polluting?
- Should catchment bodies negotiate service contracts with councils to carry out water retention and pollution control works when the work might be done by councils or the private sector? It may be more appropriate that catchment bodies might have a power to control or direct all of the public sector regarding entry into such service contracts.

Many of the sources of rural and urban run-off are beyond the powers of local councils to regulate. But some of the sources are within council powers: erosion, building works and earthworks contribute suspended solids. The sources of urban and rural run-off pollution are set out in the **Table 10, Sources of Urban Run-off, p.139.**

It appears that major environmental gains can be made by reducing urban and rural run-off as about half of the pollution of the rivers and tidal waters comes from such run-off (EPA, State of the Environment Report) Thus, an effective attack must be made on urban and rural run-off.

The cost to the Board of removing phosphates from sewage has not been provided to the Committee. A study released in September 1993 by the German Ministry of the Environment established that the cost of removing the pollutants from the water after one run of the washing machine equalled the cost of the washing powder used per wash. There are clearly significant savings to be won by the Board and its customers by removing phosphorus from detergents before it is available for sale.

The EPA licences some 1,200 premises in the Sydney metropolitan area of which some 350 are licensed as a result of obligations under the Clean Waters Act. There are, however, some 25,000 industrial/commercial premises which may pollute in various ways from time to time. The EPA has delegated to local government some powers to enforce EPA legislation for premises not licensed by the EPA; for example, local government may regulate the motor vehicle servicing and repair industry (4,000 premises), the fabrication industry (2,000 premises) and other premises. Local councils also have pollution control powers under the Local

Sources of urban runoff

The following incomplete list of pollutants and their sources which councils cannot control is taken from a list prepared by the Sydney Coastal Councils.

Heavy metals

Atmospheric fallout (eg lead), brake linings, rubber from car tyres
Corrosion of metal surfaces (eg zinc)

Sewer overflows
Anti fouling paints
Copper from water supply
Paint (lead)

Vehicle emissions
Licensed industrial discharges both aquatic and atmospheric

Pesticides/Herbicides

General pest/weed control activities
Sewer overflows

Fertilizers/Nutrients

Chemical composition of product
Detergent use
Private gardens
Natural erosion
Agricultural use
Sewer overflows

Bacterial Contaminants

Sewer overflows
Animal faeces other than dog
Decaying food
Natural bacterial sources

Examples of no control

Federal and state building sites, land and buildings; foreshore erosion from boat wash; vehicle leakage, marinas and commercial aquatic vehicles.

Government Act.

The Committee understands that where a licence holder is prosecuted for unauthorised pollution relating to a Tier One offence (but not for a Tier Two offence) it is a defence to have in place a due diligence program which is designed to prevent pollution. Accordingly, the Committee does not expect that local councils will be penalised if they have a due diligence program in place and where pollution occurs that is beyond their control.

Thus, for example, if a resident or the operator of a business at a commercial premise pollutes a council stormwater drain and the council had in place a due diligence program that took reasonable precautions to prevent such an event, the Committee would not expect a court to convict the council for the pollution of the stormwater drain.

At the same time, the Committee considers that the introduction of a program of due diligence by local government will be a necessary and constructive step to reducing urban and rural run-off.

To avoid such legal issues, however, the Committee is strongly of the opinion that any form of pollution licensing should be restricted to substances over which the licensee has clear, unambiguous control and which cannot be confused with other sources.

Decentralisation

To break down, human waste needs to be exposed to oxygen or air. Yet, the Board's water-based system prevents the oxygen and waste from combining. The Board's system covers the waste with water. After flushing from the toilet and after lengthy transport in pipes, upon arrival at the sewage plant oxygen is forced into the waste and vast amounts of energy and money are used up.

The costs of this technology which depends upon pipes is substantial. For example, in 1992 the Board's total annual electricity bill for pumping in the sewage system was \$15,188,905. This figure is broken down as follows:

Ocean STPs (outside Illawarra)	\$10,351,019
Inland STPs (outside Illawarra)	\$3,522,733
Illawarra STPs	<u>\$1,315,153</u>
TOTAL	\$15,188,905

Add to the electricity bills costs of providing the pipes, maintaining the pipes, the land carrying the pipes, the chemicals to treat the waste and the total cost of running the system is significant. Some key facts include:

- In 1992, it cost the Board \$15.18 million in electricity bills just to pump the sewage and run the sewage treatment plants;
- The amount of pipes serving the average Sydney household (Sydney's population is 3.6 million) is twice that for Los Angeles, four times that of Tokyo;
- The cost of the pipes infrastructure represents an average cost in the range of \$16,000 to \$23,000 per household;
- 80% of the costs are in transport and 20% are in treating the waste;
- Pipes in themselves are unproductive and do not treat the wastewater. Once in the ground they commit an owner (the Board) and a customer to long term usage costs from 5 to 80 years;
- It takes 1,000,000 litres of water to dispose of 200 litres of waste water;
- By comparison, a compost toilet discharges almost no waste (about half a bucket every two years of compost for the garden) and costs about \$2,500 to install and has no operating costs;
- In wet weather the flow of sewage increases by 80% due to infiltration through cracks in the pipes and 10% is due to illegal connections which activate sewage overflows into the stormwater system.

This system was developed in the nineteenth century. Sewage engineers' opinion then was that citizens could not be trusted to manage their own waste. At most, citizens could be trusted to push a button to send their waste away. It does not surprise the Committee that a monopoly such as a water authority and engineers who profit by this expensive technology may seek to maintain their position by seeking to deny citizens power to control their own waste. The Committee rejects such a monopoly and prejudices as inappropriate to today's society. As a cost-effective set of technological alternatives have been proven, the Committee is obliged to recommend their implementation.

The answer to the question of possible alternatives has been partially provided by the Board itself through its Trade Waste Policy. The Board describes its Trade Waste Policy in these terms:

"A major objective of the CWP [Clean Waterways Program] is to work with industry and the community to reduce the amount of toxic wastes and other hard-to-treat substances entering the sewerage system. Progress in this area can improve effluent quality with very low capital costs." (1992 Annual Report, Clean Waterways Program, p.53)

That is, the solution is to control waste at its source.

The Trade Waste Program has these features:

- Trade waste agreements oblige all those industries which have signed the agreements to meet tighter standards by July 1994;
- There are 3908 agreements in force;
- There are about 24,000 industrial premises in the Sydney metropolitan area;
- The Environment Protection Authority licences discharges to waters for some 1,800 premises;
- About 1200 premises licensed by the EPA are also licensed to discharge waste to the Board's sewers through a trade waste agreement.

The EPA submits that "the transport of household and industrial effluent to centralised treatment facilities . . . is preferred to the use of home-based sewage treatment processes. . . ." (pp. 50, 51). The EPA asserts that such systems have "routinely been found to be unacceptable from both the environmental and public health perspectives".

But, on examination, it became apparent the EPA was directing its criticism primarily at septic systems. The Committee has been provided with letters of approval for alternative systems by various authorities within NSW, across Australia and overseas, many of which attest to the improved environmental and health performance of compost toilets, some for over 30 years. These toilets comply with WHO guidelines. An article and diagram of a compost toilet is shown in **Appendix d, Compost Toilet Brings Relief to Beauty Spots.**

Accordingly, the majority of the Committee believes the use of compost toilets in urban areas poses no health or amenity problems that good management and the usual, typical level of supervision by local government inspectors can undertake. What pollution there may be is trivial compared to the pollution of the Board's system. The majority of the Committee accepts that compost toilets:

- have a zero operating expense;
- are odourless;
- handle high volumes of people - up to 2,000 people per day;
- cost significantly less than water and pipe-based sewage infrastructure to install and operate;
- use no water;
- contribute to the goal of devoluming Sydney's centralised system;
- could be used in developed, urban areas by a wide variety of public sector agencies where their application in private, residential use may, by comparison, not be practicable. Such agencies or land uses include schools, parks, public transport agencies;
- could be used for construction activities and may be developed for use in mobile site-to-site circumstances; and
- are a feasible, proven technology.

The Committee acknowledges that this system of compost toilets will result in additional costs to councils in terms of monitoring public health risks etc.

If Government departments apply this technology then significant financial savings and environmental benefits may be obtained. Money previously allocated for capital intensive water and pipe based sewage will be released for use on capital works directly within the charter of the departments.

More than half of the water consumed through the Board's reticulation system does not need to be delivered at potable water standards.

Effective demand management through significant water re-use will reduce the need for major new water storages and/or capital works. This is consistent with the policy of least cost utility planning.

Beneficial use also relates to the re-use of the sludge component of the waste stream. This requires the responsible development of markets through the co-operation of the Department of Health and the Department of Agriculture. Land use of sludge products is broadly suggested by the community and could be subsidised by government. Hundreds of tonnes of sludge are available daily from Sydney's three headland treatment plants.

The discharge of sludge from ocean plants such as happened at Malabar is broadly opposed by the community.

Submissions supported beneficial re-use of water through the development of nodal interceptor water filtration plants. The Committee accepts that interception appears the most cost-effective option and should be implemented in the next year.

Sydney's pipe infrastructure costs an average of \$16,000+ per average household. Despite this investment, the water does not reach NHMRC standards nor does its waste discharge meet EPA environmental requirements.

Eighty per cent of the costs are in transport and 20% in treatment.

Existing local technology, such as microfiltration plants at Cronulla, can filter water to international bathing water standards.

MEMBIO-technology equipment could be installed in modular fashion along the main sewer trunk routes, particularly where there are industrial water needs or park beautification/irrigation needs. Pipes are non-productive because they do nothing to purify.

MEMTEC submitted to the Committee that the Blue Mountains is a good example

of an area where intercepted plants could have been more cost effective. The system cost to link the Blue Mountains towns to the new large plant at Winmalee will cost \$140 million. If the Blackheath membio-technology plant had been located at each town in the Blue Mountains without linking them, the cost would have been \$40 million with a saving of \$100 million. Cost/benefit analysis done by MEMTEC, an international operator, indicate that it has been calculated that it costs \$23,000 per home to provide new water, sewerage and drainage facilities. This figure would be reduced to \$2-4,000 if a filtration system was provided in new developments whereby wastewater could be re-used within the community. (MEMTEC submission, July 26 1993)

Beneficial re-use includes the use of rainwater tank storage systems. These have two advantages. First, to provide for stormwater events whereby they act as a de-facto retention system so if necessary the water can be discharged slowly at a later time. Secondly, tanks act as a water conservation means and the submissions generally support some form of general subsidy/encouragement to install rainwater tanks. The findings of a South Australian study are on the next page, **Table 11, Rainwater Harvesting Benefits, p.146.**

In addition to the technical and social solutions, education is also needed. The **Appendix h, Case study of the introduction of compost toilets**, indicates importance of education and the provision of timely, balanced information when new technology is being introduced.

There was strong support in many submissions for the Water Board to take a pro-active role in good demand management by offering incentives on water conservation devices, ranging from dual flush toilets to water-saving taps and shower hoses.

Enhancement of the water audit section of the Water Board should continue in conjunction with the demand management unit. Measurable targets should be set by which wasted or water lost in the Board's system will be reduced. Specific outcomes, are to be included in the Board's operating licence and become a regular part of the Board's annual reports.

Examples of integrated least cost planning and total demand management programs are in **Appendix i, Least Cost Planning Examples.**

TABLE 11

QUALITATIVE ASSESSMENT OF STORMWATER "SOURCE CONTROL" PRACTICES:
DOMESTIC SCALE

STORMWATER MANAGEMENT PRACTICE	PERMEABILITY	AIM 1: FLOW REDUCTION	AIM 2: POLLUTION REDUCTION	AIM 3: STORMWATER HARVESTING
MINOR ON-SITE PRACTICES (DOMESTIC SCALE)				
Rainwater Tank	All cases	✓	INSIGNIFICANT	✓ ✓
"No Gutters" House Treatment	High	✓ ✓ ✓ ✓	INSIGNIFICANT	INSIGNIFICANT
	Medium	✓	INSIGNIFICANT	
	Low	Not Recommended		
Informal Allotment Drainage	All cases	✓	POSSIBLE INCREASE IN POLLUTION	✓
MAJOR ON-SITE PRACTICES (DOMESTIC SCALE)				
Retention/ Overflow or "Leaky" Well	High	✓ ✓ ✓ ✓	INSIGNIFICANT	INSIGNIFICANT
	Medium*	✓ ✓	INSIGNIFICANT	✓
	Low	Not Recommended		
Gravel-filled Trench	High	✓ ✓ ✓ ✓	INSIGNIFICANT	INSIGNIFICANT
	Medium*	✓ ✓	INSIGNIFICANT	✓
	Low	Not Recommended		
"Leaky" Well with Bore	High	✓ ✓ ✓ ✓	INSIGNIFICANT	✓ ✓ **
	Medium-Low*	✓ ✓ ✓	INSIGNIFICANT	✓ ✓ **
Gravel-filled Trench with Bore	High	✓ ✓ ✓ ✓	INSIGNIFICANT	✓ ✓ **
	Medium-Low*	✓ ✓ ✓	INSIGNIFICANT	✓ ✓ **
<p>* Great care required in locating devices; adequate clearance from building footings must be provided. ** Disparity between available recharge and domestic irrigation demand limits the value of this option in low density allotments</p>				

Source: A review of on-site (domestic scale) BMP's for managing stormwater on the Adelaide plain by John R Argue, Associate Professor of Water Engineering, and Director, Urban Water Resources Centre, University of South Australia, National Local Government Engineering Conference Papers, Adelaide, 30 August 1993, p.372

Recommendations

Compost toilets

- 36 The Board should trial compost toilets in urban areas of Sydney and provide financial incentives or rebates to encourage the acceptance and management of such facilities, subject to the agreement of the Department of Health, particularly where their use will be cost effective and avoid the provision of additional or augmented sewage pipes.

Co-generation

- 37 Pacific Power should be directed to allow the Board and other water, sewage and drainage bodies to co-generate electricity from emissions in sewage systems and to sell the electricity back to Pacific Power's grid or use it for their own purposes.

Dog excreta

- 38 Councils' fees for dog registration should at least recover the cost to councils of administering dog regulations. Any surplus income from such fees should be directed towards sediment controls and storm water management. In the next session of Parliament councils should be given the power to fine any dog owner with a dog in a public place who does not have a receptacle capable of being used to contain dog faeces.

Government tendering

- 39 Tenders by government departments and public agencies should include design specifications for on-site retention, rainwater tanks, porous paving, compost toilets, water re-use and other water efficient appliances in new development and in refitting existing development.

Rainwater harvesting:

- 40 The state's public sector should be encouraged to harvest rainwater from public lands and buildings. The public sector should draw up programs to harvest rainwater from existing and new development. Implementation of the programs should be reported in annual reports, commencing with those to be published in 1995, and should quantify the amount of water harvested, or to be harvested, in the current and forthcoming reporting years.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

Government Members concluded that the Board's strategic plans should recognise and encourage alternative technology which is cost effective and does not compromise health and environment standards.

The unqualified endorsement of composting toilets was opposed by Government Members due to:

- i) their cost;
- ii) their likely ability to satisfy health standards in dense urban areas;
- iii) odour problems when not properly used, poorly maintained or with excessive use;
- iv) the need to rake and stir faeces;
- v) environmental impacts from nutrient loads when the residue is used as compost; and
- vi) the associated problem of disposing of greywater.

These members submitted that there may be appropriate applications in fringe urban areas and greenfield sites for the trialling of such technologies but they should not be imposed without regard for health and environmental considerations. It should be further noted that the current policy of the Department of Health is that all "subdivisions involving lot sizes of less than one hectare and provided with reticulated water (are) to be sewered." (Explanatory Guide for Land Developers issued 4 August, 1992)

Government Members also wish to record that the community must be informed of the cost of the water quality goals proposed in Recommendations 32 (d) and 32 (e).

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

36. Government Members dissent from this recommendation.

Government Members are not convinced that composting toilets are a viable alternative to reticulated sewer systems for the vast majority of SWB customers.

37. Supported, provided electricity customers are not required to subsidise the operations of the SWB by purchasing power at less than a commercial rate.

38. Supported.

39. Supported in so far as Tenderers will be permitted to submit proposals which make use of alternative technology. Government Members do not support provisions in tender specifications which would state that alternative technology appliances are preferred where they are not commercially competitive with appliances services by reticulated sewer and water supply

40. Supported in terms similar to comments which appear in previous recommendation.

"h the existing capital structure and the future capital needs having regard to the impact of the payment of \$200 million in dividend payments to consolidated revenue on the Board's capacity to fund capital works and environmental improvements, including the impact of borrowing by the Board in or outside Loan Council guidelines to fund capital works"

h Dividends

Summary

Special dividends

Normal dividends

Recommendation 41

Minority Comments - Government Members

SUMMARY

In this Chapter the Committee concludes that no more special dividends should be demanded from the Board.

The Committee further concludes that in order to clearly plan its future capacity works program, the Board should have a stronger role in the setting of ordinary annual dividend amounts.

It is also considered that there is an urgent need for the Treasury to establish a dividend policy for each agency which is publicly explained at the time payment is sought taking into account factors such as long-term management of assets.

Special dividends

Virtually all parties who submitted to the Committee condemned the taking of

special dividends from GTEs, considering this was merely a form of disguised taxation on the part of the government. Tim Moore, the former Minister responsible for the Water Board, summed up the general opinion that revenue raised by GTEs such as the Sydney Water Board generally take the form of charges not taxes and it is therefore not appropriate for Government to use GTEs such as the Board as a "taxing arm" to supplement its revenue stream in this manner:

"If you (the Government) want to say to the Board, "we will use you as a taxing arm", it is not appropriate to have it as a commercial enterprise and it is not appropriate to have it as an arm's length trading organisation." (Hansard, July 29 1993, p.20)

The taking of the \$200 million in special dividends since 1991 attracted a considerable degree of cynicism from those parties who submitted to the Committee, particularly as it occurred in a climate of increasingly strong public demand for environmental improvement by the Board and coincided with the implementation of the Clean Waterways Program. It was obvious from the evidence the Committee received that insufficient consultation had taken place over the taking of the dividend which was set by Treasury following the findings of an investigation by the Macquarie Bank. Evidence given to the Committee in the form of letters from the then Treasurer, Mr Nick Greiner, made it clear that Treasury had long been of the view that the Water Board was "cash rich" and "squirreling money away, presumably to help fund future projects".

The issue was further compounded by the fact that the Water Board was strongly of the opinion that it would benefit from the first dividend by way of an assets transfer for the Fish River Scheme which did not subsequently occur. The former Chairman of the Appointed Board, David Harley, tabled substantial written documentation before the Committee to support such an expectation by the Board.

Mr Harley raised with the Committee the problems inherent with the Sydney Water Board now operating with only two weeks working capital:

"It brings into question the commercial aspect of how the Government and or the present management Board want to operate the instrumentality. As you correctly say, most businesses run between six and 10 weeks. The cash flow situation of the Water Board is guaranteed to some extent by the introduction of the quarterly billing that we brought in, and I will perhaps talk about that later. But yes, from a commercial point of view you would think that is less than commercially sound." (David Harley, Hansard, July 29 1993, p.29)

However, Treasury strongly supported the findings of the Macquarie Bank Report that two weeks of working capital is adequate:

"In the specific case of the Water Board we started the whole exercise of

looking at the Water Board's financial situation from a Macquarie Bank study which we did in conjunction with the Water Board. We had numerous discussions over months, I would say, coming up with scenarios and what have you, and we looked at the whole range of parameters that underpin the Water Board's position - working capital requirements and so on. We also took into account Standard and Poor's analysis of the Water Board, which rated it as a AAA organisation and pointed out that the Water Board at that time used some tricky accounting practices to cover up the strength of the operation in terms of its cash flows. They basically said this is an absolutely first-rate business with a very strong cash flow, with very high working capital coverage and a number of other parameters which led us to believe that the \$100 in two hits, a \$200 million total plus some proportional payment of pre-tax profits was certainly well within their means." (Hansard, September 15, p.22)

It is the opinion of the Committee that an outer budget authority such as the Water Board which is by its very nature intended to operate commercially on an arms length basis from the Government must be allowed to effectively conduct its daily operations and to plan for significant capital works and environmental improvements.

In order for such an authority to do this there must be predicability built into the dividends process and the arbitrary taking of such large amounts as the \$200 million in special dividends at such short notice could never allow for this. The Committee further heard evidence to the effect that the taking of these dividends had put the Board in cash flow difficulties due to the fact it was reduced to a two week operating profit margin and it had severely affected its asset replacement program. David Harley argued before the Committee:

"We had a capital works program that took into account asset replacement. Any deviation from that expenditure put at risk those assets. So, clearly, any unknown disconnected special dividend that we were asked to pay put in jeopardy that program." (Hansard, July 29 1993, p.26)

Figures supplied to the Committee by the Board outline capital works expenditure since 1989:

Financial Year	1989/90	1990/91	1991/92	1992/93
	\$m	\$m	\$m	\$m
Board's expenses	314.4	398.2	496.3	501.6
Free assets	25.9	40.8	60.4	43.6
TOTAL WORKS	340.3	439	556.7	545.2

The Water Board made it clear to the Committee that the taking of the special dividend would have a long-term effect on its capital works program and thus environmental gains would have to be postponed.

The Committee is opposed to the taking of special dividends out of GTEs in this manner and in fact considers any extraneous financial demands over and above normal dividends on authorities such as the Water Board, whose ability to repair and replace assets has such a strong affect on the environment, difficult to justify. It is therefore strongly recommended that no future special dividends be taken out of the Board.

Normal dividends

The issue of the payment of dividends by the Water Board received a great deal of attention in both written and verbal submissions put before the Committee.

The majority of parties did not contest the appropriateness of the Government demanding a normal dividend from a GTE such as the Water Board on an annual basis.

However, concerns were expressed by many parties, including the Appointed Board of the Water Board, about lack of consultation over the setting of amounts of ordinary dividends. The Appointed Board argued before the Committee that it sees its role in the dividend determination process as unclear under the Act. The former Minister responsible for the Sydney Water Board, Mr Tim Moore, also stated that he considered that the current policy is inappropriate:

"My argument has always been that if you have a commercial trading enterprise...and you appoint, as I did, an external competent board to deal with it and give it a commercial brief and try to put it at arm 's length, if you then wish it to deal with a dividend policy that dividend policy has to be a negotiated policy with the board and it has to be a properly agreed upon and negotiated policy". (Hansard, July 29 1993, p.20)

This issue of only notional consultation by Treasury over the setting of dividend amount payments was similarly discussed by the Public Accounts Committee in the Report on Dividend Payments Made by Statutory Authorities to the Consolidated Fund (1992). The Committee's inquiry found that authorities were generally unhappy with Treasury failing to consult appropriately with them as to the consequences of its dividend policy.

It was a recommendation of this report that Treasury negotiate the amount of dividend payments with the selected authorities on a case by case basis rather than only on the basis of a fixed formula. It was also a further recommendation of

this report that "in any future reworking of the Public Finance and Audit Act 1983, Treasury include a provision requiring the Treasurer to consult with authorities on their future liquidity and capital requirements when determining the amount of the dividend."

It was a concern of the Committee that while a greater consultation process is now taking place than in the past, the Water Board is still in a significantly unequal bargaining position and dividend amounts are calculated according to a fixed formula which cannot adequately take into account the Water Board's future capital needs and current operating costs.

The Committee would therefore argue for a stronger and more clearly defined role for the Appointed Board in the setting of ordinary dividend amounts to be paid by the Sydney Water Board. There should also be scope for the implementation of a more transparent process which would readily expose if the Appointed Board had taken a different view to the Treasury regarding any dividend policy issues. It is suggested that this could be done via changes to the Board's enabling legislation.

It was clear to the Committee that if there were to be a minimum diversion of funds into politically sensitive issues, the Appointed Board must be given sufficient powers to distance itself from the political process.

Treasury argued before the Committee that the logic underlying dividend policy amounts was an analysis of Stock Exchange listed companies that demonstrated their pay-out ratio of tax plus dividends averages about 70%. Evidence was further given to the Committee by Treasury that all GTEs were gradually being phased into a notional tax regime as part of a Commonwealth Government microeconomic reform agenda to improve the economic efficiency of these enterprises by creating incentive structures which promote a greater degree of commercial behaviour.

However, the Committee felt it is questionable whether the comparison between GTEs and private companies is always valid due to the fact that GTEs are governed by different regimes than private sector organisations such as increased regulatory standards. It is also recognised that in the private sector dividends paid to the holding company are not necessarily revenue foregone by the payee subsidiary as these funds may later be attracted back to the subsidiary. Furthermore, private sector company dividend policy does not necessarily demand a minimum rate of return each year depending on various factors such as the preferences of investors for capital gains over dividends.

The Water Board gave evidence before the Committee to the effect that, while its capital works program has up until this point been funded from equity, the Board expects that it will need to borrow funds to support this in the next few years.

Therefore, the Committee acknowledges that the dividend policy process can

provide a means of impressing financial discipline upon GTEs and that many private companies capital works programs are, in normal circumstances, funded through a mix of both equity and debt. In this regard the Committee acknowledges that partial funding of capital works from debt may impose a greater financial discipline on the organisation than funding solely from equity and even senior officers of the Sydney Water Board acknowledge that the Board has "gold plated" many of its assets in the past.

However, the Committee is concerned that Treasury has been inconsistent and unclear in its dividend policy and this has made it very difficult for the Water Board to plan capital works programs etc. The Committee is of the view that in the time-frame in which the Treasury had been demanding dividends from the Board, it could be expected that more predicability would have been built into the process.

Aside from the issue of the Treasury demand for the \$200 million special dividend, the Committee notes that a substantially higher dividend has been demanded of the Water Board in 1993/94 (approximately 70% of its gross operating profit as opposed to 50% in the previous year). This is due to the Treasury requirement that the Board will now pay taxation equivalent payments currently equalling 39% of its gross operating profit. This significant increase of 20% in ordinary dividend payments coincides with a period in which the organisation is being subjected to stronger environmental demands than ever before due to heightened public awareness of environmental issues, increasingly strong environmental regulation and a need to correct the environmental mistakes of the past.

In this regard, the Committee also acknowledges the opinion of the Government Pricing Tribunal that the Water Board is entering a period where it may need to undertake a very large capital expenditure program and the fact that, as indicated in other chapters of this report, the Clean Waterways Program currently appears to be at risk.

Thus, the Committee is clearly of the view that the Treasury dividend policy process needs to be conducted with much greater transparency and accountability, with Treasury being required to justify to Parliament, through amendments to s59B of the Public Finance and Audit Act, their general policy on dividends and the extent to which this has been a properly negotiated and agreed upon policy with the Board. Further to this, the individual amounts demanded each year from the Water Board should also be substantiated along with evidence of clear advance notice to the Board of Treasury expectations and all consultation processes conducted.

As previously stated, the Committee is concerned that the Board is required to pay this large amount of dividend (70% of gross operating profit) at a time when degradation of Sydney's waterways is so high. It was considered that, just as is done in private companies when it is considered financially and managerially prudent to build up a company's asset base, no further annual or special dividends

should be expected of the Board until the essential infrastructure and standards necessary to achieve the objectives of the Clean Waterways Program have been attained. As Graeme Richardson, a former Appointed Board member and manager of AWT, told the Committee:

"We have got to realise that the Water Board has more than just a return on assets drive until it gets some of those things up to speed. The Board clearly has an obligation (to both the government and the public) to get the environment right. Return on assets and return on investment criteria don't really fit. If you were a private company and you had outdated equipment you would probably go for the rights issue, get more money from your shareholders to update your equipment so you could be more efficient. You wouldn't be declaring dividends, for example, in circumstances where you had backlog assets and you weren't able to efficiently produce those assets." (Hansard, August 12 1993, p.40)

Mr John McMurtrie, the current Chairman of the Appointed Board, shared this view:

"As we go down the track and we look at the stormwater issues and further development of the Clean Waterways strategy, and what the waste water strategy should be for the Board, we may well come to the conclusion that we must retain all of the cash that is generated in the business to spend on capital. Santos, the oil company, is a good example there. They did not pay a dividend until about four years ago. They started in 1962. When they developed the Cooper Basin they took all of the cash they could generate and borrowed more and raised more equity to do it. It depends at what stage you are at in your capital expenditure cycle. I think that is a call to the directors to say that if we do end up getting a role in stormwater and the whole community issues in stormwater, and the issues on wastewater and the Clean Waterways strategy, if we need the cash to spend on capital expenditure, I would be the first to argue that we should not pay a dividend." (Hansard, October 27 1993, p.15)

This view was echoed by another current member of the Appointed Board, Dr Judy Messer and a former Chairman of the Appointed Board, Mr David Harley. Dr Messer told the Committee:

"It is very hard for the Government to achieve credibility for its (Clean Waterways) Programme when it is taking money out of the Water Board." (Hansard, September 3 1993, p.99)

Recommendation

Dividend payments

- 41(a) The Board should have a stronger role in the setting of ordinary annual dividend amounts and it should account to its customers for its role in the dividend process. Section 59B of the Public Finance and Audit Act should be amended as follows:
- (i) To limit the Treasurer's discretion to require dividends so that any amount required from an authority or state owned corporation will not directly or indirectly cause the body to defer implementation of any capital or non-capital works which is a core statutory or commercial responsibility. The Treasurer's discretion must not impede the implementation of the body's capital works program as approved by government;
 - (ii) To require the Board of a statutory authority or state owned corporation to provide the Treasurer with a certificate in which they state that the payment of a nominated maximum amount will not directly or indirectly cause the body to defer implementation of the works referred to in (i), above. Any body which pays dividends must inform each customer in their accounts of the amount of the customer's account that is attributable to dividend payments.
 - (iii) To require the Treasurer to provide the body or corporation with a written determination accounting for the calculation and basis upon which the determination has been made. The form of the certificate and the Treasurer's determination are to be provided for in a regulation made under the Act. The certificate is to be reproduced in the annual report of any body which recommends the payment of a dividend together with a statement of the determination of the Treasurer;
 - (iv) To require the body to certify that the works identified in previous certificates have been or are still proposed to be constructed and, where the costs are known, what the costs are.
- (b) If the Sydney Water Board is unable to demonstrate an ability to meet its financial commitments under the Clean Waterways Program, the government should adopt a more flexible approach to the application of dividends and CSO payments. As part of such an approach a moratorium should apply to the payment of ordinary dividends if a special audited 'dividend equivalent' was applied to the

CWP to recover shortfall in financing the program.

- (c) **There is an urgent need for the Treasury to establish a dividend policy for each agency which is publicly explained at the time the dividend payment is sought. Such a policy should explain how it will facilitate the long term management of assets, including environmental resources and investment needs of the Board.**

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

In evidence to the JSC, the Water Board's dividend policy was compared to that of a private company. In a private company, it is not the shareholders who decide on the dividend level. But it does **appear** in the public sector that the shareholder, the Government, makes the demands.

Private companies also declare a dividend level on balance, that is, some funds are retained to safeguard future expenses. It is not as permissible for public sector businesses to do this, as it can provoke charges of hiding money in hollow logs, even though provision for future expenditure and asset maintenance are as much issues in the public as in the private sector.

There is no evidence that the payment of ordinary or special dividends has adversely affected the Water Board's ability to keep up its obligations. The Water Board maintained its capital expenditure programme, while sustaining its financial soundness, as evidenced by reaffirmation of its AAA credit rating.

Corporatisation of the Water Board under the SOC Act is the most effective way of making the relationship between the Board and its government shareholders resemble that between a private sector company and its shareholders. Once registered as a corporation, the Water Corporation would be subject to the rigours of Corporations law. Dividends will be determined under the Statement of Corporate Intent between the voting shareholder Ministers and Directors of the Corporation.

Should there be a moratorium on ordinary dividends from the Water Board?

The general qualification attached to this suggestion in submissions to the JSC was that a moratorium need only be imposed until the waterways were clean, rather than an objection to the principle that Government Enterprises pay a dividend to their principal shareholder.

The prime objection to having a moratorium is that it gives a profoundly misleading signal: it helps propagate the idea that we can remedy a bad situation without pain.

The environmental objection to a dividend moratorium is that the waterways will **never** be clean enough for everybody. People expect waterways to be clean by their own subjective standards. "How clean is clean?" That status may never be achieved and could, in any case, never be demonstrated. It is only possible to achieve a comparative standard, that is, that waterways will be cleaner than they are now. The goals must, however, be spelt out. The "Choice for Clean Waterways" document indicates the way to go. Such a comparison has the advantages of being (a) achievable and (b) scientifically demonstrable.

The overriding aim has to be to achieve cleaner waterways **and having them remain so**. It depends on the public being prepared to make the ongoing commitment to pay the requisite price. This is the key fact and this Recommendation 41 (b) blurs that fact.

Special Dividends

Government Members were satisfied that the \$200 million taken in special dividends from the Board was from surplus working capital as identified by the Macquarie Bank. Government Members are opposed to the imposition of any further special dividends because of their potential impact on the CWP. It is noted that this is the current policy of the Government.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

41(a) (i), (ii), (iii) and (iv). Government Members support this recommendation in so far as it will allow commercial considerations to be the prime determinant of dividend payments by the SWB, that dividend payments follow a consistent policy from year to year, and that non commercial subsidies from consolidated revenue back to the Board are transparent.

Government Members do not believe that the bureaucratic detail outlined in Recommendations (i),(ii),(iii) and (iv) is necessary to achieve these goals.

41(b). Government Members dissent from this recommendation.

State taxpayers are entitled to a commercial return for the substantial investment which is vested in the SWB. Anything less represents a subsidy to the operations of the SWB, which not only undermines the spirit of this Report and previous Majority recommendations, it will lead to waste. Compliance with environmental standards should be considered as a normal operating expense for the SWB, and it should plan its commercial decisions accordingly. There will always be the difficulty in determining as to when the waterways are clean enough.

41(c). Supported.

"i an account of expenditure upon the Special Environmental Service charge"

i Environmental levy

Summary

Why was the SEL implemented?

The relationship of the SEL to the SEP and CWP

The expenditure of SEL funds

Accounting for SEL funds

Have the criteria for expenditure been met?

The special dividend payment

The future of the SEL?

Recommendation 42

Minority Comments - Government Members

"... the Government, being responsive to public opinion and the seriousness of water pollution throughout the whole of the waterways within the area of operation of the Sydney Water Board, made a decision to raise a special charge of \$80 million a year to contribute to the Water Board's environmental program." (The Hon. TJ Moore, as Minister for the Environment, Hansard, 9 May 1990)

SUMMARY

In this section the Committee reviews the history of the Special Environmental Levy (SEL) since it was introduced in 1989. The Committee considers the income and expenditure of the Levy upon two programs, the "Special Environmental Program" (SEP) and the "Clean Waterways Program" (CWP).

The Committee concludes that the expenditure of the money is difficult to track because of the inconsistent accounting practices and language. As the Committee is not confident it understands the Board's accounting practices, it recommends measures to make such expenditure more accountable in the future.

Why was the SEL implemented?

Community concern and media attention over the condition of Sydney's beaches during the 1988/89 summer caused the Government and the Water Board to introduce the following programs:

- the Camp, Dresser & McKee review of the Sydney Beach Protection Program, March 1989;
- the Special Environmental Levy, April 1989;
- the Special Environment Program, Aug/Sept 1989; and
- the Clean Waterways Program, December 1989.

The SEL was approved in April 1989, under the Water Board Act 1987. It allowed the Board to levy a payment of \$80 per customer per year for five years ending June 1994. It was estimated that this would raise \$440 million (adjusted to \$491.6 million as a result of urban growth and interest on the funds; Water Board submission, Reference 1i p2).

Essentially the SEL was a political response to citizens' demands for immediate action to improve the quality of Sydney's water.

An SEL Community Audit Committee (CAC) was established by the Minister (later disbanded) and met for the first time in 1990. It was set up to review SEL Reports on expenditure of the levy which were to be issued twice a year.

A group that was directly involved in these issues at the time, the Coalition of Hawkesbury and Nepean Groups for the Environment (CHANGE) submitted that:

"The program was generally well accepted in its early days. A special tribute is due to both the Board members and staff in interpreting the community's priorities and establishing diverse programs....During the early phase of SEL various funds were dispersed for innovative treatment programs. In a number of cases (e.g., Memtec and Sirofloc) these funds have been well spent even if they only indicate a move away from the long-established engineering "solutions" of the past to ones of effective on-site treatment and re-use." (CHANGE submission, pp.10-11)

The relationship of the SEL to the SEP and CWP

The Special Environment Levy was implemented as a method of raising funds for projects being carried out under the Special Environment Program. In its submission the Board says:

"The levy is collected by the Water Board and transferred to a nominated Trust Account. As expenditure is incurred on SEP approved projects funds are transferred back to the Board.." (SWB submission, Ref.1i, p.2)

The "Approval Procedures for SEL Funding" issued by the Board indicate that:

"Projects which are funded by the SEL must meet two important criteria,

(1) They must be projects in addition to the normal on-going workload of the Board; and

(2) They must contribute to providing the community with measurable environmental benefit.." (Forward, SWB, October, 1991)

The SEP is "a \$393 million program of works for the '1989/90 Special Environmental Program (SEP)' [that] was approved by the Government Capital Works Committee." (Water Board submission Ref.ii, pi)

As stated above, the purpose of the SEL was to fund programs under the SEP that were over and above the normal Board workload and to provide "measurable environmental benefit". The SEL was specifically aimed at clearing up the pollution in Sydney's waterways.

In addition to the two main criteria, there are further criteria for acceptance of projects under the SEL which are outlined in both the Board submission (Ref.1 i pp2-3) and the "Approval Procedures for SEL Funding" (Section 1).

These criteria are that an approved project must:

- meet appropriate levels of environmental impact assessment and community consultation;
- have written project plans which include a statement of objectives and a monitoring program, define work responsibilities, use measurable performance indicators, include strategies for community involvement, address community concerns and priorities, and use a management control plan;
- result in clear and measurable enhancement of the environment;
- must not have been included in the January 1989 ten year forecast of capital works;
- address one or more of several specific objectives (see Appendix j).

For example, the majority of the Committee question how one of the criteria for approval of an SEL project - that it must result in a clear and measurable enhancement of the environment - can be achieved when this outcome can only be gauged once the project has commenced.

The approval procedure as issued by the Board involves the following steps:

- review of the Project Plan by the SEL Co-ordinating Committee against the criteria;
- recommendation by the Committee to the Managing Director whether or not the plan meets the criteria;
- plans costing over \$500,000 must be submitted to the Managing Director for endorsement and the Appointed Board for approval;
- plans costing below \$500,000 require only Managing Director's approval;
- variations to existing plans are approved according to the variation in the project costs (Approval Procedures for Funding, Section 3).

The Board submission indicates that:

"If a given project does not conflict with the acceptance criteria, then it can be deemed suitable for SEP funding. When SEL funds are not available, then projects are to be placed on a ranked list....developed with weighted criteria." (SWB submission, Ref 1i, p.4)

This process and "weighted criteria" are not explained in the Board's submission.

There is a slight difference between the objectives outlined in the Board submission and those in the "Approval Procedures for SEL Funding". The latter lists ten objectives, while the former lists eleven. The Board submission to the Inquiry adds goals or criteria to:

"...encourage source control and waste minimisation by controlling the kind and amount of waste discharges by commercial and industrial outlets, collecting and disposing of hazardous chemicals in an environmentally sound manner, and educating the public in environmentally sound practices." (SWB submission, Ref. 1i, p.3)

The Board explains this change in its submission:

"To facilitate the achievement of its environmental goals the SEP was originally organised into 12 sub-programs.

The longer term CWP - which was established later than the SEP - was organised into 13 objectives. The SEL was then reorganised into 11 objectives which aligned with the objectives of the CWP and simplified reporting of the co-related programs." (SWB submission, Ref. 1i, p.4)

This statement highlights the linked but confused relationship between these three programs and some of the resulting confusion which the Committee has experienced in seeking to understand their administration.

The priorities were determined through public forums and submissions.

The CWP (see also Reference a, above) is a different longer term program. As the Board explained in their submission:

"based on the recognition that the CDM Report did not sufficiently take into account the problems associated with urban growth and stormwater drainage..[the CWP]..was announced as an enlarged \$6.25 billion, 20 year program. The program's estimated cost was later indexed to \$7 billion to reflect inflation." (SWB submission, Ref. 1i, p.2)

The "CDM" report was the report by Camp Dresser McKee which contained a series of options for cleaning Sydney's waterways. As mentioned in Reference a, above, it was the CDM report which contained Option P which formed the basis for the Clean Waterways Program.

In its first and only report in 1991 the Community Audit Committee ("CAC") was critical of the way the SEP and CWP had, in their opinion, become intertwined. They pointed out that the SEP was set up initially as a separate program. However:

"there has always been a difficulty in differentiating between projects that represent new initiatives in addressing the environment and therefore prima facie appropriate to be considered as a SEP project, and projects that were more correctly described as part of the normal work-load of the Water Board. The movement away from the specific programs of the SEP to programs which are described as representing the first stages of the \$7 billion CWP has resulted in an expansion of this difficulty." (CAC Report 1991, p.G-1)

The CAC said at the time of their Report that it was apparent that the SEP had been absorbed into the CWP. They recommended that the purpose of the SEL, SEP and CWP be reviewed and each program defined.

The Board responded at the time that it considered the SEP to be a discrete subset of the CWP.

The expenditure of SEL funds

The Water Board submission supplies the following income and expenditure figures for the SEL;

<u>Year</u>	<u>Income</u>	<u>Expenditure</u>	<u>Residual</u>
89/90	95.7	43.1	52.6
90/91	93.8	97.9	48.5
91/92	100.1	97.7	50.9
92/93	100.6	105.9	43.5
93/94	101.8	118.9	28.5
(estimated)			
TOTALS	492.0	463.5	28.5

(Water Board submission, ref.1i, p14)

The Water Board submission details SEL expenditure according to the specific objectives listed in Appendix j. The expenditure is listed as:

improvement of effluent quality	\$63.6m
increasing STP reliability - mostly electrical, mechanical and control upgrades	\$61.1m
installation and upgrade of odour reduction and control equipment	\$24.9m
using sludge for landfill, composting, and agriculture	\$54.5m
reduction of sewage outflow - gauging system, smoke testing, pilot trials, rehabilitation projects	\$47.1m
environmental monitoring	
control of urban run-off - gross pollutant traps and stormwater channel improvement for 23 sites. Research project for Katoomba reuse of artificial wetlands; catchment management studies re quality	\$5.2m
bushland and wetland management, 24 regeneration projects	\$8.0m
community participation - Streamwatch, videos and publications	\$3.25m
source control - more inspections, speeding up trade waste agreements	\$6.8m
additional sewage services for 652 properties	\$9.4m
TOTAL EXPENDITURE	\$283.85m

(SWB submission Ref 1i, pp 6-10)

The Board submitted that:

"SEL expenditure to June 30, 1993, amounts to \$344m (estimated), leaving a residual \$42m (estimated) in the Trust Account" (SWB submission, Ref.1i, p.13)

The Australian Waste Water Association submits that their impression is that the rate of expenditure of the SEL has failed to match income due to difficulties within the Board in terms of letting the various consulting briefs, surveys and contracts involved in expending the money on the CWP.

This aspect is difficult to scrutinise. The Committee is concerned to ensure, however, that the money is spent and the environmental outcomes are achieved as promised.

Accounting for SEL funds

At the time the Levy was imposed, Moore, Wilson, Harley and the then Premier, the Hon. Nick Greiner, emphasised the view that:

- the Levy should be separated from the day-to-day profit and loss activities of the Board;
- it should have specific public accountability;
- an audit committee (CAC) should be established, including people known to be hostile or sceptical of past Board reforms.

This latter proposal was abandoned with the change of Minister in 1991.

The Board submits that SEL funds are treated separately by placing them in a Trust Account. They are then transferred back to Board for payment of SEP approved projects.

The Board claims that changes in the emphasis on projects and expenditure have resulted from public feedback and identification of non-feasible projects.

Some councils submitted concern over SEL accounting procedures to the effect that:

- there should be an annual statement available to the public indicating on what projects the SEL is being spent;
- there should be constant monitoring of projects to ensure that projects have delivered the desired expectations.

The Auditor-General's submission explained that auditing is carried out to establish

that:

- the Levy is raised from eligible properties;
- the income is properly identified,
- expenditure controls are operating, and
- projects are properly authorised.

The Auditor-General's audit opinion of 1990/91 indicated:

- a difficulty in establishing that authorised expenditures had been accurately recorded; and
- the Board's records did not allow for an alternative audit procedure.

As a result, the Auditor-General recommended changes to the SEL accounting procedure on which the Board acted. Internal controls were improved and a "Management Control Plan" established to improve management practices.

A second review by the Auditor-General of the 1990/91 year was conducted at the request of the Board which revealed that the expenditure of SEL projects for that year was "now materially correct."

The Auditor-General submitted that the 1991/92 audit was satisfactory even though some further improvements to internal control were proposed.⁸

The 1992/93 audit is currently incomplete.

The SEP Community Audit Committee Report for the period to 30 June 1991 highlighted some concerns and made some recommendations. It reviewed the amount of funds received under the SEL, and found that there was an overpayment of interest to the Trust Fund as a result of calculation of interest on amounts billed rather than amounts received.

The Board responded by saying that the appropriate adjustments would be made during the financial year ending 30 June 1992. The CAC was also concerned over the Board's accounting system and the reliance on computer-generated figures with regard to the SEP levy. To their knowledge no attempt has been made to confirm the reasonableness of the reported levy receipts by the Board's accounting officers.

The CAC recommended a "gross error" check which was carried out with a

⁸ The Auditor-General outlined in his submission to the Committee of 2 August 1993 that 1991/92 (and subsequently the 1993/94) SEL expenditure received a clear audit opinion. He highlighted several internal control measures in a letter to the SWB of 8 December 1992. These measures included: SEL certificates, project managers and Board systems, changes raised by other production areas, changes in location and retention of documentation.

satisfactory result for the year ended 30 June 1991. They suggested that a similar check is carried out each year.

Have the criteria for expenditure been met?

The SWB submits that it has *"implemented a rigorous process to ensure that SEL funds are allocated to appropriate projects..."* (SWB submission, Ref 1i, p.2)

The Board points out that many projects have long term perspectives and therefore conclusive quantification is not yet available. That is undoubtedly so. But this response is in conflict with the clear requirement that expenditure should not be on the "normal on-going workload of the Board" and projects funded by the levy "must contribute to providing the community with measurable environmental benefit". There is a difference between reaching conclusions about the effectiveness of levy expenditure and accounting for its expenditure. For example, if levy money has been spent on a project for which there is presently no "measurable environmental benefit", that fact must be disclosed along with any qualifications about potential benefits.

An analysis of the Board's "Five Year Rolling Plan & Ten Year Forecast for Capital Works" does not indicate clearly whether the SEL has or has not been spent on projects against the following two criteria:

- that they must be in addition to the normal on-going workload of the Board; and
- that they are not included in the ten year forecast.

Application of the criteria to the Board's projects is difficult and sometimes impossible due to the use of varying terminology over time. This lack of consistency in terminology prevents accurate analysis of whether SEL funds have been approved and spent in line with criteria.

Some examples of conflicting terminology are:

- In the pre-SEL 1988 Annual Report the following headings are used for "Actual vs Budgeted Capital Items":
 - System Expansion;
 - System Amplification;
 - Environmental Protection;
 - Water Quality;
 - System Renewal;
 - Dam Safety;
 - Other.

- The post-SEL 1992 Annual Report uses the following headings for the same annexure:
 - Environmental Protection;
 - Urban Development;
 - Maintenance of Standards;
 - General.
- The Ten Year Forecast adopts the same terminology as the 1988 Report.
- In the 1988 Report "Sewer Backlog" was included in System Expansion.
- In the 1991 report "Backlog Sewerage" was included under Environmental Protection.
- The terminology of the Ten Year Forecast (see Appendix k) is substantially different from the terminology used by the SEL (see Appendix j).

As an example, the Board provides figures (Appendix 1/2 in its submission) of adjusted expenditure and notes that \$20 million has been reserved for "effluent improvement" measures on Picton sewerage being constructed to 1996. The Five-Year Plan/Ten Year Forecast indicates that \$35 million is allocated to eliminating "sewer backlog" in Picton.

The similarity between these two terms suggests that SEL funds have been used to pay for a pre-SEL project.

An example of SEL funds being spent on the "normal on-going works" is in relation to Malabar:

- The ten year forecast evidences expenditure of upgrading the Malabar STP;
- The Board submission lists SEL expenditure on Malabar, such as fine screens, trials of chemically assisted sedimentation, magnetite and Sirofloc processes, electrical reliability upgrade, ventilation upgrade, odour control upgrade and emission studies (SWB submission, Ref 1i pp 7,8.).

The Committee is not confident that these SEL funded projects at Malabar are truly over and above the Board's on-going workload.

The Committee's difficulties in understanding the accounting language are not limited to interpretation of the Board's levy expenditure. The difficulty applies to the balance of the Board's capital works projects and appears to be a "whole of government" problem.

If uniform language was used by all government agencies to identify capital

expenditure government and citizens would be able to compare effectiveness and efficiency from one agency to another and within an agency over time. Uniform language could be achieved through the use of uniformly applied major classifications and sub-groups.

The Board's Five Year Rolling Plan & Ten Year Forecast for Capital Works 1989 states:

"The Rolling Plan includes all those major works that are seen as being needed to expand, amplify, maintain and renew the Board's water supply, sewerage and drainage systems and to meet the requirements of Government planning and standards of service. In addition to details of major projects, bulk allocations are included to present a complete picture of capital works needs in each year." (page 1)

The Plan also says that projects are assessed in terms of:

- technical requirements;
- social and political implications; and
- environmental pressures.

Given the nature of the public benefits and the significant public interest in having the public sector produce accounts that are readily understood the Committee considers that criticism of the Board is justified due to the inconsistency in reporting terminology generally and in relation to the environmental levy in particular.

Such inconsistency does little to inspire confidence and does the Board avoidable harm because it suggests concealment of the reality of the expenditure. Citizens are justified in their concern and deserve greater accuracy from the Board for expenditure of SEL funds.

Part III of the Ten Year Forecast deals with "sewage treatment" (including ocean outfalls). "Sewage treatment" is a major focus for the SEL. Spending forecasts for this area were as follows:

1988/89	\$79.0m
1989/90	\$52.2m
1990/91	\$23.5m
1991/92	\$2.6m
1992/93	\$7.4m

Does this drop in expenditure indicate an anticipation of funds from the SEL? If so it defeats the purpose of the SEL being for works over and above normal SWB works.

The Ten Year Forecast says that the purpose of the upgrading of sewage treatment plants:

"is to provide a higher level of treatment necessitated by increasing urbanisation resulting in greater stress on the environment and hence a requirement for greater levels of environmental protection." (page 20)

This statement is evidence that the Board views the reduction of sewage pollution as important. The forecast also indicates that:

"Future expenditure in this category is forecast to be much lower with some works being required to improve the effluent quality from Blue Mountains plants." (page 20)

The Board does not explain why expenditure will be lower in a category they have identified as important.

A member of the Boards' "Program Evaluation Area Team" gave evidence that a number of problems had been detected with the way SEL funds were being spent. The member did not expand on this comment except to say that improvements had been made.

The SWB annual report for the year ended June 1988 shows a drop in expenditure on water quality from \$10.8 million actual in 86/87 to \$2.7 million budget for 88/89 (p75).

The SWB have made it clear that they are committed to improving water quality. This drop in allocated funds seems to indicate an anticipation of access to extra funds when the budget was made.

If projects funded by the SEL are supposed to be over and above the normal on-going workload of the Board it is necessary to do the following:

- adequately define what is meant by "normal on-going workload"; and
- use standard headings and categories for all reporting documents ie financial reports, plans, budgets, etc.

The special dividend payment

Concern was expressed to the Committee that the special dividend payments by the Board to the Government were being made out of the SEL funds. The Board emphasised that it:

"is absolutely scrupulous in distinguishing SEL funds and expenditure from the Board's other revenues." (SWB submission, Ref., 1i, p.12)

Mr David Harley, a former Chairman of the Board during the use of the levy, gave evidence to the Committee that:

"it was clear that the amounts that were being taken as a special dividend and the amounts that were being spent on the SEL were approximately the same...it was Bob Wilson who actually alerted the Government to that situation. One of the important things about the Special Environmental Levy was that those moneys had to be put into a safe, special, audited spot so that they were spent on nothing else but environmental good works. Tim Moore ensured that happened. But the community was not to know that and there was some restlessness in the community..." (Hansard, 29 July 1993, p.40)

SEL is collected by the SWB and transferred to a nominated SEL Trust Account. Once an SEP project is approved and expenditure incurred funds are transferred back to the Board.

The NSW Treasury submits:

"that it is not possible [for dividend payments to be sourced from the SEL] since up to 1990/91, the SEL income was recorded in the balance sheet of the SWB in a way which did not impact on profit and hence were excluded from dividend calculations." (NSW Treasury submission, p.12)

The Treasury submission further points out that in 1991/92 the SWB changed their accounting system. Under the new system:

"the SWB was required to...recognise all revenue received through the profit and loss statement. In order to quarantine the SEL revenue from profits and dividends...a letter was issued in July 1992 from Minister Souris to Minister Webster indicating that the dividends payable by the SWB would not increase as a result of compliance [with the new accounting system]. This was achieved by including SEL revenue below the profit line when dividends were calculated." (Treasury submission, p.12)

Further to this point Mr Paul Broad, Managing Director of the Water Board

guaranteed the Committee that the SEL would not be treated as revenue by Treasury (Hansard, p30).

Mr Broad was asked by the Committee if, as the SEL is to be incorporated in 1994 bills as part of general income, that equivalent sum would be counted as revenue and thus subject to the dividend process?

Mr Broad replied that this would only be the case if it was not spent on "environmental outcomes". The funds come in, are spent on environmental outcomes and so there is no profit from whence to take a dividend. The Committee does not understand how the Board will distinguish to the satisfaction of citizens and the Treasury (which set dividends) what income is and is not spent on "environmental incomes". This language seems as incapable of clear meaning as the language that has been used to date for the levy.

The Board included SEL revenue below the profit line in its 1991/92 Annual Report (see p84).

This evidence does not prove that the SEL did not fund the dividend payments.

The fact that SEL funds are excluded from dividend calculations does not mean that they have not been used to source the payment of the dividends.

Sydney Coastal Councils (SCC) indicated their concern that the special dividend payments seem to equal the SEL collected by the Board. They say that if this is so it inhibits the needed expenditure on the sewerage system and may jeopardise the CWP. Another council expressed concern that there is no procedure in place for determining the size of the dividend payments.

The Committee does not find it surprising that there is general confusion and doubt about the source of funds for the special dividends.

Whether the dividend payments were in fact made from SEL funds or not, it is clear that better accountability measures are required.

There have been problems with the accounting procedures as evidenced in the Treasury and Auditor-General's submissions.

Clear and precise accounting methods from the beginning of the program would have prevented the accusations now levelled at the Board and the government.

The future of the SEL?

It has been said that the SEL will cease in 1994 and be absorbed into existing rate structures on a user pay system.

The CAC Report 1991 recommended:

- that the function and purpose of the SEP, SEL, CWP and CAC should be reviewed to achieve appropriate definitions and interlinking of objectives and responsibilities for any on-going program the levy and the CAC. The Board supports the review which should be carried out by the Board's Minister.
- consideration be given to acknowledgment that the CWP has absorbed the SEP.

Several submissions requested that if the SEL is to be abolished in 1994 and absorbed into existing rates, that sums equivalent to the money being allocated to the CWP should continue to be used solely for that purpose and spent on environmental projects in the area in which they are collected. It was further suggested that existing projects that are being funded by the SEL should be continued to completion. Submissions sought an independent "Environmental Levy Committee" to identify projects on which the levy could be expanded.

Mr Garry Tipping, a systems planner from the Board, suggested in a personal submission to the Committee that:

"All householders should receive annually details of all projects and consultancy services funded by the environmental levy of more than \$1 million in their Local Government Area, more than \$5 million in their respective Region, and more than \$10 million in other areas of operation"

An interesting suggestion was that an "opinion coupon" should be available for rate payers to fill out seeking future environmental projects.

The Board's Managing Director, Mr Paul Broad, told the Committee that although the SEL ceased in January 1994, the Board will be targeting environmental issues with or without the SEL.

The Western Sydney Regional Organisation of Councils (WSROC) submits that there needs to be a guarantee that the SEL is spent on projects which the public identify as priorities. WSROC believe that expenditure to date does not equate with this approach.

Recommendation

Customer bills and financial accounting

42 (a) The Board should publish in early 1995 one set of accounts showing the expenditure of the special environmental service charge (commonly known as the environmental levy) since 1989 using consistent language and accounting terminology. It should be made clear in the accounts whether the SEL is in fact a separate program or a sub-set of the Clean Waters Program. By May 1994 the Community Audit Committee should publish at the Board's expense, in two newspapers circulated daily in the Board's area, a one page commentary upon the accounts.

(b) Commencing with the next round of customer bills Board accounts should identify the amounts customers pay for the following charges:

- (i) Usage charges for water;
- (ii) Usage charges for sewage;
- (iii) Charges allocated to the Clean Waterways Program;
- (iv) Access charge to water supply pipes;
- (v) Access charges to sewage disposal pipes;
- (vi) Any dividend payments;
- (vii) Charges for water unaccounted for due to loss in the system
- (viii) Charges relating to the water treatment plants.

(c) Commencing in 1995 annual reports by the Board must disclose, both for any levy moneys raised to date or in the future and for ordinary Board income, what "measurable environmental benefit" has been obtained. If there is presently no measurable benefit that fact must be disclosed along with any qualifications about potential benefits and the time by which the Board anticipates being in a position to measure any benefits and to account for any successes or failures.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

The historical section is inaccurate.

An SEP Community Audit Committee was set up to monitor the expenditure of SEL funds, as outlined in Appendix I-10 of the Water Board submission. The SEP Community Audit Committee - see page 24 of Appendix I-10 - recommended that "consideration be given to acknowledging the Clean Waterways Programme as having absorbed the SEP"; the Board's response (also page 24) was that the SEP should be a

discrete subset of the CWP, with an SEL chapter within CWP reporting.

The principle of distinguishing SEL-funded projects from the CWP is supported.

The SEP Community Audit Committee was replaced in August 1993, the SEP having been increasingly subsumed into the Clean Waterways Programme by the Environmental Works Community Audit Committee (EWCAC). The EWCAC is funded by the Water Board, but reports to the Minister for the Environment. It will present its first Progress Report in April 1994.

After December 31 last year the SEL does not appear in bills. Its five years' duration will run out on June 30, 1994 but the levy has been incorporated in the new pricing for the last six months of the period. Term of Reference 2 for the EWCAC is to ensure that the equivalent amount is deposited in an interest bearing trust account. Some spending from the levy will obviously go beyond June 1994 on functions originally assigned to the SEP which have been subsumed into the CWP.

It is regrettable that the SEP Community Audit Committee did not actively function as originally intended, reporting late and falling into disuse.

SEL Reporting Criteria

The major criticism of SEL reporting is that changes of language and accounting practices make tracking and monitoring difficult.

This needs to be put into the historical context. In 1988-89, there was intense community pressure "to do something", and the setting of clear administrative arrangements would have been seen as a minor priority in 1988-89 alongside getting the SEP going.

Getting and Spending of SEL Funds

Various claims were made to the Committee that expenditure of SEL funds lagged behind the rate of acquisition of such funds.

Government Members find such criticism misplaced. Funds are collected from **the** SEL at a constant rate; expenditure on the SEP and the CWP is not constant. **There** are many reasons why the pace of expenditure may not match that of income. **For** example, it is customary for planning to be done before any capital works are started. Peaks and troughs in capital works expenditure are the normal pattern for **all** government Departments.

Continued criticism of this kind (and it is still going on) has hindered rational **progress** on the SEP and CWP. The Board has been pressured to measure SEP success **by** dollars spent and not by environmental outcomes.

General comment

Much of the criticism levelled at the SEL in this majority report is unhelpful, and too much opinion is masquerading as fact.

The majority report seems to give undue weight to what may only be uninformed comments, such as:

- * The comment (p 161) by CHANGE that SEL funds were well-spent in the early days is only opinion.
- * The AWWA's **impression** (our emphasis) on the reason for a mismatch of the rate of collection of SEL funds with the rate of expenditure (p 166) is just that: an impression.
- * The comment (p 173) by Sydney Coastal Councils that the special dividend payments seem to equal the SEL collected by the Board is an observation. No evidence to support the conclusion was provided.
- * WSROC's belief that SEL expenditure to date does not equate with the public's view on priorities is not backed up with any supporting evidence.

The Government Members view with scepticism, and with surprise, the majority statement on page 167 that "the evidence does not prove that the SEL did not fund the dividend payments." There is no rigour in this argument. Surely the onus is on those who believe that the SEL did fund the dividend payments to provide supporting evidence.

Government Members are satisfied from the evidence submitted that all levy funds have been spent on or allocated to environmental projects. The SEL did not fund the special dividends.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

42(a). Supported

42(b). Government Members support reasonable proposals which keep customers well informed as to how funds raised by the SWB are spent in their interests. However, the extent of the details required by the recommendation would make water bills incomprehensible to many consumers.

"j the use of consultants, professional services and contractors by the Board as defined by the Office of Public Management"

j Consultants

Summary

"Consultants" defined

Why use consultants?

The Board's use of consultants

Is there value in the use of consultants?

How should consultants be used in the future?

Recommendation 43

Minority Comments - Government Members

"The SWB's operating costs per property rose by 23% in real terms over the past five years. Over this period labour costs per employee have increased by 34% in real terms. While the SWB has contracted out some activities this has not been translated into reductions in total costs. In fact, labour costs plus contract costs have continued to rise over the past four to five years. Contract and consultant costs rose from \$84 million in 1989/90 to \$165 million in 1991/2... The Tribunal's preliminary view is that the scope for reductions in SWB costs is very substantial" (Government Pricing Tribunal, Inquiry into Water and Related Services, Final Report, October 1993).

SUMMARY

In this section, the Committee:

- notes the findings of the Government Pricing Tribunal; and
- concludes from the evidence to the Inquiry that the Board's use of consultants requires changes.

In Reference d, above, the Committee has made recommendations for the re-structuring of the Board and for staffing and related arrangements to be made as part of the re-structuring. The Committee considers that implementation of those recommendations will give more direction to the Board in the use of consultants. Implementation of those recommendations will also assist with re-training and up-grading the skills of staff.

"Consultants" defined

The NSW Office of Public Management provides the following definitions:

- a "consultant" is an organisation or individual engaged on a temporary basis to give advice or provide a service.
- a "contractor" works under direct supervision of an agency to complete a defined task.

Following consultation with the Office of Public Management, the Board has expanded these definitions as follows:

- *"...a consultant provides help - in the form of opinion or advice - on the content, process or structure of a task...".* They do not do the task itself but assist those who are doing it.
- a *"professional service contractor is a subset of contractor"* and creates or implements a task. (SWB submission, Ref 1j, p3)

The Board submits that it uses:

"other temporary staffing options in addition to those mentioned in the terms of reference"; and

"It might be said at the outset that there is nothing inherently wrong with hiring consultants, contractors, casual staff or part-timers. Each case has to be considered on its merits: in some situations recourse to external sources may be the cheaper and more efficient method." (SWB submission, Ref 1j, p.3)

Why use consultants?

There was a shift to contractors during the Moore, Wilson, Harley years. Messrs Moore, Wilson and Harley estimated that the Board would save \$20 million in the first year of operation of this policy, and \$50 million a year by better management of the contractors.

The Board submits that community and government expectations regarding accountability, commerciality and efficiency have influenced its greater use of consultants.

"In line with the bipartisan push from government for commercialisation and improved efficiency during this decade, reform within the Board has sought flexibility in its organisational structure, human resources, capital investment, and managing procurement and operations, to achieve the best return....for the

dollar spent." (SWB submission, Ref 1f, p.1)

There has been a change in skills mix within the Board as a result of the administration and policies introduced by Messrs Moore, Harley and Wilson. A shift from mainly engineering to a greater emphasis on science, the environment, economic analysis, management, customer service and community relations, has been

"mirrored in the range of options or choices the Board has for running its business. Options include involving the private sector through contracting out long term procurement contracts, Build Own Operate schemes and for exposure of selected internal operations to external competition." (SWB submission, Ref 1j, p.2)

The Board submits that;

"It would also cost more - about 40% more - for the Board to "staff up" to achieve its total program by itself" (SWB submission, Ref 1j, p.4).

The Board does not justify this figure. There is no indication whether it is a long or short term cost. There is simply no basis in the Board's submission upon which the Committee may form a judgement about the accuracy of the assertion.

The Board's use of consultants

The Board supports the use of contractors/consultants for the following reasons:

- changing skill needs, especially short to medium term, which do not justify permanent positions;
- the need for greater flexibility in short to medium term needs;
- specialist technical skills not available within the Board, eg. the CWP program has required higher technical skills;
- changes in the labour market, i.e. availability of required expertise;
- reduction in cost through competitive tender;
- exposing internal staff to competition;
- increasing Board skills through skills transfer programs;
- sometimes external providers can carry out the required work more efficiently or cheaper; and
- independent assessment of a Board issue. (SWB submission, Ref 1j, pp. 4-5)

The use of external resources is said to be aligned with the commercial focus of the Board.

Councils and other bodies with experience in direct dealings with the Board submitted that in their experience consultants have been used where in-house resources are limited. They allow the use of external expertise and they provide an independent approach to issues.

The National Association of Personnel Consultants (NAPC) submitted it had positive feedback with regard to "outsourcing" by the Board. It provided an industry view of the strategic use of NAPC members services.

Is there value in the use of consultants?

There was conflicting evidence submitted to the Committee in support of claimed savings or reductions in capital cost. In the light of the findings by the Government Pricing Tribunal (extracted at the beginning of this Chapter) the Committee is not surprised by the absence of such evidence from the Board.

The Board points out that it observes government policy regarding the use of consultants/contractors and that it monitors their use continually.

Total expenditure to the year end 1992 for payments over \$30,000 was approximately \$26.5 million.

The Auditor-General submitted that the Board's records indicate the following expenditure on consultants, contractors and professional services:

	1990/91	1991/92	1992/93*
Consultants	\$18.8m	\$26.4m	\$29.0m
Contractors	\$25.5m	\$43.0m	\$51.0m
Professional Services	\$8.2m	\$12.8m	\$8.5m

* N.B. 1992/93 are unaudited Board figures.

The Auditor-General believes the definition distinctions used by the Board cause some difficulties.

Anderson Consulting, who have assisted the Board in review of its procurement strategies, noted the following:

- the Board is committed to an open and collaborative relationship with its consultants;
- the Board recognised they were disadvantaged with respect to their purchasing

- practices; and
- the injection of specialist expertise to address the Board's Procurement function was both timely and managed.

The Board submits that the use of contractors:

- has provided savings in meter reading costs from \$2.80 per meter in 1990 to 77 cents;
- has improved meter replacement response times from 21 day average to 7;
- should save the Board on its general and engineering supplies \$9.5 million over 5 years;
- will lead to a saving of \$2 million annually on a grounds maintenance contract;
- is anticipated to save \$2 million on a painting contract; and
- is expected to save in net cash flow \$650 million on proposed BCO contracts.

The Auditor-General's submission highlighted the following:

- there was a "gross departure from existing state contract control guidelines..";
- 37% of consultants were engaged without the use of competitive tendering quotes;
- of the 10% worth more than \$50,000, about 25% were also engaged without tendering; and
- 18 consultancies costing more than \$200,000 and a \$9.5 million combined cost were engaged without tendering process.

CHANGE is critical of the use of the consultancy SAGE Analytics who were commissioned by the Board in 1992 to "failsafe" the mission of the CWP.

CHANGE believe the document prepared by SAGE was:

"a waste of time, energy and public money because the company appeared to have little concept of who would be responding to the document.." (CHANGE submission p.12)

Submissions were also received to the effect that:

- end costs from contractors often include free access to Board resources and facilities;
- there is an alarming loss of skill which is difficult to replace; and
- that loss of skill increases the bargaining power of contractors due to the lack of alternatives.

Several private contractors made submissions which were critical of the Board's operations in this area. It was submitted that:

- ordinary workers are employed as sub-contractors and are not subject to insurance coverage, superannuation coverage, leave entitlements, and that the Board pays no payroll tax;
- the approval process for environmental contracts is poor; successful tenderers have sometimes lacked the experience to be considered over local companies;
- the Board's lack of knowledge of its assets makes contracting for the Board difficult;
- contractors claim that they were asked to quote for the supply of equipment which was, in their opinion, inadequate or inappropriate for the use specified;
- the cancellation of contracts for the Bondi STP Upgrading, Sludge De-watering Plant cost each tenderer between \$50 - 60,000 and more for the Board;
- appropriate equipment could have been supplied for half the cost with no compromise to safety, efficiency or longevity;
- purchasing guidelines need to be revised as currently their interpretation and application is inflexible or ambiguous;
- the pattern of capital expenditure on some of the well advertised programs be reviewed. The irregularity of expenditure leads to major inefficiencies and increased costs for the Board and contractors;
- the Board set certain qualifying criteria for agencies to comply with in their selection process;
- mandatory visits by Board officers are recommended to the premises of agencies under consideration.

The Australian Waste Water Association (AWWA) were critical of the Board in both their submission and evidence to the Committee. They say that:

"In general terms, the perception of virtually all suppliers of goods and services of a specialist nature to the Water Board is that most of its officers neither appreciate nor are concerned about the workings of commerce and the professions. The prevailing attitude, at least among some officers, has been that the Board's imperative is to purchase each commodity (under which professional services seem to have been lumped) at the lowest possible cost, regardless of the value for money, the impact on the suppliers in the long term, or the manner in which the procurement is managed." (AWWA submission, p.8)

AWWA point out that some of the officers have indeed been accurate, fair and effective in their conduct. Likewise, where many of the Boards managers have been exemplary, AWWA says that most suppliers can report several experiences of managers who have been unprofessional.

AWWA is also concerned about instances where temporary employees working for an hourly rate are classified as 'contractors'. This practice was developed to cope with ceilings on staff and seems to have been widely used. There are three problems associated with this:

- the costs are higher than for normal full time employees;
- the practice erodes work potential for professional engineering companies;
- it is unfair to full-time employees who carry out similar work for less remuneration.

AWWA point to the Board calling for international tenders in 1991 for sweeping contracts to deal with Sydney's sludge. After considerable expenditure by several consortia, most of the project was shelved, leaving a group of bidders several million dollars out of pocket. AWWA also critical of the Board for:

- spasmodic work flow on projects leaving crews either idle or overloaded; and
- overestimates of workloads to suppliers, the flow of work nowhere near the inflated expectations, leaving many companies in serious problems.

AWWA suggest that:

- *"a profound shift in attitude is required in which the Board strenuously attempts to enter into a meaningful dialogue with the industry sectors which service it - attempting to interact rather than to propagandise."*
- the SWB needs to acknowledge that specialised services are not a commodity like concrete or shovels to be set up for a long term contract, based on the lowest price and ordered in a random fashion.

The AWWA submitted to the Committee (AWWA submission, p.218) that although they believed "downsizing" of the Board was necessary, the core skills needed to understand the issues and deal with them strategically should be retained. They expressed a fear that some of these core skills had been lost and suspect that the "consulting" heading has been used to subsume technical consulting and some commercial and accounting work. The area of contractors is considered a grey area.

It is suggested by the AWWA that what happens is that staff are retrenched or depart from the Board only to reappear as a contractor working on an hourly rate. A great deal of the excess funds used under consulting have been spent in this area.

AWWA note that the Board's annual report shows \$20-30 million spent on consulting engineers or paid to consultants but believe that, if analysed, no more than \$15-20 million would have actually gone to consulting engineers.

The Committee understands from these submissions that while the Board has been instructed to keep a cap on its hourly rate, they have in reality retrenched and re-employed people at higher rate. This actually costs the Board more money to employ the same number of people (p222).

The Committee was supplied with information regarding specific examples of Board officials abusing their authority over contractors. Several research and development programs failed to achieve worthwhile results for the following reasons:

- lack of proper control of the projects;
- inconsistent pursuit of original objectives;
- poor organisational skills within SWB management; and
- a lack of adequate expertise of Board personnel involved.

Some of the problems involved with several pilot plants were:

- a tender for a pilot plant being lost; a second one submitted and the original resurfacing;
- a pilot plant being operated for four months then shut down and left to deteriorate;
- the same plant being re-commissioned and a contractor employed to refurbish it only to find that the Board had insufficient funds to commission the plant;
- a plant being repeatedly shut down for longer periods than it had actually operated because of inadequate feed, air and power supplies;
- inadequate operating programs because SWB staff are inexperienced;
- contractors investing more in plants than they received from the Board due to internal conflicts and inadequate information within the Board;
- the Board using its position to gain concessions on contracts;
- the Board altering its position after tenders were submitted and approved;
- insufficient explanations from the Board with regard to its acceptance criteria for certain projects.

How should consultants be used in the future?

The Board says that recent criticisms can be accounted for by errors in media reporting and interpretation of expenditure.

The Board is committed to adoption of best practices and use of consultants where required and where most efficient.

Clearly consultants are going to be required where the Board lacks expertise.

Submissions suggest that industry experts be used on a Board controlled committee when selecting tenderers.

It is clear that it would not be economical to employ staff whose skills are only going to be fully accessed periodically.

The opinion of the AWWA favouring a delineation between contractors used at an

hourly rate and those contractors who are firms for specific projects, is supported; only the latter is appropriately being contracted out.

In the next phase it seems that a balance needs to be struck between the desire to "downsize" and staffing requirements. Releasing staff only to have them return the next day as a "contractor" defeats the whole purpose behind reducing excess staff levels.

The tendering process also needs to be tightened up and some appeal system introduced for tenderers who disagree with tender decisions. There seems no reason in principle to set up mechanisms that do not accord with the recommendations relevant to these issues that have been made for the building industry.

The Committee's recommendations on training, consultancies and re-structuring of the Board in Reference d address the structural and policy issues raised by this reference.

Recommendation

43 When the Board contracts out its services or technology the contracts must provide for training of staff as part of the arrangement. The Board should initiate secondment arrangements with other water operators in and outside Australia for all categories and grades of employees. These training and secondment arrangements should be accounted for in that part of the annual report which details consultancies exceeding \$30,000 in value.

MINORITY COMMENTS - GOVERNMENT MEMBERS

(Hon. P. Forsythe, Hon. J. Gardiner, Hon. J. Ryan, Mr A. Humpherson, Mr. S. O'Doherty, Mr M. Richardson)

There should be no objection, as a matter of principle, to the use of external consultants by the Water Board. Any charges against misuse of consultancies would need to be assessed on an individual basis.

A number of witnesses made allegations that the Water Board wasted money by re-hiring former employees as consultants. Government Members challenged these witnesses to provide evidence to substantiate these allegations. No evidence was ever provided.

The method of listing assertions on pages 182 and 183 as if the claims are anything more than unproven charges is to be deplored.

It should be noted that the Water Board did give supplementary information to the

Committee, indicating that the amount saved by hiring in depended on whether the area was white or blue collar, and the areas where savings are to be expected by using consultants in preference to internal Board staff.

SCHEDULE OF RESPONSES FROM GOVERNMENT MEMBERS TO RECOMMENDATIONS.

43. Supported.

ADDITIONAL COMMENTS

BY

ALP MEMBERS

OF THE JOINT SELECT COMMITTEE

This document is prepared by the Australian Labor Party members of the Joint Select Committee (JSC).

We believe it has been necessary to record our concerns as a separate annexure to the JSC Report because the process of enquiry, and subsequent preparation of the Report, was made difficult and cumbersome by what we regard as a partisan approach to the enquiry by some senior Sydney Water Board (SWB) officials as well as attempts to frustrate the process of Enquiry by some government members of the committee.

Therefore, in the interests of clarity, we have chosen to make some separate, additional points about the Enquiry and the SWB.

Introduction

The Sydney Water Board provides water, waste water and some stormwater services to a population of about 3.7 million in the Sydney, Blue Mountains and Illawarra regions.

The Board's area of operations cover approximately 13,000 sq. kilometres and include seven major river basins, the coastal catchment and the Tasman Sea.

Since its establishment in 1888, the Board has provided services based largely on "engineering" solutions. That is, a system of pipes extending ever outward to service the growing metropolitan area.

For example, the Board's sewerage systems comprise about 19,000 kilometres of mains.

Because of Sydney's geography, environment and growth patterns, together with the increasingly difficult task of maintaining its assets, the Board has been under increasing internal and external pressure to adopt alternative solutions to the management of Sydney's water and waste.

The current Board and water administration

It has been conceded by all parties who made submissions to the Enquiry that the historic methods used by the Sydney Water Board are environmentally, economically and socially unsustainable.

For too long the Board has maintained a management system which simply extends pipes, supports massive cross subsidisation, fails to properly train staff to allow them to be commercially competitive, has little understanding of the concepts of sustainability and no clear understanding of its core activities or the needs of its customers.

Further, the current plethora of ill-equipped so called regulators compounds the problem.

Evidence demonstrated the chaotic situation that exists in the regulatory side of water management - unclear and incomplete rules, overlapping responsibilities, duplication, shifting standards, and a failure by some regulators to perform their designated role despite the clear legislative power to enforce compliance.

The need for change has been articulated by the former senior management of the Sydney Water Board, Messrs. Harley, Wilson and Moore in their submission to the Enquiry.

They argue that during the period 1989 to 1992 the Sydney Water Board commenced a process of fundamental change.

They express this process as the establishment of a "social contract" between the community, the Board's customers and the Board itself - a plan to ensure the long term viability of the Water Board both financially and environmentally.

The centrepiece of the social contract was undoubtedly the Clean Waterways Program, established as a result of massive community protest about the pollution of Sydney's beaches and waterways.

Perhaps, for the first time in the Water Board's history, the social contract represented a consensus on what had to be achieved to rectify historic problems, as well as achieve future outcomes which were both environmentally, economically and socially sustainable.

The establishment of the Joint Select Committee of Enquiry into the Sydney Water Board (the JSC) was the result of broad community perceptions that the social contract had been breached.

Changes in Minister, resignations from the Board by its Chairman and other Board members, as well as the resignation of the General Manager created an environment of uncertainty and concern that the future directions and aspirations established by Harley, Wilson and Moore were being dismantled.

Further weight was given to the breach of contract argument when the Government extracted a total of \$200 million in special dividends from the Water Board. This issue led to the resignation of the then Chairman, David Harley, in protest.

Other than those who base their argument on accounting semantics, the \$200 million raid on the Water Board was clearly regarded as an attack on its environmental programs, the Clean Waterways Program and the Special Environmental Levy.

At that time evidence suggested that there had been under-spending on the Clean Waterways Program which has subsequently been confirmed during the course of the Enquiry.

Further, proposals by the Board to focus on core business functions, the subsequent establishment of its trading arm, AWT, created an environment of change within the Board.

Where Harley, Wilson and Moore had intended to establish an internal management environment based on customer service, productivity and, in the case of AWT - contestability, the new management and ministerial regime appeared to move away from these goals, choosing instead to use the restructure as an opportunity to reduce staff levels for cost saving purposes, increase the use of consultants when staff shortages led to program failures and, in the case of AWT, devalue the knowledge base and remove opportunities for AWT to develop strategic capabilities and to provide an opportunity for Australian enterprise in world markets.

On this latter point it should be noted that Mr. Graeme Richardson, one of the Board members responsible for the formation of AWT as a company, resigned in protest. He cited, in evidence, a dramatic change to a "back to basics" management philosophy, lack of communication, commitment or common purpose within the Board and a dissipation of the resources of AWT.

Given the enormous amount of public funds invested in the Sydney Water Board and the level of community involvement in the establishment of the future direction of the Board, these events necessitated a full Parliamentary Enquiry.

The Enquiry

The process of enquiry, and subsequent preparation of the Report, was made difficult by what we regard as a partisan approach to the enquiry by some senior Sydney Water Board (SWB) officials.

The apparent reluctance of the SWB to provide information equally and openly to all members of the JSC should not escape comment as we believe such an attitude may be indicative of the corporate culture currently in place at senior levels of the SWB Administration.

Non-Government members of the JSC were made to feel as though the Parliamentary Enquiry - and by extension the Parliament - was little more than a hindrance to be tolerated whilst the SWB moved on with its own "back to basics" plans and objectives.

For example, during the course of the Enquiry it became apparent that some, if not all, Government members had received detailed critiques of the JSC's Draft Reports by the SWB.

Further, it was clear from the actions and statements of the General Manager of the SWB, that the SWB were aware of all Committee reports and papers during the course of the Enquiry.

This information could only have been made available by Government members.

Such a partisan approach by the SWB created a hostile environment and affected the work of the JSC.

It also created perceptions that the SWB had something to hide.

These perceptions were reinforced by the numerous refusals (or absence of response) when information was requested of the SWB by the JSC. Such refusals were usually couched in terms of "commercial confidentiality" despite the JSC Terms of Reference.

Whilst we acknowledge the Government's initial opposition to the JSC, it is important to remember that the Parliament did establish the Enquiry, the Minister responsible for the SWB expressed his support for the Enquiry and the Terms of Reference agreed to by the Parliament gave the JSC a mandate to conduct a wide ranging and detailed Enquiry into the operations of the SWB.

There were many issues canvassed in the Enquiry and commentary on those issues can be found within the context of the main report.

However, we believe some issues require further comment. They are dealt with below.

Should the Board be Corporatised?

Considerable attention was focussed during the course of the Enquiry on whether the Sydney Water Board should be corporatised.

However, we believe the fundamental question that must be addressed prior to any consideration of corporatisation of the Water Board, under any model, should be how competent are the regulators and how capable are they of regulating the Sydney Water Board in its role as an operator of the system?

Our investigations suggest that there is much work still to be done by all the regulators associated with the water industry before they are competent to perform their task.

International experience suggests that weak or poorly structured regulatory bodies permit a system operator such as the Sydney Water Board to dominate.

Arguments that consumer demands and pressure are adequate controls over an operator like the Sydney Water Board are not substantiated by international experience.

Internationally, Governments of all political philosophies are developing structures which will predominantly cast them as regulators whilst operational aspects are conducted by Government Trading Enterprises, the private sector or some corporate amalgam of both.

New South Wales is no different and it is therefore incumbent upon the present administration to ensure that the regulatory environment - the structures, rules and resources required to administer the system - is sound and in place.

As noted in the report the Water Board is a monopoly. It has considerable resources, technical expertise and history. It would be dangerous to simply corporatise the Board - placing upon it a stronger financial and commercial imperative than currently exists - without its regulators being equally as strong and equipped to protect the public interest.

Even if this objective was achieved there is still some doubt that corporatisation in itself is necessary for the Sydney Water Board to achieve its stated objectives.

Confidential Cabinet papers made available for inspection by the committee suggest considerable care should be given to assessing the advantages and disadvantages of Corporatisation.

As importantly, the enquiry process indicated the need to ensure the Sydney Water Board (whatever its corporate structure) maintains a high level of accountability to the community and its regulators.

There needs to be a "healthy tension" between each of the regulators, the Water Board and the Government - constantly testing and synthesising the competing economic, environmental and social needs of the community.

The "healthy tension" concept helps to ensure an acceptable balance between those competing needs and gives proper weight to the competing interests of environmental and health standards, pricing policy and shareholders interests such as dividend payments.

Consequently, a regulator or a regulatory framework which is weak, poorly resourced or not effective immediately destroys that balance.

Therefore, given the above remarks, it is necessary to make the following observations about some of the existing regulators.

The Regulators

The Environment Protection Authority (EPA)

It was apparent from the evidence received that the EPA has a management philosophy which can be best described as "leading from behind". Their submission and evidence suggests that they are slaves to detail - not to environmental outcomes.

This suggests that the cultural environment of the EPA is wrong.

The EPA needs to change from a reactive organisation, adapting its approach to demand improvement rather than encourage and coax.

Despite its intended role as the principal environmental regulator for the Sydney Water Board, the EPA has failed to vigorously defend its brief, noting the almost total absence of prosecutions under its legislation, preferring instead to adopt an "educative" role.

There is an apparent lack of resources in the EPA and the need for the introduction of the Stage II Legislation (promised by the current Government for more than three years) is now urgent. Further, the Government needs to endorse national regulations relating to water quality and standards.

Finally, there would seem to be what can almost be described as a lack of courage by the almost invisible Board of the EPA. A vigorous and public Board of Management should have the role of aggressively promoting improvements to environmental standards. This is clearly absent in the current Board.

In conclusion, the Enquiry found that the EPA, whilst possessing the necessary legislative "tools" to do their job, lacks the necessary will.

The Government Pricing Tribunal (GPT)

The GPT is the principal regulator in the determination of how much we pay for our water.

It is an independent tribunal and should consider the proper balance of social, environmental and economic needs when reaching its conclusions on the proper pricing mix.

This is a complex task and should incorporate issues such as the community's ability to pay as well as the long term viability of the Water Board's business, i.e. asset management strategies etc..

To date the GPT's recommendations have appeared to postulate more questions about, for example, how much the community can afford to pay for its water, than it provides answers for.

The Enquiry process revealed a need for the GPT to take a more vigorous role in determining the answers to such questions. Otherwise it runs the risk of abrogating its responsibilities to less independent bodies.

Whilst we acknowledge the GPT is a relatively new organisation, we regard its role as central to the success of a proper regulatory framework for the Sydney Water Board.

The GPT must be more directive in its approach to community service obligations and how they are structured.

The consequence of a rapid introduction of "user pays" water pricing rather than a phased program has meant many families, low or fixed income earners, have been unreasonably impacted by increased water bills.

"User pays" should only be one part of a demand strategy and the absence of, for example, an expanded education program or the availability of alternative technologies to encourage water conservation, is likely to mean prolonged price impact.

Therefore, the GPT has a responsibility to develop recommendations which consider the equity issues associated with "user pays" pricing.

Whilst the GPT would assert that they do this already, we can only restate that they do not go far enough in the strength of their recommendations.

Treasury

Treasury's role as a regulator is to act on behalf of the Government to deal with Dividend Policy and Asset Maintenance.

Historically, Treasury and its officials have exerted enormous influence over the operations of the Sydney Water Board.

Whilst their \$200 million dividend raid placed Treasury in the spotlight of public accountability for a brief period of time, it is apparent that Treasury officials resent public scrutiny and accountability principles.

To an outsider, Treasury practices appear complex and the Enquiry found that Treasury officials preferred to maintain their air of mystery.

It is apparent that the various Treasury activities in relation to the Water Board (tax, revenue, dividend policy, capital works and accounting policy) frequently overlap.

Treasury officials refer to the need to establish "walls of China" to separate the various competing functions of their organisation (one assumes as some allusion to their perceived mandarin status).

They assert that the "walls of China" are in place, thereby preventing conflicts of interest between, for example, Treasury's determinations regarding dividend payments and capital works' expenditure by the Sydney Water Board.

However, evidence suggests that the "walls of China" are frequently breached and that Treasury decisions are usually as dependent on the revenue needs of the Consolidated Fund than any rational policy analysis.

Policy mechanisms are required to demonstrate to the community and to organisations such as the Water Board that the "walls of China" are in place.

This means clear separation between Treasury functions such as the GTE monitoring unit (the "shareholder" role), accounting policy, the Office of State Revenue (taxation), budget division etc..

With regard to GTE management, Treasury should extend its consultation programs to first discuss capital needs and CSO's with all financial, social and environmental regulators and the Sydney Water Board to establish a program in the full context of the needs of the Board.

Unless this is done, there will continue to be conflict between Treasury's role of overseeing the maintenance of public assets and GTE/dividend management.

The need for a transparent dividend policy which has regard to the whole GTE structure, including asset management and capital works needs, as well as a more inclusive and iterative consultation process should be obvious.

The compelling evidence of former Board chairman, David Harley, about the way in which Treasury officials extracted Special Dividends totalling \$200 million, as well as ordinary dividend negotiations, gives rise to real alarm as to the consequences of the Treasury being allowed to continue in a similar way in the future.

Department of Planning (DoP)

The DoP has the principal responsibility for the administration of the Environmental Planning and Assessment Act.

The Act provides sufficient scope for the DoP to take a central role in the determination of the balance between the competing economic, environmental and social standards and requirements associated with water administration.

Sadly, not unlike the EPA, the DoP has the opportunity - in fact the legislative responsibility - to take a positive role but appears to lack the willingness to participate.

We are unsure whether this is a result of lack of staff, a policy position or both.

Whatever the reason, we consider that the DoP must assume a stronger regulatory role. Consideration should be given to appointing a Board - similar to the Sydney Water Board and EPA Boards - to oversee the operations of the DoP.

The Clean Waterways Program

It would appear that the only groups who believe the Clean Waterways Program remains intact is the Sydney Water Board and the Government.

All other commentators and interest groups have expressed the view that the continued underspending on CWP and the recent announcement of the "Choices for Clean Waterways" consultation process represents a departure, if not an abandonment of the Program.

Current government rhetoric would have the community believe that the existing CWP was developed in isolation from community expectations and standards.

This is patently false.

Evidence presented to the Enquiry - particularly by Messrs Moore, Harley, Wilson, Richardson and Dr. Messer - overwhelmingly demonstrated one of the most extensive consultation processes undertaken by a public utility.

What is clear from that process is that the public demanded urgent action (not a further 12 month "consultation process" as is currently proposed) to clean up Sydney's waterways and beaches.

Options were assessed and the preferred option (Option P) was adopted.

Option P - the Clean Waterways component of which was a \$7 Billion program over 20 years - was heralded as the program which would deal with the environmental problems of our waterways at cost which could be reasonably afforded by the community.

We believe that the integrity of the Clean Waterways Program must be re-established as a matter of urgency.

Conclusion

There is no doubt that messages being sent by the Water Board with its back-to-basics philosophy indicate a major shift away from the direction and programs articulated by Harley, Wilson and Moore.

The need for the Sydney Water Board to adopt a commercial approach is not disputed. However, there is now an absence of an articulated plan to ensure the future of Sydney's water systems.

A balanced and comprehensive approach which links all of the components of our environment is desperately needed.

Sadly, the submissions and evidence provided by the Sydney Water Board, its officials and Minister lead us to believe that the issues relating to financing Government have taken precedence over other environmental and economic objectives.

We believe economics should be about the interaction between money and society - not just about financing Government - otherwise society misses out.

A society that for more than a century has been taught to be careless with water has been asked to change its practices overnight. They have been asked to change without education on how to change, to change their lifestyle and living conditions without being shown alternatives and to change without being given a chance to change the design of its houses, gardens or budgets.

Harley, Wilson and Moore indicated that the shift toward a more conservation conscious society would normally take place over a period of five or six years. The changes would be gradual with continuous testing of the effects of the change on the social and economic circumstances of water consumers.

The current administration of the Sydney Water Board has failed to do this, preferring instead to accelerate and focus upon one component of a proper demand strategy - the punitive user-pays system.

The failure to acknowledge the dynamics of society and include the community in the decision-making processes about the future of the Sydney's waterways is an indictment on the Sydney Water Board and the Government.

APPENDICES

- Appendix A: Powers to co-ordinate the public sector
- Appendix B: Controlling government agencies
- Appendix C: The Hunter Water Corporation: successes and failures
- Appendix D: Compost toilet brings relief to beauty spots
- Appendix E: Areas which cannot sustain development
- Appendix F: EPA example of the two stage process
- Appendix G: Linking development to pollution
- Appendix H: Case study of alternative technology
- Appendix I: Examples of least cost planning
- Appendix J: Specific Objectives of the Special Environment Levy (SEL)
- Appendix K: Five Year Rolling Plan and Ten Year Forecast for Capital Works 1989
- Appendix L: Werribee Sewage Treatment Complex

Appendices submitted by Government Members

- Appendix M1: The Board's Option P Business Plan 1990-2010
- Appendix M2: Extract from EPA submission relating to ocean outfall monitoring
- Appendix M3: Correspondence from the Water Board relating to Option P
- Appendix M4: Correspondence from the Hunter Water Corporation Ltd relating to corporatisation

Powers to co-ordinate the public sector

This appendix shows the legislative functions of some major infrastructure authorities as contained in their enabling Acts. Key sections are quoted from Acts which give the state government powers to coordinate public sector development or to assess their work or to give them criteria to operate by:

Of the infrastructure authorities surveyed four (EPA, DEP, Energy, Housing) have enabling Acts requiring them to coordinate, two (RTA, SRA) do not, and one (Water Board) is required to "integrate" its development. In addition, all are required by reporting Acts to spell out goals, successes and failures but none do this in a way useful to the budgetary process or for effective management.

EPA

The objectives of the EPA are:

"... to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development;

"... to reduce the risks to human health and prevent the degradation of the environment.... (by) effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of.. The precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation." s6

Protection of the Environment Administration 1991

The Authority may "... formulate and promote plans for environment protection..."
s8 PEA 1991

The Authority is required to "... develop environmental quality objectives, guidelines and policies to ensure environment protection, and

"... monitor the state of the environment from the purpose of assessing trends and the achievement of environmental quality objectives, guidelines, policies and standards.." s9 POEA 1991

The Authority may "... direct any public authority to do anything within the powers of the public authority which will, in the opinion of the Authority, contribute to environment protection..."
s12 PEA 1991

DEP

"... to encourage ... (ii) the promotion and coordination of the orderly and economic use and development of land

(iii) the protection, provision and coordination of community services and facilities..." EPA Act s5.

RTA

No general or specific functions are set out in its enabling Act. Some are given to it in other Acts. But the Act sets up the Roads & Traffic Advisory Council to advise the RTA on:

"... improvements in the movement of traffic ... promotion of industrial development, primary production and tourism in relation to roads and traffic ... protection of the environment in relation to roads and traffic ...".

Members of the RTAC include the Director of the Department of Planning, a representative of the Local Government & Shires Association but not of the SRA. The RTA is not obliged to prepare a corporate plan. See TA Act ss 46 to 55.

The RTA's Minister can direct it what to do.

SRA

"... shall operate railway passenger ... and... freight services..."

The SRA Board has the function of determining the policies of the SRA and "... shall, as far as practicable, ensure that the activities of the State Rail Authority are carried out properly and efficiently".

The SRA's Minister can direct it what to do. It must prepare a corporate plan. See ss 4 through to 15 TA Act.

Both the SRA, STA and RTA must:

"... submit to the Treasurer, in such manner and at such times as the Treasurer specifies (a) detailed estimates of ... revenue ... expenditure ... such other information as the Treasurer requests": s81 TA Act.

Water Board

Its objects include:

"... promotion of efficient use of resources;

the necessity for integrated catchment management and planning of land use and the use of water resources...;

conservation of natural resources ...;

pollution control and prevention; and

efficient use of human, material and financial resources": s 4.

The Board's Act links the Board's power to levy service charges to any zoning controls in force under the EPA Act; if the use of the land is prohibited by the EPA Act the Board has no power to levy for its services; and levies cannot be made if the use of the land is "in breach of any other Act": s 32.

There does not appear to be any requirement to provide a corporate plan each year although the Minister's powers are broad enough to achieve that.

Department of Energy; Energy Corporation

"... to provide an authoritative source of advice to the Government and the community on energy matters and their coordination...to promote the most cost-effective long term match of energy supply and demand ...": s 5 *Energy Administration Act 1987*.

"... have consultations, and make arrangements with, any public authority in respect of the exercise or undertaking by that authority of anything within that authority's functions that may affect energy or energy resources..."

This Act specifically:

- empowers the Corporation to enter into agreements with any public authority that the Corporation shall act as the authority's agent either under the Corporation's Act or the other authority's Act if it is administered by the Corporation's Minister: s19.

Housing & NSW Land & Housing Corp

"... to promote orderly and economic urban development and the adequate

supply of affordable and suitably located land for housing at the minimum practicable cost to consumers";

"... to maintain an efficient housing administration to ensure the effective coordination and provision of all housing services";

"... to encourage the planning and development of new urban areas as communities with a full range of appropriate services and facilities available in the shortest practicable time";

"In the administration of the Housing Acts regard shall, to the maximum extent possible having regard to the needs of the State and available resources, and subject to directions of the Minister, be had to the objects of this Act": *Housing Act 1985 s 4*.

"... to acquire land for present or future urban development and for public purposes" There are three "Housing Acts" in force - 1912, 1976 and 1985.

Significantly, these fundamental powers to buy and sell land - and commit the state government's other infrastructure bodies to future expenditure - are exercised:

- without representation of the Department of Planning, Water Board, SRA or RTA on the Corporation;
- free of the environmental controls over land use planning.

State Owned Corporations Act

"... to operate at least as efficiently as any comparable businesses" *s 8 SOC 1989*.

The voting shareholders are the Treasurer and any one of the eligible Ministers who is nominated by the Premier as a voting shareholder.

Public Sector Management Act

The Minister has "(a) the function of securing the overall effectiveness and efficiency of the public sector; and (b) the function of reviewing management effectiveness and efficiency in the public sector." *s 43*.

Under ss 42 G & H the employment of executive public service officers is governed by contracts of employment which must set out performance criteria for the purpose of reviews of the officer's performance. The officer's performance must be reviewed "at least annually" and is to "have regard to the agreed performance criteria": *s 42 I*.

These sections provide power for government to increase coordination of the public sector. It would be possible, for example, to make coordination of infrastructure part of the criteria for reviewing an officer's performance. Then, failing adequate annual or corporate reporting by those authorities the government could ensure that, to secure their continued employment, the senior public sector officers must report adequately and be reviewed on agreed criteria. If the contracts were reviewed on criteria that were similar to some of the criteria considered as part of the budget process there may be a useful opportunity to assess the achievements of the public sector.

Public Finance & Audit Act

The Treasurer may issue directions to an authority relating to: the recording, issue and control ... sale and disposition ... of public property;

... the commitment of expenditure;

the control and management of budget allocations;

program budgeting and accounting":
s9.

Annual Reports (Departments) Act and Annual Reports (Statutory Authorities) Act

These two Acts say similar things.

"... The annual report ... shall comprise
... a detailed budget for the financial year
and an outline budget for the next
following financial year;

... a report of the operations of the body
prepared in accordance with this Act and
the regulations...

... a report of operations (to include) ...
aims and objectives ... summary review
of operations...

...shall provide details of all land owned
or occupied by the statutory body ... the
current use of that land;

(details of) all land that is considered to
be essential to its operations not
essential to its operations ... such other
matters relating to the land owned or
occupied ... as the Secretary may
determine...

... to give detailed reasons why the land
is considered essential to its operations ...
; see ss 7, 9, 14. (These two Acts say
the same thing on these issues.)

Controlling government agencies

This appendix provides a brief overview of the roles and powers of some key government agencies with powers to affect the use and flow of water.

Public Works Department

The Public Works Department has a major influence on the use and flow of water both in the Sydney Water Board's area and in the rest of the state.

The PWD:

- Has conflicting functions under which it acts as a water manager, an operator and a regulator. This impairs its capacity to advise its clients and the state government;
- Acts in positions of inevitable conflict, where it is playing both "gamekeeper" and "poacher" roles.

As a manager it:

- Administers the state's subsidy to local government for water, sewage and drainage projects (some \$80m from the state and another \$80m from local government is spent each year). The Department recommends priorities for projects for the government to decide. In 1991/2 the Department's cost of managing the program was \$7.7m, or about 10.4% of the sum granted. Through the subsidy scheme it promotes capital works priorities that involve judgements about desirable technology and levels of water treatment.
- Advises the Capital Works Committee of Cabinet about water, sewage and drainage projects proposed

by local and state government. Its Minister is a member of that Committee.

- Provides technical and project management advice about construction and operation of water, sewerage and drainage to state and local government and to state agencies such as the Departments of Education and Health.
- Administers the water, sewerage and drainage functions of local government under the *Local Government Act*, including the councils which receive the state subsidy from time to time. The PWD says it is responsible for: "*Ensuring that water supply and sewerage assets are properly managed . . . We set policy affecting nearly 200 local government bodies with combined assets of \$6 billion in infrastructure.*" (Corporate Plan 1993 p6).

- The Department (and another Department, the Department of Land and Water Conservation) jointly administers the key Act for managing the state's river banks and foreshores. (See, the *Rivers and Foreshores Improvement Act 1948*; see, *Government Gazette* No 63, 24 June 1993, pages 3037 and 3040, proclaimed under the *Administrative Changes Act 1976*).

As a regulator it:

- Sets and enforces environmental standards over trade waste outside Sydney. It sets the fees for industry to discharge trade waste to local government sewers. The EPA is not involved in this process.
- The PWD provides its clients with "total asset management services" which it defines as: "*value management, advice on demand management, alternative strategies to capital works, asset strategic planning and rationalisation, capital and maintenance strategic planning, developing building standards, environmental advice.*" (Corporate Plan, 1993, p6)

Unfortunately, as the PWD is a client based agency, its "total asset

management services" are inevitably confined, and are significantly limited, to something less than that suggested by the definition. When the PWD is asked to advise a client about, say, the most cost effective way to make its sewage system meet EPA standards and licensing conditions its brief is flawed. The PWD is advising just one of the several public sector agencies whose land use practices and capital works programs affect the quality and quantity of water in the river and waters affected by the council's sewage works. Its client-based brief prevents the PWD asking other relevant agencies (schools, hospitals, train and road agencies) to spend some money or implement measures to improve the quality and to reduce the amount of runoff from their properties.

As an operator it:

- Owns and operates two water supply facilities, the Fish River and Southern Tablelands projects.
- Quotes to construct and manage water, sewage and drainage projects.
- May take over and operate any council sewage, drainage or water facility (*Local Government Act, Chapter 6*).

At the same time, this role is confused because the PWD also manages the government's subsidy scheme for local government water and sewage. Thus, the PWD carries on more than one function for much of the work it performs in the water, sewage and drainage industry. Only a body without a client base can be expected to implement public sector wide policies that will effectively manage the quality and quantity of water and the allocation of capital resources by the public sector.

Department of Planning

The Department acts as a manager and regulator.

The Department makes local, regional and state planning regulations. Local councils initiate "local" land use controls and, after the Department and the Minister for Planning have approved them, the councils administer the controls. The regional and state controls are initiated and administered by the Minister and the Department.

Land use planning controls do not apply the same controls to private and public developments of the same kind. For example, a subdivision by the Department of Housing need not meet the same standards for runoff, hard surfaces (such as roads, etc) as those of a private developer. By contrast, there is a consistent approach to dam safety where the safety rules apply equally to the 242 dams operated across NSW by the public and private sectors. Most of the Department's controls are aimed primarily at the private sector, not public, development.

Most sewerage, drainage and water services are usually carried out by public sector developers.

Thus, the state's state, regional and local planning controls have limited application to public sector development and, accordingly, are limited in the scope they offer to government to co-ordinate public sector impacts on the use and flow of water, land and air.

Dam building, river works, drainage or irrigation works by local councils, the water boards and by the Department of Water Resources cannot be controlled by planning regulations. The key controls over these "public" works are spread across the many Acts administered by the DWR, local councils, the water boards, the Department of Public Works and the other public agencies.

Planning controls also apply differently according to the timing of development. Thus, land use

planning controls are largely ineffective to control urban and rural runoff and pollution from existing development. Planning controls can only alter the standards that are to be met for future development. Yet, it is the runoff from existing urban and rural development that is causing about half of the pollution of rivers and aquifers (underground water). It is only when a development application is lodged for new projects, or to alter an existing project, that planning controls may be used.

Thus, for existing development the Department's role is minor.

New approaches by the Department that emphasise implementation and outcomes are essential if this power is to be effective, however.

Department of Housing

The Department of Housing has broad powers to buy and develop land for housing, business or other purposes. It may also manufacture, produce or purchase and supply building materials, such as efficient water fittings.

Of all NSW's public authorities the Department has the clearest statutory obligations to consult, and to co-ordinate its work, with other public authorities and to carry out its functions "at the minimum practicable cost to consumers".

The Department of Housing is exempted from the controls local councils may wish to place on the Department's housing and subdivision projects. The Land and Housing Corporation, an agency controlled by the Department, and developing the Rouse Hill project, is also exempt from planning controls.

Local Councils

Outside Sydney most local councils operate water, sewerage and drainage and other public works. Within Sydney, over forty councils operate drainage, road and other public services in the Board's area.

Councils in the Board's area directly control water quality and quantity through their land use regulations and permits. The Water Board may control the impacts on water quality and quantity by requiring conditions to be included in land use use consents issued by councils. The Board has given itself limited powers to control water impacts in a handful of these council areas (mainly Wingecarribee). The Board's conditions for development it approves through local council plans typically lack performance monitoring or implementation devices and do not enable the Board to inform itself of the environmental impact of the development it approves.

During the four month inquiry, while the media covered another algal outbreak on the Hawkesbury Nepean rivers and about a year after the Department of Planning announced a review of the Hawkesbury Nepean Regional Plan 20 to make it more effective, councils on the rivers made more land use regulations. Most of the plans contained no water quality or stormwater goals. The plans mostly ignored water management issues, and created few implementation mechanisms. For example, a current draft local environmental plan proposes the following land use control for land draining to the Hawkesbury river at Hornsby: "to protect and enhance the environmental qualities of the area". The plan only proposes that the impact of the development has to be "considered". No environmental goals are set. The plan permits development beside the river. Water quality and stormwater outcomes are not

mentioned at all in the plan. The lack of water quality and quantity goals in the plan is typical of plans that have been made for the river for the last few decades. See, Draft Hornsby Shire Local Environmental Plan 1993.

Council accounts do not show separately the subsidies, real costs, or rates of return on the water, sewage or drainage components of their public works. Sometimes the accounts do not show such matters at all for public works. There is a lack of accounting standards that:

- create some standard measures,
- identify cross-subsidies and other subsidies, or
- enable efficiencies to be compared.

Many councils will continue to provide water-related services because there is no viable alternative provider. It is therefore essential for accountability and water pricing reforms to extend to the whole of the water industry including local government.

The structure of many councils in the Board's area generates fragmented decisions. Several departments within a council permit or carry out development that affects water quality. For example, it is common for the engineering department of a council to build and design traffic roundabouts without contributions from the parks or landscaping department. This partly explains why councils have few integrated stormwater management controls; eg roundabouts and other council works often have no trees or vegetation or porous paving design elements.

Roads & Traffic Authority

The RTA has one of the largest capital works programs of any private or public sector developer in Australia

(over \$1b in 1993). As perhaps the state's largest single land owner, the state's biggest road builder, an influential road designer and a major "outer budget" agency its operations have a major impact on the quality and the quantity of water that runs into the rivers and tidal waters.

If the RTA designs its roads so that asbestos, lead, grease, oil and other pollutants may wash from its roads to watercourses where they must be ingested by citizens or aquatic life, or removed by water agencies at a cost to their customers, then the RTA passes on to others the costs of pollution that, instead, should be born by the RTA and road users. Lead has recently been shown to have accumulated in unacceptably high levels on the ground below the northern pontoon of the Sydney Harbour Bridge. Lead and other pollutants from other RTA roads falls or drains in amounts of comparable magnitude into Sydney's waters: into Sydney Harbour, from the Cahill Expressway, Western Distributor, Northern Expressway; into Darling Harbour and Glebe harbour, from the Darling Harbour expressway, Western Distributor; into Middle Harbour; to the Hawkesbury River, Mooney Creek, Berowra Creek, from the freeways which drains to those and other water and so on.

Yet, the Committee was informed by the RTA that it carries out no monitoring of water pollution from its roads. The RTA is in the process of establishing monitoring pollution in three places in NSW, all in Sydney; one at Qantas Drive, Botany, one at Victoria Road, Sydney and one to be established on the F3 when it is built. Results from the monitoring are not expected until 1994.

The Committee regards it as unacceptable for the RTA to have no pollution monitoring program by which it may inform itself of the impacts its roads have on water quality and quantity. Performance measures

for RTA senior staff should make the quantification and management of water quality and quantity a measure of acceptable management.

The *Transport Administration Act* sets up the Roads and Traffic Advisory Council to advise the RTA on: "... promotion of industrial development, primary production and tourism in relation to road and traffic ... protection of the environment ...". Members of the RTAC include the Director of the Department of Planning, Local Government & Shires Association but not the State Rail Authority. The Sydney Water Board and the Ministerial Water Corporation are not members. The RTA described its charter thus: "*to manage the roads and traffic system for the people and Government of NSW*" (p1, submission)

That charter gives no clear direction about the environmental outcomes desired of the RTA. It is so broad as to be meaningless.

An agreement being completed between the RTA and local government on "funding, road management and responsibility" includes an arrangement whereby the RTA pays "a proportion of the cost of downstream drainage improvement". The proposed arrangement may allow RTA projects to increase the level of pollution of the Sydney river systems. If the RTA is to be responsible for the impact of its development then the amount of its water runoff and pollution should not be increased unless the Water Manager has formally agreed to those levels. Monitoring will need to be carried out to measure any pollution and its impacts if the Water Manager and the EPA agree to the additional runoff.

Environment Protection Authority

The EPA is the state's primary regulator of environmental conduct by the public and private sectors.

Pollution fees paid by the Sydney Water Board to the EPA in 1992 were \$17,056,056. The EPA's total budget was some \$60m.

Measured by pollution fees, or by volume of pollution, the Board is NSW's largest polluter.

The Board's pollution fees represent about one third of the total budget of the EPA or about one half of all EPA income from pollution licence fees. If the volume of sewage is reduced so too is the amount of EPA fees reduced.

The size of the Board's fees and creates the appearance that the Board is the EPA's major source of income. This appearance is only partly of substance because the EPA's budget comes from consolidated revenue, not its fees. However, the relationship between pollution fees and the EPA's financial strength should not be ignored in any assessment of future management of the relationship between these two bodies. If the Board reduces the volume of sewage then the amount of fees paid will also reduce. The EPA should not have any disincentive to oblige the Board to reduce the level of sewage pollution.

In practice, where development applications directly involve the Environment Protection Authority (because an EPA pollution licence is required) the Authority and local councils may defer decisions about pollution to the EPA. It is the EPA's procedure, however, not to deal with an application and not to decide to grant or withhold a pollution licence until the council has first decided to grant consent. That is, the process works in a sequential, not a parallel

way. This end-on-end process extends the time and costs of the approval process. It splinters the environmental assessment of projects.

Local government seeks more powers to control urban pollution by being allowed to enforce some EPA pollution laws such as those allowing on-the-spot fines and enforcement of pollution licences, including Water Board licences, issued by the EPA to Scheduled Premises (which include sewage plants, grease traps, etc). With over 40 local councils operating throughout the Sydney area there are substantial untapped enforcement resources available to the community and the EPA.

power to close water supplies; *Public Health Act, 1991 s7.*

Department of Health

The Health Department has no specific statutory obligations for water quality, whether for drinking supply or receiving waters. It administers the *Fluoridation of Public Water Supplies Act* which is intended to improve dental care in the State. The installation and operation of fluoridation systems is the responsibility of the individual water supply authority.

The Department, through the Director General, is required under Clause 75 of the *Approvals Regulation of the Local Government Act, 1993*, to provide design approval of all "waste treatment devices".

The quality of drinking water is assessed against the National Health and Medical Research Council (NHRMC) Guidelines. The Department contributes to the development of these Guidelines but has no statutory power to enforce them. Larger authorities, such as the Hunter and Sydney Water Boards provide their own analytical services. If the Department believes that there is a threat to public health then it has

The Hunter Water Corporation: successes & failures

Some failures

Five failures are apparent from the operation of the Corporation.

1. It appears the Corporation is unable or unwilling to carry on some of its core business without substantial funding subsidies from the state's capital works program.

The Corporation and its predecessor have persuaded the government to provide a subsidy that should not have been granted.

The Corporation's major capital works sewage project, the Hunter Sewage Project, is being funded in approximately equal shares by the Corporation and by the State Government. The current 1993/4 state budget shows that this year the Corporation will contribute \$25m while the State will contribute \$23.5m to the project (*Budget Paper No 4 pp58, 69, 1993*). Briefly these appear to be the facts:

- Before it was incorporated the Corporation's predecessor, the Hunter Water Board, requested the state government to subsidise extension of its sewage works for a program called, the *Hunter Sewage Project*. The project commenced in 1989 and will continue through to 1997 - six years after corporatisation took place. So far some 223 kilometres of sewer mains, 82 kilometres of rising mains, 51 sewage pumping stations, three new treatment plants have been built and another amplified. The PWD is managing the project.

- The former Board's 1991 annual report shows the program received an increase in funding from the government for the *Hunter Sewerage Project* bringing the total estimated cost of the scheme at completion to \$310m. To fund the Board's share of the increased costs for the project it was necessary for the Board to increase its "environment improvement charge" (p21). The Corporation's 1992 annual report shows that in the three years to June 1992 the project cost was \$98m for which 5,407 properties had been given water and pipes-based sewage at an average cost of \$18,124 per property.

- After incorporation the Corporation elected to continue the project. It adopted the decision of its predecessor. It has continued to seek a subsidy from the state government capital works program. It has not identified the subsidies for the *Hunter Sewage Program* in its 1992 annual report or the half-yearly report (to 30 December 1992). In the half-yearly financial statements the project is not referred to specifically or generally. In the annual report misleadingly states that "the dominant [community service obligation] would continue to be the pensioner rebate" of some \$5.4m.

- The appropriate inferences to draw from the annual report and half-yearly accounts at their face value are:

- the project is in the Corporation's commercial interests; and
- the subsidy from the State government is not for a community service obligation.

Neither of these inferences, however, are valid.

- The subsidy is not referred to in the Corporation's model for calculating developer charges. This model is

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required by the Corporation's operating licence to be available to the public so they may understand the basis of developer charges. In the Corporation's half-yearly report ending 31 December 1992, dated January 1993, this statement appears:

"Developer charges were applied in the manner prescribed by the licence and the model used for calculation resulted in significantly more equitable charges than in past years."

Depending upon whether the government subsidy is or is not included in the Corporation's calculation of developer charges then developers will either pay the full cost of the development or some subsidised amount. It is therefore possible that the Corporation's developer charges are not being applied in the proscribed manner. The impact of the subsidy is not disclosed in the Corporation's model.

Although the Corporation has continued to provide new sewage on the basis that the state subsidises the project the Corporation has described the project thus:

"... the project predates corporatisation and the State Owned Corporations Act. The project services properties on the fringe of our service area and as such was not commercially viable for the Corporation to undertake on its own. The agreement that was struck was that the project would be funded jointly between the NSW Government and the Corporation so that the capital investment by the Corporation would be justified by future income streams. In short the Hunter Sewerage Project has, to date, been a commercial proposition for the HWC."

That statement, however, is inconsistent with the common meaning of the phrase used in the SOC Act, "a successful business". When half the capital costs of a significant component of the Corporation's core business activity are paid for by government it is simply impossible to call that business "successful". To underline this point the Committee adopts the reasoning of the Industry Commission which recommended that new sewage infrastructure should only be built when it would recover the costs, and that there should be no hidden subsidies.

The significant fact is the Corporation is being subsidised by the government to carry out its core business of sewerage for the *Hunter Sewerage Program*.

If the Minister for the Hunter Water Corporation wishes it to perform activities, or to cease activities, in circumstances where the Corporation considers it is not in the commercial interests of the Corporation to do so then the Minister may direct it to do or not to do the thing and, in return, the Corporation is entitled to be compensated; *s11 State Owned Corporations Act*; (see end of this appendix)

To the extent that the Corporation has adopted the decision of its predecessor that decision becomes a decision of the Corporation. On the face of it, the Hunter sewage project should be disclosed under the SOC Act as a non-commercial event. The Minister and the Corporation, however, have decided the Corporation has yet to do anything that "is not in the commercial interests of the Corporation" within this Act. This assessment may be in error according to the summary above.

It appears from this experience that the SOC Act does not create sufficient

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accountability mechanisms for disclosing the payment of state subsidies to SOCs for capital works programs.

2 Competition has yet to appear against the Hunter Water Corporation.

In Reference g, below, the Committee outlines why competition is practical in water, sewage and drainage. So long as there is the will and there are no regulatory barriers preventing customers choosing alternatives, competition has flourished.

The Corporation's operating licence expressly directs the Corporation not to take advantage of its operating licence to prevent or hinder the entry of competition into any market supplied by the Corporation (operating licence of the Hunter Water Corporation, clause 7, granted under s 12 of the *Hunter Water Corporation Act 1991*; s

3 Only the one technique has been introduced to manage demand and use of water - user pays.

With "user pays" pricing the more water a customer uses the higher the bill.

The other side of the pricing mechanism, demand management or least cost planning, has not been introduced yet it is over 10 years since user pays was introduced to the Hunter. The Committee is concerned that in the ten years it has taken to introduce user pays there has been no move towards demand management.

Unless the recommendations of the Government Pricing Tribunal are implemented in the Hunter and in Sydney, there is a real prospect that the one-sided pricing policies applied in the Hunter area will be repeated in

Sydney and will continue in the Hunter.

4 The Corporation has committed itself and its customers to a single technology - pipes and water-based sewage.

For an outline of the proven alternatives, please refer to References f and g, below.

5 Scope of audit of environmental performance and services is too narrow.

The 1993 audit of the Corporation suffers from having a narrow scope. There are two confining elements of the audit:

- a the terms of the operating licence under which it was conducted, and
- b the circumstances in which it was conducted.

These elements are discussed below.

a the terms of the operating licence:

The licence restricts the audit to two things: the quality and performance standards set in relation to water quality; and operational standards for waste water treatment works, service interruptions, surcharges and water pressure.

Other key matters that are not audited include:

- the accuracy and destination of the calculation, income and expenditure relating to developer charges;
- the extent to which the Corporation has carried out non-commercial activities or relied upon subsidies from government for its business;
- the extent to which the Corporation has complied with the

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licence requirements not to create barriers to competition;

- the extent to which the Corporation has implemented least cost planning or demand management;
- the extent to which the overall pollution from sewerage has been reduced and what the pollution trends are over time;
- whether the capital works program is cost-effective; is the program aiming for the goals of least cost planning and catchment management?
- whether the performance measures used to measure the Corporation's environmental and operational efficiency accurately reflect the impact of the Corporation's activities.

An example of the narrow scope of the audit relates to role of the "user pays" pricing policy for which the Corporation and its predecessor are famous. The effectiveness of user pays is traditionally measured by the amount of water supplied to a household. But, according to the Corporation, "there is a strong decreasing trend in occupancy rates" per household; From 3 persons per household in 1982, when user pays pricing policies were effective, households in the Corporation's area now average 2.4 persons. The Corporation expects this strong trend to continue.

This decline, and its impact on choosing another performance measure (say, of consumption per person) is of major relevance when assessing the effectiveness of the user pays pricing policy. The measure distorts that assessment and appears to have distracted the Corporation from implementing the other essential pricing mechanism, demand management.

b the circumstances of the audit:

The auditors from the auditing firm described themselves in their expression of interest as having:

"... undertaken many projects directly for the Hunter Water Corporation and indirectly for the Corporation through the Hunter Sewerage Project . . . " and, "... completed numerous engagements on behalf of the Corporation, through the Hunter Sewerage Project"; Appendix A to Audit of Hunter Water Corporation, p2.

The Victorian EPA has guidelines for the selection of environmental auditors which resemble those for financial auditors in some respects. In effect, they require that auditors cannot audit their own books or projects. There do not appear to be comparable guidelines in NSW.

This is not a complicated industry as is the nuclear or a chemical industry. Its technology and practices are capable of being audited by an almost unlimited pool of experts across Australia.

Another comparison with the Hunter audit can be found in local government audits. Persons or firms are disqualified from auditing local councils if they have a contractual arrangement with the council that, if the person were the auditor, might reasonably be seen to give rise to a conflict between the person's duties as an auditor and the person's interests under the arrangement; *Local Government Act s423.*

It would be prudent in future for the auditors of water, sewage and drainage operators not to have been involved in the design, construction or environmental assessment of the projects which are included in the audit.

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Two issues arise out of these points:

- the outcomes of the mid-term review of the Corporation appear to be prejudiced by the deficiencies of the audit; and
- corporatisation has made the Corporation and the government more accountable than the Sydney Water Board but not to a significant extent.

The mid-term review, prescribed by the Corporation's licence, will be a report to the Minister on the operation and impact of the *Hunter Water Board (Corporatisation) Act* and the licence. In the circumstances, the Committee expects that the Minister will publish the review and ensure it deals with these concerns of the Committee.

Some successes

There are seven successful things about the Hunter Water Corporation experiment which can be built on and improved. None of them, however, depend upon corporatisation to be implemented.

1 More accountable for land use decisions:

When it wishes to develop land the Corporation currently faces similar obligations to the private sector which is obliged, generally speaking, to provide more environmental accountability than the public sector.

For example, the Corporation must lodge development applications for all its works, including sewage plants which are presently excluded from control by the local councils.

By contrast, as the current draft SEPP on sewage plants demonstrates, public sector proponents of sewage plants

operate under Part V and can avoid both council controls and citizens' appeals on planning and environmental merits to the Land and Environment Court. The Committee rejects the proposal in the draft SEPP to lower the Corporation's obligations by giving it powers to decide its development proposals. The SEPP would give it privileges not enjoyed by the private sector.

2 More open management:

Board meetings are open to the public, agendas are published before meetings and minutes and papers are also published at the meetings (except for the usual legal or commercial matters). By comparison, the Sydney Water Board edits its Board minutes into "narrative" form and does not have public Board meetings.

3 Less middle and senior management:

The management structure is much "flatter", with less middle and senior management. Management works more closely with workers.

The construction staff have reduced from 300 some 10 years ago to about a dozen. The dozen staff are chosen where the private sector has not got the experience, or is likely to exploit the Corporation by finding variations in the contract or for other reasons where the Corporation requires its own staff to carry out the work. Those staff are multi-skilled. Experience has demonstrated the construction staff can operate quicker and cheaper than the private sector.

4 Public auditing of service and environmental performance:

The 1993 annual audit of the Corporation's compliance with its operating licence has been completed and the significant points are:

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- the audit is publicly available;
- the Corporation is generally complying with its pollution licences;
- the standard of the Corporation's services and the water it provides is generally as required by the operating licence.

Significantly, such information is not available from the Sydney Water Board.

5 Some accountability for developer charges:

The Corporation has a systematic and public procedure established for the application and administration of developer charges as required in clause 5.6 of the Hunter Corporation's operating licence.

6 Dividend payments partially constrained:

There do not appear to be any specific policies or legal and accountability procedures (including any accounting standards) which place a limit on the amount, timing or other matters relating to dividend payments by the Hunter Water Corporation to its shareholders. The Corporation's board is legally obliged to contest what they see as any unreasonable request for dividends. The Minister's power to require a dividend, however, reserves to the Minister a power to require a dividend to be paid even if the Corporation's board considers the payment to be excessive.

7 User pays applied to the public sector:

One of the most encouraging outcomes of corporatisation has been the application of the user pays principle the whole of the public sector which uses the Corporation's services and water. Thus water must be paid for according to the amount used and local councils and other agencies have

become more prudent in their use of it. In return, the Corporation has paid its way and pays rates to the councils.

A question the Committee has sought to answer is, would the benefits achieved in the example of the Hunter Corporation have been achieved without a corporate structure? The Committee has also considered whether the failures could have been avoided without corporatisation.

Note the following ;

State Owned Corporations Act 1989

Principal objective of State owned corporations

8. The principal objective of every State owned corporation is to be a successful business and, to this end:

- (a) to operate at least as efficiently as any comparable businesses; and
- (b) to maximise the net worth of the State's investment in the corporation; and
- (c) to exhibit a sense of social responsibility by having regard to the interest of the community in which it operates and by endeavouring to accommodate these when able to do so.

Non-commercial activities

11. (1) If a Minister wishes a State owned corporation to perform activities, or to cease to perform activities, or not to perform activities, in circumstances where the board considers that it is not in the commercial interests of the corporation to do so, that Minister with the approval of the Treasurer may, by written notice to the board, direct the corporation to do so in accordance with

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any requirements set out or referred to in the notice.

(2) The corporation is required to comply with any such direction.

(3) The corporation is entitled to be reimbursed, from money advanced by the Treasurer or appropriated by Parliament for the purpose, amounts equal to:

(a) the net cost of performing any such activities, including the cost of capital; and

(b) the net cost of complying with a direction to cease to perform or not to perform any such activities.

(4) The amounts and times of payment of those amounts are as agreed between the Treasurer and the corporation or (failing agreement) as determined by a suitably qualified person or persons nominated by the Premier.

(5) The corporation may be reimbursed, from money advanced by the Treasurer or appropriated by Parliament for the purpose, amounts not exceeding the estimated net amount of revenue forgone through ceasing to perform or not performing any such activities, as determined by the Treasurer having regard to such factors as the Treasurer considers relevant in the circumstances.

Compost toilet brings relief to beauty spots

Andy Coghlan

A FLUSHLESS toilet launched in Britain and Ireland last week requires no disinfectants, no connection to sewers, and turns its waste into compost. To prevent it smelling, the toilet relies simply on an electric fan.

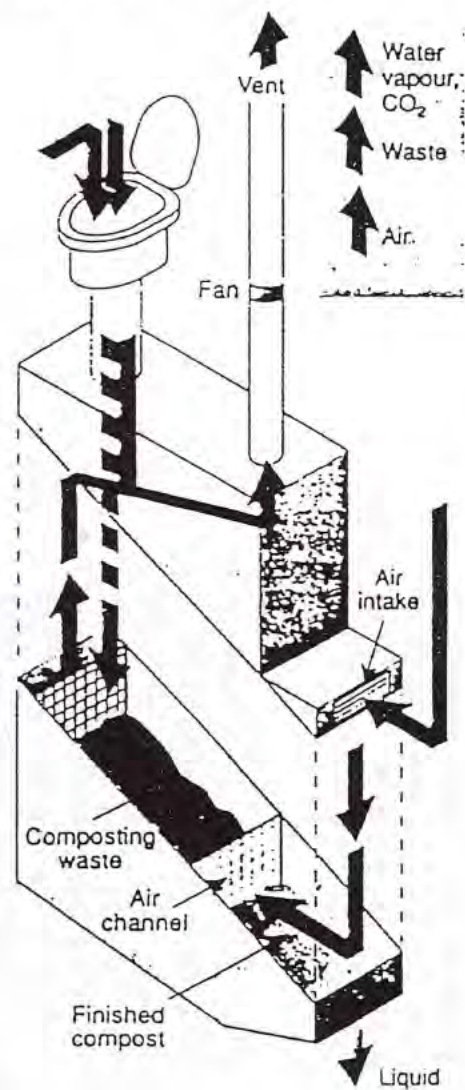
The toilet, known as the Clivus system, is targeted at remote settings, such as beauty spots, beaches and motorway lay-bys, where it would be difficult to connect a toilet to the sewer system. But Peter Soulsby of Eco-Clear, the company in Chichester selling the lavatory, estimates that if it replaced every toilet in England and Wales, it would save 3 billion litres of water a day, a quarter of all daily consumption.

The pan resembles a normal one, but is made from stainless steel and sits atop a chute 35 centimetres across. "The general idea is that not too much touches the sides," says Soulsby, "but like any lavatory, the pan would require periodic cleaning."

Debris passes down the chute and lands on a bed of sawdust contained in a large polyethylene tank sited underneath. Here, the debris slowly decomposes into compost. "The first solid compost would probably take around two years to appear," says Soulsby.

The largest tanks the company produces cope with 45 000 uses of the toilet per year, but even these would only produce a few bucketfuls of solid compost and 4000 litres of liquid compost annually. Owners of Clivus systems would either have to use the liquid compost themselves, or arrange for it to be collected, says Soulsby.

Much less water is used with the Clivus toilet. Some 360 000 litres of water



disappear down a conventional toilet if it is used 40 000 times, compared with just 2500 litres for a Clivus system.

The unpleasant odours normally produced by lavatories and sewage originate from the action of anaerobic bacteria on waste. Soulsby says. These bacteria, which survive only in airless conditions, generate foul-smelling products such as mercaptans and other sulphurous compounds, and methane gas which is flammable.

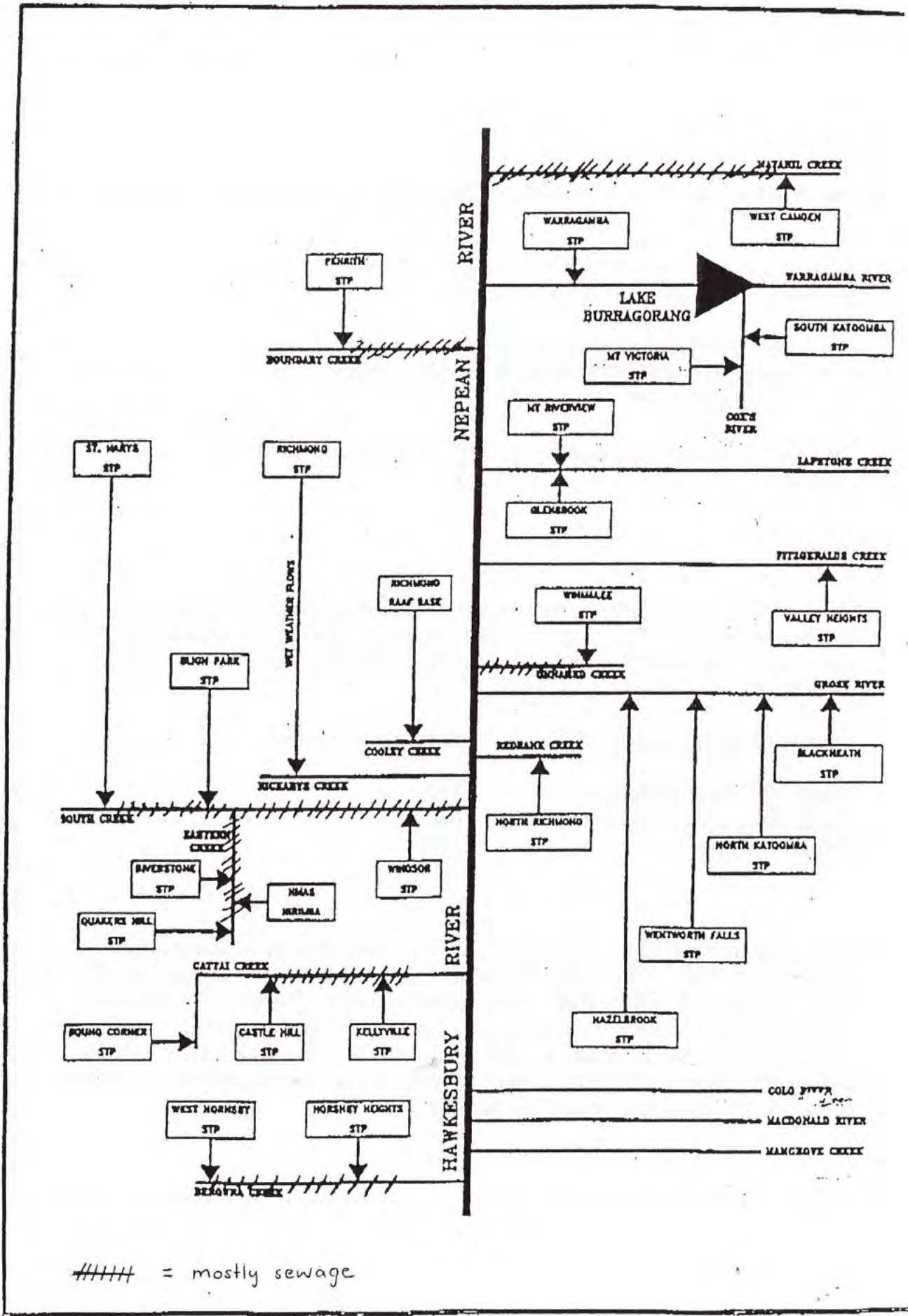
The Clivus toilet overcomes this problem with an electric fan which draws air through the compost pile. This eliminates odours, because only bacteria that "breathe" air can survive in the compost pile. These aerobic bacteria generate odourless carbon dioxide and water vapour as they degrade the waste, and these are flushed into the atmosphere by the fan. "If the fan breaks," says Soulsby, "it's essential to fix it quickly before the anaerobic bacteria get to work."

The Clivus toilets require virtually no maintenance. Sawdust or wood chips act as a bulking agent and help to create cavities allowing air through the pile. The base of the polyethylene tank slopes downwards, and the compost naturally flows by gravity to a collecting tray at the lowest point.

"Also, the loos never get blocked, because everything goes straight down. Loo paper decomposes, as do disposable nappies and tampons," says Soulsby. The drawback is that the toilets require space beneath a depth of more than a metre to accommodate the tanks.

Down the pan: a fan provides enough air to prevent bacteria creating nasty niffs

This would make them unsuitable for many city flats and offices. □



EPA example of the two stage process

"Conversion of ambient water quality goals to ambient water quality objectives

A hypothetical urban community wishes to protect the following environmental values in a freshwater river:

- modified aquatic ecosystems
- irrigation of small farm areas (sensitive crops); and
- drinking water.

These are identified as potential quality goals for the section of the river in question.

The ANZECC water quality parameters and criteria corresponding to each goal are then tabulated. The goals will have several water quality parameters in common but the criteria applicable to each parameter may differ. Take the parameter "salinity" as an example:

Ambient water quality goal	Salinity Maximum
Modified aquatic ecosystems	1500
Irrigation-sensitive crops	280
Drinking water	1470

It is apparent from this tabulation that if the river salinity is low enough for irrigation of small farm areas (sensitive crops) it will be low enough for all other values which the hypothetical community wishes to protect. The sensitive crops criterion, namely the maximum electrical conductivity of 280, therefore would become the proposed ambient water quality objective for the salinity parameter. Following this, further analysis on the environmental, social and economic implications would be developed."

Linking development to pollution

Residential land availability and water pollution

Lots in the pipeline		Water Pollution		
Catchment X	Local Govt. Area Y	June '91	Dec '91	% Increase
xx	xxx	x	x+	6%

Explanation:

Some features to note about the example include:

- Data under the column, "Water Pollution", will change as pollution levels change. For example, the June 1991 readings may increase over the six month period to December 1991 from x to x+.
- The Environment Protection Authority must provide government and all public sector agencies with a common language for pollution so that data may be consistently presented by the whole public sector.
- Bodies with different responsibilities may see the individual and cumulative environmental impact of their separate programs.
- The example does not show all the links between land development and water pollution. Some columns to be added to show the links include:
 - Future water and air pollution levels;
 - Future developer charges.

Case study of alternative technology

What happened at Buxton Primary School

A composting system was installed at Buxton Primary School by the Public Works Department in 1991 at a cost \$45,000. Children and parents did not accept the "funny dunny". They feared that children might fall into the tanks, or be sucked down by the draught from the fan that drew air into the toilet bowl. There were complaints about solids and paper sticking to the inside of the downpipe. The toilet used by the children was taken out but the one used by the teachers has remained in use.

What happened at Ballina Primary School

An aquatic plants sewage system was successfully installed for 200 - 400 children at Byron Bay for a cost of some \$2,500. It uses a landscaped mound, a septic system which discharges into plants. Any effluent discharges into a small pond which is safe enough for children to play around.

The parents and children were fully informed and the parents take an active interest in the workings of the system.

Education is the key

New on-site technology is likely to fail for cultural, not technical, reasons. Complete rejection is likely of new technology while tolerance and acceptance is shown towards the continuing failures of the traditional sewage system. Thus, it is essential to manage properly the introduction of new technology.

Taboos and cultural traditions need to be overcome before new technology will be accepted by most people. Where alternative technologies have succeeded then attitudes have also changed.

What is needed for the successful introduction of different sewage treatment is clear information about:

- the cost savings, the environmental and health improvements;
- the reduction in waste and the conservation of water;
- the operation and maintenance of the system.

Demonstrations, workshops, seminars, brochures, school programs are all required. Both parents and children must be involved. Special attention must be paid to the needs of users. For schools, the parents and children must be consulted and the benefits and workings of the toilets explained. Toilets seats should suit small children and the downpipe should flare out to prevent adhesion.

Examples of least cost planning

United States:

The Boston-based firm of analysts, the Goodman Group, estimates that US power companies spend \$3 - 1 billion a year on demand management ("DSM"), and that every dollar invested in DSM avoids spending of between \$1.50 and \$1.75 on building new plants. (December 1992, commissioned by Greenpeace.) Other findings of the analysis include:

- demand management has created 80,000 new jobs;
- demand management creates jobs in home insulation, double glazing and other areas of the construction industry;
- reduced fuel bills give companies more money to spend elsewhere, which leads to an indirect increase in jobs;
- demand management is roughly 70 per cent more effective as a means of creating jobs than constructing new power stations.

Water and Energy Utility Partnerships -

Two Connecticut water utilities have formed an alliance with a local electrical utility to promote residential water and energy efficiency. In a pilot program of 1,100 home audits, contractors visit homes to install water-efficient and energy-efficient hardware. The utilities split installation cost in an innovative way: if the home has an electrical water heater, the electrical utility pays for the labour, and if the home has a gas water heater, the utilities share the labour costs. (Bruce Wall, Northeast Utilities, Box 270, Hartford CT 06141).

Irrigation Improvements - In Lubbock, Texas, utility financed irrigation efficiency projects have led to savings between 25% and 40% and a reduction

in the annual aquifer depletion rate from 1.4 million to 0.2 million gallons per year. These projects include replacing unlined ditches with pipeline, shortening furrows and watering them in surges, reticulating tailwater at a faster rate to reduce evaporation, using soil moisture monitoring devices such as gypsum blocks (which can also increase yields), and switching from high to low pressure sprinkler systems. (Wayne Wyatt, High Plains Water District, 2930 Ave, Q, Lubbock TX 79405).

Composting Toilets and Greywater Systems -

In New Jersey, the need for a sewer hookup or a septic system was avoided in the construction of two public rest-room facilities which were equipped with composting toilets and greywater systems. The greywater from one of the facilities is used in a solar greenhouse. (William Clothier, "Using Composting Instead of a Septic System: It Works In New Jersey," P&R Magazine, June 1987).

Rebate Programs - In Mesa, Arizona, local officials developed a rebate program for landscape water efficiency improvements. As a result, some participants use 40% less water than their turf-intensive neighbours. (Bill Bates, Water Conservation Office, Box 1466, Mesa AZ 85211).

Dual Plumbing Systems - In St Petersburg, Florida, the local utility developed a dual distribution system to use reclaimed water for non-potable needs, providing approximately 18-21 million gallons per day (1/3 of total city consumption) for use in irrigation and cooling. This system will eliminate the need for new water sources and expansion of water facilities until 2030-2050. (Joe Towry, Public Utilities Department, 290 16th Street North, St Petersburg FL 33713).

Centralized Treatment and Reuse - Sanitation districts in and around Los Angeles, California supply an annual

Appendix: i

average of 63 million gallons per day of reclaimed water to local customers. This tertiary-treated effluent, which meets or exceeds bacterial and other drinking water standards and is virus free, is retailed at 45%-85% of the potable water rate, and is used for parks, golf courses and other landscaped areas, irrigation of food crops, livestock, recreational impoundments, industrial processes, cooling towers, construction and groundwater recharge. (Chuck W. Carry, Sanitation Districts of Los Angeles County, Box 4998, Whittier CA 90607).

On Site Treatment and Reuse - In Essex County, New Jersey, the Roseland III office park development, a 360,000 square foot project serving over 1,100 people, uses approximately 62% less water than comparable buildings. These savings are accomplished through the use of an on site wastewater recycling system which treats the building's wastewater and reuses the reclaimed water for flushing toilets and urinals. Similar projects have resulted in water savings as great as 90%. (John Thetford Systems, Inc, Box 1285, Ann Arbor MI 48106).

Low-Income Housing Retrofits - the Lower Colorado River Authority in Austin, Texas, has completed a demonstration project at several low-income public housing sites, retrofitting 1.6 gallon-per-flush toilets in place of 5.0 gallon-per-flush toilets. Water use reductions ranged from 23.0 to 27.5 gallons per person per day at various sites (Nora Mullarkey, Lower Colorado River Authority Water Efficiency Department, PO Box 220, Austin, TX 78767).

Commercial and Industrial Efficiency Programs - In Massachusetts, water use audits were conducted for a variety of facilities, including universities, laboratories, hospitals, and businesses. Savings of 10% to 73% were anticipated via fixture modifications, or better

maintenance practices, flow and pressure controls, and cooling system recirculation. On average, it was found that a facility could reduce water use by 20% to 30% with a simple payback for the investment of 1.3 years. (Laura McGrath, Demand Management for Industry: Clearing the Hurdles to Implementation, Massachusetts Water Resources Authority, 100 First Ave., Charlestown MA 02129, 1990, pp2,3.).

Hotel Refits - The Lennox Hotel in Boston reduced its average water demand by about 40% (3.6 million gallons per year water savings and \$15,000 annual cost savings) by replacing conventional plumbing fixtures in its 220 rooms with high-efficiency fixtures. These savings have been achieved with no reduction in fixture performance or customer satisfaction and with no problems with wastewater flow. (Amy Vickers, Amy Vickers & Associates, 100 Boylston St., Suite 702, Boston MA 02116).

University Efficiency Programs - At Edinborough University in Pennsylvania, dormitories were retrofitted with-efficiency shower heads, faucet aerators, and other retrofit devices, which led to savings of approximately 11 million gallons per year, or 20% of the University's previous consumption. Utility costs - water, sewer, and energy - reduced by \$52,000 per year, at total program cost, including labour, of \$11,000. (Tom Fidler, State Water Plan Division, Dept of Environmental Resources, Box 8761, Harrisburg PA 17123-8761).

Agriculture Transfers - Casper, Wyoming obtained 2,000 acre-feet of water per year for municipal use in return for repairing and lining parts of local irrigation canal and lateral systems to reduce seepage. (David Hill, Board of Public Utilities, 200 N. David St., Casper WY 82601).

Appendix: i

Hookup Fee Incentives - Builders in Morro Bay, California are given the option to save, in existing structures, twice as much water as they need, or pay the standard hookup fee. As a result, private builders have retrofitted 50% of all homes and businesses with high-efficiency plumbing fixtures. (William Farrell, City of Morro Bay CA 93442).

Repairing Leaks - in New York City during the fiscal year '90-'91, 26 full-time workers surveyed over 90% of the city's 57 miles of water mains. With a budget of \$1.5 million for labour and equipment, they fixed 66 breaks and 671 leaks, an estimated saving of 49 million gallons per day. (Ian Michaels, New York City Department of Environmental Protection, Room 2454, Municipal Building, 1 Centre St, New York NY 10007).

Comprehensive Programs - In Goleta, California, over 17,000 ultra-low-flush toilets have been installed in the last few years, most with a \$50-\$80 rebate from the local utility. The utility has also distributed 35,000 high-efficiency shower heads, implemented rate structure changes, and conducted on site water use surveys. These measures, in addition to some emergency drought measures, led to a reduction in water use of 50% and reduction in sewage flow of over 50%, thus eliminating for now, the need for multi-million dollar treatment plant expansion. (Larry Farwell, Dept. of Water Resources, Box 942836, Sacramento CA 94236)>

The Central Maine Power Company - Richard F. Spellman

Demand-side management (DM) increased dramatically in the USA during the 1980's. Of all electrical utilities the Central Maine Power Company (CMPC) makes the second largest percentage-of-revenue

commitment (4% in 1989; increase from \$200,000 in 1983 to \$26 million in 1991). The CMPC is the largest supplier of power in Maine.

Energy efficiency programs conducted in 1990 reduced peak demand by 33 megawatts. An estimated 119 megawatts will be saved when all projects are completed.

Residential (1/3 CMPC sales) programs include water-heater insulation, compact fluorescent light bulbs, insulation and weatherisation of homes, mandatory time-off rates and energy audits.

Commercial (2/3 CMPC sales) programs include the CM Power Partner's program which integrates supply and demand. Three successful bids in this project save 7 million, 20 million and 50 million kilowatt hours /year.

Profitability and cost effectiveness are important considerations for the success of DM programs. Incentive regulation is required to ensure profitability of DM programs and encourage and reward savings. Changes in regulations have made CMPC's use of DM programs profitable.

Suggested tests for cost effectiveness are rate impact and total resource cost.

Emphasis is on the role of legislature to balance the need for conservation and who should bear the cost.

Specific Objectives of the SEL as listed in the "Approval for SEL funding" October 1991:

- (1) Environmental Monitoring
- (2) Improve Effluent Quality
- (3) Improve STP Reliability
- (4) Improve Sludge Management
- (5) Reduce Sewage Overflows
- (6) Reduce Odours and Emissions
- (7) Urban Bushland Management
- (8) Additional Sewerage Services
- (9) Control Urban Runoff
- (10) Public Information and Accountability.

Appendix k

Five Year Rolling Plan and Ten Year Forecast for Capital Works 1989

I System Expansion

- (a) new release infrastructure
- (b) sub-divider-developer reticulation
- (c) sewer backlog

II System Amplification

- (a) water supply
- (b) sewage treatment
- (c) drainage

III Environmental Protection

- (a) sewage treatment (plant upgrade)
- (b) system separation

IV Water Quality

V System Renewal

VI Dam Safety

VII General Items

- (a) sundry debtor works
- (b) asset acquisition
- (c) telemetry (IICATS)
- (d) land, depots, buildings, miscellaneous.

Appendix L

WERRIBEE SEWAGE TREATMENT COMPLEX

On December 2, 1993, a delegation of Committee members made a site visit to the Werribee Sewage Treatment Complex and met with executives for discussions. The following observations were made during the visit.

Melbourne Water has Australia's cheapest operating costs for sewage and water. By comparison, the Hunter Water Corporation has Australia's highest operating costs, followed by Canberra and Sydney (see Table 11, Comparative Metropolitan Sewerage and Water Total Costs).

More than 50 per cent of Melbourne's sewage and 90 per cent of its trade waste flows into the Werribee Sewage Treatment Complex or "Farm" on the shores of Port Phillip Bay, 35 km west of Melbourne. Forty per cent is treated via the activated sludge process at Carrum and discharges into Bass Strait, the rest is treated by smaller neighbourhood treatment plants.

There are very significant differences between the two plants. Werribee occupies 10,850 hectares, enough land to house more than 300,000 people; Carrum, just 616 hectares. Cattle, sheep and goats raised on grasses grown on the sewage at Werribee return around \$3 million a year to the Melbourne Water Board, and a pilot methane gas powered electricity generating plant and tree plantations have been established. As well, the area is a wildlife reserve of international significance, with 254 species of birds recorded at the farm.

Sewage piped to Werribee is treated in one of three ways: land, grass or lagoon filtration. Land filtration operates during the warmer months (October-March); paddocks are flooded to a depth of 10cm, allowed to dry out, then animals are brought in to graze the rapidly growing pasture. Sixty per cent of the water evaporates or is taken up the plants. During winter, sedimented sewage is passed slowly through Italian rye grass which traps and digests pollutants.

Lagoon treatment operates all year round treating peak daily and wet weather flows. The sewage flows first into an anaerobic pond where bacteria digest the organic material, producing methane, carbon dioxide and other gases. Some of this gas is being collected and burnt to generate electricity. Waste water then flows into a series of aerobic ponds where algae take up nutrients and trace elements and are in turn eaten by zooplankton. The cycle takes 50-80 days.

There is no doubt that the Werribee treatment complex is economical to run and has a number of attractive environmental features. However, it is not an appropriate model for Sydney. The flat land it occupies was acquired progressively from the 1890s; there is no comparable area available today in the Sydney basin. Strong odours produced require a 4-5km buffer zone around the facility. Cattle reared on the farm are sold at market but have had to be bred specially to resist disease and must be 'finished off' on clean pasture. At least one of the five effluent discharge outlet points does not meet EPA licence requirements; effluent quality is at best equivalent to secondary treated standard.

Melbourne Water plans to concentrate on lagoon treatment in the future, as it is less labour intensive and uses far less space than grass or land treatment. It estimates it would cost only \$25 million for a lagoon treatment system to service 400,000 people.

Cost Comparisons
Werribee Treatment Complex
and
Conventional Treatment Processes

(a) Total Cost

From WTC Development Strategy includes operating, overhead, interest, depreciation and redemption

	<u>S/ML</u>
Current treatment cost	240
Land/Lagoon system - future	240-320
Alternative mechanical - future	480-500

(b) Construction Cost

- *Lagoon System* for 100ML/day (400,00 people)
and 500 ML/day wet weather flows
(incl. covers for odour control and power
generation and wildlife islands) \$25M

Full tertiary treatment - 300 ha
(Secondary treatment for large re-use - 50-150 ha)
No chemicals added in treatment process.
Achieves better removal of metals and toxicants
than conventional systems

- *Conventional Technology*
e.g., Geelong system
50ML/day (200,00 people) \$50M

(c) Operating Costs

The WTC system is regularly quoted as
operating at 25%-33% of the cost of a
conventional plant.

It is very simple to operate being a biological
process

N.B. Costs do not include land or commercial
benefits from wildlife, livestock, power generation etc.



Wastewater Gas Collection System

Aim To capture gases as they bubble up from the reactor to reduce odour

Positive Consequences Greenhouse gas emissions are reduced by 25 times
 Electrical power is generated from methane
 Heat is retained under cover - aids process efficiency

Cover The black plastic sheet is draped over the surface of the first half of the first pond (3 metres deep). The cover is anchored around the perimeter of the pond and held down by weighted pipes.

Area 3.3 hectares

Material Made from high density Polyethylene, 2.5mm thick

Installation Late 1992

Cost \$1.5 million

Gas Produced 5,000 to 20,000 cubic metres per day

Collected gases

Methane	80%
Carbon Dioxide	10%
Nitrogen	5%
Hydrogen Sulphide	0.5%
Water	4.5%

Power Produced 1.1 mega watt (1,100,000 watts)
 Capable of powering 11,000 '100 watt' light globes

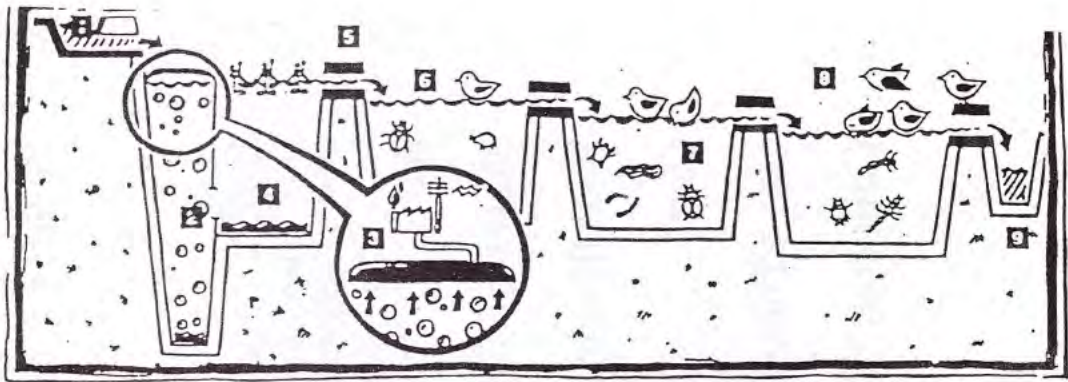
Electrical power generated will be sold to the SEC power grid or used to power the aeration system on the WTC.



**MELBOURNE
WATER**

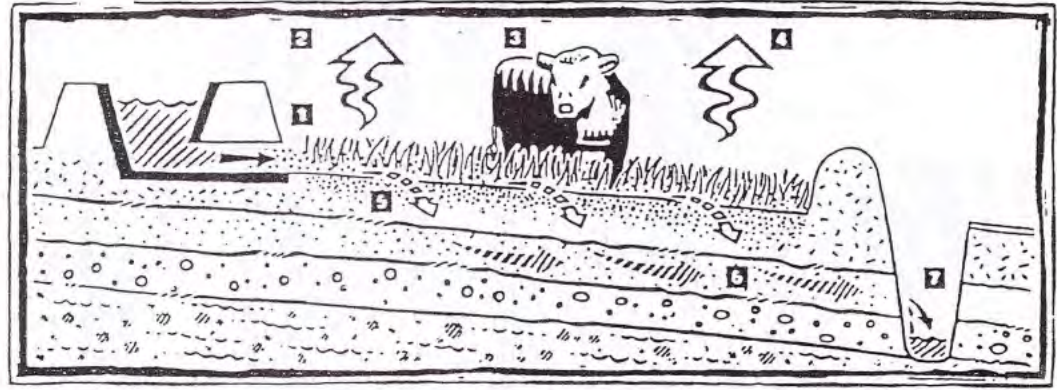
**LAGOONS
FILTRATION**

- operates all year round treating peak daily and wet weather flows.
- total length approximately 16 kms.



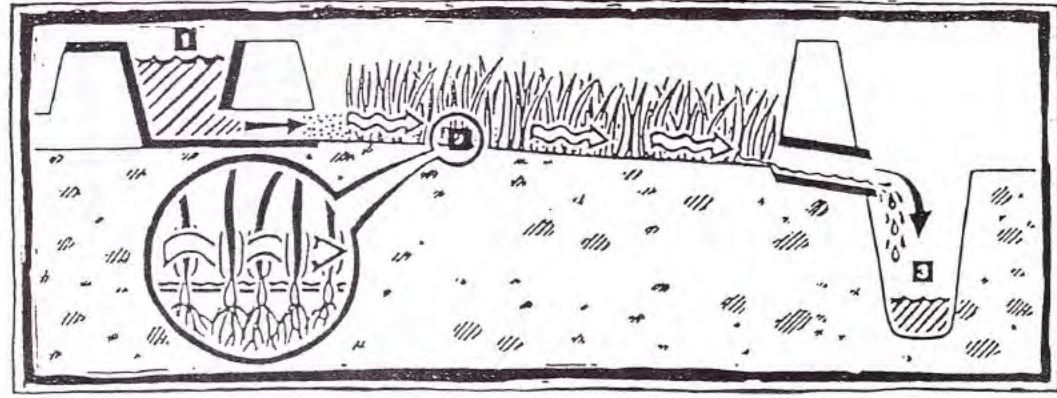
**LAND
FILTRATION**

- operates during the warmer months.
- length of bay 400 metres.



**GRASS
FILTRATION**

- operates during the cooler months.
- length of bay 400 metres.



WASTE WATER & STORMWATER
PERFORMANCE AGAINST PLAN

OPTION P
BUSINESS PLAN 1990-2010
January 1990

Report October 1993

The Report Context

Option P was the starting point for integrated waste water planning in the Board. Many of the objectives of Option P were stated to instigate investigations so that targets and indicators could be established on better information in later plans. The outcomes of the Board's report against plan reflect this role of the plan.

Note:

1. This report was compiled by the Pollution Abatement Branch with the assistance of Ocean Waste Water, Inland Waste Water, Utilities, Urban Development, ICSD and Stormwater Planning.
2. The original objectives and targets of Option P are printed in Bold. Report of Performance is printed in normal font.

Waste Water Objectives

QUANTITY

1 THE BOARD WILL MANAGE WASTE WATER DISPOSAL SYSTEMS SO THAT CONTEMPORARY EXPECTATIONS ARE MET.

1.1 Provide sewerage services for future urban development.

The Board provides a wide range of advice regarding the availability of services and costs of providing new or amplified services to State and local governments, and developers.

It has provided sewerage services in over 20 fringe release areas since 1990. These areas include Menai, Cherrybrook, Shellharbour, North Cranebrook and Hoxton Park.

The Board has entered into agreements where developers and consortia provide upfront funds for infrastructure, eg, the Rouse Hill and Glenmore Park development areas. These agreements allow development to proceed when Board funds are not able to meet infrastructure costs.

1.2 Provide systems to manage waste water in existing unsewered areas.

8,500 of the 12,700 properties targeted for sewerage have been sewerred.

Warringah Peninsula, Hornsby/Berowra and Sutherland areas will be completed in 93/94.

The backlog sewerage policy is being reassessed.

1.3 Reduce system overflows.

A wide range of activities have been completed and are underway to reduce overflows: 400 flow gauges have been installed, research and monitoring studies have been undertaken, and the Inflow/Infiltration Pilot Program is underway.

1.4 Treat sewage overflows as required.

Floatables from overflows are manually removed and treated.

A recently completed research study has options for diverting overflows from discharge into the environment. Options include system interception, amplification and temporary storage.

QUALITY

2 TO MEET NSW CLEAN WATERS ACT & REGULATIONS FOR OCEAN BATHING WATERS

2.1 Meet Ocean Plant Licence by 1991.

Despite tougher licence conditions, 33 of the 36 Ocean & Inland STP's meet licence conditions as against 9 of 36 in 1989/90, and 247 of 254 licence conditions are met as against 180 of 266 in 1989/90.

2.2 Improve plant reliability.

By-passes have almost been eliminated:

North Head by-passes have reduced from 1,136 hours in 1989/90 to 13 minutes in 1992/93, Malabar from 250 hours to 12 minutes.

Equipment and process reliability have improved: breakdowns now demand less than 20% of maintenance work as against 70% in 1989/90.

2.3 65% Solids removal by 1991

65% solids removal is beyond the present capabilities of the major ocean plants.

Present average suspended solids removal efficiencies are 36% North Head STP, 51% Malabar STP and 40% Bondi STP.

By late 1997, improved grease capture will increase solids removal at North Head to about 50%. Full installation of Chemical Assisted Sedimentation facilities at Malabar this year will make it possible to remove an extra 10-20%.

Planning reviews for these plants have considered upgradings for up to 85% solids removal. Further significant expenditure on upgrading treatment will be assessed against environmental studies, statutory requirements, financial affordability and community expectations.

2.4 75% solids removal at Minor Ocean Plants by 1995

80-90% solids removal occurs at STP's with secondary treatment - Warriewood, Bombo, Shellharbour and Wollongong.

40-60% solids removal occurs at STP's with full primary treatment - Cronulla, Bellambi and Port Kembla. Installation of Chemical Assisted Sedimentation facilities will make 60-75% solids removal possible at Cronulla, Bellambi and Port Kembla this year.

Investigations for further performance improvement at these plants is continuing.

2.5 Deepwater outfalls for Minor Ocean Plants by 1998

Improved effluent treatment may mean that the construction of deepwater ocean outfalls at some minor ocean STP's is not needed.

Planning for the deepwater outfalls at minor ocean plants has commenced and is progressing on the assessment of environmental needs, statutory requirements, financial affordability and community expectations. Detailed assessments have commenced for the Cronulla plant and Bate Bay.

2.6 Eliminate ocean sludge disposal by 1993

Elimination of Ocean sludge disposal achieved December 1992. However, due to extraordinary equipment failure, sludge has been temporarily disposed in the ocean at Malabar.

2.7 Reduce industrial discharge strength via Trade Waste Policy

3000 Trade Waste Agreements have been completed since 89/90.

Many agreements now meet 1994 standards.

Upto 300 wet tonnes/day is captured by industry and commercial users, and thus is not dumped in the sewer. New standards may increase this upto 700 wet tonnes/day.

Discharge of 56 major pollutants into sewers reduced to 20% of 1991 standard.

3 TO MEET EXPECTED COMMUNITY DETERMINED STANDARDS & SPCC WATER QUALITY OBJECTIVES FOR OCEAN WATERS

3.1 75% solids removal at Major Ocean Plants by 1996

The maintenance of these targets is dependent on the assessment of environmental studies, statutory requirements, financial affordability and community expectations. At this stage, the community and the EPA have not finalised the relative priorities of these targets in relation to other community and environment, eg, hospitals and the Hawkesbury-Nepean.

See 2.3 for the improvements that are being made at Major Ocean Plants.

3.2 90% solids removal at Minor Ocean Plants by 2005

The maintenance of these targets is dependent on the assessment of environmental studies, statutory requirements, financial affordability and community expectations. At this stage, the community and the EPA have not finalised the relative priorities of these targets in relation to other community and environment, eg, hospitals and the Hawkesbury-Nepean.

See 2.4 for the improvements that are being made at Minor Ocean Plants.

4 TO MEET NSW CLEAN WATERS ACT & REGULATIONS FOR INLAND WATERS

4.1 Amplify West Hornsby by 1995

Amplification of West Hornsby to be commissioned by end of 1993 ahead of target.

4.2 Satisfy licence conditions for nutrients by 1995

Reduction of nutrients are on target for Pollution Reduction Programme conditions negotiated with EPA.

90% of ammonia, 85% of phosphorous and 53% of nitrogen is presently being removed. These represent load reductions of 55%, 30% and 22% respectively, since 1990.

Nitrogen effects on receiving waters are under specific review. Any need for reduction of total nitrogen will require longer term solutions and major capital investment.

4.3 Reduce industrial discharge strength via Trade Waste Policy

See 2.7

4.4 Improve plant reliability

See 2.2

5 TO MEET EXPECTED STANDARDS & SPCC WATER QUALITY OBJECTIVES FOR INLAND WATERS

5.1 Meet anticipated future Phosphorus & Nitrogen standards by 1995

See 4.2

5.2 Trial & evaluate overflow treatment

See 1.4

5.3 Minimise overflow of sewage by 25% by 1998 then to 1 event pa from 50 locations by 2010

Further research has led to the development of more accurate targets:

The I/I programme targets a 15% decrease in flows by 2000 and a 40% decrease by 2010.

Modelled overflows from 2yr ARI sewer flow are aimed to reduce to 250 overflow events in 2000 and 0 in 2010 following the implementation of the I/I programme.

5.4 Improve Blue Mountains Streams

Of the 7000 existing Blue Mountains backlog sewerage properties, over 2000 have been seweraged since 1989/90, and a further 1,400 are planned to be seweraged in the immediate future.

Nutrient removal has been greatly improved in inland plants (see 4.2)

Replacement of several old STP's with the Blue Mountains Tunnel and Winmalee STP will remove sewage effluent from 6 Blue Mountains National Park streams. The sewage diverted via the tunnel to Winmalee will receive much improved treatment.

Springwood and Hazelbrook have already been decommissioned. Valley Heights is due to be taken off line in November 1993. By 1997, all sewage from Katoomba to Winmalee will be treated at Winmalee.

6. TO IMPROVE THE OVERALL EFFICIENCY OF THE PERFORMANCE OF THE WASTEWATER SYSTEM

6.1 Demand reduction strategies (Pricing, Infiltration/Inflow)

430,000 houses have been smoke tested. 103,000 defects such as illegal connections of stormwater and roof-drains to sewers have been detected. 60,000 defects have been fixed by property owners.

The I/I program targets reductions of sewer flows of 15% by 2000.

Source Control has greatly reduced the dumping of pollutants into the sewers by industry (see 2.7)

6.2 Productivity improvement

A wide range of activities are underway to improve waste water system efficiency:

Instrumentation upgrades have been undertaken at most ocean STP's and at the St Mary's, Penrith and Winmalee inland STP's. Minor instrumentation upgrades have been undertaken to comply with EPA requirements at Northern Treatment Group inland STP's.

SPS's are being refurbished across the reticulation system.

The Board is testing the market for the provision of electrical and/or mechanical maintenance services by contract.

6 inefficient old plants will be replaced by a single modern STP at Winmalee and the Blue Mountains Tunnel.

TQM, Quality Assurance, benchmarking and skills development programmes are improving efficiency.

6.3 Urban consolidation to provide for 25% of future housing

The Board has co-operated with the NSW Government's urban consolidation policies, while seeking to recover the full cost of infrastructure investments in its role as a commercial service provider.

It has enhanced the Land Availability Data System which monitors available residential land to now enable monitoring of development activity in established areas.

It has provided advice on infrastructure availability and costs to State and local governments and developers regarding both infill and major redevelopment areas (eg the City West redevelopment);

It has participated in the Minister for Planning's model urban housing project which will provide a demonstration of urban consolidation at 3 sites (including the Board's Waterloo site).

It has provided infrastructure for redevelopment in a number of areas including, for example, Strathfield, Alexandria, Five Dock, Hunters Hill and Manly.

6.4 Research

The Board undertakes 3 types of research: Experimental Development, Applied Research and Research Monitoring/Surveys.

The majority of Experimental Development and Applied Research is undertaken by CWP. CWP has completed over 18 major projects which include the Dissolved Air Flotation at North Head STP, Chemical Assisted Sedimentation at Cronulla, chemically assisted phosphorous removal at West Camden, and Crossflow Microfiltration for tertiary treatment at Blackheath. Over 10 projects are underway including the I/I pilot programme, Sirofloc high flow through effluent treatment process and the Membio process for reuse.

A large amount of work in the categories of Experimental Development and Research Monitoring/Surveys has been done over the last two years by Inland Waste Water.

This work has substantially been done as part of the nutrient reduction programme. The areas covered in this period include alkalinity addition, pickle liquor optimisation, post dosing, multi-point dosing, disinfection, high bio-mass and tertiary filtration.

Results of this work by operations has meant that existing technology has been shown to be capable of delivering the effluent quality required to meet most of the predicted needs of the business for the next few years.

6.5 Reuse to reduce system loads and develop commercial markets

An effluent quality evaluation has been completed.

Re-use guidelines are being developed.

Community research and consultation has been undertaken.

Effluent re-use is being implemented at Pt Kembla Steelworks, 5 Sydney golf courses and the Rouse Hill consortium development.

74% of Board Sludge is being recycled. 105,600 tonnes of biosolids were produced for beneficial use in 1992/93.

6.6 IICATS

The contract has been let to design and implement the system wide area computer linkage of asset monitoring and control equipment, (Integrated Information, Control and Telemetry System).

Review for upgrading monitoring and control equipment at sites has been commenced.

Scope of application is being re-assessed.

6.7 Modelling and Planning studies

A wide range of modelling and planning studies have been completed and are underway to improve waste water treatment:

As part of the CWP a technically based, comprehensive, long-term master plan for the waste water system is being developed. It has been a major contributor to the Board's recent review of the waste water issues and implication confronting Sydney. The master plan will continue to be developed in 1994.

Facilities Planning is developing comprehensive long-term plans for specific STP's and waste water and stormwater facilities. Long term planning reviews or facility plans have been prepared for North Head and Malabar. Facilities planning also has been a major contributor to the Board's recently developed waste water issues paper.

A wide range of environmental monitoring and modelling is carried out throughout the Board. Most significant are those carried out on the Hawkesbury-Nepean, the I/I program, coastal waters, STP's and the rivers, estuaries and lagoons.

6.8 Public and staff education

6 Customer Councils have been established near STP's.

Environment groups are contributing to the planning.

120 school and community groups are taking part in Streamwatch monitoring.

CARE environmental and due diligence education programme has been provided for all staff.

STORMWATER

7. QUANTITY & QUALITY

7.1 Reduce pollution load to meet environmental and community standards.

Gross pollutant control devices are being trialled covering 19% of the Board's stormwater area. They presently capture 120 tonnes/year of rubbish.

Public and industry education source control studies are underway, eg for fertiliser application and animal droppings.

7.2 Reduce stormwater flooding to the greatest extent.

Flood prevention work eg Raglan St Manly, Muddy Ck and Whites Ck

Catchment studies, eg flood component studies at Sheas Ck and Manly.

Partnerships with developers for stormwater management in new areas, eg Rouse Hill.

7.3 Implement measures to improve public safety.

Over 20km of new fencing has been completed under the fencing programme. Fencing is also completed under cost share arrangements with other owners. The Board also has a fencing maintenance programme.

800 locations have been identified and budgeted for the erection of safety signage.

7.4 Take holistic approach on a catchment by catchment basis, maximising community involvement.

The Board provides scientific and technical information covering components such as water quality, system inventory, catchment characteristics and flood reviews to the studies. Studies are carried out on a catchment by catchment basis.

The Board participates in the community represented catchment committees under the auspices of the EPA.

8. BUSINESS COVERAGE

8.1 Upgrade our own drainage systems.

see 7.1, 7.2 & 7.3

- 8.2 Aggressively offer our services for new sector developments from land production phase onwards.

see 1.1

- 8.3 Progressively assist communities in existing developed catchments.

Two studies have been completed outside Board areas: Cabramatta Ck and Burns Ck (13% is Board area).

Following the completion of the Cabramatta Ck Catchment study, the community have indicated an unwillingness to pay the Board for undertaking flood prevention improvements.

Stormwater policy is being reassessed by all parties.

9. PROGRAMS TO MEET OBJECTIVES

Implement flood management programs.

- 9.1 * Board's catchments -

10 by 1996, 30 by 2002, 50 by 2007, 70 by 2015.

13 Board area catchment studies have been completed covering 31% of Board catchment areas, eg Upper Cooks, Manly, Haslam's Ck.

3 Board area catchment studies are in progress: Sheas Ck, City CBD and Blackwattle Bay.

The Manly catchment study is being implemented.

- 9.2 * New Sectors

Rouse Hill by 1997, South Creek by 2000, etc.

Development of the Rouse Hill STP by the Rouse Hill Infrastructure Consortium (RHIC) is on target, with practical completion of the plant anticipated in May 1994. This does not include the wetlands nor recycled water.

Due to environmental concerns, South Ck development is on hold pending a Total Water Cycle Management Study by the Board and an Air Quality Study by the DOP.

The Board has developed a model to assess the economic, biophysical and landuse inputs into the South Ck development.

- 9.3 * Additional Catchments 20 by 1999, 60 by 2009.

The ability for the Board to take on the responsibility of additional catchments is dependent on the stormwater review amongst all stakeholders, and particularly, the assessment of community demands as expressed at Cabramatta Ck and other catchments and the recent Stormwater forum.

APPENDIX M2

EXTRACT FROM EPA SUBMISSION RELATING TO OCEAN OUTFALL MONITORING.

Ocean Outfalls

19. *Should the environmental monitoring program of the ocean outfalls be ended before the results are known?*

If analysis of the data for the two year period shows some unacceptable trends or results and data was collected after September 1993, then that data could provide readily accessible further information.

This question appears to be predicated on a misunderstanding of the nature of the Environmental Monitoring Program (EMP)

Contrary to some views, the EMP is not and was not established as a routine monitoring program designed to give regular reports to the public on the condition of Sydney's ocean beaches and bathing waters. That has been the function of another EPA program called "Beachwatch" which is described in the EPA's submission at p 31. Nor is it an audit of sewage treatment plant discharges. That has been the function of a third EPA program, the sewage treatment plant audit program, which is described in the EPA's submission at p 44.

Rather, the EMP comprises a series of very complex oceanographic, chemical and biological studies designed to measure the effects on the marine environment of relocating the discharge of primary treated sewage effluent at North Head, Bondi and Malabar from cliffline outfalls to deepwater outfalls some 2-4 km offshore. The program has focused mainly on the off-shore environment and beach pollution, and has been designed and conducted in three phases:

- . Phase 1, the Pre-Commissioning Phase, from July 1989 to September 1990, provided 14 months of baseline data on environmental conditions while the cliffline outfalls were still operating;
- . Phase 2, the Commissioning Phase, the period from September 1990 to July 1991 during which the outfalls progressively came into operation, enabled the scientists to fine-tune and validate their techniques and methodology; and
- . Phase 3, the Post-Commissioning Phase, from July 1991 to September 1993, provided two years' data on the changed environmental conditions brought about by the changeover from shoreline to deepwater outfalls.

The field component of the Post-Commissioning Phase will end shortly. Analysis of samples and statistical analysis of data will take a further 6-9 months, then evaluation, synthesis and reporting of findings are likely to take a further 6 months. During this evaluation phase, an assessment will be made of the need for any follow-on environmental studies, including study objectives, experimental approaches and the timing of such studies.

The EPA has, however, already observed that the deepwater outfalls have not sufficiently reduced grease on beaches and has required the Water Board to improve grease removal at its sewage treatment plants prior to discharge. The EPA has also designed a new beach grease study to evaluate the effect of these upgradings and will initiate it as soon as the EMP beach grease study concludes.

Over the next summer, the EPA will also be evaluating further the reduction in contaminants in fish and oysters near shore and be checking contaminant levels in fish, oysters and sediments near the deepwater outfalls.

The Beachwatch and sewage treatment plant audit programs, of course, will also be continuing.

In summary, the EMP was not designed as a routine on-going monitoring program. Rather, it was designed to compare environmental conditions immediately pre-commissioning with those immediately post-commissioning. That purpose has now been achieved and there would be no point in continuing the study. Follow-on studies with new objectives will need new designs and such studies will be designed and implemented as and when the need for them is identified, and indeed, this has already begun.

20. *Is it premature to ask for information about pollution trends from the outfalls when the research has not been completed? Such information and the conclusions may be more reliable if they are subject to a form of peer review which is presently proposed by the EPA before it releases the conclusions next year.*

The EPA considers that it is important that information and results from the EMP be provided to the public as soon as possible, following the necessary quality assurance checks and peer reviews. Otherwise, the EPA might legitimately be criticised for withholding information from the public. The results published to date already have been subjected to these reviews.

The findings of the Pre-Commissioning Phase baseline studies were prepared in a report of 14 volumes, 13 of which were published between January and June 1992. Titles in the series were:

Volume 1	Overview of Oceanography Components
Volume 2	Physical Oceanography
Volume 3	Hard Substratum Macroinvertebrates
Volume 4	Numerical Modelling
Volume 5	Remote Sensing
Volume 6	Database
Volume 7	Beach and Bathing Water Quality
Volume 8	Microlayer [This volume is as yet unpublished]
Volume 9	Water Quality

Volume 10	Contaminants in Sediments
Volume 11	Contaminants in Fish
Volume 12	Bivalve and Morwong Bioaccumulation
Volume 13	Fish and Soft Substratum Macroinvertebrates
Volume 14	Pre-Commissioning Phase Overview

Volume 8 is expected to be published shortly. A copy of each of the 14 volumes, including Volume 8, has been given to the Joint Select Committee. Volume 8, however, is still a draft and is subject to further scientific editing.

A public information booklet, which outlines the study and presents early results after deepwater outfall operations commenced, was released in June 1992 and distributed widely. A copy of this has also been given to the Committee.

The EPA expects the Commissioning Phase studies to be published in eight volumes in October 1993. Titles in the series will be:

Volume 1	Overview of Oceanographic Components
Volume 2	Physical Oceanography
Volume 3	Hard Substratum Macrobenthos
Volume 4	Numerical Modelling
Volume 5	Remote Sensing
Volume 6	Database
Volume 7	Chemical and Biological Studies
Volume 8	Commissioning Phase Overview

A copy of each volume has been given to the Committee. The Committee is cautioned, however, that Volumes 1, 7 and 8 are still drafts and require further editing following peer review. The Technical Advisory Committee of the EMP, which includes independent members, will provide this peer review.

The EPA expects the Post-Commissioning Phase studies to be published in December 1994, as at least 14 volumes. They will contrast environmental conditions before and after deepwater outfall commissioning and will address the questions of the effectiveness of the outfalls and the need for further studies. All volumes will be subject to external peer review prior to publication.

Some preliminary findings, however, have recently been incorporated into two papers by N A Philip, the EMP Project Coordinator. One entitled "Environmental Impact of Deepwater Sewage Discharge off Sydney" was presented to 11th Australasian Conference on Coastal and Ocean Engineering, 23-27 August 1993; and the other entitled "Sewage in the Marine Environment: A Case History from Sydney NSW" will be published early next year in "The State of the Marine Environment - Report for Australia". This latter paper is a draft and is subject to further peer review and editing organised by the journal editor. A preprint of each paper has been given to the Committee.

The EMP so far has confirmed that prior to commissioning of the deepwater outfalls, the marine waters and biota off Sydney were adversely affected by the presence of sewage emanating from the treatment plants. Many surfing beaches often were impacted by sewage litter, including particles of grease. Bacterial levels in the bathing waters frequently failed Health Department guidelines. The flesh of some fish species caught near the major shoreline discharge points frequently contained contaminants, some at levels above residue limits set by the National Health and Medical Research Council as being fit for human consumption.

Since the three deepwater outfalls were commissioned there has been a considerable improvement in environmental conditions near the shoreline. The effluent plumes are no longer visible and there has been a marked decrease in the extent and frequency of faecal bacterial contamination in bathing waters at Sydney's ocean beaches, although sewage grease still is deposited at times on some beaches and levels in beach sand have not fallen to background levels. Contaminant levels in oysters and fish near shore also have decreased and the previously high levels in the fish species, red morwong, near the shoreline outfalls are now at levels similar to those at control sites.

Offshore, near the deepwater outfalls, a slight increase but no environmentally significant build up of contaminants in oysters suspended for three months in the water column has been detected. Nor has any build up of contaminants been detected in sediments. Bacterial levels in the offshore deepwater area impacted by the effluent plume have increased, but numbers of bacteria remain relatively low.

21. *What is the status of the analysis? Does the EPA have adequate resources to continue the monitoring or to carry out the analysis of the data?*

Once the field component of the study has ended, analysis of samples and statistical analysis of data will take 6-9 months. Evaluation, synthesis and reporting of findings are likely to take a further 6 months.

As the EPA has indicated, the program was not designed as a routine monitoring program but as a discrete scientific program. The EPA has sufficient resources to complete the field component of the study and to carry out the analysis of the data.

As indicated in the response to Question 19 above, further studies into beach grease, contaminants in fish and oysters in the nearshore environment and contaminant levels in fish, oysters and sediments near the deepwater ocean outfalls will also be undertaken while the post-commissioning data are being analysed.



WATER BOARD

SYDNEY - ILLAWARRA - BLUE MOUNTAINS

Office of the Managing Director

Dr Peter Macdonald, MP
 Chairman
 Joint Select Committee on the Water Board
 Parliament House
 Macquarie Street
 SYDNEY NSW 2000

Dear Dr Macdonald,

I refer to your letter of 22 February requesting extra information for the Joint Select Committee.

With regard to Question 1:

I am concerned at the selectivity of the list of targets against which the Board's performance is apparently being assessed.

The information presented in the table, if it is in fact destined for inclusion in the Joint Select Committee's report, is a distortion of the original intention of Option P in that:

- . only some targets have been listed, and
- . too many of the target dates listed on the chart provided by the Committee have not occurred yet and in several cases are still between two and 16 years away.

I must emphasise that it is not in any way meaningful to cite the "actual situation" today as a measure of performance against targets set so far ahead and I trust that the Committee will not promote this table as its only evidence of our performance on Option P to date.

Nevertheless, we have complied with your request to verify and fill out the blanks in this chart. A filled out chart is attached.

We refer you again to information already supplied to you, and already verified, in recent correspondence to the Committee through the Committee Clerk, Catherine Watson. This information covers the full status of Option P. Let me remind you once again, that this information shows:

- . We have kept largely to Option P except in some instances at the major ocean plants where we have not reached 65% solids removal by 1991. The Board is

meeting its licence requirements at these plants. The percentage of solid capture is increasing with the introduction of CAS. Whether or not 65% is correct is a matter for future debate with our regulators based on objective environmental benefits.

Option P was developed before we had any water quality data, so in this sense, it was a guess. Three years down the track we now have a lot more water quality data and it is appropriate to review Option P in line with that data.

Strategic planning for our part of the Government's Clean Waterways Programme will be reviewed regularly in the light of new information.

I respectfully request that the alternative information supplied in the attached document, entitled "Wastewater and Stormwater Performance Against Plan", be inserted into the report in place of the more misleading chart supplied by your committee and discussed above.

If the Committee chooses, however, to insert its own chart, the following points should be noted:

With regard to the right hand box, second from the top, the Board considers there are only seven minor ocean plants, Bellambi, Bombo, Port Kembla, Shellharbour, Wollongong, Cronulla and Warriewood. The table supplied by the Committee has a total of ten. As the table does not give a reference for the figures contained therein, I am unable to comment further.

In the left hand bottom box, there is a misquote from Option P. The actual target was to reduce overflows to one event per annum from 50 locations by 2010. The JSC table omits the words "from 50 locations" thus distorting the objective as originally designed.

With regard to Question 2:

We do not know where the Committee got the figure of \$194.4 million.

When calculating expenditure on the Clean Waterways Programme it should be noted that Option P was the initial Water Board business plan that provided the first plan for implementation of the Clean Waterways Programme. It focussed on reducing the Board's wastewater and stormwater impacts on the environment and included three components to reducing those impacts:

the need to maintain the wastewater and stormwater assets to protect the environment;

the need to address the environmental impact of growth; and

the need to focus on "step improvements" in environmental protection.

While all three components were incorporated as part of the CWP and have been reported as such in the CWP Reports, the "step improvement" component was budgeted separately to the other two components, so that it could be managed more effectively. To some people, the step improvement component, at the time Option P was first formulated, was the most important part of the programme since it was the part that focused on things like effluent quality improvements and the reliability of treatment plants and other assets.

The CWP Report has reported each year the expenditure on all three components, whereas the Water Board Annual Report has only reported the CWP "step improvement" component. The other two components of the CWP were reported in the Board's Annual Report in other places in a manner that combined them with expenditure for the water side of the business. This explains the difference in figures between the Annual Report and the CWP Report.

The Water Board's 1992/93 Annual Report figure for capital expenditure on the Clean Waterways Programme of \$172 million only includes the "step improvement" component budgeted under the title of CWP. In that year, however, if all three components of the CWP are included, the total expenditure for the CWP was actually \$254 million. Unfortunately, the CWP report for last year inadvertently omitted \$30 million in developer assets and so the figure actually reported was \$224 million. On top of all this, there was an additional \$46 million in expenditure last year in SEL operating costs which covered such core CWP activities as maintaining gross pollutant traps on stormwater channels, transporting sludge for beneficial use, bushland maintenance, source control inspections, and environmental monitoring. This brought the total of CWP expenditure for the 1992/93 year to \$300 million (i.e., \$254 M capital and \$46 M in SEL operating).

The other figure you refer to of \$155.1 million for 1993/94 was an early prediction of the projected budget for this year for the "step improvement" component only of the CWP. The budget figure for the step improvement programme that was finally approved for this year is \$134 million. When all three components of the programme this year are added together and SEL operating costs are included, the total estimated expenditure for CWP this year has been projected as being somewhere in the order of \$260 million. The Board, however, is expecting that the actual outcome for the year will be lower than this due to the marked drop in growth (see below) and improvements in efficiency.

It should be noted that the original figure for the "growth" component of Option P was somewhat over-estimated when Option P was devised. It was assumed then that it would cost approximately \$180 million in the first year alone to service growth under the CWP, including developer assets. In subsequent years expenditure was expected to be maintained at the rate of approximately \$150 million. Expenditure in this area has been significantly affected by the recession. In fact, only \$123 million has been necessary to service growth under the CWP since the inception of the Programme. Last year, a mere \$18 million was spent on the urban development component of the programme. As you can see, urban development has not proceeded at anything like the pace we expected when Option P was devised. This has meant that total expenditure in the CWP has necessarily diminished markedly.

If growth had proceeded as projected then the Board's expenditure for CWP would have been approximately \$350 million each year.

With regard to Question 3:

I have attached some graphs showing the results of an extensive sampling programme that the Board has conducted since November, 1989 on the concentration of trade waste substances in influent at its treatment plants.

160,000 samples have been analysed to produce these results, so they represent an extremely reliable source of data.

When reading the graphs, attention should be focussed on the trend lines, not the individual readings. Because of the high day to day variability of sewage quality, individual readings do not provide an accurate picture of changes to influent quality over time. The trends shown in these graphs have been verified by the use of a statistical package built by the CSIRO's Division of Mathematics and Statistics especially for the purpose of validating the results of our analytical programmes for wastewater source control. As you will see, most substances are trending downwards at both ocean and inland plants.

I trust the Committee will be pleased that there have been marked improvements in the quality of effluent at this time.

Yours sincerely



(PAUL A BROAD)
Managing Director

9. 3. 94



PARLIAMENT OF NEW SOUTH WALES
LEGISLATIVE ASSEMBLY

Parliament House
Macquarie Street
SYDNEY NSW 2000
Telephone: 230 3011
Facsimile: 230 3033

22 Feb 1994

JOINT SELECT COMMITTEE UPON THE
SYDNEY WATER BOARD

22 February 1994

Mr Paul Broad
Managing Director
Sydney Water Board
PO Box A53
SYDNEY SOUTH NSW 2000

Dear Mr Broad,

In relation to its current inquiry, the Committee would be appreciative if you could provide it with the following information:

1. Your most current information regarding the status of Option P targets for: suspended solid removal for major ocean plants; for minor ocean plants; for the Hawkesbury-Nepean plants; for sludge management/reuse; for sewer overflows.
2. Verify if it is correct that \$194.4m was spent in 1992/93 and \$155.1m predicted to be spent in 1993/4 on your capital works program.
3. Your latest figures on trade waste disposal into the sewage system.

Yours sincerely,

Dr Peter Macdonald, M.P.
Chairman

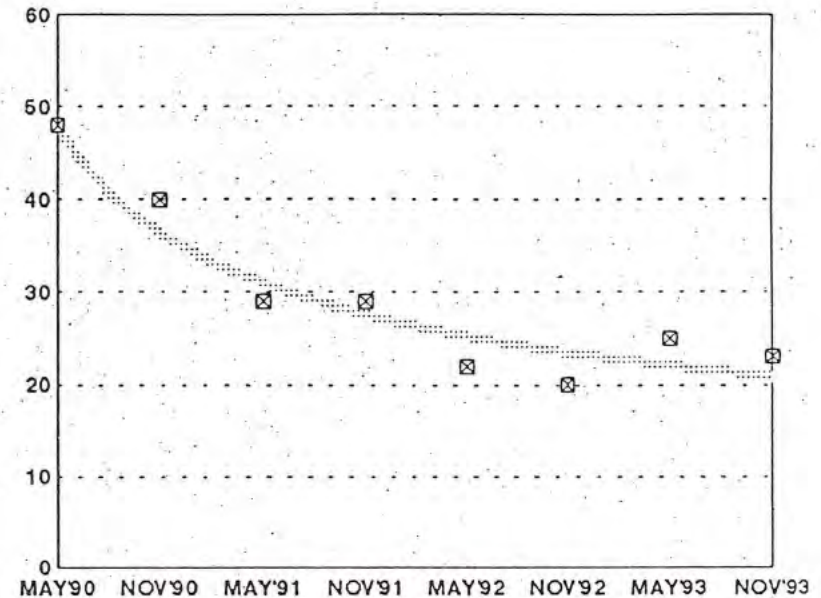
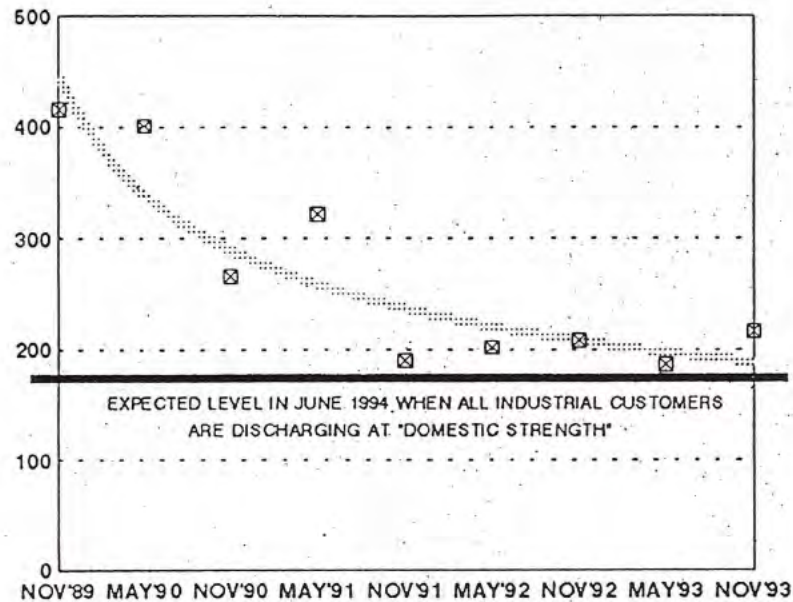
TABLE 2

Option P: Status of projects

OPTION P	ACTUAL SITUATION
<ul style="list-style-type: none"> ■ For major ocean plants: "65% SS removal 1991" "75% SS removal 1996" <p>Expenditure upon major ocean plants is listed as "\$720m"</p>	<p>North Head 39% Malabar 63%, Bondi 49%.</p>
<ul style="list-style-type: none"> ■ For minor ocean plants: "90% SS removal 2005" 	<p>4 Plants: Secondary Treatment 3 Plants: in excess of 60%.</p>
<ul style="list-style-type: none"> ■ For river quality: "Nepean-Hawkesbury plants 1995 \$460m" 	<p>All plants already meet licence conditions.</p>
<ul style="list-style-type: none"> ■ For sludge management/reuse: "end sludge to sea 1993 \$240m" 	<p>All sludge disposal to ocean ceased before 1993. At Malabar, disposal of sludge temporarily resumed (7 July - 28 October 1993) because of equipment breakdown. The volume discharged represented 10% of the sludge previously discharged on a yearly basis.</p>
<ul style="list-style-type: none"> ■ Capital works expenditure: 1990/91 1992/93 - \$350m 1993/94 - \$350m 	<ul style="list-style-type: none"> ■ 1992/93 expenditure on Clean Waterways Programme: \$254m capital plus \$46m SEL operating = \$300m ■ 1993/94 projected expenditure on Clean Waterways Programme: \$260m capital and operating. Final outcome is likely to be less, due to slowing of growth and improved efficiency.
<ul style="list-style-type: none"> ■ Overflows: Reduce to 25% by 1998 Reduce to one per annum from 50 locations by 2010 - \$1.68b 	<ul style="list-style-type: none"> ■ Significant smoke testing to provide source control; half a million houses tested; 24% found defective and being rectified ■ 170 km of sewer rehabilitated ■ 4400 house service lines rehabilitated.
<p>"The target we are now looking at is to reduce flows to the two-year level, so that the two-year storm can be contained within the system...we are looking at that and trying to estimate what is the cost associated with it. If that is the best use of the money, or it might be better to use it in some other aspect of the program" (Hansard, Dr Robinson, 10 September 1993, p62)</p>	

SUSPENDED SOLIDS.

NOVEMBER 1989 TO NOVEMBER 1993



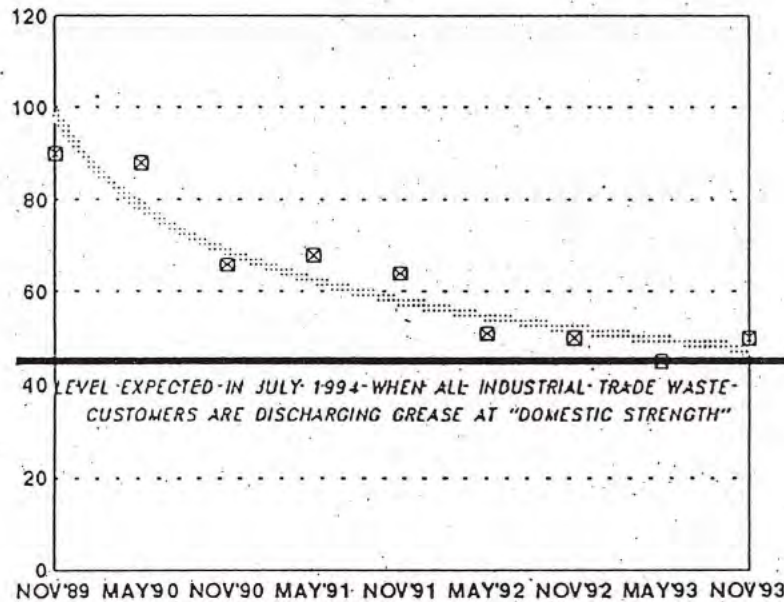
ALL OCEAN PLANTS

ALL INLAND PLANTS

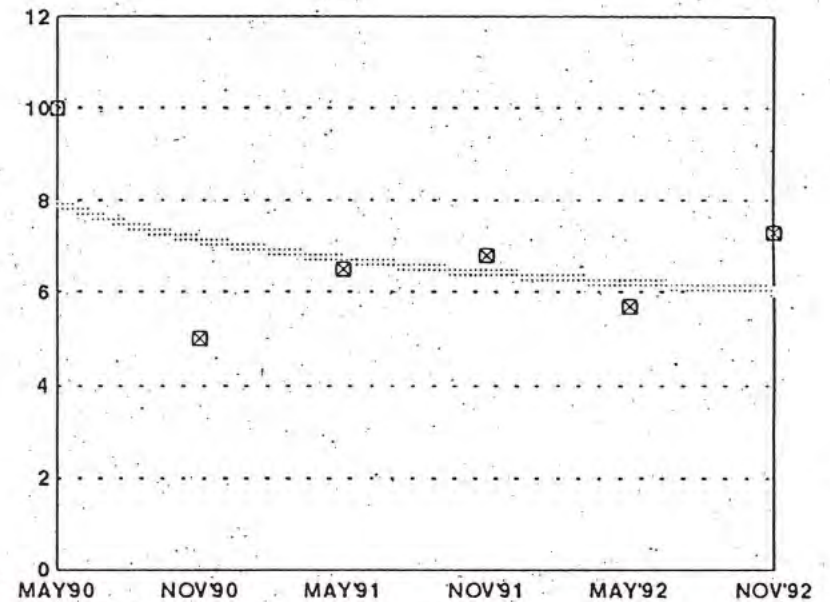
INFLUENT TONNES PER DAY

GREASE (Soxhlet)

NOVEMBER 1989 TO NOVEMBER 1993



ALL OCEAN PLANTS

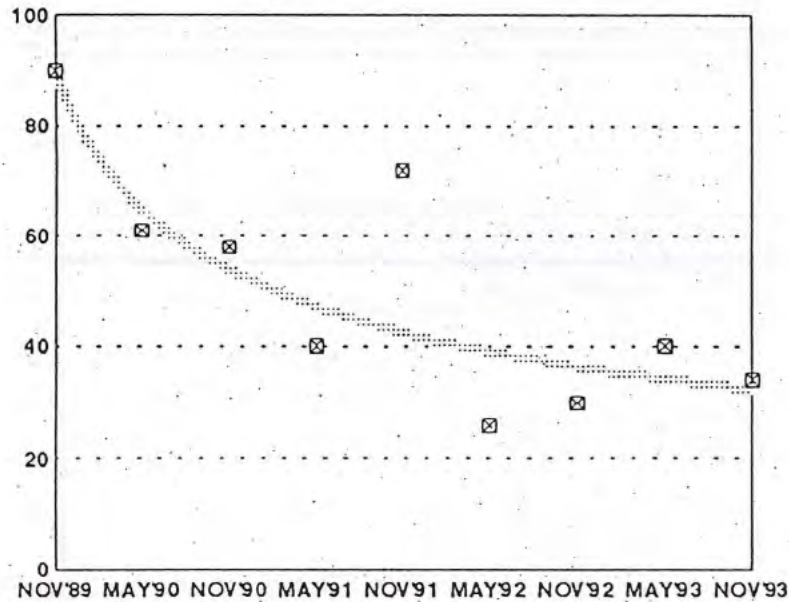


ALL INLAND PLANTS

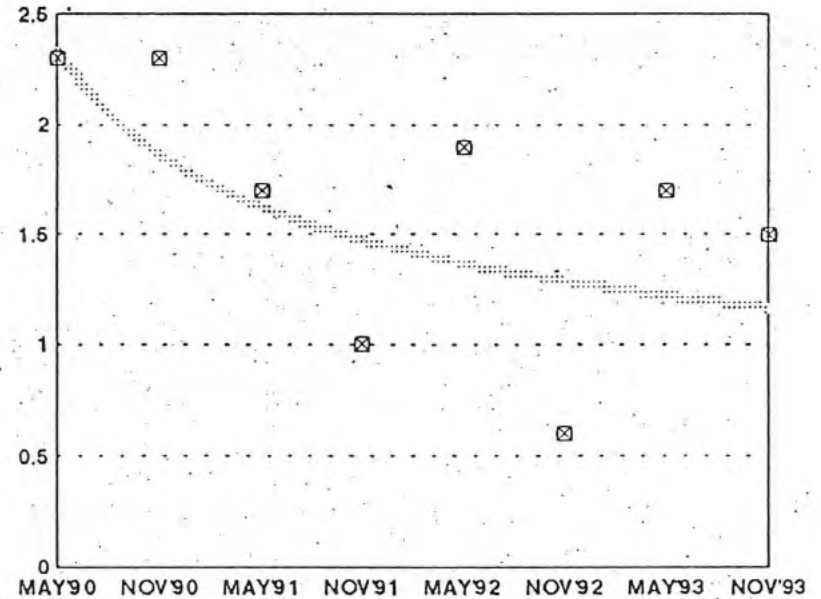
INFLUENT TONNES PER DAY

NICKEL

NOVEMBER 1989 TO NOVEMBER 1993



ALL OCEAN PLANTS

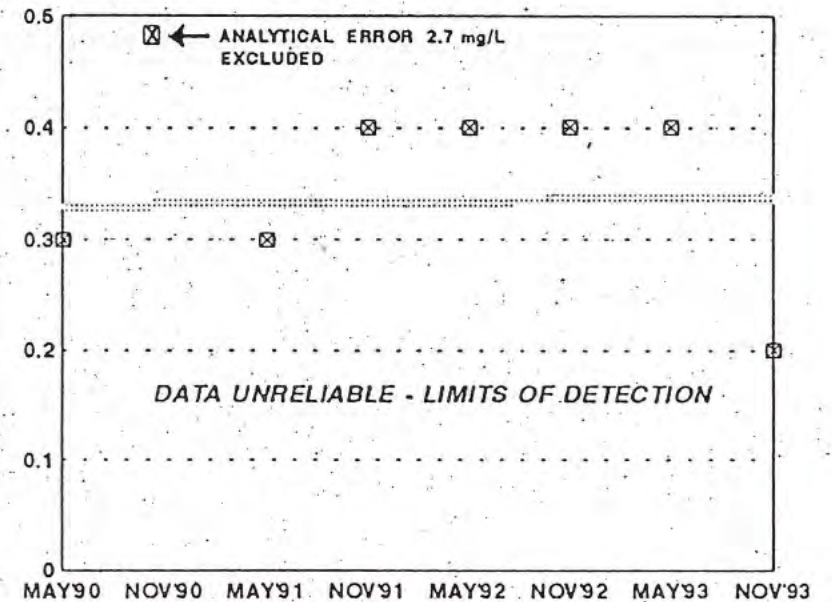
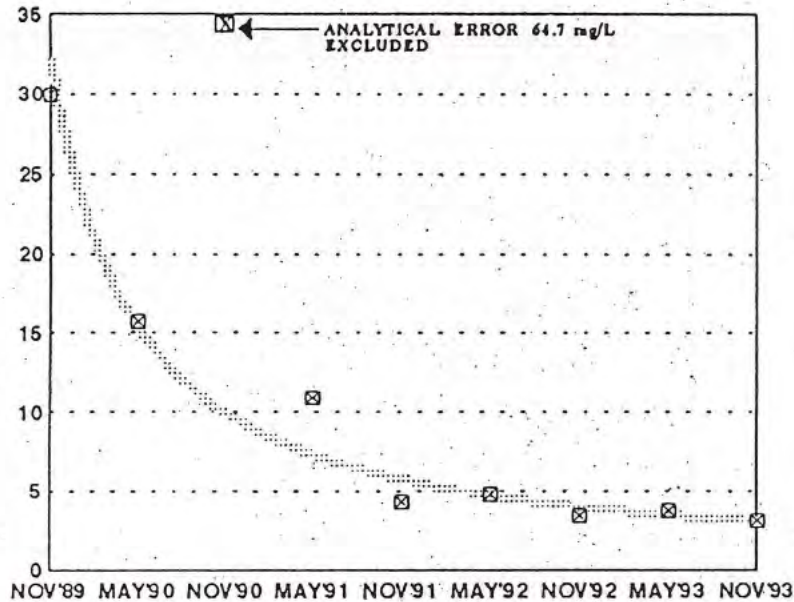


ALL INLAND PLANTS

INFLUENT KILOGRAMS PER DAY

ARSENIC

NOVEMBER 1989 TO NOVEMBER 1993



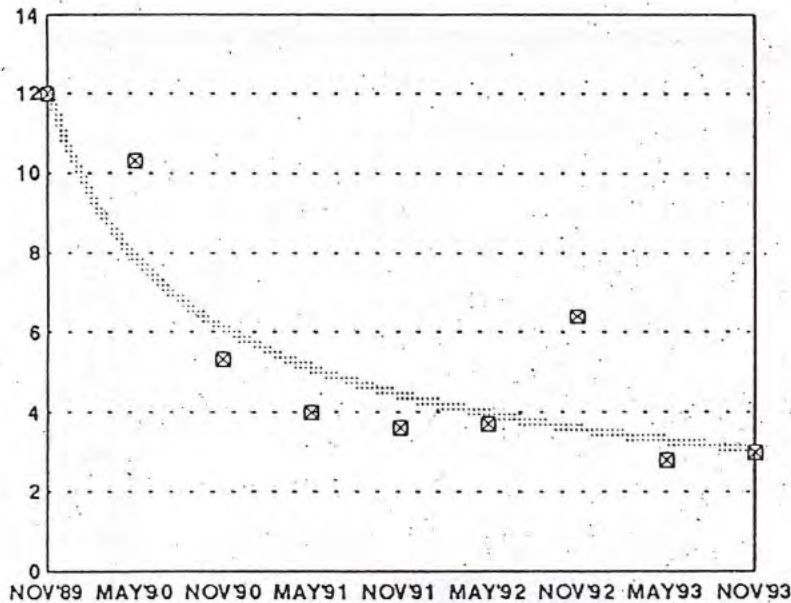
ALL OCEAN PLANTS

ALL INLAND PLANTS

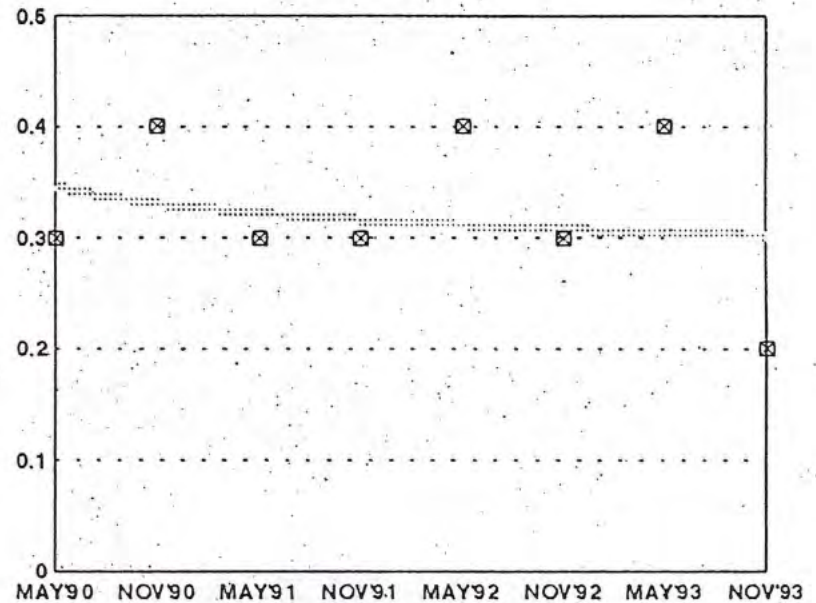
INFLUENT KILOGRAMS PER DAY

CADMIUM

NOVEMBER 1989 TO NOVEMBER 1993



ALL OCEAN PLANTS



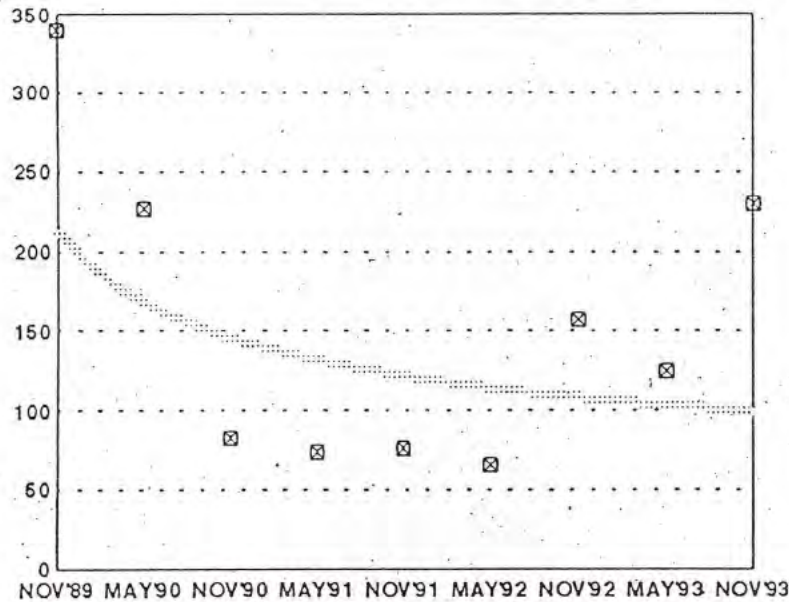
ALL INLAND PLANTS

INFLUENT KILOGRAMS PER DAY

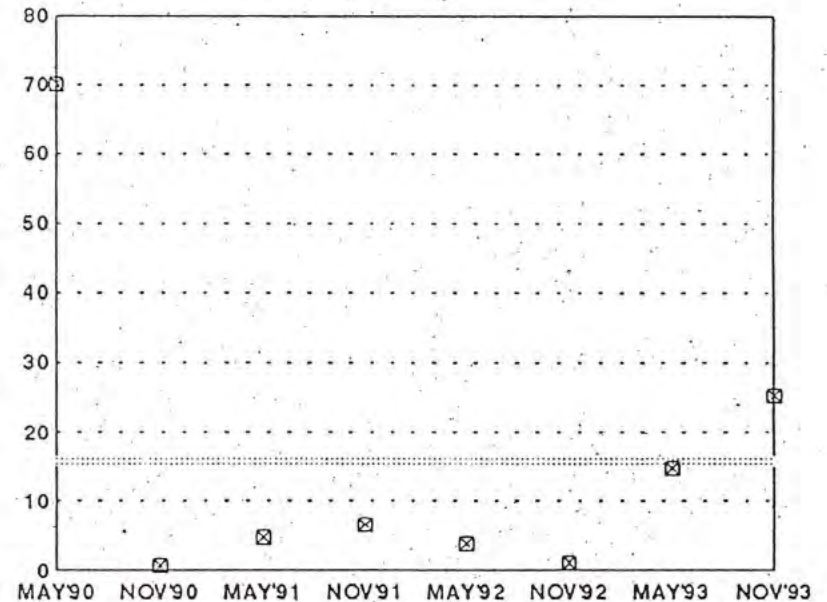
PHENOLS

NOVEMBER 1989 TO NOVEMBER 1993

TREND SINCE NOV'92 UNDER INVESTIGATION



ALL OCEAN PLANTS



ALL INLAND PLANTS

INFLUENT KILOGRAMS PER DAY



HUNTER WATER CORPORATION LIMITED A.C.N. 053 102 837

PO Box 5171B, Newcastle West, NSW 2302, Australia
Telephone (049) 26 7267 DX7858

REFERENCE: 401/DB/DE/LETTERS/MCDONALD

19 November 1993

Dr P McDonald, MP
Room 926
Parliament House
Macquarie Street
SYDNEY NSW 2000

Dear Dr McDonald

Thank you for your letter of 16 November 1993 seeking my response to a draft Appendix of the Joint Select Committee Upon the Sydney Water Board's Draft Report. In order to provide the necessary information, three Appendices are attached as follows:

- ◆ Attachment 1 describes the Corporatisation package and the criteria relevant to its evaluation.
- ◆ Attachment 2 responds to the specific points raised in Appendix C of the Committee's Draft Report.
- ◆ Attachment 3 relates to the specific questions you raised on charging matters for the Hunter.

I have included Attachment 1 to provide some background information to put the comments of the draft Appendix C in context. The purpose of Appendix C appears to be to provide an evaluation of the Corporatisation package. However, it is incomplete in this evaluation and in its present form does not provide a sound basis for the evaluation of the merits of application of Corporatisation elsewhere. In particular, I believe the Appendix would benefit from the broader understanding of the range of instruments applied under Corporatisation. The Appendix focused particularly on the Operating Licence which is, of course, only one of the Corporatisation instruments.

Yours sincerely

DAVE EVANS
Managing Director

FUNDAMENTALS OF CORPORATISATION

Figure 1 sets out the structure created by the Hunter Water Board (Corporatisation) Act under which the Corporation is required to provide services. The structure recognises the fundamental fact that the water industry, by its nature has natural monopoly characteristics. It is therefore important to provide protection of consumers against this monopoly power. World-wide, this protection is provided either by direct government regulation or implicitly through standards and expectations set by the political process. In order to provide the necessary consumer protection, it is necessary to regulate both quality of service (eg water quality, pressure, etc) and price.

The other fundamental characteristic of the water industry is its capacity to impact on the environment and accordingly, the Government has in place through the EPA, regulation of wastewater treatment plant discharges.

In the case of the Hunter Water Corporation, the method of consumer protection adopted is an Operating Licence which specifies a wide range of water and wastewater quality parameters and price limitations. The performance of the Corporation against this Operating Licence is audited annually and the results of the audit made available publicly. The Act provides for substantial fines and other penalties for breach of the Licence conditions. Such a formal regulatory regime to provide consumer protection is not in existence elsewhere in Australia.

It is important to note, however, that the Operating Licence is not the only instrument of Corporatisation. In addition to its role as a Government regulator, the Government has an obligation as an owner of the Hunter Water Corporation to ensure it performs effectively as a business. It is necessary for the Hunter Water Corporation to operate efficiently, pursue relevant new technologies, etc. The requirements of ownership of the Government are summarised in a Statement of Corporate Intent (see Figure 1) and performance against these requirements is assessed by the Treasury on behalf of the Government as the owner.

Performance against EPA environmental regulation is, of course, separately assessed against licences issued under the Pollution Control Act.

In addition to these instruments, Corporatisation establishes a clear role for the Department of Water Resources to make water available to the Hunter Water Corporation. The Corporation does not have regulatory powers to directly regulate water use or approve its own developments and must obey the relevant laws in these areas as any other citizen.

The important point is that the Corporatisation arrangements create specific instruments which guide the operation of the Corporation in an explicit and transparent way. These instruments are:

- ◆ EPA Wastewater Treatment Plant Licences.
- ◆ The Operating Licence to provide consumer protection against monopoly power.
- ◆ The Statement of Corporate Intent.

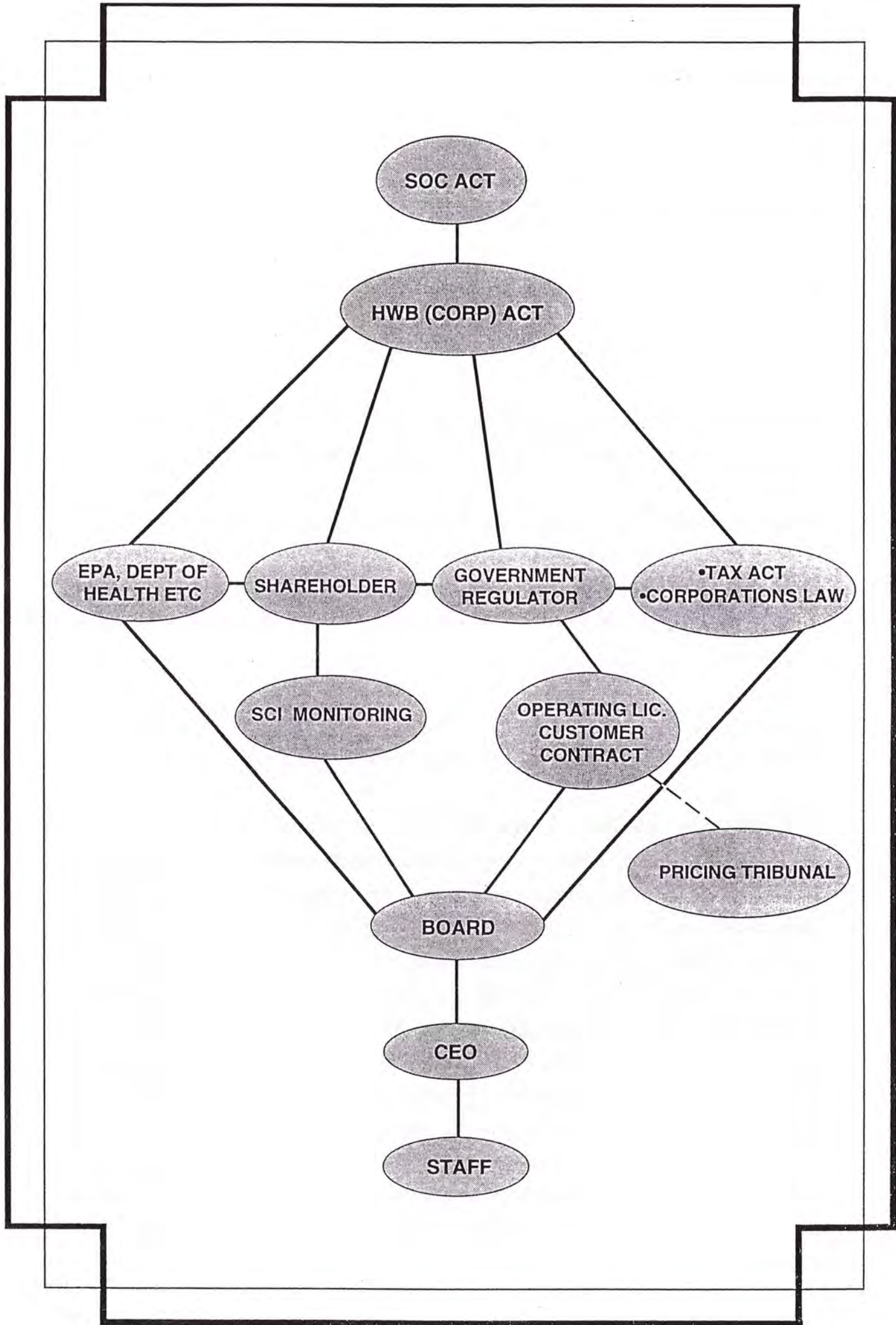
- ◆ A Customer Contract which sets out the rights and obligations of the Hunter Water Corporation and its customers.

In addition, Directors of the Corporation are subject to all the provisions of the Corporation's Law and the incentive that provides for them to ensure efficient service delivery.

In evaluating Corporatisation, it is necessary to consider the merits of the total package and not simply focus on a component part - eg the Operating Licence. As discussed in Appendix 2, the present Draft of your Committee's Report appears to ascribe the Operating Licence a range of responsibilities which actually reside elsewhere in the structure described above.

The Hunter Water Corporation has operated under the above arrangements since 1 January 1992 and a full evaluation of the arrangements is beyond the scope of this brief reply in the timeframe available. However, I offer the following points in evaluation of the benefits, from the process, that have arisen to date:

- ◆ Charges to customers have been limited to below the CPI for the three and a half years concluded 30 June 1995.
- ◆ The Operating Licence has provided a clear focus for the workforce of the organisation to pursue defined objectives in terms of water quality and other aspects of service provision. This has greatly assisted in focusing the workforce, prioritising necessary expenditure, etc.
- ◆ The fact that operational standards are specified and the audit is known to occur provides a greatly enhanced incentive for the organisation to pursue desirable customer service standards.
- ◆ The clearer definition of the Corporation's relationship with government and the clear establishment of legal accountability of the role of the appointed Board has provided a greatly enhanced arrangement for pursuit of efficiency improvements and substantial operating cost reductions are being achieved.
- ◆ The Corporation is being required to make development applications in its own right as other entities are required and the previous Hunter Water Board's privileged position in a number of respects has been removed. This sends a clearer signal to both the workforce and our customers of the need to provide a focused customer service in a responsible way.



ATTACHMENT 2

Hunter Sewerage Project

Apparent View of Existing Appendix

The Hunter Sewerage Project is an example of the Corporation requiring substantial subsidies in order to carry on its core business. The Corporation has not adequately disclosed the subsidy to the public.

There is a general implication in the Appendix that the payment of subsidies is not consistent with the principles of corporatisation. This is not correct.

Payment of subsidies is an instrument by which governments achieve social and environmental benefits and subsidies are paid to a wide range of corporations in both the public and private sectors. Subsidies are an effective and appropriate strategy where the alternative of using directly funded government agencies to achieve the benefits is either impractical or more costly.

The State Owned Corporations Act of course makes explicit provision for payment of subsidies via S.11 which deals with Community Service Obligations.

The Hunter Fringe Area Sewer Scheme was established by the previous government in August 1986 not in 1989. It has since been renamed the Hunter Sewerage Project and is targeted at the provision of backlog sewerage to many areas in the Lower Hunter Valley but particularly on the western side of Lake Macquarie and in Port Stephens. The project arose out of lobbying which had occurred for many years at both the political and environmental level. This lobbying sought the provision of sewerage facilities to small pockets of development on the fringes of the then Board's service area. It was the Board's and subsequently the Corporation's position that the provision of services should be carried out at the cost of the beneficiaries, either through up-front payments or on the basis that future revenue flows were sufficient to justify the capital outlay. In 1986 it was recognised that there were insufficient revenue prospects and, at the behest of the government, a funding arrangement was entered into whereby the scheme would be funded on a 1/3 each basis by the Hunter Water Board, NSW Government and the relevant Local Government authorities.

The significant argument that was put forward by those lobbying for the service was that communities outside the Hunter's area of operation had been, and are still being, subsidised significantly by government through the NSW Country Towns Sewerage Scheme. This scheme has been the vehicle for government funding to most of the country towns in the state including, notably, the Gosford and Wyong local government areas.

In 1988 the government decided that the project should be 50/50 funded between Hunter Water and the State Government and directly incorporated into the NSW Country Towns Scheme. The additional funding requirement from Hunter Water was to be achieved through an environmental levy which recognised the benefit to all sewer users of improvements from the project, particularly the removal of discharges into Lake Macquarie and Port Stephens.

Making inferences "at face value" in respect to the 1991-92 Annual Report and the first half yearly report is unfortunate. It has led to an incorrect conclusion that the Corporation has not clearly recognised the funding arrangements for the Hunter Sewerage Project. The Corporation and the previous Hunter Water Board, together with the government, have publicised the funding arrangements for the Hunter Sewerage Project on many occasions. The non-viability of the project without State Government subsidy has been noted and reported in previous annual reports and has been included in press releases of which several examples are attached.

The scheme pre-dates corporatisation by almost 5 years and, as a result, predates the CSO framework provided by the SOC Act. It is recognised however that it is in fact a subsidy/CSO arrangement.

Developer Charges in Hunter Sewerage Project Areas

Apparent View of Existing Appendix

The Hunter Sewerage Project subsidy is not explicitly referred to in HWC's developer charges model.

The Corporation's model for the calculation of developer charges has been endorsed by the Government Pricing Tribunal for implementation throughout the state and is subject to annual review through the provision of our Operating Licence.

The model is applied universally to all developments across the Corporation. It establishes the cash flows which will result from a given development as operating income, operating cost and capital (system amplification) costs.

In respect to system amplification costs for sewerage for HSP areas, the amount used is \$2,913 which is equivalent to the charge, on connection, to vacant lots existing at the time of inception of the scheme.

Typical charges for sewerage services for a new development in a HSP area would be around \$6,000 which is consistent with charges prevailing in areas outside the HSP.

Competition

Apparent View of Existing Appendix

Competition has yet to appear against the Hunter Water Corporation.

It is widely recognised that the provision of water and wastewater infrastructure is a **natural** monopoly. Government's responsibility is to ensure that such monopolies are regulated for the benefit of consumers and that maximum competition is encouraged within the constraints of the natural monopoly characteristics of the infrastructure. A major focus of corporatisation is in fact to provide the regulatory framework within which HWC as a natural monopolist operates.

The Operating Licence which arises out of corporatisation is explicit in directing Hunter Water not to provide any barriers to the entry of competitors. The Corporation has complied with this requirement. Competition exists in a number of areas - provision of packaged water, underground bores, alternative sewerage systems etc. The Corporation however has no role whatsoever in regulating these services. Alternate sources of water and sewerage services are free to compete subject to the health requirements of councils etc.

Reliance on artificial competition in an uncompetitive environment will not necessarily produce a least cost outcome. It is more important to promote least cost delivery by other means and the corporation has accordingly encouraged and sought participation of private industry by calling tenders for many of its core and ancillary services. It has been a major management strategy of the HWC to "unbundle" the HWC's business into a series of competitive business units which have to compete with the private sector. This has seen services such as construction, maintenance, design, financial asset management etc performed by the private sector.

Demand Management

Apparent View of Existing Appendix

Demand management tools, other than pricing, have not been used to control consumption trends.

A number of demand management tools have been used other than pricing. In 1991 a major campaign was conducted in the media and through community activities encouraging consumers to reduce their consumption by adopting water wise habits. The Corporation has run extensive water conservation campaigns focused on building customer awareness through the media and promotional material. In addition, we have promoted concepts such as the water efficient house which examined the provision of water efficient devices and, where appropriate, retrofitting these devices. We have also conducted and continue to conduct leak detection programs and promote effluent re-use initiatives.

Commitment to Pipes and Water Based Systems

Apparent View of Existing Appendix

The Corporation has committed itself and its customers to a single technology - pipes and water based sewerage.

It is unfortunate that the references which described proven alternatives were not available in addressing this issue. The Corporation is continually monitoring the development of new technologies and is recognised inside and outside the water industry as a technological leader. It is committed to allowing its customers to use technologies other than the pipe and water based systems that it provides.

The Corporation has no regulatory function in respect to provision of services but generally, the customer base, and more specifically the developers of land, want traditional systems. This is in response to the requirements of the planning controllers and regulators such as NSW Department of Health and councils. As an example, Department of Health explicitly now requires residential subdivisions with a reticulated water supply to be sewerred. (See Department of Health circular attached)

In the past, councils have permitted development to proceed without reticulated sewerage and this has resulted in the problems which the Hunter Sewerage Project is addressing. In particular, this lack of reticulated sewerage, while it has relied on "adequate" pan or septic systems, both of which remove the bodily waste from the residence but not necessarily from a property in a controlled manner, has not been environmentally sound.

Grey water from washing and bathing etc has proven to be a substantial environmental and public health hazard. Studies have shown that sullage accounts for over 50% of the pollutant load generated within households and that without reticulated systems the sullage deposited on residential land results in run-off to neighbours' land, roadways, and water bodies. It should be noted that dry toilet systems rely generally on land disposal. They are therefore inconsistent with medium and high density development and consequently do not really lend themselves to urban consolidation.

The Operational Audit

Apparent View of Existing Appendix

The scope of the operational audit is too narrow and avoids consideration of pricing and commercial performance issues.

As discussed in Annexure 1 the appendix confuses the Operational Audit, which measures compliance with the Operating Licence, ie performance in regard to service delivery, with the assessment of commercial performance by the Corporation. Commercial performance is assessed by the shareholders through the GTE Monitoring Unit and not the Operational Audit.

It is similarly not the role of the Operational Audit to examine the extent of non-commercial activities or the payment of government subsidies. In respect to pollution reduction programs, it is the EPA's role to monitor and control these programs and attention is drawn to the operational audit report which noted the comments of the regional office of the EPA in commending the co-operative attitude of the Corporation to the EPA's activities.

Pricing issues are of course now addressed through the operation of the Government Pricing Tribunal.

Circumstances of the Audit

Apparent View of Existing Appendix

The operational audit does not require specific technical expertise and the appointment of a national firm of environmental engineers creates a potential conflict of interest as they have indirectly carried out work in regard to the performance they are auditing.

It is of paramount importance that technical expertise is available to the audit. Without this expertise the thorough assessment of what is a very complex set of operating performance criteria can't be carried out satisfactorily. It is not an environmental audit, it is an operational audit.

The audit is made public and the process generally received substantial scrutiny. It would clearly not be in the interest of the auditor to jeopardise its professional status by carrying out the task in an incomplete way.

In appointment of the auditor, initial assessment was made on technical qualification. All of those organisations which were technically qualified and submitted an expression of interest had had some previous dealings with the Corporation. The appointment of a national firm of environmental engineers did not create any material conflict of interest.

Successes

Apparent View of Existing Appendix

None of the successes quoted depend on corporatisation being implemented.

Corporatisation has been either essential or extremely instrumental in facilitating the successes quoted.

In respect to land use decisions and the requirement for the Corporation to lodge development applications for its works, this accountability arises due to the Corporation losing Part V powers under the Environment Planning & Assessment Act as a direct result of corporatisation.

The atmosphere of open management that prevails within the organisation has been enhanced by the corporatisation process and particularly by the focus on service delivery. The major items in respect to the open section of Board meetings are in fact consideration of performance against the Operating Licence criteria.

The streamlining of middle and senior management has been an ongoing process for some years but once again has been enhanced and facilitated by the move to a corporate structure. The public auditing of service performance quoted and the operational audit is of course a direct result of corporatisation. Similarly, the accountability for developer charges.

In respect to dividend payments, corporatisation and, explicitly, the Statement of Corporate Intent prescribed by the SOC Act, has provided a framework for defining the payment of dividends. In addition to the SOC Act, corporatisation brings the organisation into the ambit of the Corporations Law. This results in the sanctions and control framework of the Corporations Law giving guidance and incentive to the Board of Directors.

User pays or appropriately reciprocal charging in respect to public sector organisations such as councils and others occurred because of the corporatisation process.

ATTACHMENT 3

In regard to the specific questions raised:-

- (a) *How does the Corporation calculate the user pays component of its sewage charge to customers and what is the current charge?*

The Corporation calculates the user pays component of its sewer charge by establishing the proportion of water delivered which is subsequently taken into the corporation's wastewater system. It establishes the volume by assessing a discharge ratio which varies from 0 - 100% and applying that to the metered consumption. The standard discharge factor for residential properties is 50% and the current residential charge is \$1.172 per kl of discharge.

- (b) *Does the Corporation reduce sewage usage charges to customers who reduce usage of the sewerage system? How does the charge reduce in these cases?*

Reduction in sewer usage occurs through an overall reduction in water consumed. The reduction is reflected in overall reduced usage charges through reductions in metered consumption.

- (c) **What competition is there (please name the competitors if they are known to the Corporation) that also provide water and sewage in the Corporation's area?**

As noted in Attachment 2 the Corporation operates in a natural monopoly. There are, however, peripheral competitors. These competitors provide:-

- * packaged and tankered water
- * underground bores in domestic and industrial (BHP etc) applications
- * alternate sewerage systems.

Additionally, a wide range of core and ancillary services to the Corporation are increasingly sourced through external tender.

EXPLANATORY GUIDE FOR LAND DEVELOPERS & COUNCILS
FOR PROPOSED SUBDIVISIONS - DOMESTIC WASTEWATER DISPOSAL

The NSW Health Department has adopted a Policy concerning the disposal of domestic wastewater for proposed subdivisions. It requires that all proposed subdivisions which do not comply with the Policy be submitted to the NSW Health Department for review, prior to the granting of development consent.

In brief, the Policy requires all future subdivisions involving lot sizes of less than one hectare and provided with reticulated water to be seweraged.

It should be noted that applications submitted to the NSW Health Department for comment may be unduly delayed, should the developer and/or Council submit an application which may be incomplete in detail, or fails to address the specific Policy matters.

Many development applications in the past have been submitted on the basis that subdivisions could be serviced by conventional (or in more recent times by aerated) septic tank systems, without due consideration of a number of factors - eg maintenance of the units & water catchments. Any subsequent failure of such systems can give rise to public health nuisances and the rectification is a cost usually borne by the property owner. The Policy addresses the priority for reticulated sewage treatment/disposal and the specific requirements of the Department.

Provision exists within the Policy for consideration of an application outside the Departmental recommendations, should it be considered exceptional circumstances exist, eg a package treatment plant to be installed by the developer and later handed over to Council. Should it not be possible to connect a development to a sewerage system, a development may be premature. All such applications will be subject to a thorough evaluation by Environmental Health Officers.

The Policy also recognises the provisions for dual occupancy and the additional volume of effluent and sullage water generated. It also recognises that most new dwellings are provided with automatic washing machines and automatic dish washing machines. An unrestricted water supply, ie a reticulated supply, (including bore water which is intended for non-potable use) will further aggravate any on-site disposal of waste water, as some occupants have little incentive to reduce the amount of water used within the dwelling.

In some instances, the NSW Health Department shares common environmental concerns with other Government Departments (eg Water Resources; Environment Protection Authority and Conservation & Land Management) and will, if necessary, consult with those Departments.

Enquiries concerning this Policy may be directed to an Environmental Health Officer at the NSW Health Department at the closest Public Health Unit.

4 August, 1992

PUBLIC HEALTH SERVICES BRANCH
Macquarie Hospital
Wicks Road North Ryde NSW 2113
PO Box 380 North Ryde NSW 2113
Telephone (02) 887 5608 Facsimile (02) 885 7210

LIST OF SUBMISSIONS

	<u>NAME</u>	<u>ORGANISATION</u>
1.	Mr John Carter (Managing Director)	Sage Analytics Australia Pty Ltd
2.	Mrs J. Marshall	
3.	Ms Lee Cahill	
4.	Mr Cahill	
5.	Ms Wills	
6.	Mr Brian Carey	Public Relations Audit
7.	Mr Ron Maxwell (Secretary)	Retired Members Association
8.	Ms Mae Willmott	
9.	Mr Bruce Galloway (Manager/Director)	Sirani Pty Ltd
10.	Ms Margaret Edmonds	Clivus Multrum
11.	Mr J. Hodges (President)	Ballina Environment Society Inc
12.	Alex & Pat Elphinston (Joint Secretaries)	Left Connection Group
13.	Ms Hennon	
14.	Dr K.R. Makinson	
15.	Ms Toni Sinclair	
16.	Dr Rex Campbell (Vice President)	Surfrider Foundation
17.	Mr Gerard Ygosse (President)	Arrawarra Beach Community Group
18.	Mr K.D. Staples (Managing Director)	Davies-Kent (NSW) Pty Ltd
19.	Mr Tim Moore (Ex-Environment Minister) Mr David Harley (Former Chairman, Water Board) Mr Bob Wilson (Former Manager, Water Board)	
20.	Mr Rob Becher	Coalition Against Ocean Outfalls Inc
21.	Mr Garry Tipping (Systems Planner, Civil Engineer)	Sydney Water Board
22.	Mr Mark Guttenberg	
23.	Mr John McEwan (General Manager)	J. Blackwood & Son Ltd
24.	Dr Sharon Beder	
25.	Mr Wallis (Director)	Consulting Environmental Engineers
26.	Ms Evelyn Churchill	Community Advisory Group for The Oaks, Oakdale and Belimba Park Sewerage Scheme
27.	Dr Terry Lustig	Environmental Management Pty Ltd
28.	Ms Jenny Edwards (Hon Secretary)	The Coastwatchers Association Inc

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| 29. | Mr D. J. Baker | Picton Community Working Party |
| 30. | Ms Heather Clark
(Executive Officer) | Manly Municipal Council |
| 31. | Mr Steve Procter | |
| 32. | Dr David Russell
(Assoc. Professor, social ecology) | Centre for Social Ecology of Water &
Waste Management
Uni of Western Sydney, Hawkesbury
The Council of the City of Holroyd |
| 33. | Mr D. Trezise
(General Manager) | |
| 34. | A.G. Colley OAM
(Hon. Secretary) | The Colong Foundation for
Wilderness Ltd |
| 35. | Mr R.M Grimwade
(Director) | Centennial Park & Moore Park Trust |
| 36. | Mr Ronald Gornall
(Secretary) | Lane Cove Bushland & Conservation
Society Inc |
| 37. | Mr Rohan Boehm
(Team leader) | Hawkesbury River Centre |
| 38. | Mr George Threlfo | |
| 39. | Dr Terry Lustig
(Director) | Enviroloo |
| 40. | Ms Sally Berridge
(Chairperson) | Fluoride Working Group,
Blue Mountains City Council |
| 41. | Associate Professor P. Adam
(President) | Coast & Wetlands Society Inc |
| 42. | Mr John Archer | John Archer & Associates |
| 43. | Mr V. Dimitrov | R.A.G.E. |
| 44. | Mr Anthony Hancy
(Managing Partner) | Anderson Consulting |
| 45. | Mr Harold Scruby | |
| 46. | | GREENPEACE |
| 47. | Mr Graham Higgins
(Convenor, NSW Gvt & Industrial
Relations Committee) | National Association of Personnel
Consultants |
| 48. | Mr A.R. Dunlop
(Director) | Sydney Rainwater Tanks |
| 49. | Mr Paul Moy
(Deputy Secretary) | NSW Treasury |
| 50. | Mr Michael Rolfe
(President) | The Vacluse Progress Association |
| 51. | Mr Bill Hann
(Director) | Engineering and Technical
Consultants |
| 52. | Mr Michael Johnson
(Director) | Public Sector Research Centre |
| 53. | R & E Carlisle-Sainty | |
| 54. | Mr Rhett Butler | |
| 55. | Mr Dean Cameron | DOWMUS Pty Ltd |
| 56. | Mr A. Ferrier
(Area Manager, South East) | Dept of Conservation & Land
Management |

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| 57. | Ms Lesley Scarlett
(Executive Officer) | Illawarra Region of Councils |
| 58. | Ms Lyndall McCormack | |
| 59. | P. Armytage
(A/Hon Secretary) | Australian Institute of Urban Studies
NSW Division |
| 60. | Mr R.D. Kempshall
(General Manager) | Municipality of North Sydney |
| 61. | Mr Douglas Sewell | Manly Resident Alert |
| 62. | Mr David Wallin
(Secretary) | Curl Curl Lagoon Committee |
| 63. | Mr Jonathon Howard | |
| 64. | Mr V.J. Polich
(National Manager) | Warman International Ltd |
| 65. | Mr Phil McGrath
(NSW State Manager) | Hardie Ipex Pipeline Systems |
| 66. | Mr Peter Millington
(Director-General) | Department of Water Resources |
| 67. | Mr John Hannah | |
| 68. | Mr Leo Braun | |
| 69. | | Australian Services Union (NSW
Branch) |
| 70. | Mr Pierre Alla
(Managing Director) | NSW Water Services |
| 71. | Ms Heather Neil | Western Sydney Regional
Organisation of Councils (WSROC) |
| 72. | Mr Ron Farrell
(President) | Cook's River Valley Association |
| 73. | Mr Chris Davis
(Executive Director) | Australian Water & Wastewater
Association Inc |
| 74. | Ms Jenny Smith
(Vice President) | CHANGE |
| 75. | J. Britton
(Shire Health & Building Surveyor) | Wollindilly Shire Council |
| 76. | Mr Colin Cass | Campaign to End Sewage Smells |
| 77. | | Nature Conservation Council of NSW |
| 78. | Mr Jeff Mansfield | Mallesons Stephens Jaques |
| 79. | Mr David Kettle
(President) | Royal Australian Planning Institute
(NSW) |
| 80. | Mr Ross de la Motte
(President, AILA NSW State Group) | Australian Institute of Landscape
Architects |
| 81. | Mr Alph Williams | Coalition Against Ocean Outfalls Inc |
| 82. | Ms Diana Shanks | |
| 83. | Mrs Gabrielle Kibble | Department of Planning |
| 84. | Mr Norman and Mrs Helen Michener | |
| 85. | Mr John and Mrs Beryl Schweikert | |
| 86. | Ms N. Austin | |
| 87. | Mr Denis Hanley | MEMTEC Ltd |

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|------|---|---|
| 88. | Mrs Nancy Hillier
(President) | Botany Environment Watch |
| 89. | Mr Greg Nichols
(Manager) | Caroma Industries Ltd |
| 90. | Dr Neil Shepherd
(Director-General) | Environment Protection Authority |
| 91. | Mr A.C. Harris
(Auditor-General) | Auditor-General's Office NSW |
| 92. | | Water Board |
| 93. | | Australian Conservation Foundation |
| 94. | Mr Barry Alchin
(Managing Director) | Austin Chemical Company Pty Ltd |
| 95. | Mr Alex Payne
(Acting General Manager) | Austral Pipes Australia |
| 96. | Mr Ralph Kaye
(Deputy Manager) | Centre for Wastewater Treatment
University of NSW |
| 97. | Mr Colin James | School of Architecture
University of Sydney
Cremorne Point Precinct
c/o North Sydney Council |
| 98. | Mr Peter Tesoriero
(Chairman) | |
| 99. | Mr R. Huggett | Surfrider Foundation |
| 100. | Mr Mick Barlow | Oxford Progress Association |
| 101. | Mr Chris Wilmott | Coalition Against the Welcome Reef
Dam |
| 102. | Mr Frank Miller | |
| 103. | Mr Leo Braun | (supplementary submission) |
| 104. | Mr Stephen Lees | Upper Parramatta River Catchment
Trust |
| 105. | Mr Greg Hawken | |
| 106. | Mr Derek Urquhart | |
| 107. | Mr J. Carse
(Manager - Design Services) | Parramatta City Council |
| 108. | Mr D.R. Cafe
(General Manager) | The Council of the Municipality of
Woollahra |
| 109. | | Urban Development Institute of
Australia |
| 110. | | Sydney Coastal Councils |
| 111. | Ms Heather Clark
(Executive Officer) | Manly Municipal Council |
| 112. | Mr W. I. Taylor
(Acting General Manager) | Ku-ring-gai Municipal Council |
| 113. | | Baulkham Hills Shire Council |
| 114. | The Hon Bruce Baird, M.P. | Minister for Transport and Minister
for Roads |
| 115. | Councillor Vic Smith
(Mayor) | Office of the Mayor of South Sydney |
| 116. | Mr J.O'Grady | Hawkesbury City Council |
| 117. | Mr Gary Donovan | NSW Irrigators' Council |

- (Executive Director)
118. Mr Tony Hall
119. Mrs Graham-Taylor
120. Mr Murray Kidnie
(Secretary) Local Government Association of
NSW
121. Mr & Mrs J. & P. Hair
Mr & Mrs S. & K. Maltby
122. Mr J.W. Bourke
(General Manager) The Council of the City of South
Sydney
Marrickville Council
123. Alderman Barry Cotter
(Mayor of Marrickville)
124. Dr Garry Smith
(Principal Environmental Scientist) Sutherland Shire Council
125. Department of Public Works
126. Mr Robert Bell
(tabled 3/9/93) Nepean-Hawkesbury Catchment
Management Council
127. Mr Rowan L. Gear
128. Ms Florence Short Vineyard Riverstone Development
Committee
129. Mr Andrew Doig
(NSW Environmental & Technical
Services Manager) Australian Chamber of Manufactures

MINUTES OF PROCEEDINGS

**Wednesday, 26 May 1993
at 1.00pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan	Hon. E. Obeid
Mr A. Humpherson	Hon. A. Manson
Mr C. Knowles	Hon. J. Gardiner
Mr B. Morris	Hon. P. Forsythe
Mr A. Packard	Hon. J. Ryan

Copies of the minutes of the previous meeting held on 20 May, 1993 were circulated and confirmed as correct.

The Committee discussed the staffing needs of the Committee and confirmed that Ms Catherine Watson be appointed as Project Officer, and that a technical consultant be appointed on a part-time basis to assist the Committee. The Chairman and the Clerk were to make inquiries and advise the Committee at the next meeting.

The Clerk outlined the budget available to the Committee.

The Committee considered a draft advertisement seeking submissions and agreed that it be published on 5 June, 1993 seeking submissions by a closing date of 30 July, 1993.

The Chairman advised the Committee that he had written to the Minister seeking formal appointment of a liaison officer, and that Dr B. Kelly had been nominated to that role.

At 1.00pm the following officials joined the Committee for a briefing session:

- Mr Bruce Grimshaw (Australian Services Union)
- Mr Joe Fisher (union representative)
- Mr John Werda (APESA)
- Mr Paul Broad (Managing Director, Water Board)
- Dr Bronwyn Kelly (Project Manager, and liaison officer to the Committee)
- Mr Tony Robinson (Policy Advisor to the Minister)

Discussions ensued.

The members agreed to a suggestion by Mr Broad that the Committee attend the Water Board to be more fully briefed on the Water Board's management program, the Clean Waterways program, corporatisation, and contracting out.

The meeting adjourned at 2.10pm.

**Thursday, 17 June 1993
at 1.00pm Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan

Hon. E. Obeid

Mr A. Humpherson

Hon. J. Ryan

Mr C. Knowles

Mr A. Packard

Apologies:

Hon. P. Forsythe, Hon. R. Jones, Hon. A. Manson, Hon. J. Gardiner, Mr B. Morris.

In attendance:

C. Watson, Project Officer, M. Mobbs, Consultant to the Committee.

The Chairman opened the meeting.

Mr Ryan proposed that the Water Board liaison officer be permitted to attend all Committee meetings, with the exception of deliberative meetings. The Committee deliberated.

It was moved Mr Knowles, seconded Mr Obeid, that the Committee note the appointment of Dr Kelly as liaison officer. Discussion ensued.

The Committee also discussed the attendance of Members' personal staff at Committee meetings. The Committee Clerk referred to Standing Order 364.

The Committee resolved, on the motion of Ms Allan, seconded by Mr Packard, THAT any Committee member be entitled to be accompanied to briefing sessions by a member of staff, so that members may be assisted in their Committee work.

The Committee discussed the briefing summaries prepared by the consultant and circulated previously. Members requested that, in view of postage delays, all Committee correspondence be faxed or couriered to their electorate or Legislative Council offices.

The Committee discussed the previously circulated draft Issues Paper and suggested amendments. The Consultant undertook to present an amended Issues Paper to members for consideration.

The Committee resolved, on the motion of Ms Allan, that the Issues Paper be publicly released following recirculation of the amended draft and confirmation of the redraft.

Mr Knowles requested that the Director of the Public Accounts Committee be requested to attend a future meeting of the Committee to advise on the process of community consultation and tendering.

The meeting adjourned at 1.45pm, until 2.00pm.

**Tuesday, 22 June 1993
at 9.00am, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan
Mr A. Humpherson
Mr A. Packard

Hon. E. Obeid
Hon. J. Ryan

Apologies:

Hon. P. Forsythe, Hon. R. Jones, Hon. A. Manson, Hon. J Gardiner, Mr B. Morris, Mr C. Knowles.

In attendance:

C. Watson, Project Officer, M. Mobbs, Consultant to the Committee, Dr B. Kelly, Liaison Officer.

The Chairman opened the meeting and welcomed the members of the Water Board:

Mr John McMurtrie
Mr John Calvin
Mr Paul Broad

Dr Judy Messer
Mr Graeme Richardson

Mr McMurtrie addressed the Committee on challenges facing the Board, key achievements, the role of the Board under the Act, the Board's legal powers and responsibilities and corporatisation.

Members of the Committee discussed with the Board issues arising from Mr McMurtrie's address.

The Chairman thanked members of the Board for attending.

The meeting adjourned at 11.00am.

**Tuesday, 20 July 1993
at 1.00pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan
Mr C. Knowles
Mr A. Humpherson
Mr A. Packard

Hon. P Forsythe
Hon. R Jones
Hon. A Manson
Hon. J Ryan

Apologies: Hon. J. Gardiner, Mr B. Morris, Hon. E. Obeid.

In attendance: C. Watson, Project Officer, M. Mobbs, Consultant to the Committee.

The minutes of the meeting and briefing session held 15 July, 1993 were confirmed, as amended, on the motion of Mr Ryan, seconded by Mr Humpherson. Minutes of earlier meetings were circulated and will be considered at the next meeting.

Copies of correspondence from the Auditor General dated 16 July 1993 were circulated.

The transcript of the briefing session held 15 July, 1993 was circulated.

The Chairman referred to the Committee's decision to be informed by the Consultant of his briefing sessions with the Water Board and advised that all members would be invited to attend any briefing involving a level of preparation by the Board.

The Committee discussed proposed witnesses for the public hearing on 29 July and agreed that Mr Wilson, Mr Harley and the Hon T Moore should be invited and heard separately.

The Clerk advised that the Water Board had been requested to find out the cost of the proposed helicopter site visit, and that a proposed date for the trip was 11 August.

The Committee agreed that time should be allocated in the future hearing dates to hear from the Water Resources Commission and the Water Board on the contractual issues raised in the correspondence between the Chairman and the Minister for Land and Water Conservation (dated 20 July).

The Committee considered submissions received to date, and submissions 23-26 which were circulated at the meeting. The Chairman proposed submission 1 and submission 9 and the Committee agreed to hear them.

The Committee agreed that, rather than hear from the Surfrider Association the Department of Planning should be asked to brief the Committee on SEPP 32.

Ms Allan proposed submission 7 and the national water resource body. Mr Knowles undertook to provide a list for the Committee to consider as witnesses as the hearings on 12, 17 and 26 August.

The Committee agreed that it should hear from witnesses on the issues of contracts, access, dividends and pricing policy.

The Committee agreed that a representative of Treasury should be called on the matter of finance and dividend payments. Other suggestions for witnesses were an officer from "Ocean Watch" (EPA) and someone from the Public Works Department to advise on value studies of projects over \$45,000.

Mr Packard suggested that the Committee group witnesses from the north-west sector, eg Baulkham Hills council, David Hughes, and the relevant Water Board officer for that region.

The Committee also agreed that on the morning of the 4th August, the Local Government Association, the Urban Development Institute of Australia and the Department of Planning should be called. Submission 24 should also be called.

The Hawkesbury Catchment Trust were to be approached for a submission.

The Clerk undertook to circulate members of times, dates and places of hearings as soon as the witnesses were finalised.

The consultant spoke to the minute previously circulated entitled "Developers contributions".

The meeting adjourned at 2.05pm.

**Thursday, 29 July 1993
at 2.00 pm, Parliament House, Sydney.**

Present:

Dr Macdonald (Chairman)

Ms Allan
Mr Humpherson
Mr Knowles

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. E. Obeid
Hon. J. Ryan

Apology: Mr Morris.

The press and public were admitted.

The Hon. Timothy John Moore, former Minister for the Environment, sworn and examined.

Evidence concluded, witness withdrew.

Mr David Anthony Harley, former Chairman of the Sydney Water Board, sworn and examined.

Evidence concluded, witness withdrew.

Mr Robert Ernest Wilson, former Managing Director of the Sydney Water Board, affirmed and examined.

Evidence concluded, witness withdrew.

The Committee adjourned 5.05 pm.

August 4, 1993
at 9.30am, Parliament House, Sydney.

Present:

Dr Macdonald (Chairman)

Ms P. Allan
Mr C. Knowles

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. J. Ryan
Hon. E. Obeid

Apologies: Mr B. Morris, Mr A. Humpherson.

In attendance: Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

At 9.30am the Chairman opened the meeting. The Clerk circulated submissions number 42-89.

The press and public were admitted.

Mr. Laurence Michael Rose, consulting engineer, and Mr Richard Alan Hereward Harper, Executive Director, Urban Development Institute of Australia, sworn and

examined. Receipt of summons acknowledged, the witnesses tabled a submission which was circulated to members. Mr Harper addressed the Committee, and then the witnesses answered questions asked by Members.

Evidence concluded, the witnesses withdrew.

Alderman Peter Robert Woods, President of the Local Government Association of NSW, affirmed, addressed the Committee and was then examined.

Evidence concluded, witness withdrew.

Ms Gabrielle Kibble, Acting Director, Department of Housing and Director, Department of Planning, affirmed and examined.

Evidence concluded, witness withdrew.

Mr Peter Millington, Chief Executive Officer, Department of Water Resources, sworn and examined. The Committee questioned the witness. Evidence concluded, the witness withdrew.

Mr Kelvin Ernest O'Keefe, solicitor, Mr David Michael Manzi, former Manager of Drinking Water Program and Mr Alan Andrew Dodds, Manager, Water Resources Program, Water Board, sworn and examined. The Chairman tabled copies of his correspondence with Mr Souris, Minister for Land and Water Conservation dated 12 July 1993 and 20 July 1993.

Dr Sharon Beder, Lecturer, Department of Science and Technology Studies, University of Wollongong, affirmed and examined by the Committee. Evidence concluded, the witness withdrew.

Mr Frederick John Carter, Managing Director, SAGE Analytics Pty Ltd sworn and examined.

The Committee adjourned 4.40 pm, until 9.00am on Thursday, 12 August, 1993.

**Thursday, 12 August 1993
at 9.15am, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Mr C. Knowles
Mr A. Humpherson

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. E. Obeid

In attendance: Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Apologies: Hon. J. Ryan. Mr B. Morris

Resolved, on the motion of Mr Manson, seconded Ms Forsythe, that the minutes of the meeting and proceedings held 4 August, 1993 be confirmed.

The Committee considered the draft agendas circulated for the hearings scheduled on 17 August, 26 August, 3 September and 10 September. The Chairman noted that there was sufficient time allotted on the latter two dates to permit selective recalling of witnesses. The Committee considered which further witnesses and ministers should be called or invited to attend hearings.

Resolved, on the motion of Ms Forsythe, seconded Mr Manson, that 10 September be set as a hearing day, and that no further hearing days be set.

The Committee considered correspondence received from the Water Board concerning access to contracts and schedules as requested by the Committee. The Committee deliberated, and it was resolved, on the motion of Mr Humpherson, seconded by Mr Jones, that the Chairman write to the Water Board and request that commercial information which the Board considered to be confidential to be concealed in the contracts, so that members might be allowed access to the rest of the full contracts, in order to ascertain whether aspects of public interest were being served. Members could then consider whether confidentiality should apply.

The Committee considered correspondence received from the Water Board advising that a summary of the Appointed Board's agenda items and list of outcomes would be provided.

Resolved, on the motion of Mr Obeid, seconded Mr Knowles, that the Chairman should request provision of full narrative minutes.

The Chairman notified the Committee of the appointment of Mr O'Doherty to replace Mr Packard, discharged on 9 August, 1993.

The Consultant briefed the Committee on his activities and meetings.

The Committee agreed to permit the ABC to record background footage without sound of the early part of the hearings to be held later in the day. Meeting adjourned 9.55am.

**Tuesday, 17 August 1993
at 9.00am, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan

Mr A. Humpherson

Mr C. Knowles

Mr S. O'Doherty

Hon. P. Forsythe

Hon. J. Gardiner

Hon. A. Manson

Hon. J. Ryan

Apologies:

Hon. E. Obeid, Hon. R. Jones, Mr B. Morris

In attendance:

Mr M. Mobbs, Consultant to the Committee, Ms K. McLean,
Assistant Committee Officer

Minutes of previous meeting.

Resolved, on the motion of Ms Forsythe, seconded Mr Ryan, that the minutes of the meeting and proceedings held 12 August 1993, as amended, be confirmed.

Future hearings

The Committee considered the draft agendas circulated for the hearings scheduled for 26 August, 3 September and 10 September.

Resolved, on the motion of Ms Allan, seconded Mr Knowles, that the Committee invite the Hon. R. Webster, Hon G. West, Hon G. Souris and Mr Schipp to attend a future hearing at a suitable time.

The Committee deliberated on other witnesses to be called on the three scheduled days of hearings.

The Committee agreed to call Sydney Coastal Council, the Centre for the Social Ecology of Water and Waste Management and the authors of submission no. 40 dealing with water fluoridation.

The Chairman tabled copies of correspondence between him and the Managing Director of the Water Board concerning access to the Minutes and Business Papers of the Appointed Board and the draft contracts and associated schedules for the Build, Own Operate water filtration plants. Copies of submission nos 110-113 were also circulated.

The Chairman raised a matter concerning comments by the Deputy Leader of the Opposition on 16 August 1993 concerning funding of water supply and sewerage

treatment in the north-west sector. The Committee agreed that there would be no objection to members asking questions of the Managing Director of the Water Board, when he next appeared before the Committee, regarding infrastructure funding and other issues related to the north-west sector. The Consultant agreed to seek further information from the Water Board regarding differences in funding policy between Part 4 and Part 5 developments.

The Committee discussed their future work program and agreed that the Chairman's draft report should be circulated one week prior to the meeting scheduled for the week commencing 20 September 1993, in order that it may be fully considered. The Committee agreed that the deliberative meeting to consider the draft report would be held on Friday 24 September from 11.00am - 5.00pm, and that the meeting previously scheduled for 22nd September would be cancelled.

The Chairman commented on press reports that some members of the Committee were critical of the Committee being established, and expressed concern that the value of the Committee's work might be eroded. The Committee deliberated on copies of the article which were circulated and the Chairman stated that he would seek confirmation of the Minister's continued support for the Committee.

The deliberative meeting adjourned at 9.45am prior to the hearing being opened to the public.

At 4.25pm the Committee resumed deliberative session.

The Clerk confirmed details for the helicopter site visit to be attended by 3 members of the Committee.

Mr Ryan referred to the Committee's earlier decision to invite Messrs Souris, Webster, Schipp and West to address the Committee

The Committee resolved on the motion of Mr Ryan, seconded by Mr Humpherson, that Ministers Souris and Webster be invited by letter to address the Committee, and that the Hon. G. West and Mr Schipp not be invited until Ms Allan could advise of the issues to be pursued.

The Committee adjourned at 4.40pm until 3 September, 1993 at 9.00am.

**Friday, 3 September 1993
at 9.00am, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Mr A. Humpherson
Mr C. Knowles
Mr S. O'Doherty

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. J. Ryan

Apologies: Hon. E. Obeid, Ms P. Allan

In attendance: Mr M. Mobbs, Consultant to the Committee, Ms K. McLean,
Assistant Committee Officer

Minutes of previous meeting

Resolved, on the motion of Ms Forsythe, seconded Ms Gardiner, that the Minutes of the meeting and proceedings held 17 August 1993, as amended, be confirmed.

Copies of submissions nos 121-123 were circulated.

1. Arrangements regarding the viewing of the BOO Contracts

The Committee discussed correspondence from the Board concerning viewing of the contracts for Build, Own, Operate works.

The Committee agreed to schedule a meeting for 2.00 pm on Tuesday, 7 September to receive the contracts and arrange for in-camera viewing. The Consultant agreed to sign a confidentiality agreement.

2. Letter from Hon. George Souris, MP

Copies of correspondence between the Committee and the Hon. George Souris were circulated. The Committee deliberated, and noted that the Minister would not be appearing before the Committee.

3. The Committee considered the draft agenda circulated for the hearing scheduled for 10 September and confirmed that the meeting scheduled for 24 September would be to deliberate on the draft Report.

The deliberative meeting concluded at 9.35 am.

**Tuesday, 7 September 1993
at 2.00pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Mr C. Knowles

Hon. P. Forsythe

Hon. J. Gardiner

Hon. J. Ryan

Apology: Hon. E. Obeid

In attendance: Mr Tony Richards, Mr Colin Nicholson, Mr David Manzi, from the Water Board, Mr M. Mobbs, Consultant to the Committee, and Ms C. Watson, Project Officer.

Mr Mobbs signed a confidentiality agreement relating to the contracts to be tabled.

Pursuant to the resolution of the Committee of 3 September, 1993, Mr Richards tabled two Water Filtration Agreements entered into by the Water Board, to be available in camera for viewing by members of the Committee until 6.00pm.

The Committee agreed to meet on the following day at 2.00pm to receive documents to be tabled from a witness, which documents would be made available to members on request.

The meeting formally concluded at 6.25pm.

**Wednesday, 8 September 1993
at 2.00pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Mr A. Humpherson

Hon. R. Jones

Mr C. Knowles

Hon. J. Ryan

Apologies: Ms P.Allan, Hon. P. Forsythe, Hon. E. Obeid.

In attendance: Ms C. Watson, Project Officer and Mr M. Mobbs, Consultant to the Committee.

The Chairman declared the meeting open and tabled documents received that day from Mr David Harley, in relation to evidence he had given earlier before the Committee. The Committee resolved, on the motion of Mr Ryan, seconded Mr Knowles, that the documents be received.

Mr Ryan raised concerns regarding breach by Mr Knowles of the in camera proceedings of the previous day without consultation with the Chairman to get a ruling. The Committee deliberated and Mr Knowles undertook to have his taped records prepared by the Secretariat.

The Committee adjourned at 2.10pm until 9.00am on Friday 10 September.

**Friday, 10 September 1993
at 1.10pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan

Mr A. Humpherson

Mr C. Knowles

Mr M. Richardson

Mr S. O'Doherty

Hon. P. Forsythe

Hon. J. Gardiner

Hon. R. Jones

Hon. A. Manson

Hon. E. Obeid

Hon. J. Ryan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

The Chairman welcomed Mr Richardson, who had been appointed to replace Mr Morris, discharged.

Minutes of the Meetings 3 September, 7 September and 8 September were confirmed, as amended, on the motion Mr Knowles, seconded by Ms Allan.

Correspondence

The Committee deliberated on correspondence received from the Minister for Planning, Mr Webster.

The Committee reminded the Secretariat that all material distributed to members should be enveloped to ensure confidentiality is maintained.

Mr Knowles moved, seconded Ms Allan, that the Chairman write to Minister Webster, advising that he is factually incorrect in asserting that any copy had been taken of documents and that the Committee resents the inferred intimidation in referring the matter to the Legislative Council Committee.

Mr Ryan moved, seconded Mr O'Doherty, that the motion be amended by deleting all words after "advising that" with a view to inserting "the Committee expresses

concern at the fact that Mr Knowles took 'in camera' material to his office without the consent of the Committee and that the matter has been referred by the Chairman to the Legislative Council Privileges Committee".

The Committee deliberated.

The Chairman put the question "that the amendment be agreed to". The Committee divided:

Ayes

Mrs Forsythe
Ms Gardiner
Mr Humpherson
Mr O'Doherty
Mr Richardson
Mr Ryan

Noes

Ms Allan
Mr Jones
Mr Knowles
Mr Manson
Mr Obeid
Dr Macdonald

The votes being equal, the Chairman exercised his casting vote with the noes and so the question was lost.

Mr Knowles moved, seconded Ms Allan, that the motion be amended by deleting all words after "documents". The Chairman put the question and the Committee divided:

Ayes

Ms Allan
Mr Jones
Mr Knowles
Mr Manson
Mr Obeid
Dr Macdonald

Noes

Mrs Forsythe
Mr Humpherson
Ms Gardiner
Mr O'Doherty
Mr Richardson
Mr Ryan

The votes being equal, the Chairman exercised his casting vote with the ayes and so the motion was carried.

The Committee resolved, on the motion of Mrs Forsythe, seconded by Mr Ryan, that no further correspondence be sent in the name of the Committee without the Committee being advised, and that any other correspondence be sent in the name of the Chairman.

General Business

The consultant briefed the Committee on his activities and progress with the draft report.

Ms Allan noted the delay in the Water Board providing copies of the documents previously requested.

The Committee deliberated on availability for future hearings and meetings. Mr Jones moved, seconded Ms Allan, that the Committee meet for two one hour sessions in the coming week, for hearings only. The Secretariat circulated a calendar to members to ascertain the most suitable time and would advise members within 24 hours.

At the conclusion of deliberations the Committee resumed hearing witnesses.

**Wednesday, 15 September 1993
at 6.20pm, Parliament House**

Present:

Dr P. Macdonald (Chairman)

Mr C. Knowles
Mr S. O'Doherty
Mr M. Richardson

The Hon. P. Forsythe
The Hon. J. Gardiner
The Hon. R. Jones
The Hon. A. Manson
The Hon. J. Ryan

Apologies: Ms P. Allan, Mr A. Humpherson, The Hon. E. Obeid

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee and Ms K. McLean, Assistant Committee Officer.

At 6.20pm the meeting was opened to the public.

Mr Roger Wilkins, Director General, the Cabinet Office, affirmed and acknowledged receipt of Summons.

The Committee questioned the witness. Examination concluded, the witness withdrew.

Mr Jeff Bateson, Chief Economist, NSW Treasury, affirmed, Mr Paul Moy, Deputy Secretary, NSW Treasury, affirmed and Mr George Maltabarrow, NSW Treasury, took the oath and acknowledged receipt of Summons.

Members of the Committee questioned the witnesses.

Mr O'Doherty moved, seconded Mr Ryan, that the Committee do now adjourn. The Committee divided:

Ayes

Ms Gardiner
Mr Ryan
Mr O'Doherty
Mr Richardson

Noes

Mr Jones
Mr Knowles
Mr Manson
Dr Macdonald

and the vote being equal the Chairman cast his vote with the noes and so it was resolved in the negative.

The Committee resumed questioning the witnesses. Examination concluded, the witnesses withdrew.

The Committee adjourned at 7.31pm until 16 September 1993 at 1.00pm.

**Thursday, 16 September 1993
at 1.00pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Mr A. Humpherson
Mr C. Knowles
Mr S. O'Doherty
Mr M. Richardson

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. E. Obeid
Hon. J. Ryan

Apologies: Ms P. Allan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

A quorum being present, the Chairman opened the meeting at 1.00pm.

Mr Robert Wilson, on former affirmation, and Mr David Harley, on former oath were further examined.

The witnesses addressed the Committee and responded to questions which had been referred to them by the Committee.

Mr Harley tabled a copy of a memorandum dated 25 August 1992. Examination concluded, the witnesses withdrew.

Resolved, on the motion of Mr Knowles, seconded by Mr O'Doherty, that the Committee adjourn.

The meeting concluded at 2.03pm.

**Friday 24 September, 1993
at 12.00 noon, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan
Mr A. Humpherson
Mr C. Knowles
Mr S. O'Doherty
Mr M. Richardson

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. E. Obeid
Hon. J. Ryan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Minutes of previous meeting

The minutes of the meetings held 10th, 15th and 16th of September, were confirmed, as amended, on the motion of Mr Jones, seconded by Mr Humpherson.

Correspondence

The secretariat distributed copies of submissions nos 128 and 129, publications of the Office of Water Services forwarded for circulation by a member of the Committee and correspondence from the Sydney Coastal Councils dated 18 August, 1993.

The Chairman tabled further correspondence received from Mr Bob Wilson enclosing his notes of a telephone conversation with Mr Moore. The Committee deliberated.

Further witnesses

The Committee resolved, on the motion of Mr Knowles, seconded by Mr Jones:

THAT Messrs Wilson, Harley, McMurtrie, McDonell and Moore be called to respond to matters raised in the hearing on 16 September;

THAT Mr Webster be invited to respond;

THAT Mr Harley be asked to provide any further names or information relating to his mention in evidence of "others"; and

THAT the Auditor General's comments be sought on Mr Harley's comments on pages 3-4 of the transcript of evidence of 16 September.

The Committee further resolved, on the motion of Mr Ryan, seconded by Mr Knowles, THAT the hearings be held in camera, due to the potentially damaging nature of the evidence.

The Committee agreed that Dr Clary and Ms Cairns, previously called but not heard, be also heard at the next hearing date.

The Committee agreed that an extension in reporting date be sought, to the end of the Budget session.

Mrs Forsythe requested, in view of the extension of reporting date, a pair for early November.

The Committee agreed to meet on Monday 25 October from 9.00am to 12 noon to deliberate on the draft report, to be circulated within the next 10 days.

The Committee set the date for the hearing as Wednesday 20 October from 1.00 - 5.00pm.

The Committee adjourned at 1.40pm until 20 October at 1.00pm.

**Wednesday, 20 October 1993
at 1.00pm, Parliament House**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan
Mr A. Humpherson
Mr C. Knowles
Mr M. Richardson

Hon. P. Forsythe
Hon. J. Gardiner
Hon. R. Jones
Hon. A. Manson
Hon. E. Obeid
Hon. J. Ryan

Apologies: Mr S. O'Doherty

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs

The Minutes of the meeting held 24 September 1993 and corrections were noted. The Minutes were adopted, as amended, on the motion of Mr Ryan, seconded by Mr Knowles.

The Chairman advised the Committee of correspondence received and reported that a number of items which had been requested had not been forwarded to the Committee.

The Committee resolved, on the motion of Mr Knowles, seconded by Mr Richardson, that in the case of documents not being forwarded on grounds of Cabinet or commercial confidentiality, this fact be recorded in writing.

The Consultant to the Committee advised that the draft report would be circulated to Members at the meeting scheduled for Monday 25 October, 1993.

The Committee discussed future meeting requirements and agreed that the meeting scheduled for Monday 25 October be rescheduled, the hearing component (Mr McMurtrie in-camera) to be held at 1.00pm on 27 or 28 October, and the consideration of the draft report to take place on Thursday 4 November from 9.00am to 1.00pm.

The Committee discussed the scope of questions to be put to the witnesses due to be heard later in the afternoon.

The Committee adjourned its deliberations and Mr McDonnell was called as a witness.

Mr Ken McDonnell, on former oath, appeared before the Committee, in-camera.

The Committee questioned Mr McDonnell, who then withdrew.

Mr Tim Moore, Mr David Harley and Mr Bob Wilson, on former oath, were examined by the Committee, until 3.30pm, at which time the examination was interrupted and the witnesses left the room.

At 3.30pm the Hon R.J. Webster, Minister for Planning and Minister for Housing, addressed the Committee and answered questions. At the conclusion of questioning, the Minister left the room and Messrs. Moore, Harley and Wilson re-entered and their evidence continued.

Examination concluded, the witnesses departed.

The Committee adjourned at 4.33pm.

**Tuesday 23 November 1993
at 9.30am, Parliament House.**

Present:

Hon. J. Ryan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

The minutes of the meeting held 15 November, were confirmed on the motion of Ms Allan, seconded by Mr Jones.

The secretariat distributed copies of correspondence received from the Hunter Water Corporation Ltd dated 19 November, 1993, Briefing Papers No 21 (Principles of Incorporation), No 22 (Discharge of sewage to land) and a note prepared by the Water Board entitled "Can a Corporatised Water Board exercise control over Government Policy".

The Chairman advised that, as resolved at the last meeting, he had released a press statement on 16 November, 1993 in relation to the Committee's findings on the Harley and Wilson evidence. Copies of the release were circulated.

The Chairman advised that the House had extended the Committee's reporting date to 17 December, 1993.

Draft report

Mr Richardson suggested that, in view of the contents of the draft report, the Committee might visit Weribee Treatment Plant. Other sites were also suggested. The Committee agreed that any site visit should take place in the coming week. The secretariat circulated calendars during the course of the meeting and set the visit date for Weribee for Thursday 2 December, the most convenient date for the majority of members.

The Committee confirmed incorporation of certain amendments arising from the previous meeting's consideration of the report into the redrafted report.

The Committee considered recommendations nos 17 - 91. Mr Knowles undertook to fax comments on recommendations nos 71 - 81 to the secretariat.

The Chairman advised that the third draft of the report would be prepared by the Project Officer to reshape the material to reflect the order and grouping of the recommendations, as reviewed.

The Committee adjourned at 1.00pm until 9.30am on Monday 6 December, 1993.

**Monday 6 December, 1993
at 9.30am, Parliament House.**

Present:

	Dr P. Macdonald (Chairman)	
Ms P. Allan		Hon. P. Forsythe
Mr A. Humpherson		Hon. R. Jones
Mr C. Knowles		Hon. E. Obeid
Mr S. O'Doherty		Hon. J. Ryan
Mr M. Richardson		

Apologies: Hon. A. Manson, Hon. J. Gardiner.

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Minutes of previous meeting

The minutes of the meeting held 23 November, were confirmed on the motion of Mr Knowles, seconded by Mr Jones.

Correspondence

The secretariat distributed copies of correspondence received from the Managing Director of the Water Board dated 12 October, 1993 containing information on the Board's Option P.

Draft report

The Committee deliberated on the further draft of the Report. A schedule of suggested amendments to the draft Report was distributed.

The Committee deliberated on the list of terms and abbreviations and confirmed that it was to be inserted, as amended, after the contents page. The Committee agreed to the insertion of a foreword reflecting the Chairman's views, and an executive summary of the report.

The Committee reviewed the sections of the report containing amendments and insertions as a result of the Committee's prior deliberations. Mr Knowles moved, seconded by Ms Allan, that Government members be permitted to incorporate their views in the report as "Government members' views". Debate ensued.

The Committee further deliberated. Mr Ryan circulated a document "Waste Water and Stormwater Performance Against Plan". Water Board endorsement of the document was to be sought.

The Committee deliberated on chapters a, b and c and associated recommendations. The Clerk noted agreed amendments and suggestions for

insertions and redrafting.

The Committee resolved, on the motion of Ms Forsythe, seconded Mr Jones, that an extension of the reporting date be sought to 17 March, 1994. The Chairman advised that 2 more meeting dates would be required in the first two weeks of February.

The Committee adjourned at 4.20pm.

**Thursday, 10 February 1994
at 10.30am, Parliament House.**

Present:

	Dr P. Macdonald (Chairman)	
Ms P. Allan		Hon. P. Forsythe
Mr A. Humpherson		Hon. J. Gardiner
Mr C. Knowles		Hon. R. Jones
Mr S. O'Doherty		Hon. A. Manson
Mr M. Richardson		Hon. E. Obeid
		Hon. J. Ryan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Minutes of previous meeting

The minutes of the meeting held 6 December, 1993, were confirmed on the motion of Mr Knowles, seconded by Mr Jones.

Correspondence

The secretariat distributed copies of a letter received from the Water Board dated 9 February, 1994.

Draft report

The Committee agreed to defer reconsideration of chapters a,b and c of the report, which had been amended and previously circulated. These chapters, together with any amendments arising from this meeting, were to be incorporated in a fourth draft, to be circulated on Friday 11 February, and considered on a page by page basis at the next meeting.

The Committee agreed that written amendments were to be provided at the next meeting, following circulation of the fourth draft.

The Committee considered chapter d. Mr Ryan circulated alternatives to

recommendations 63 - 70. The Committee deliberated.

Mr Knowles tabled an article from The Observer reporting on the regulatory framework of the UK water system.

The Committee deliberated on chapter e and agreed that additional information was to be incorporated.

The Chairman drew attention to the information provided by the Government Pricing Tribunal which had been circulated prior to the meeting.

The Committee deliberated on chapter f and agreed on amendments to pages 63, 69 and 74 of the draft.

The Committee deliberated on chapter g and agreed to incorporate more information.

The Committee deliberated on chapter h and Mr Knowles advised that alternative recommendations would be submitted at the next meeting.

The Committee deliberated on chapter i. The amendments previously circulated by the Government members were considered.

The Committee deliberated on chapter j.

The Consultant circulated a further briefing note containing the two new draft recommendations to be included in the draft Report.

General Business

Mr Ryan requested that future meeting dates only be set after consultation with all members at a Committee meeting.

Mr Manson tendered an apology for his inability to attend the next meeting of the Committee, and the Committee agreed that a pairing arrangement between Mr Manson and a member of the Government would be acknowledged.

The meeting closed at 12.35pm.

**Thursday, 17 February 1994
at 9.30am, Parliament House.**

Present:

	Dr P. Macdonald (Chairman)	
Ms P. Allan		Hon. P. Forsythe
Mr A. Humpherson		Hon. J. Gardiner
Mr C. Knowles		Hon. R. Jones
Mr S. O'Doherty		Hon. E. Obeid
Mr M. Richardson		Hon. J. Ryan

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Apology: Hon A. Manson.

Ms Allan moved, seconded by Mr Obeid, that as Mr Knowles was unable to be present until later in the morning due to attendance at court a pairing arrangement be honoured. Debate ensued.

Minutes of previous meeting

The minutes of the meeting held 10 February, 1994 were confirmed on the motion of Mr Jones, seconded by Mr Ryan.

Copies of appendices to the report were circulated.

Draft report

The Committee proceeded to consider the draft report, which had previously been circulated.

The Committee resolved on the motion of Mr Ryan that paragraph 1, p.1 be amended by deleting "In return for the payment of" and inserting "The Community has contributed".

Mr Ryan moved that "should be obliged to" be deleted and "has committed itself to" be inserted. Debate ensued. Question put and negatived.

Mr Ryan moved an amendment to paragraph 2 to insert new sentences, as circulated. Debate ensued. Question put and negatived.

The Chairman proposed, and the Committee agreed, that when Government members' had proposed an amendment which was not carried and which opposed views set out in the Report, then those members be given the opportunity to insert those dissenting views either in the text or at the end of a Chapter.

The Committee agreed to insert "majority of the" in p.1, paragraph 2.

The Committee agreed to correct paragraph 3, p.2 to state "\$6.25 billion".

The Committee deliberated on voting procedure and whether Mr Knowles would be paired. Debate ensued and the Committee adjourned briefly. At 10.32pm the Committee reconvened and debate continued. Mrs Forsythe requested that the Minutes record that the Government members had not been advised of Mr Knowles' absence prior to the meeting. Ms Allan moved that Mr Knowles be granted a pair. Mr Ryan moved an amendment to the effect that Mr Knowles be granted a pair on divisions on the content of the Report and proposed amendments, but not on procedural motions. Debate ensued. The Committee divided:

Ayes	Noes
Ms Gardiner	Mr Jones
Mr Ryan	Mr Obeid
Mr Humpherson	Ms Allan
Mr O'Doherty	Dr Macdonald
Mr Richardson	

and so the motion, as amended, was decided in the affirmative.

The Committee continued to consider Chapter 1 and resolved, on the motion of Mr Humpherson, to insert two new paragraphs 4 and 5, as circulated, after paragraph 3, p.2.

The Committee resolved, on the motion of Mr Jones, to insert a new paragraph 6, as circulated after new paragraph 5, p.2.

The Committee agreed that paragraphs 2 and 3 on p.7 be inserted on p.2 following new paragraph 6.

The Committee requested that the source of Table 1 be fully detailed.

The Committee deliberated on Table 2 and agreed to seek further information from the Water Board on progress and to insert it. Other amendments were noted to be incorporated and recirculated to members.

On p. 6, it was agreed to insert a quote from Mr Harley's evidence on 15 July, 1993 : " Mr Harley said in evidence that 'the vision is not set in stone. The vision is a moving, living thing'."

The Committee resolved on the motion of Mr Ryan, to incorporate a new paragraph 2, as circulated.

The secretariat was requested to seek Dr Messer's leave to include an excerpt from her evidence to the Committee on 3 September, 1993.

The secretariat undertook to check, verify and source the information on expenditure contained in paragraph 1, p.7.

Mr Ryan moved that paragraph 5, p.7 be deleted. Debate ensued. Question put and negated.

Mr Ryan moved an amendment to paragraph 6, p.7 to replace the sentence commencing "Therefore, if the volume of sewage..." with alternative words, as circulated. Debate ensued. Question put and negated.

The Committee resolved on the motion of Mr Jones, to an alternative amendment to paragraph 6, p.7 to insert after "increasing" the words "and treatment not improving".

The Chairman moved a further amendment to paragraph 6, p.7 as circulated. Debate ensued. The amendment was withdrawn.

The Committee deliberated on Tables 3 and 4 and agreed that they be deleted.

The Committee deliberated on paragraph 1 of p.10 and resolved on the motion of Mr O'Doherty that it be amended to read: "The EPA, through its licensing system should be encouraging the SWB to decrease the infiltration of storm water into the sewage system in wet weather".

In paragraph 5, p.10 the word "concentrations" should read "loads".

The Committee resolved on the motion of Mr Humpherson, to insert new paragraphs 5 and 6 on p.10, as circulated and amended.

The Committee deliberated on Table 5. Mr Ryan moved to insert a new paragraph 1 on p.12, as circulated. Debate ensued. Question put and negated.

Mr Humpherson moved to insert two new paragraphs as new paragraphs 2 and 3 on p.12. Debate ensued.

The Chairman put the question that the new paragraphs be inserted. The motion was lost.

Mr Ryan moved that the Committee seek further advice from the Water Board regarding figures on trade waste that could be provided to be inserted on p.12.

The Committee agreed that Government members be able to insert their views following paragraph 1, p.12.

The Committee resolved on the motion of Mr Ryan, that paragraph 2 on p.13 be amended to read "Regardless of differing views within the Committee on the foregoing evidence, the Committee still felt..."

The Consultant undertook to provide further sourcing for the research papers on "Long term effects of ocean disposal of sewage effluent" and "Mussel Watch".

The Committee agreed to incorporate after "windborne pollution" in the final

paragraph on p.14 the words "before the deep ocean outfalls were commissioned".

Mr Ryan moved to insert a new paragraph 2 on p.15, as circulated. Debate ensued. Question put and negatived.

The Committee agreed to insert the word "some" before "Submissions" in paragraph 2, p.15.

Mr Ryan moved to insert in paragraph 4, p.15, that a series of technical reports on the operation of deepwater outfalls were available, as noted in the EPA submission. Debate ensued. Question put and negatived.

The Committee resolved, on the motion of Ms Allan, to insert a new paragraph 3, p.15 that "The Committee received submissions and evidence from the Sydney Coastal Councils that there is doubt about the effectiveness of the Beachwatch monitoring program, that it is inadequate in that the level of beach pollution is not really known and that there is concern about the amount of resources devoted to the program.

The Committee resolved on the motion of the Chairman to delete paragraph 3 and insert "Despite the EPA's Environmental Monitoring Program both it and the Board have limited ability to predict environmental impacts".

Mr Ryan moved that the first sentence in paragraph 4, p.15 be amended by the insertion of the words "Although the EPA submission noted the public availability of the series of technical reports from the EMP and the further results in September 1993". Debate ensued. Motion carried.

The Committee resolved on the motion of the Chairman, seconded by Ms Allan, that after "outfalls" in paragraph 4, p.15 there be inserted "and the Water Board continues to discharge 1 billion litres of sewage per day into the Pacific via its three major headland treatment plants, only partially primarily treated".

Mr O'Doherty moved that this new paragraph 5 be amended by the inclusion of the words "The cost of upgrading these plants to full treatment capacity would be \$800m or \$800 per customer". Debate ensued. Question put and negatived.

The Committee resolved on the motion of Mr Ryan that a new paragraph be inserted on p.16 "However, the majority of the Committee agreed it also needs to be recognised that chemical control, and banning of chemicals, is a national issue which is currently being overseen by the National Registration Authority for Agricultural and Veterinary Chemicals and in NSW involves other government regulatory authorities such as the Workcover Authority and the Department of Agriculture".

The Committee resolved on the motion of the Chairman to insert a further new paragraph on p.16 following new paragraph 2 "Notwithstanding this, the majority of the Committee believe that NSW should take the lead in this area and that progress to date has been too slow.

The Committee deliberated on Table 6.

The Committee agreed to delete the heading at the top of p.18 and to incorporate the text (with the source footnoted) into the section on the fishing industry.

The Committee resolved on the motion of the Chairman, to insert prior to "Conclusions" on p.18 a new paragraph 2 ("International developments") as circulated.

The Committee agreed to amend the heading "Conclusions" by inserting "by the majority of the Committee".

Mr Ryan moved to delete the second sentence in paragraph 2 on p.18 commencing "It would appear...".

The Committee divided:

Ayes	Noes
Ms Gardiner	The Chairman
Mr Ryan	Mr Jones
Mr Humpherson	Mr Obeid
Mr O'Doherty	Ms Allan
Mr Richardson	Mr Knowles

and the votes being equal, the Chairman cast his vote with the noes and the question negatived.

The Chairman invited the Government members to insert their views under the heading "Dissenting Conclusions" prior to the section on Recommendations on p.18.

The Committee deliberated on the recommendations in Chapter 1.

The Committee agreed to replace "September 1994" with "May 1995" in Recommendations 1(a) and 1(b).

Mrs Forsythe moved that "Water Administration Ministerial Corporation" be replaced with "the Government" in Recommendation 1 (d). Debate ensued, and the Chairman advised that references requiring alteration could be revisited after the relevant Chapter had been considered.

The Committee agreed to insert the proposed cross reference, as circulated by the Chairman, into p.19 before the heading "Co-ordination of environmental monitoring programs".

The Committee agreed to replace "1994" with "1995" in Recommendation 3(a).

The Committee resolved, on the motion of Mr Ryan to delete the sentence "The Sydney Water Board should reimburse the EPA for the costs of the review".

The Committee resolved on the motion of Mr Knowles to delete "in 1994" in Recommendation 3(a) and to insert "within 3 months of the completion of peer assessment".

Mr Ryan moved that Recommendation 3(b) be deleted. Debate ensued. The question was put and negatived.

Mr Ryan moved to delete "after having included in them standards that require in measurable terms such as the reduction and eventual prohibition of discharge to the ocean of trade waste substances". Debate ensued. Question put and negatived.

The Committee agreed to Recommendation 4(b).

The Committee resolved on the motion of the Chairman to insert new recommendations 4(c) and 4(d) as circulated and amended. Government members agreed to provide a dissenting view for incorporation in the Report.

Mrs Forsythe moved, that in Recommendation 5(a) the words "consult with the community regarding targets for" should be inserted in place of "the EPA Board should publish in 1994". Debate ensued. Question put and negatived.

The Committee resolved on the motion of Mr Ryan to delete Recommendation 5(a)(iii) and insert an new 5(a)(iii) reading" The programs by which the EPA and the Regional Algal Coordinating Committee proposes to control and prevent where possible Blue-Green Algae outbreaks in the Hawkesbury-Nepean River".

Mr Ryan moved an amendment to Recommendation 5(b) as circulated. Debate ensued. Question put and negatived.

The Committee resolved on the motion of Mr Richardson to delete the last sentence in Recommendation 5(b) and to insert instead a new sentence:"The EPA should also publicly determine whether a similar moratorium should be recommended to other consent authorities involved in new development".

Consideration of Recommendation 5(c) was deferred until the relevant chapter had been considered.

The Committee agreed to meet again in the first week of the sittings. The secretariat would circulate a calendar to Members and advise of the most suitable date.

The meeting closed at 1.35pm.

**Tuesday, 23 March 1994
at 8.30am, Parliament House.**

Present:

	Dr P. Macdonald (Chairman)	
Ms P. Allan		Hon. P. Forsythe
Mr A. Humpherson		Hon. R. Jones
Mr S. O'Doherty		Hon. E. Obeid
Mr M. Richardson		Hon. J. Ryan

Apologies: Hon. J. Gardiner and Mr C. Knowles.

In attendance: Ms C. Watson, Project Officer, Mr M. Mobbs, Consultant to the Committee, Ms K. McLean, Assistant Committee Officer

Minutes of previous meeting

The minutes of the meeting held 2 March, 1994 were confirmed on the motion of Mr Jones, seconded by Mr Obeid.

The minutes of the meeting held 9 March, 1994 were confirmed on the motion of Ms Allan, seconded by Mr Obeid.

Business Arising from the Minutes

Mr Humpherson requested a report from the Clerk and the Consultant regarding the items to be provided which were listed in the Minutes of 2nd March, 1994. The Consultant circulated a letter from Mr Ledbetter and advised on the source of information for Tables 1 and 2. Information from the EPA regarding Recommendation 5(a) had been incorporated into the 5th draft of the Report. Dr Messer had been contacted regarding her evidence. The Consultant advised that the Australian Chamber of Manufactures had been contacted and requested to write to the Committee confirming the Consultant's advice. The Committee agreed that, as no letter had been received, the quote and associated text should be deleted.

The Committee discussed the time table for consideration of the draft report and Minister Webster's reported comments that the Committee was delaying its deliberations.

Draft report

The Committee resumed consideration of the draft report, which had previously been circulated. The Committee confirmed that the 5th draft (pages 1-30 and 43-48) had been circulated and incorporated the amendments previously adopted.

The Committee adopted pages 32-33, as amended on the motion of Mrs Forsythe to insert "Joint" in reference to the Standing Committee, and resolved, on the

motion of Mrs Forsythe, to insert "and their compliance with the relevant environment and planning legislation" at the end of paragraph 3 on page 33.

The Committee adopted pages 34 and page 35.

The Committee adopted recommendation 13, as amended on the motion of Mrs Forsythe to insert "and the relevant REPs" and "Joint".

Mrs Forsythe moved insertion of an new recommendation after Recommendation 13, ("A Catchment Objectives Tribunal should be established..."). The amendment was withdrawn.

The Committee considered Recommendation 14. The Committee resolved, on the motion of Mrs Forsythe, to insert "any" before "pollution" and to insert "to which they have committed their agency" in Recommendation 14(b).

The Committee adopted Recommendations 14(a),(b) and (c), as amended.

The Committee adopted Recommendations 15(a), 15 (b) and 16(a).

The Committee deliberated on Recommendation 16(b).

The Committee adopted Recommendations 16(b), 16(c), 16(d), 17, 18, 19, 20 as amended to insert "and for this purpose councils should report in their State of Environment reports" and to replace "projects" with "entities".

The Committee adopted Recommendation 21.

The Committee agreed to incorporate "Operating License" in the list of terms at the front of the report.

The Committee considered Chapter c.

The Committee agreed that the Pricing Tribunal recommendations should be moved to the relevant chapters of the Report.

The Committee adopted pages 39, 40, 41 and 42.

The Committee considered page 48 and agreed to incorporate a new paragraph 3 containing information from Memtech's submission and evidence on microfiltration and reduction in costs over time.

The Committee adopted page 48, as amended.

The Committee considered page 49. Mrs Forsythe moved that the quote be deleted. Motion negatived. The Committee adopted page 49, as amended, on the motion of Mrs Forsythe, to insert "The Committee closely examined the case for corporatisation" after the heading.

The Committee deliberated on page 50. Mr Richardson moved that further information be incorporated. The Committee requested that he circulate a proposed amendment for consideration.

The Committee resolved, on the motion of Mrs Forsythe, to incorporate alternative text, as circulated, after "some problems". Page 50, as amended, was adopted.

The Committee considered page 51. Mr Richardson moved to delete point 4. "for an outline of proven alternatives, refer to chapters f and g."

The Committee adopted page 51, as amended on the motion of Mr Humpherson to replace point 3 with a new point 3 "Demand management has mainly relied on use of user-pays".

The Committee considered page 52. The Committee agreed to incorporation of further information on Water Reform as circulated by the Chairman.

Mrs Forsythe moved to delete paragraph 3 from "However" and to delete paragraphs 4 and 5. Debate ensued. The Committee resolved, on the motion of the Chairman, to replace paragraphs 3, 4 and 5, with a sentence emphasising the need for an effective audit.

The Committee resolved, on the motion of Mrs Forsythe, to insert after the quote "To some of the Committee it appeared that none of the alleged problems arising from corporatisation are insurmountable and certainly would not be a barrier within the proper framework. The majority of the Committee believe that the following reforms must be initiated: " to be followed by the information on Water Reform previously agreed to be incorporated, and a new sentence "Until the SOC Act and other legislation is amended, however, none of these instruments will be sufficient".

The Committee agreed to move the section on "Hunter Water Corporation" commencing on page 50 to the beginning of the chapter.

The Committee adopted page 52, as amended.

The Committee considered page 53. Mrs Forsythe moved that new paragraphs be inserted, as circulated, commencing with "It was felt however, that the instruments of corporatisation, the operating licence and the statement of corporate intent would provide a mechanism for controlling the organisations' operations which is not available in the regulation of private companies". Debate ensued. The amendment was withdrawn.

The Committee agreed to delete paragraph 4 ("Also, as previously stated..") and replace it with a new paragraph on the need to incorporate the SOC Act, as drafted by the Consultant.

The Committee resolved, on the motion of Mrs Forsythe, to incorporate the amendment, as circulated.

The Committee agreed to delete the paragraph commencing "Also, as", and incorporate the paragraph previously circulated by the Consultant on the SOC Act and statement of Corporate Intent. The Committee resolved, on the motion of Mrs Forsythe, to delete the second last paragraph and incorporate instead "This may be offset by the need for major capital works to complete with REPS and catchment management objectives".

The Committee adopted page 53 as amended, and page 54.

The Committee considered page 55. Mr Ryan moved to insert "The perceived lack of accountability can be overcome through corporatisation. Corporatisation will improve accountability and the rights of its customers by specifying these in the operating licence which should be subject to regular audit", as circulated. Debate ensued.

Mr Humpherson moved to insert "The Committee acknowledges that the implementation of the Moore, Harley, Wilson "vision" brought around a change in culture and release of increased information to the public". Debate ensued.

The Committee adopted page 55, as amended by deletion of the name of the Water Board officer.

The Committee adopted pages 56 and 57, as amended by deletion of paragraphs 3, 4 on p56 and all following up to the heading "Why Regionalisation", and amendment of that section to accord with the Committee's earlier resolution regarding regionalisation of the Water Board.

The Committee considered page 60, and agreed that item (ix) be reworded to reflect the intent that potable quality water should be reused.

The Committee considered chapter e.

The Committee adopted page 63, and noted that the Government members would provide a paragraph to insert in that section reflecting their views.

The Committee adopted pages 63 - 70, as amended by deletion of duplicated material.

The Committee agreed to replace "clean" with "filter".

The Committee deliberated on page 71. Debate ensued and the Committee agreed to the Government members providing a dissenting response for incorporation in this chapter.

The Committee adopted Chapter e, as amended.

The Committee considered Chapter f.

Mr Humpherson moved to delete the first quote on page 85. Debate ensued.

Motion negatived.

The Committee deliberated on page 97. The Chairman requested further information regarding the relationship between the POE Act and other legislation.

The Committee agreed that the Government members could provide a dissenting view.

The Committee adopted Chapter f.

The Committee considered Chapter g. Mr Richardson circulated an alternative Chapter g.

The Committee adopted page 106, as amended by correction of the Table number.

The Committee agreed to deletion of Table 10.

The Committee adopted page 107 as amended by insertion of "the majority of" before "Committee".

The Committee adopted page 108, as amended by moving information on beneficial re-use to an appendix.

Pages 109-112 adopted.

The Committee adopted page 113, as amended by deleting information already footnoted, and page 114.

The Committee adopted page 115 as amended by inserting in paragraph 1 "It is suggested that" and amendment to the final paragraph to reflect the Committee's decision on regionalisation of the Water Board.

The Committee adopted page 116 and agreed to incorporate a definition of "airshed" in the list at the beginning of the report.

The Committee adopted pages 117 - 121, and adopted page 122, as amended to insert into the text of the final dot point "which then activate the sewage overflows into the stormwater system".

The Committee adopted page 123 as amended to insert "with the level of public awareness on health issues and infectivity" in the first sentence and "majority of" in the final paragraph before "Committee". The Consultant undertook to source the information on the city of Los Angeles.

The Committee adopted pages 124 - 125.

The Committee deliberated on pages 126 - 127. The Committee resolved on the motion of Mrs Forsythe, to insert "If these were to be introduced in a wide spread manner there could be increased costs for local councils in terms of public health

supervision".

The Committee agreed to footnote the submission from Memtech and adopted pages 126-127, as amended.

The Committee adopted Recommendation 34, as amended on the motion of Mrs Forsythe to insert "in an urban area" and "subject to the agreement of the Department of Health".

The Committee adopted Recommendations 35, 36 and 37.

The Committee considered the additional unnumbered recommendation on Rainwater harvesting. Mr Ryan moved to delete the second sentence. Debate ensued.

Mr Richardson moved to insert a new recommendation, as circulated. Motion negated.

The Committee adopted Chapter g, as amended and agreed to insert the Government members' dissenting view.

The Committee considered Chapter h and adopted pages 130-131, as amended by deletion of "extremely", and the incorporation of extra information on alternatives to the Macquarie Bank findings.

The Committee adopted pages 132-135.

The Committee considered Recommendation 38. Mr Ryan moved deletion of the final sentence commencing "The Treasurer's discretion...". Debate ensued. Motion negated. Mr Ryan moved to delete 38(ii), (iii) and (iv). Debate ensued.

The Committee resolved, on the motion of Ms Allan, to adopt new Recommendations 38(b) and (c), as previously circulated.

The Committee agreed to move recommendation 39(a) to the Chapter on SEL.

The Committee considered Recommendation 39(b). Mr Ryan moved to delete the recommendation. Debate ensued. Motion negated.

The Committee adopted Recommendations 39(b) and (c).

The Committee considered Chapter i. The Committee agreed to move the sentence "How can this be a criteria..." to a later point in the chapter. Pages 140-146 adopted, as amended.

The Committee considered page 147. Mr Ryan moved to delete "The similarity between these two terms.... project".

The Committee adopted pages 147 -150.

The Committee adopted page 151, as amended on the motion of Mr Humpherson, to delete paragraph 4.

The Committee considered Recommendation 40. The Committee resolved, on the motion of Mr Ryan, to delete the first sentence, and to relocate the recommendation to the end of chapter j.

The Committee adopted Chapter i, as amended.

The Committee considered Chapter j.

The Committee adopted page 155 and page 156.

The Committee considered page 157. Mr Ryan noted that the Government members objected to the sentence "There was little substantial evidence" and was invited to produce a dissenting paragraph. The Committee agreed to delete "little substantial" and insert "conflicting".

The Committee adopted pages 157, as amended, 158, 159 and 160.

The Committee adopted page 161, as amended by deletion of the first word in paragraph 3.

The Chairman moved a new recommendation 41, as circulated. The recommendation was adopted.

The Committee adopted new recommendation 42 as circulated.

The Committee adopted new recommendation 43, as amended on the motion of Ms Allan.

The Committee agreed to meet again once the corrected draft had been circulated.

Mr Humpherson requested advice from the Secretariat regarding receipt of information requested, as noted in the minutes of 2nd March, 1994. The Consultant advised on the basis for Table 2 and referred to briefing notes previously circulated. A letter from Mr Leadbetter was also circulated. As no letter had been received from the Australian Chamber of Manufactures confirming information in the draft Report the Committee agreed that the reference on page 12 of the Report should be deleted.

The Committee agreed that the draft report should also address the recently issued document on the Clean Waters Program.

The Committee agreed to meet again on 7th April at mid-day and to put aside time from mid-day on 11th April, if necessary for a further meeting. The meeting closed at 12.30pm.

**Thursday 7 April,1994
at 12.30 pm at Parliament House.**

Present:

	Dr P. Macdonald (Chairman)	
Ms P. Allan		The Hon. P. Forsythe
Mr A. Humpherson		The Hon. J. Gardiner
Mr S. O'Doherty		The Hon. A. Manson
Mr M. Richardson		The Hon. R. Jones

Apologies: The Hon. E. Obeid and Mr C. Knowles.

In attendance: Ms C.Watson-Project Officer,Mr M. Mobbs-Consultant to the Committee,Mr M. Sheather-Acting Clerk to the Committee and Ms K. Mc Lean-Assistant Committee Officer.

The minutes of the meeting held on 23 March,1994 were confirmed on the motion of Mr Humperson seconded by Mr Jones.

Resolved on motion of Mr Humperson seconded by Mr O'Doherty;
That all documents received by Mr Mobbs as Consultant to the Committee be deemed to be the property of the Committee.
Mr Mobbs agreed to provide a list of all documents directed to him as consultant to the Committee.

The Committee deliberated.

Consideration of the Draft Report;

The Committee resumed consideration of the draft report,that had been previously circulated. This draft included all amendments previously considered.

Pages i to iv as read,agreed to.
Page v,as amended,agreed to.
Page viii,as amended agreed to.
Page 3,as amended,agreed to.
Page 4,Table one,as amended,agreed to.
Page 5,Table 2,as amended,agreed to.
Page 7,as amended,agreed to.
Page 23,as amended,agreed to.
Page 24,as amended,agreed to.
Page 25,as amended,agreed to.
Page 29,as amended,agreed to.
Page 39,as amended,agreed to.

Page 41,to be further considered,after amendment.

Mr Richardson moved,seconded by Mr Humpherson that Recommendation 5.1 be included,negatived.

Page 42,to be further considered,after amendment.

Page 44,as amended,agreed to.

Page 45,as amended,agreed to.

Page 48,as amended,agreed to.

Page 49,as amended,agreed to.

Page 51,as amended,agreed to.

Page 53,as amended,agreed to.

Page 55 as amended,agreed to.

Page 57,Moved by Mr Richardson seconded by Mr Humperson,That the reference to Reark Research Pty Limited be deleted.

Whereupon Ms Allan moved that the reference to Reark Research Pty Limited remain.The Committee divided:

Noes 6

Ayes 4

Reference deleted.

Page 60,as amended,agreed to.

Page 64,e Catchment & demand management,that the Terms be moved to the Terms section of the report.

Page 65,as amended agreed to.

Page 68,as amended,agreed to.

Page 71,as amended,agreed to.

Page 73,as amended,agreed to.

Page 116,to be further considered.

Page 122,as amended,agreed to.

Page 140,as amended,agreed to.

Mr Ryan moved for the inclusion of section d,to be further considered.

Mr Ryan,further moved,for the inclusion of minority comment for sections concerning Terms of Reference A,B,E,M,N & P as circulated. To be further considered by the Committee.

The Chairman,moved for the inclusion of a new recommendation 22A-User pays and residential flats.To be further considered by the Committee.

The Committee deliberated.

The Committee adjourned at 3.05 p.m.,until Monday 11th April,1994 at 12.30 p.m.

**Monday 11 April,1994
at 12.30 pm, Parliament House.**

Present:

Dr P. Macdonald (Chairman)

Ms P. Allan
Mr A. Humpherson
Mr C. Knowles
Mr S.O'Doherty
Mr M. Richardson

The Hon. P. Forsythe
The Hon. J. Gardiner
The Hon. R. Jones
The Hon. A. Manson
The Hon. E. Obeid
The Hon. J. Ryan

In Attendance: Ms C. Watson-Project Officer, Mr M. Mobbs-Consultant to the Committee, Mr M. Sheather-Acting Clerk to the Committee, Ms K. McLean-Assistant Committee Officer.

The minutes of the previous meeting held on 7 April,1994 were confirmed on the motion of Mr Manson seconded by Mr Ryan.

The Committee deliberated.

Consideration of the Draft Report:

The Committee resumed consideration of the Draft Report from 7 April,1994.

The Chairman opened debate as to the placement of dissenting view within the Draft Report. Options raised were to incorporate such material at the end of the Draft Report.

Mr Ryan seconded by Mr O'Doherty moved: That it was not acceptable to Members to not include such material within the relevant Chapters of the Draft Report.

Whereupon Ms Allan moved,seconded by Mr Knowles: That material from Members of the Committee dissenting to the Draft Report be incorporated in the Draft Report at the end of each Chapter.

Agreed to.

Mr Ryan requested that material tabled by the Government Members of the Committee on 7th April,1994 be incorporated into the Draft Report.

The Chairman agreed to consider these proposed amendments as each Chapter of the Draft Report was considered.

Page 54-55,as amended,agreed to.

Page 49,as amended,agreed to.

Addition of Appendix C from the Water Board, be included,agreed to.

Page 48,Para. 7 Mrs Forsythe moved,seconded by Mr Ryan:That the paragraph be amended.The Committee divided,Chairman used his casting vote.Amendment negatived.

Page 40,The Chairman moved:To include material headed "Residential Flats".
The Committee deliberated.

The material as amended,agreed to.

Material included in Draft Report.

Pages 41,42 & 43,Mr Ryan moved,seconded by Mr Humpherson:That recommendation 5.1 of the G.P.T. be included. Whereupon Mr Jones also agreed to the incorporation of the recommendations of the G.P.T.

Pages as amended,agreed to.

Page 7,as amended,agreed to.

Page 3,That the document as circulated be included at the end of page 3 together with the Table.The Committee divided,the
Chairman used his casting vote.Agreed to.

Page 5, Mr Humpherson moved,seconded by Mr Ryan: That all of Water Board,Option P be included in the report. Agreed to.

Page 57.The Committee deliberated. Mrs Forsythe moved,seconded by Mr Humpherson: That the Committee not receive or incorporate any reference to the Rearth Research Pty Limited material,as it had not been qualified.

Motion for rescission of the Motion moved by Mr Richardson,
seconded by Mr Humpherson on 7 April,1994.

The Committee divided,the Chairman used his casting vote.
Material to be included into the Draft Report.

The Committee agreed to include a footnote that the material had previously been requested from the Water Board.

Page 71,as amended be agreed to. The Committee divided.

Noes 4

Ayes 6

Agreed to.

Page 85,as amended be agreed to. The Committee divided.

Noes 4

Ayes 6

Agreed to.

Page 90,as amended,agreed to.

Page 97,as amended be agreed to.The Committee divided.

Noes 4

Ayes 6

Agreed to.

The Chairman moved,seconded by Mr Jones: That the Draft Report be the Report of the Committee. Agreed to.

Tabling of Correspondence:

The Chairman tabled correspondence to him from Mr Paul Broad,Water Board dated 31 march,1994.

The Chairman moved: That a briefing be sought fro the Water Board to further clarify this correspondence.

Agreed to.

The Committee adjourned at 4.12 p.m.
