

CHAPTER 9

DEFENCE OF THE SUBMARINE OUTFALLS: PUBLIC RELATIONS ASSISTED TECHNOLOGY

The engineering of Sydney's submarine outfalls began with the first conception of the idea, followed by firm proposals and plans for the outfalls in the 1960s. By the time the firm Caldwell Connell Engineers was formed to do the feasibility study and initial design and the money had been allocated for this purpose the decision had been made that submarine ocean outfalls would be the next step in the development of Sydney's sewerage system. The previous chapter has concentrated on the Caldwell Connell studies and their social construction of knowledge. This chapter will consider further the defence and implementation of this decision to build the submarine ocean outfalls, particularly following the display of the environmental impact statements at the end of 1979.

Figure 9.1 shows these events in a chronological frame with relevant regulatory, political and public relations activities indicated. It will be noted that the decision to install submarine ocean outfalls preceded legislative reforms and in fact preceded the growth of environmental concern that bloomed at the end of the 1960s and throughout the 1970s. (see figure 9.2) These events may have hastened the plans but did not alter them.

The display of the Environmental Impact Statements followed closely after legislation (the Environmental Planning and Assessment Act 1979) which aimed at allowing more public input into the urban development process. It marked the culmination of a decade of resident protest actions and union green bans against unwanted developments, and the consequent political recognition that the public was increasingly demanding a say in the shaping of the urban environment.

Caldwell Connell prepared environmental impact studies for the Malabar and North Head submarine outfalls at the request of the Water Board and these were displayed for the public at the end of 1979. The Board prepared the EIS for the Bondi submarine outfall itself, along the same lines as the others and it was displayed with the other two EIS's at the end of 1979. The submissions received in response to the public display of the Environmental Impact Statements ranged from one or two page handwritten letters from residents of beachside suburbs to more weighty submissions from environmental groups. Ten government authorities and five councils responded. About forty six submissions were made altogether.

The general thrust of each submission is shown in table 9.1. Whilst a few individuals used the opportunity to protest against beach pollution, most of those who were opposed to the submarine outfalls were opposed to the principle of disposing of the wastes into the ocean. The submarine outfalls were repeatedly referred to as a "short-sighted solution" or a "stop-gap measure". Many submissions called for the return of sewage to the land, utilisation of the sewage as fertiliser for urban tree plantations or crop production further west and the reuse of the water.

In its assessment of the EIS's and submissions the newly formed Department of Environment and Planning (DEP) concluded that there were no environmental

Figure 9.1 EVENTS RELEVANT TO THE SUBMARINE OCEAN OUTFALLS

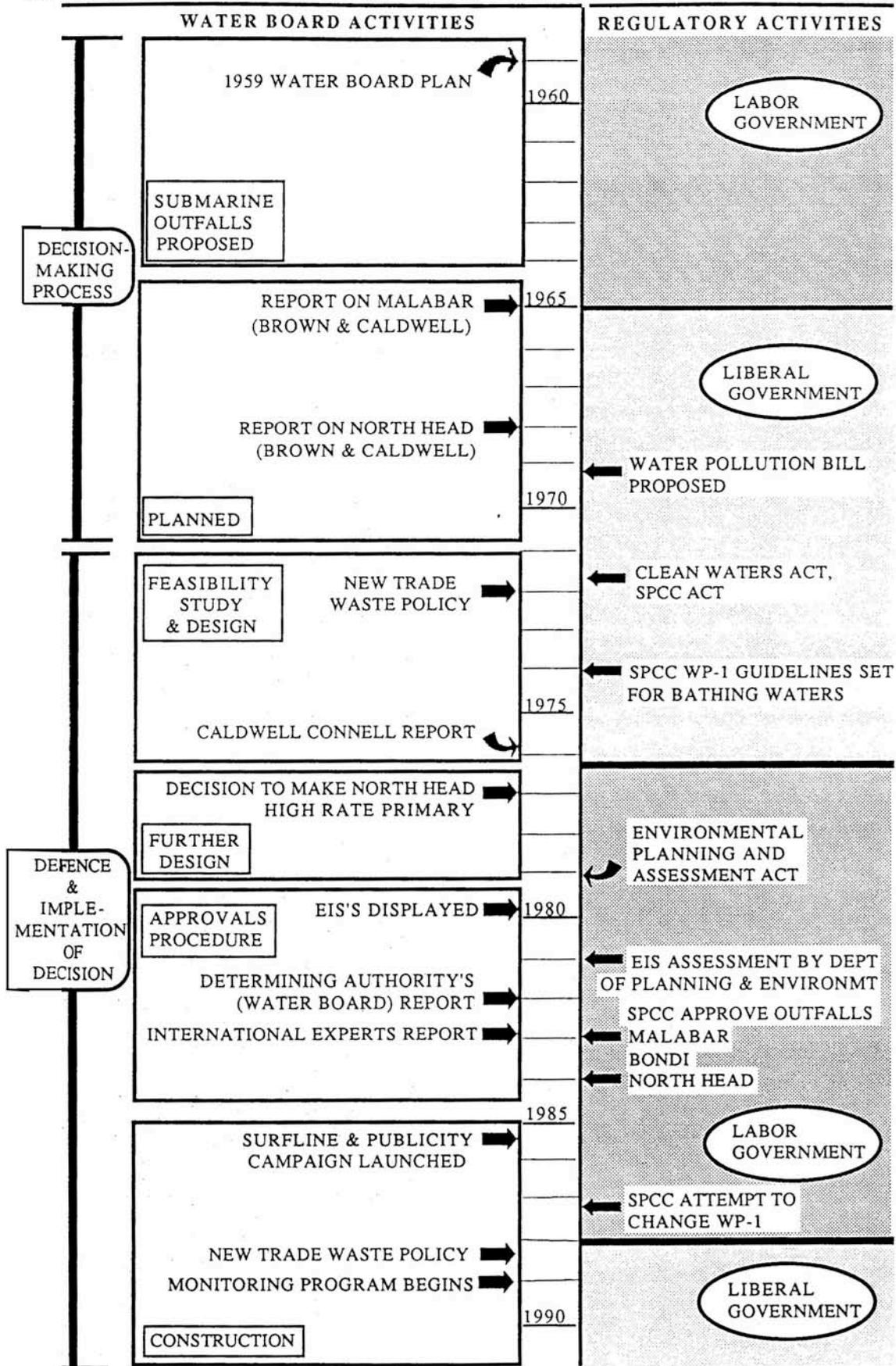


Figure 9.2

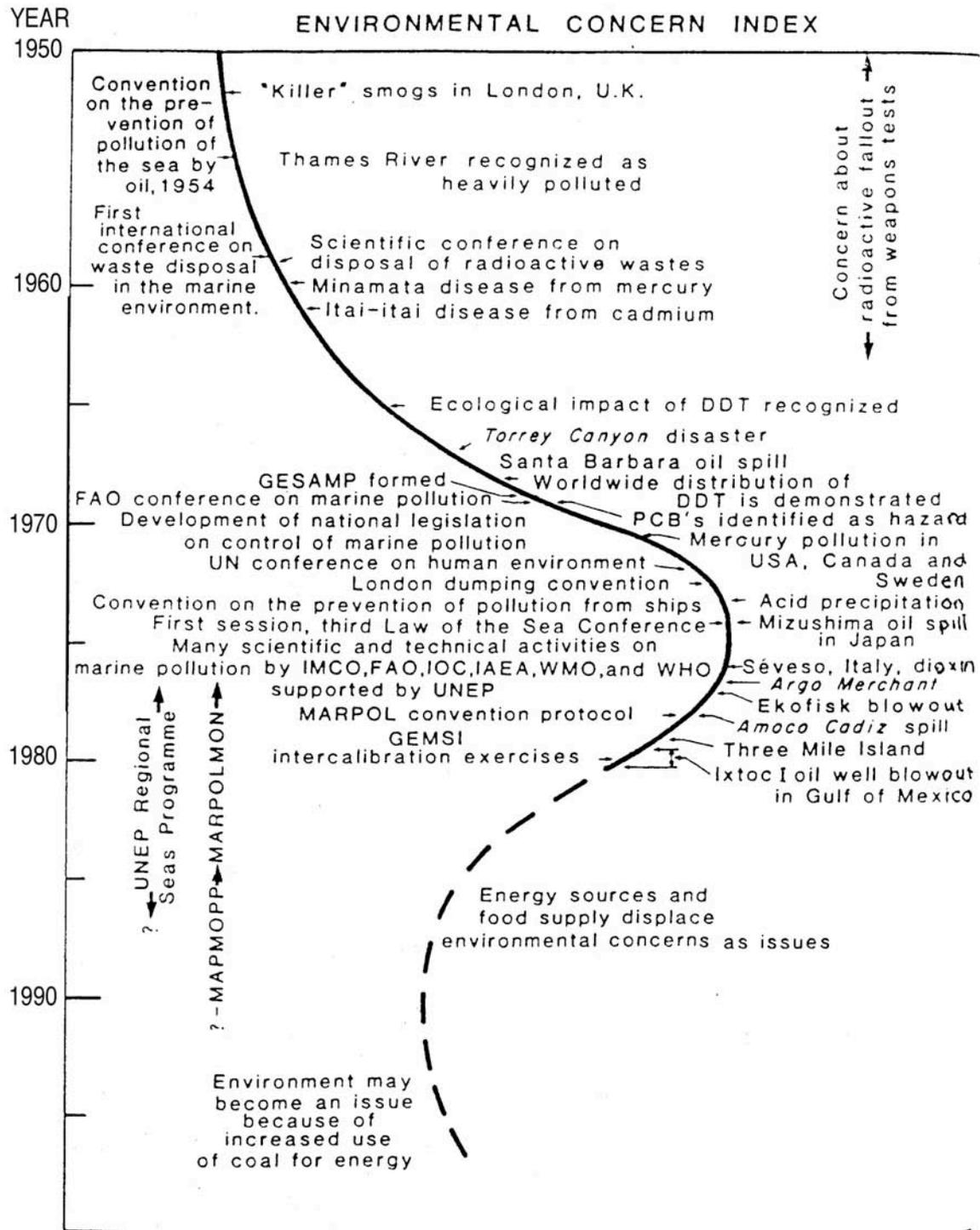


Fig. 9.2 Changing level of public concern about the marine environment, as based on significant environmental events.

SOURCE: Michael Waldichuk, 'International Perspective on Global Marine Pollution' in Virginia Tippie & Dana Kester, eds, Impact of Marine Pollution on Society, Praeger, 1982, p72.

TABLE 9.1

SUBMISSIONS ON EIS'S	approve decisions	qualified approval	oppose decision		other
			reuse/ recycle	more treatment	
GOVT AUTHORITIES					
Dept of Sport & Recreation					desire less pollutn
NSW State Fisheries	✓				
Maritime Services Board	✓				
Met Waste Disposal Authority					prob-sludge reuse
Dept of Public Works					prob-spoil disposal
Water Resources Commission					against reuse
Australian Museum		✓	✓		monitor ocean life
Dept of Mineral Resources					concern- impact
State Pollution Control Comm		✓			need more details
National Parks & Wildlife				✓	
LOCAL COUNCILS					
Botany Municipal Council	✓				fear-overloading
Manly Municipal Council	✓				
Randwick Municipal Council		✓			interim measures
Warringah Shire Council	✓				
Waverley Municipal Council	✓				
INTERESTED GROUPS					
Total Environment Centre			✓		
Nature Conservation Council			✓		
Randwick Beach Polltn Comm		✓			
ALP, Windsor Branch			✓		
Environment Defence Council			✓		
Engineered Australia Plan					anti ocean disposal
Opposition Committee					critical of design
PRIVATE SUBMISSIONS					
W.H.Haigh, M.P	✓				
Commonwealth Industl Gases				✓	
O.Miller			✓		
N.Blakes					concern-pollution
Chapman & Chapman					general protest
F.M.Brooks	✓				
H.Humel					need urgent action
J.Shearman					disgust with W/Bd
J.Rodgers				✓	
A.Strom			✓		
W.Solomons					ship it further out
W.Wilkin			✓		
P.A.Yeomans			✓		
G.Jarjoura			✓		
L.Cruise			✓		
J.Crossley			✓		
G.Bartley			✓		
Amot & Poole			✓		
Seabridge Australia P/L			✓		
R.Niblack				✓	
J.Oakden			✓		
R.D.Evans			✓		
Beverley Haas			✓		
Cathy Phillips			✓		

reasons why the submarine outfalls should not be built.¹ The DEP did however impose a number of conditions on the Board. These included the implementation of monitoring programmes for levels of grease, oil, floating particles, suspended solids, settleable solids, turbidity, pH, restricted substances, toxic materials in sediments, beach pollution and for effects on benthic organisms and fish. Moreover the Board had to submit to the DEP a feasibility study and economic analysis of the cost and benefits of short term measures to alleviate existing problems with shoreline discharge of sewage.²

In April 1982, the Board completed its Determining Authority's report in which it formally considered the submissions and the DEP's report and announced its final decision to go ahead with the detailed design and construction of submarine outfalls.³ The outfalls were subsequently approved by the Clean Water Advisory Committee in 1983 and 1984 and construction began in October 1984. The outfalls are expected to be completed in the early 1990s.

This chapter is essentially about how the Water Board and its employees have defended the submarine outfall decision against a number of groups and individuals who have criticised it. Figure 9.3 attempts to show the various groups that have had an interest in the Board's decision, many of which have sought to influence or support that decision. The Board has been purposely placed at the centre of this constellation of groups to indicate its power and importance as well as its central role in the decision making process.

EARLY ENVIRONMENTAL CONCERNS - MANURE AND COMPOST

The nineteenth century debates over water carriage and ocean disposal had first highlighted that a section of the community viewed sewage as a resource rather than as a disposal problem and these concerns, repressed for seventy or eighty years during which the public had no say about sewage disposal, again came to the fore when the public were invited to comment on the EIS's for the submarine ocean outfalls. Recycling was a concern all the established environmental groups took up as an environmentally sound option but a number of individuals also took the opportunity to oppose ocean dumping and record their preference for a recycling option of some sort. Most of the individual submissions made in response to the EIS's favoured some form of reuse. They cited damage to the ocean ecosystem, threats to human health and the further entrenchment of a system that was wasteful of resources and unnecessarily polluting.

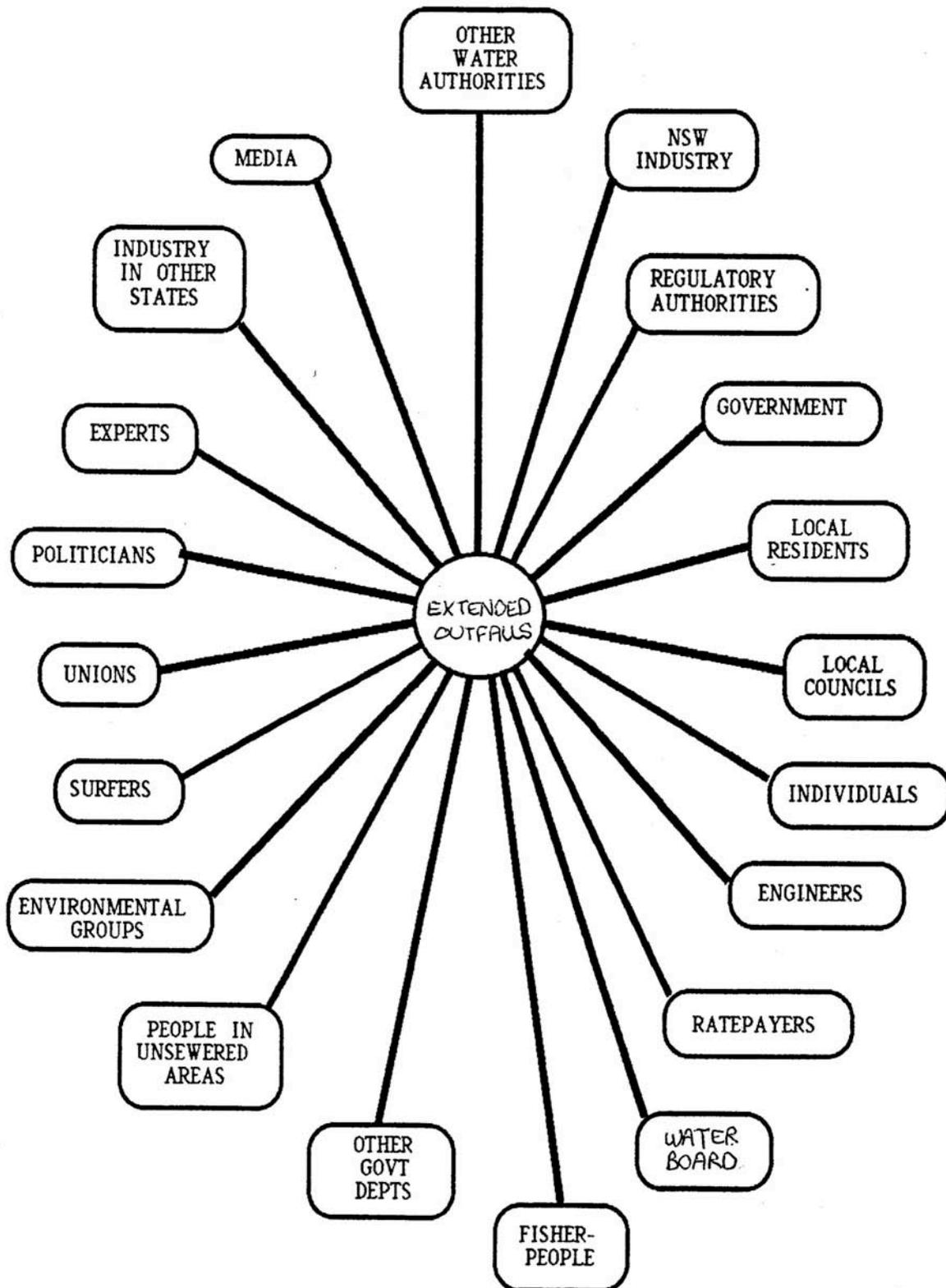
One of those individuals at the forefront of the push for sewage reuse was Francis Sutton. In 1974 the National Times had featured Sutton, a "man who can't stop", and that same year a film had been made about Sutton similarly entitled "The Man Who Can't Stop". Sutton had been trying for years to get public authorities on the NSW coast to utilise sewage rather than dump it in the sea to spoil the beaches. Sutton had designed fairly detailed schemes for using

¹ Department of Environment and Planning, Proposed Upgrading of Ocean Outfalls for Disposal of Sewage Effluent at North Head, Bondi and Malabar: Environmental Impact Assessment, Sydney, January 1981, p20.

² ibid., pp21-2.

³ M..W.S.&D.B., Determining Authorities Report on Deepwater Submarine Outfalls for the Disposal of Sewage Effluent at North Head, Bondi and Malabar, April 1982.

Figure 9.3 People and Social Groupings with an Interest in Sydney's Submarine Ocean Outfalls



sewage effluent for irrigation and cooling water. The National Times portrayed Sutton as a bit of a fanatic,

Mr Sutton now spends most of his waking hours trying to persuade the authorities and the public to consider the scheme. His savings are dwindling, his family and social life neglected, but he is determined to continue until the scheme is given fair consideration.⁴

But Sutton was not without his supporters. The Central Coast Trades and Labour Council placed a green ban on Gosford Council's planned outfalls in an effort to ensure that the Sutton scheme was fully examined⁵ and later the Commonwealth government provided a grant for the development of Sutton's inland sewerage treatment scheme for the Central Coast of NSW.⁶

In response to the Sydney Water Board's EIS's, Francis Sutton, representing the Environment Defense Council, recommended "full scale improved multi-stage lagoon and irrigation systems". Sewage could be diverted to such systems inland.⁷ In more recent years Sutton has given up on Sydney and now devotes his time to getting other NSW communities to reuse their sewage.

Another campaigner for the reuse of sewage effluent was P.A.Yeomans, an agricultural engineer who argued that partly treated sewage could fertilise specially planted forests.⁸ Mullins was also a strong advocate of reuse arguing that Sydney's water supply was finite and would run out by the year 2000.⁹ Dr Nancy Millis, a reader in microbiology at Melbourne University, also argued that Australian water was not used enough and should be recycled for industrial, irrigation and domestic uses and that the treatment involved would be cheaper than building dams.¹⁰ And an emeritus Professor at the University of NSW, C.J.Milner, wrote to the Herald arguing that the eastward push of the sewage should be reversed so that the sewage could be used constructively and giving references to papers that backed up his case.¹¹

Len Williams of the Nature Conservation Council of NSW argued for the progressive recycling of sewage effluent and against new urban subdivisions being "plugged in" to existing systems when they could go into urban forest or similar land disposal schemes as outlined by Professor Elias Duek Cohen, Town Planner, Sydney University. They argued that the large expenditure on submarine outfalls would effectively close off recycling avenues.¹²

⁴ National Times, July 8-13, 1974.

⁵ ibid.

⁶ Francis Sutton, submission on the Environmental Impact Statements for the submarine outfalls, 1980.

⁷ Environment Defense Council, submission on the Environmental Impact Statements for the submarine outfalls, 1/3/80.

⁸ Sydney Morning Herald, 7th September 1974.

⁹ Australian, 24th August 1974.

¹⁰ Mirror, 27th October 1974.

¹¹ Sydney Morning Herald, 3rd January 1979.

¹² Nature Conservation Council of NSW, submission on the Environmental Impact Statements for the submarine outfalls, 1980.

Dr A. Jones, from the Australian Museum also argued that the although recycling disposal methods were uneconomic at that time, changes in technology, supply and demand were all likely to favour re-use in the future but by then Sydney might be "locked into a totally non-recycling system." Jones argued that re-cycling was not only more sustainable and environmentally desirable but also it was the way that natural ecosystems operated.¹³

The Total Environment Centre argued that the project should not go ahead until all alternatives had been properly considered and called for the SPCC to present a parliamentary white paper which fully presented the alternative disposal options. They argued that the EIS's had given poor consideration to the Sydney water supply which had been assumed to be infinite and had presented costings which did not include the benefits which land applications would have in terms of crop productivity, the aesthetic value of urban forests and such like. Nor did the cost estimates include the cost of augmenting existing sewers although the EIS's had said that this was necessary.¹⁴

The main argument against reuse was the cost argument but the cost estimates made by Caldwell Connell were never detailed. The costing included taking all the sewage from the three major outfalls and piping it across the dividing range. This would include heavy annual pumping costs and more treatment. Such an option was obviously more expensive than piping it out to sea but if considered as a long term option might have compared more favourably since it was argued that secondary treatment would have to be installed at the outfalls in the future and that the sewerage system would have to be renewed. Caldwell Connell, in their 1976 report, had covered two alternatives for expanding the inadequate sewerage systems. One was to expand each main outfall sewer independently and the other was to divert part of the sewage flow from the Bondi and Malabar outfalls and reroute it to Marley Head, in the Royal National Park, south of Sydney and also augment the North Head system independently.¹⁵ The cost of doing either of these was not included when comparisons were made with recycling alternatives.

Moreover the gains from the additional irrigation water and fertiliser had not been included in the cost estimates. These gains were instead considered separately and compared to the cost of water from dams in the western valleys.¹⁶ The Water Board claimed that there was no need to recycle water since the Shoalhaven Scheme would meet Sydney's water demand until after the year 2020 if current population and usage trends continued and that further potential existed for water storage by damming other rivers that were relatively close to Sydney.¹⁷

¹³ Australian Museum, submission on the Environmental Impact Statements for the submarine outfalls, 1980.

¹⁴ Total Environment Centre, submission on the Environmental Impact Statements for the submarine outfalls, 1980.

¹⁵ Caldwell Connell, Sydney Submarine Ocean Outfall Studies, M.W.S.&D.B., 1976, p20.

¹⁶ Water Resources Commission, submission on the Environmental Impact Statements for the submarine outfalls, 1980.

¹⁷ Acting Secretary, Water Board, letter to Secretary, NSW Planning and Environment Commission, 14/8/80; also D.E.P., Environmental Impact Assessment, p12.

As for using the recycled effluent closer to the city, for the irrigation of trees, the Board claimed that there was insufficient land for this purpose "within an economically feasible distance from Sydney".¹⁸ The Board also claimed that new urban subdivisions would not "plug in" to the existing systems, in fact most would be beyond the ocean outfall catchment areas and would be connected to sophisticated treatment plants which would discharge into the Georges and Hawkesbury Rivers.¹⁹ Their argument that putting sewage into various rivers (which discharge into the sea of course) ignored the point that Conservation Council was making that sewage should be progressively reused where possible. Moreover the later episode, when the effluent from the Glenfield effluent works was found to be creating problems in the Georges River and was diverted to the Malabar outfall, showed a trend in the opposite direction.

The Department of Planning and Environment, in its assessment of the EIS's and the submissions, accepted the Board's claim that ocean disposal was the only feasible disposal alternative because of the impracticability of disposing of all effluent from the three main ocean outfalls by agricultural use within the Sydney metropolitan area. However, recognising the support amongst the public for the recycling of sewage they recommended that the Board continue to investigate the matter so that some sewage might be beneficially used²⁰ and asserted that the submarine outfalls would "in no way prejudice future selection" of recycling alternatives should the need arise.²¹

It might be noted here that before public display, the EIS's were shown to the Deputy Premier and Minister for Public Works, L.J.Ferguson, who requested that, for public relations purposes, the EIS's be adjusted to place greater emphasis on the potential for increased utilisation of digester gas and the possible energy recovery potential of the treatment works as well as on the monitoring and control of heavy metals in effluents.²²

The public airing of the Total Environment Centre's views on recycling sewage received a savage Water Board reaction in a local paper. In an official statement that was heavy on rhetoric and light on information the Board chairman claimed that "any qualified person" could see that land treatment of sewage was "only superficially attractive" and, far from acceptable, was not viable.

The environment centre apparently wants these exhaustively-researched impact studies cast aside in favour of a scheme which is totally inappropriate to the Sydney region...Is the board to abandon the coastal treatment plants, which have already cost more than \$100 million...? ²³

¹⁸ M..W.S.&D.B., Determining Authorities Report.

¹⁹ Acting Secretary, Water Board, letter to Secretary, NSW Planning and Environment Commission, 14/8/80.

²⁰ D.E.P., Environmental Impact Assessment, p13.

²¹ ibid., p20.

²² L.J.Ferguson to Water Board, 17th August 1979.

²³ Southern News, 15th April 1980.

Letters continued to be sent to the papers advocating the reuse of sewage, especially for fertiliser.²⁴ The Secretary of the Water Board wrote in to counter these calls. He said that the .03% of sewage which was solid had little or no value as fertiliser, it would be very expensive to process and it was doubtful whether there was a market for the final product. The liquid, he said, would still have to be disposed of to sea because it would take an area larger than the Royal National Park to soak it up. To pump it over the mountains would be extremely energy and cost intensive and environmentally undesirable.²⁵

The United Nations Association of Australia also promoted the idea of turning garbage and sewage into hygienic compost which would decrease beach pollution and provide natural fertiliser for Australia's depleted soils.²⁶ And two Wollongong researchers, Chris Illert and Daniella Reverberi, criticised the Water Board's submarine outfall plans in a book they wrote on Botany Bay's Seagrass Meadows. They argued that sewage would kill sea plants and annihilate the fisheries and they advocated the recycling of sewage, claiming that the Board had tested sewage fertiliser at Glenfield and found that it increased the yield of vegetables six times on an untreated plot of ground and gave twice the yield of conventional fertilisers.²⁷

A series of letters at the beginning of 1984 also advocated reuse of sewage. A farmer testified to the poverty of Australia's soil and Elizabeth Kirkby of the Australian Democrats had raised the issue in the Legislative Council. She called for the conversion of 750,000 tonnes per annum of sewage sludge to compost, the elimination of 862 tonnes per annum of toxic heavy metals from the sewage flow, secondary treatment, recycling of some effluent for irrigation and some effluent to be pumped below ground into existing aquifers at Botany for purification and recycling.²⁸

Kirkby's reference to the toxic heavy metals in the sewage flow was a point that most advocates of reuse largely missed and the one which the Board was not anxious to point to. But it was the major problem, apart from cost, in reusing sewage. This became clearer when the Metropolitan Waste Disposal Authority were asked to comment on Owen Millers' submissions in 1980 that the sewage sludge should be mixed with garbage to make compost. They agreed that the scheme had some potential and said that it was practiced overseas to produce a soil conditioner or compost.

However, some concern has been expressed in the literature as to the health risks that may result from the continued application of such compost to agricultural land, particularly with regard to the levels of pathogens and heavy metals.²⁹

²⁴ For example Sydney Morning Herald, 7th April 1981.

²⁵ ibid.

²⁶ Manly Daily, 7th March 1984.

²⁷ Illawarra Mercury, 12th March 1986.

²⁸ Sydney Morning Herald, 10th February 1984.

²⁹ M.W.D.A., letter to Water Board, 29/2/80.

In a letter to the editor, A.D. Brown from the Department of Biology at Wollongong University also posed the problem of heavy metals which are often found in urban sewage and which can accumulate in the soil and contaminate crops.³⁰

The strength of public support for recycling of sewage did not go unnoticed by the Board who announced that they would run a public seminar in June 1984 on the "re-use of sewage by-products". Mr Paul Whelan, Minister for Water Resources, Forests and Aboriginal Affairs, explained that the seminar would try to identify "the most practical and cost efficient re-uses" for effluent, sludge and digester gas.³¹ In July, the new Minister for Natural Resources, Janice Crosio, made the same announcement but this time for a seminar in August. She pointed out that the Board already used some tertiary treated effluent from inland plants for irrigation of crops and golf courses.³² Prominent advocates of recycling were invited to speak including Tom Mullins and Owen Miller.³³

The Seminar was held, the recyclers had their say and the Board drew their trump card; a recycling scheme would cost about \$1500 million dollars with annual running costs of \$84 million. "This would have to be financed by a massive increase in water rates."³⁴ A local Eastern Suburbs paper which reported the seminar hoped that work on the submarine outfalls would not be delayed by investigations into recycling.³⁵

Nevertheless the Board sought ways to pacify the reuse lobby. A scheme to use sludge for fertiliser at the Bellambi Sewerage Treatment Works near Wollongong, which had been initiated by sewage workers, was achieving good results and this was supported by the Board. The Board was reported to be seriously considering marketing the processed sludge under the name of 'Orgo-Natural' for large scale use in agriculture, landscaping and vegetation regeneration as well as for the domestic consumer. Research showed that 12,000 tonnes of topsoil had been bought on the South Coast during the previous year for \$16 a tonne and 'Orgo-Natural' top soil could be produced for about \$10 a tonne.³⁶

The Board has carefully promoted and exaggerated the tiny amount of reuse that it does undertake at its inland plants to give the impression that the Board too aims to recycle sewage where possible. One advertisement headlined, "People like to tell us what we can do with our effluent", claimed that the Board had investigated a number of uses for treated effluent "scientifically" including the irrigation of Australia's "Red Centre" which would be enormously expensive for only a small irrigated area and environmentally destructive to the Blue Mountains. They boasted that they already irrigated two golf courses, agricultural land at Camden, Castle Hill Country Club, the Hawkesbury

³⁰ Sydney Morning Herald, 13th February 1986.

³¹ Macarthur Advertiser, 3rd April 1984.

³² Macarthur Advertiser, 17th July 1984.

³³ Messenger, 18th July 1984.

³⁴ Sydney Morning Herald, 13th August 1984.

³⁵ Messenger, 15th August 1984.

³⁶ Sydney Morning Herald, 8th February 1986; Illawarra Mercury, 8th February 1986.

Agricultural College and Warwick Farm racecourse. They were only at the experimental stage and any extension of the programme could only happen when they were sure that bacteria levels could be kept down. (There was no mention of heavy metals or toxic substances of course)³⁷

Another advertisement featured a pile of sludge superimposed on a scene of Farm Cove in the city. The advertisement said that sludge was digested, incinerated or burned but there was no mention of ocean disposal although the great majority of Sydney's sludge was disposed of that way. The text of the advertisement said that the Board was experimenting with turning sludge into fertiliser with some good results and that they already sold 300 tonnes of composted sludge per month from the St. Marys plant (an inland plant) to local landscapers. Their 'Orgo-Natural' produced better results than chemical fertilisers.³⁸ Although the Board's experiments were not aimed at the sludge that was planned to be dumped out the submarine ocean outfalls the setting of the pile of sludge with the Opera House and the Harbour Bridge in the background clearly gave the impression that the Board's "Sludge Recycling Project" was for the whole of Sydney.

The Board has not only aimed advertisements directly at the reuse lobby but market research has also led them to use key words like "natural" and "recycle" in their more general advertisements. For example, an advertisement featuring a deep blue ocean says,

Introducing the world's most efficient purification plant. This is also the world's largest and most natural treatment plant, and it has some of the most experienced employees as well. Hundreds of species of fish and other marine organisms exist here to do little more than thrive on breaking down the pre-treated effluent discharged into the ocean off Sydney. What they don't recycle, the salt water and sunshine purify naturally. Its the most natural process in the world. ³⁹ (*my emphasis*)

The impression that is attempted to be given here is that no harm is being done to the marine ecosystem and that in fact the sewage is being treated as God and Nature meant it to be and the discharge of sewage is actually beneficial to marine life. The reference to marine life existing only to breakdown sewage effluent gives and insight into the Board's attitude toward nature and the differences in value systems between technocrats and environmentalists.

GOVERNMENT AUTHORITIES - SOLIDARITY AND CONFIDENTIAL CRITICISM

As was shown in Table 9.1, ten government authorities responded to the display of the Environmental Impact Statement. Only the NSW State Fisheries and the Maritime Services supported the proposal unconditionally. The Department of Sport and Recreation, the Metropolitan Waste Disposal Authority, the

³⁷ For example, Sydney Morning Herald, 21st February 1987.

³⁸ For example, Sydney Morning Herald, 2nd January 1987.

³⁹ Sydney Morning Herald, Weekend Magazine, 12th December 1987.

Department of Public Works and the Water Resources Commission were all non-committal about the scheme. The Australian Museum expressed some concerns about marine life and the need to continue monitoring it.

The National Parks and Wildlife Service were concerned that more consideration had not been given to secondary treatment in conjunction with the submarine ocean outfalls and they questioned whether the discharge would come under the aegis of the London Dumping Convention and whether the discharge would meet this criteria. This question seems to have remained unanswered and is completely ignored in the Department of Environment and Planning's Assessment.⁴⁰

The Department of Mineral Resources expressed a number of concerns about the impact of the submarine ocean outfalls. They were concerned about the accumulation of sludge deposits containing heavy metals and also the affect on fish of having sewage including detergents submerged in the ocean. They argued it was unwise not to consider the discharges in conjunction with the other existing and planned ocean discharges up and down the NSW coast since it was intended that the ocean currents carry all the material southward. If the currents were all simultaneously going in one direction then the total nutrients and sediments in the downdrift areas would be considerable.

The Board countered that there was not any cause for concern about the combination of residual pollutants since the closest outfalls were still 9 kilometres apart and the submarine outfalls would provide high levels of dilution. Moreover, the longshore currents carried an average of about 920 tonnes of nitrogen and 66 tonnes of phosphorous through the outfall areas each day and the additional 48 tonnes of nitrogen and 11 tonnes of phosphorous that would ultimately be discharged from those outfalls would not result in any undesirable phytoplankton growth in the discharge region.

The SPCC gave the EIS's most attention as the regulatory body responsible for pollution of the ocean waters. Despite Brain's grave reservations (see chapter 8) the SPCC made its submission on the EIS's stating that it considered the provision of the submarine outfalls to be "the most practicable solution" to beach pollution problems. It noted that detailed design had not begun and advised that this would require more geological and oceanographic studies.⁴¹

Although the SPCC submission didn't express the concerns that Robert Brain had over the performance of the submarine outfalls, the submission made by the Opposition (Liberal) committee covered many of those concerns and one can only suppose that Brain was in contact with them. Their submission covered the misleading information in the EIS's, the oversimplified computer model which had neglected to take into account the effect of currents and the faulty diffusion calculations. The submission also criticised the Board for not having carried out studies which had been recommended in the 1976 Caldwell Connell report.⁴²

⁴⁰ D.E.P., Environmental Impact Assessment, p6.

⁴¹ ibid., p5.

⁴² Opposition Committee, submission on the Environmental Impact Statements for the submarine outfalls, 11/3/80.

The SPCC still had its private doubts about the submarine outfalls, fed by Brain's objections. They persuaded the Board that it would be desirable to obtain 'independent' advice from "a panel of acknowledged international experts" since the extreme complexity of the ocean environment meant that outfall processes might be "subject to alternative technical interpretation" and that these interpretations had to be resolved prior to statutory approval being given for any specific design.

A set of SPCC questions and Caldwell Connell answers, together with the various reports, were sent to Professor Norman Brooks of the United States and Professor Poul Harremoes of Denmark for their evaluation. Both men were said to be recognised as experts in the field and to have considerable experience in outfall design. They came to Sydney for a week during which they inspected oceanographic records, viewed the outfall sites from the air and spoke to Water Board and SPCC officers.⁴³

The SPCC officers maintain that after meeting with the experts Brain recanted and that was the end of his criticisms. Brain himself denies this. He says that Brooks and Harremoes agreed with his criticisms but argued that the extended ocean outfalls would still be an improvement on the existing shoreline discharges. Brain agreed with this, and said no more, since as far as he was concerned he had done his job in pointing out the faults in the Caldwell Connell calculations.⁴⁴

The Health Department made no submission on the Environmental Impact Statement although the matter was directly linked to health concerns. NSW Health authorities seem to have consistently supported the Sydney Water Board and the SPCC in downplaying health risks from swimming in sewage polluted bathing waters. However they continued to use the threat of a health risk as a political weapon against striking sewage workers despite the need to make contradictory statements in order to do so.⁴⁵ Dr Ian Hay, Health Department spokesman, during a sewage workers strike in 1971, advised people not to swim at affected beaches "although it has never been proven that polluted beaches cause disease."

I'm not saying there is a danger - but it would be most unwise to swim at any beach affected by this sort of pollution ⁴⁶

The implication that a strike, when raw sewage was discharged might be more of a health danger than at other times was also a controversial point since, as Mullins pointed out, primary treatment was ineffective at removing "disease carrying agencies including viruses".⁴⁷ Dr W.A. Lopez, deputy director of epidemiology at the State Health Department, admitted that primary treatment did not kill viruses but claimed that it dispersed the sewage more easily and this

⁴³ M.W.S.&D.B., 'Technical Report in support of Application for Approval under Section 19 for the Malabar Extended Ocean Outfall' presented at Clean Waters Advisory Committee meeting, 8th September, 1983, p24.

⁴⁴ Robert Brain, personal communication, July 1987.

⁴⁵ Sydney Morning Herald, 30th December 1980.

⁴⁶ Sunday Telegraph, 4th April 1971.

⁴⁷ Sydney Morning Herald, 14th December 1972.

removed the health hazard.⁴⁸ Lopez made a similar statement a few years later, that untreated sewage (which was being discharged during a sewage workers strike) was not a health hazard because it was "broken into tiny pieces and diluted considerably."⁴⁹

And whilst Lopez maintained his line on the health hazards of sewage pollution, Hay, now State Director of Health Services, changed his tone during a 1975 sewage workers strike and warned of the "grave risk" of catching diseases such as gastro-enteritis or hepatitis in an effort to get the strikers back to work.⁵⁰ During the 1981 strike the Health Commission's adviser on infectious diseases, Dr Peter Christopher, warned the public that people swimming in the surf "ran a serious risk of contracting hepatitis or gastro-enteritis."⁵¹

Early in 1985, rumours of breakdowns at the newly completed North Head treatment works created some public alarm, although the Board claimed that the bits of plastic in the surf was just picnic rubbish.⁵² The alarm grew to such an extent that the Department of Health began emergency testing even though the chief health officer argued that there was no evidence that the beaches were unsafe and the Water Board claimed there was no sewage in the water.⁵³ A few days later the Department reported that tests had shown a higher than expected quantity of two organisms, but both were considered "unreliable indicators" and did not cause disease.⁵⁴ One wonders why they bothered to measure them if that were so.

In September, however, the Health Department recommended that it reduce the number of tests it was taking after salmonella organisms were detected in samples taken from Manly's waterways and the surrounding ocean. The Department said that the number of tests should be halved because of the work load on their laboratory and staff but the Council and the local State MP were incensed and called for more rather than less tests.⁵⁵

It now also appears that the Health Department monitoring of the beaches from 1983 through to 1987 was finding that many of the eastern suburbs beaches were unsuitable for swimming by their own definition for 30-80% of the time and yet they did not make this public in any way. Moreover they were turning up salmonella in samples from bathing areas.⁵⁶ (see chapter 8) In early 1987 a Health Department Report was leaked to surfing writer, Kirk Wilcox, which showed that 6 out of 9 samples taken at Eastern suburbs bathing spots during that summer had contained salmonella organisms. Wilcox noted that the

⁴⁸ Sydney Morning Herald, 14th December 1972.

⁴⁹ Sun, 13th February 1975.

⁵⁰ Mirror, 4th April 1975.

⁵¹ Daily Telegraph, 21st March 1981.

⁵² Manly Daily, 4th January 1985; 9th January 1984.

⁵³ Manly Daily, 12th January 1985.

⁵⁴ Manly Daily, 15th January 1985.

⁵⁵ Manly Daily, 13th and 17th September 1985.

⁵⁶ A.G. Bernard, 'The Bacteriological Quality of Sydney's Tidal Bathing Waters', Water Quality & Management for Recreation & Tourism, Proceedings of an International Conference, IAWPRC & AWWA, 1988, pp46-50.

findings had not been made public, nor had any warnings been given to the public, either by the media or signs on the beach, even though the period October through to December was at the height of the "official" surfing season. Anyone contracting a salmonella related disease at that time would have been more likely to attribute to something they ate than to swimming.⁵⁷

SURFERS & LOCALS - HEALTH HAZARDS AND SPOILT PASTTIMES

Surfers, particularly, were aware of the health problems associated with polluted waters. Each new summer brought a fresh batch of allegations. In the Summer of 1969/70, before the Caldwell Connell study commenced, the president of the Maroubra Surf Life Saving Club blamed pollution for six of his club members becoming ill in two months with ear, eye, throat and bowel infections.⁵⁸ Randwick Council Health Inspector, Brian Kelly, pointed to a rising incidence of hepatitis and other notifiable diseases in Clovelly, Coogee, Maroubra and Malabar and argued that many surfers and swimmers got ear, nose, throat and bowel infections and glandular fever.⁵⁹ He was backed up by Aldermen, one of whom quoted figures to show that the rate of increase of hepatitis was far greater in their area than in other parts of the state.⁶⁰

When the submarine outfalls were first proposed, the main reaction in beachside suburbs was a hooray that at last something was to be done about the pollution and the main pressure was that they should be hurried up. Beach pollution, once a reason to criticise the Board, became the incentive to push for the submarine outfalls. The Councils, local MPs and community groups, formed to do something about the pollution, all pushed for the submarine outfalls.⁶¹ When, at the end of 1978, a report on the board's operations by US management consultants McKinsey & Co recommended that the outfalls be deferred because they would not be income earning, there was much protest and the Board had to reassure the public that pollution control works would continue.⁶²

Following the release of the environmental impact statements the public continued to lobby for the speedy cleaning up of the beaches. The Randwick Beach Pollution Committee which had collected 12,000 signatures on a petition for this purpose presented it to the State government.⁶³ Randwick council made attempts to see the Deputy Premier and Minister for Public Works, Mr Jack Ferguson.⁶⁴ Threats were made about supporting only candidates in the coming State Election willing to take immediate action on beach pollution or even nominating candidates for that purpose.⁶⁵

⁵⁷ Kirk Wilcox, 'Australia a Turd World Country', Tracks, May 1987, p68.

⁵⁸ Mirror, 15th January 1970.

⁵⁹ Mirror, 16th January 1970.

⁶⁰ Sydney Morning Herald, 21st January 1970.

⁶¹ for example Southern News, 1st August 1978; Messenger, 15th November 1978; Daily Telegraph, 22nd December, 1978.

⁶² Sydney Morning Herald, 28th December 1978.

⁶³ Messenger, 20th February 1980, 21st May 1980.

⁶⁴ Southern News, 1st April 1980.

⁶⁵ Messenger, 2nd April 1980; Messenger, 3rd December 1980.

But not all those who used the beach rejoiced at the idea of the submarine ocean outfalls. Many people who actually used the beaches felt intuitively that the outfalls would not achieve the results promised. In particular surfers and regular bathers were well aware of the way the sewage field moved with the wind and of the long distances the field could travel. They argued that discharging the sewage 2 or 3 kilometres further out to sea would make no difference since the sewage travelled that far anyway.

At the beginning of 1985 a group of Manly surfers got together and organised a protest march. Supported by various big name surfers and iron men, the March against Pooh made its way along the beach promenade and up to the treatment works. Surfers and others, numbering several hundred according to the local paper, carried buckets of "nasties" collected from the surf to dump back at the works.⁶⁶

The Board did its best to capitalise on this event despite the obvious hostility of the crowd. Surfers were invited to tour the treatment works after the march and a Water Board press release said that organisers of the march had been invited to discuss improved liaison with surfers on pollution issues at a later meeting with Board's officers. Crawford claimed that they were all working towards the same goal of cleaner beaches.⁶⁷ In fact the Board at first welcomed the raising of awareness of pollution caused by the surfers because it justified the money that was being spent on the new outfalls.

In April the following year the Manly Surfers, now organised as People Opposed to Ocean Outfalls (POOO), organised their second annual protest march. By coincidence the Water Board had an open day organised for the same day and had an information campaign conducted from a marquee next to the local surf club buildings, tours of the treatment plant, and engineers and scientists on hand to answer questions. Peter Crawford, the general manager of the Board, said the open day was to "encourage informed discussion and debate on environmental issues."⁶⁸

Despite the rain, it was reported that four or five hundred people turned up for the march, including several well known surfers. The crowd were addressed by David Hay, local MP, Richard Gosden, from Stop the Ocean Pollution (STOP) and Peter Garrett from the band Midnight Oil. The march organiser said that their campaign was to get the Board to consider other alternatives to the submarine outfalls which would "use the sea as a sewer".⁶⁹

The main concerns of surfers were the aesthetics and health risks of surfing in polluted waters. They experienced these problems personally and so were more aware than anyone that Water Board denials of pollution had very little foundation. However epidemiological studies have not been carried out in Australia so there was little hard evidence besides the experience of individual beachgoers and the unsourced evidence of beachside doctors and chemists. What evidence that did exist was played down. One such investigation followed an

⁶⁶ Manly Daily, 26th February 1985.

⁶⁷ M..W.S.&D.B., News Release, 23rd February 1985.

⁶⁸ Manly Daily, 10th April 1986.

⁶⁹ Manly Daily, 15th April 1986.

incident in Perth where eight cases of typhoid (an unusually high number) were notified in a very short space of time early in 1958. The usual sources were investigated, such as contact with carriers and food eaten, but these did not seem to account for the outbreak.

It was found that five of the eight victims had spend a lot of time bathing at Perth's City Beach which was close to a leaking outfall from an uncompleted sewage plant. High levels of faecal coliforms had been found at the time. Following closure of the beach there were seven more notifications of typhoid, five of whom had bathed at the beach and one of whom had been in contact with a carrier.

The causative organisms from the victims were found to be of five different types and therefore ruled out the possibility that they had all been infected by one or two carriers or a common foodstuff and strengthened the case that the sea-water had been the source of infection. Moreover, it was known that the infective dose of typhoid bacteria is very small and that they are capable of surviving in sea water for long periods of time.⁷⁰

In 1964 an investigation was carried out by Flynn and Thistlethwayte of the Sydney Water Board. Flynn and Thistlethwayte refer to the Perth incident saying that although ten cases were claimed, they were never definitely proven, to be due to swimming. Flynn and Thistlethwayte freely admitted that typhoid and paratyphoid organisms were commonly present in Sydney's sewage and that "it may be assumed that sewage discharges commonly contain pathogenic bacteria" but they stated that in NSW none of the health authorities had received "specific claims of such disease" from swimming in sewage polluted sea water.

Moreover, questionnaires of doctors, pharmacists, surveys of schools and of hospitals had not revealed any more of an increase in typhoid, paratyphoid, infective hepatitis or poliomyelitis amongst coastal populations than inland groups.⁷¹ The researchers also dismissed claims of eye, ear, nose and throat infections from sewage pollution, arguing that such infections could result from swimming in any water and there was just as much risk from swimming in chlorinated freshwater pools.⁷²

Flynn and Thistlethwayte noted back in 1964 that measures of coliform organisms, especially faecal coliforms, gave some indication of the degree of contamination from sewage but were not a measure of health risk. They argued that a coliform standard could not be set on health grounds until a thorough epidemiological study was done and that until then bathing water quality was a matter of public relations and aesthetic considerations.⁷³ Such an epidemiological study seems to have been carefully avoided in the intervening years whilst public relations has been stepped up.

⁷⁰ Paul Ryan, Submarine Ocean Outfall Sewers, typescript, undated, p30.

⁷¹ Michael Flynn & D.K.B.Thistlethwayte, 'Sewage Pollution and Sea Bathing', International Journal of Air and Water Pollution 9, 1965, p641.

⁷² ibid., p642.

⁷³ ibid., pp650-1.

For many years the Board would not even admit that their outfalls were responsible for more than a rare instance of pollution occurred. When the papers reported particularly bad instances of pollution the Board was always ready with an excuse. In 1976, for example, the Secretary of the Board claimed that samples of suspect sewage pollution had been analysed and "found to consist of marine animal life pulverised by heavy seas."⁷⁴

At the beginning of 1979 the Board admitted publicly for the first time (aside from mention in the 1976 Caldwell Connell report) that the existing outfall systems did not always meet the standards laid down in the Clean Waters Act because of the visible trail of effluent which could, at times, "extend several kilometres from the outfalls" and that the SPCC faecal coliform guidelines were also not being met.⁷⁵ This admission of pollution was possible and even necessary because of the plans to build the submarine ocean outfalls which would have seemed a waste of money, if pollution didn't occur.

The Board continued to deny the health risks however. In March 1979 it was claimed that a 71 year old bather died as a result of bathing in polluted water when septicaemia caused his lung and kidney to fail.⁷⁶ Later that year there were scares of a hepatitis epidemic after thirteen or more suspected cases amongst swimmers in the eastern suburbs. The State health authorities insisted that there was no way that the hepatitis could be linked positively with the beach pollution.⁷⁷ The Board responded that there were 3000 cases of hepatitis in Sydney every year and that thirteen possible cases were not statistically significant.⁷⁸

The Board made full use of the way the standards were based on a geometric mean and claimed it was right that occasional high readings could be disregarded:

individual readings mean nothing because they may have been taken from water fouled by a seagull or "dog moments" before the test, or contaminated by effluent from a ship moored off the beach.⁷⁹

Such a disclaimer was thought necessary because the newspapers and the councils kept taking their own readings and coming up with very high readings. In February 1981 readings of over 200,000 faecal coliform/100 ml were found at Maroubra beach and over 3000/100ml at Coogee. The high readings were blamed on heavy rainfall and the additional load of stormwater pollution which had washed accumulated street rubbish into the sea.⁸⁰ (Faecal coliforms in stormwater drains came from animal droppings and sewage overflows rather than rubbish.) The Board claimed at the end of the month that inspite of some unusually high faecal coliform counts on some days the SPCC criteria for that

⁷⁴ Sunday Mirror, 5th December 1976.

⁷⁵ Telegraph, 1st January 1979.

⁷⁶ Sydney Morning Herald, 30th March 1979.

⁷⁷ Mirror, 31st October 1979.

⁷⁸ Telegraph, 23rd November 1979.

⁷⁹ Sydney Morning Herald, 30th December 1980.

⁸⁰ Sun, 17th February 1981; Mirror, 17th February 1981.

month had been met at all eastern suburbs beaches except at Clovelly where the geometric mean had been marginally exceeded.⁸¹

The Board was more willing, by 1980 to admit that swimming in very polluted water might be a health risk, especially during a strike, but still denied that Sydney's beaches posed any real threat. Dr Bruce Fraser the Board's chief medical officer argued that there was more risk of infection in a crowded backyard swimming pool than at a Sydney beach and that by the time a beach was so contaminated by faecal coliform that it was a health hazard, most swimmers would have left the water for aesthetic reasons.⁸² (clearly reminiscent of Moore 1959) The Board was helped in maintaining this line by the Health Department as could be seen earlier in this chapter.

The surfers and beachgoers didn't tend to be organised except into surf life saving clubs and associations. The NSW Surf Life Saving Association was reluctant to speak out against the government because they depended on government funding. However in January 1989, the conservative National body, the Surf Life Saving Association of Australia (SLSAA) threatened to withdraw their beach patrols and force the closure of beaches unless there was immediate action to provide money to solve Sydney's beach pollution problems. Ian Macleod, the Association's spokesman said that they were concerned about the health risks of polluted beaches and that the submarine outfalls would not solve the problem. He claimed that three members of the Maroubra surf club had serious gastric illnesses in the previous week alone.⁸³

The Tourism commission also made a statement in response that Sydney's beaches were an integral element in the marketing of NSW and Australia overseas and that they "could not afford to have any doubt cast over our beaches." The Minister for Environment, Tim Moore, also responded saying that nothing could be done quickly just by throwing money around and that secondary treatment would cost \$3 billion and mean that rates would be tripled.⁸⁴ This is more than double the Board's own estimate of November 1987.⁸⁵

AN ALLIANCE OF SURFERS AND ENVIRONMENTALISTS

Stop the Ocean Pollution (STOP), a group representing surfers, swimmers and fishing people, was formed in 1984. It aimed to get the community involved in the issue of ocean pollution and to educate the media on the issue.⁸⁶ STOP's approach differed significantly from that of environmental groups which took an interest in the issue in the 1970s. Realising that alternatives, such as recycling, were easily dismissed on cost grounds STOP undertook a detailed critique of Water Board reports and claims, lobbied politicians and supplied research material to various interested groups and individuals. This approach has been far more successful at raising public consciousness and keeping the media

⁸¹ Southern News, 10th March 1981.

⁸² Sydney Morning Herald, 30th December 1980.

⁸³ Sydney Morning Herald, 21st January 1989; Telegraph, 21st January 1989.

⁸⁴ Sydney Morning Herald, 21st January 1989.

⁸⁵ Sydney Water Board, Background Briefing 8, November 1987.

⁸⁶ Sydney Morning Herald, 9th February 1989.

informed, although sometimes the debate has been too complex for the media to use.

STOP had three main concerns. They argued that the submarine outfalls would not keep pollution off the beaches, that toxic waste posed a threat to marine life and people who ate fish caught in the vicinity of the outfalls, and that viruses and bacteria posed a health threat to swimmers and surfers. In May 1986 a local paper reported on STOP's research under the shock headlines, "New Sewer Won't Work!". STOP pointed out that a similar treatment plant and submarine outfall in Los Angeles had not worked satisfactorily and that Los Angeles City Council was being forced to install secondary treatment before discharge via the submarine outfall.⁸⁷ It was also claimed by STOP that sewage reaching the surface would be blown directly onto the beaches by easterly winds. On the same page the paper had a story about a whale which had been killed in 1934 when it was accidentally hit by a Manly ferry. The whale was towed out to sea several times, the last time 14 miles out, but it still floated back inshore. Finally it was taken out 20 miles and was never seen again.⁸⁸

STOP also directed the paper to Brain and the following week the paper reported his views, and the responses by Sandy Thomas, spokesman for the Board (previously spokesman for the SPCC). Thomas said that Brain had been a "minority of one" at the SPCC with his views about the efficacy of the submarine outfalls. He said that the Board was "completely and utterly confident that these outfalls will work."⁸⁹

The two articles in the local papers prompted such concern amongst local residents that the Waverley Council asked its chief engineer to investigate the outfall project and report "as to any deleterious effects that might be experienced".⁹⁰ After a meeting with the engineer, three members of STOP were invited to a committee meeting of the Waverley Council to put their case. Several aldermen were persuaded that there was reason for concern and the council decided to invite representatives of the Board and the SPCC to respond to the matters raised.

The Board and the SPCC sent seven officials to the Council with several display boards and a three metre long model of one of the submarine outfalls and, as the local paper put it, flooded the meeting with facts, figures, charts, diagrams and models. They attempted to discredit STOP by labelling their submission as being unscientific and an attempt to scare the public.⁹¹ This is a situation that Brian Martin has described as fairly typical of such controversies. Proponents attribute their own stand to science and attribute opposition to personal or political factors.⁹²

⁸⁷ Wentworth Courier, 7th May 1986.

⁸⁸ ibid.

⁸⁹ Wentworth Courier, 14th May 1986.

⁹⁰ Southern Courier, 4th June 1986.

⁹¹ Southern Courier, 6th August 1986.

⁹² Brian Martin, 'Analyzing the Fluoridation Controversy: Resources and Structures', Social Studies of Science 18, 1988, p335.

In their submission to the Waverley Council the Board defended their outfalls, arguing that independent overseas experts had reviewed the Board's calculations and confirmed their accuracy. They also claimed that their own estimate that sewage would reach the shore 40% of the time in the winter was an extremely conservative estimate and that the latest estimates were more like 5-10% of the time.⁹³

STOP argued that the real reason that the submarine outfalls were being built, since their performance was in doubt, was to dispose of industrial waste. They claimed that the sewerage system had become Sydney's major toxic waste dump. With the submarine outfall proposals toxic substances would be dumped further offshore where they couldn't be easily identified. Alternatives such as recycling and secondary treatment would necessitate the removal of industrial waste and this would cause extra expense to industry.⁹⁴

The local paper, in its editorial a month or so after the confrontation at Waverley Council chambers, said that the Water Board's public relations team had "failed to allay the fears of at least some aldermen". It noted that whilst the Board had criticised STOP's submission, the Board had itself appeared to "have taken liberties with the truth". They referred to an incident at the Council meeting when Board representatives claimed that the primary treatment process could remove 60% of the solid matter, implying that this was what was achieved at Sydney's outfalls. They had been embarrassed and forced to admit this was misleading when Kirk Wilcox of STOP had put to them that the Bondi plant in fact only removed 11% of suspended solids.⁹⁵

The main government funded environmental groups did not involve themselves in the issue of Sydney's beach or ocean pollution once they had made their submissions in 1980. Richard Gosden presented STOP's case to the Total Environment Centre's Toxic and Hazardous Chemicals Committee in 1986 and although they were interested the committee decided that the Water Board was just too big and powerful for them to tackle.⁹⁶

STOP did manage to interest Greenpeace in the industrial waste aspect of the sewage question and Greenpeace, using information supplied by STOP, ran a short 'Clean Seas Campaign' against the use of the sewers as a major toxic waste dump at the beginning of 1987. At the end of January, they delivered thousands of leaflets to homes in beachside suburbs.⁹⁷ The leaflets, entitled "Sun, Surf and Cyanide" began;

The Water Board is asking you not to pour oils down your sink. Fine.
What you may not know is that half of Sydney's sewage is wastewater

⁹³ M.W.S.&D.B., 'The Sydney Water Board's Beach Protection Programme', submission to Waverley Municipal Council, July 1986, pp13-4.

⁹⁴ Richard Gosden, 'Truth Surfacing on Submerged Field', Engineering and Social Responsibility 2(7), August 1985, p5.

⁹⁵ Wentworth Courier, 10th September 1987.

⁹⁶ Interview with Richard Gosden, S.T.O.P., 18th January 1989.

⁹⁷ Greenpeace, media release, January 1987; Wentworth Courier, 21st January 1987; Daily Telegraph, 2nd February 1987.

from industry. The things they pour down the sink tend to be a little nastier....⁹⁸

Greenpeace made use of STOP figures on the quantities of toxic chemicals going into the sea with the sewage. These figures were based on those reported in the Caldwell Connell reports and showed that of the 1500 tonnes of heavy metal waste generated in Sydney every year over 600 tonnes were going through the sewers and that the waste being discharged into the sea included 5 tonnes of arsenic, 19 tonnes of organochlorines, 38 tonnes of lead, 190 tonnes of cyanide etc.⁹⁹

The Water Board argued that domestic waste, especially domestic grease, was a more significant problem than industrial waste.¹⁰⁰ They disputed the quantities of toxic chemicals as being "dramatic overstatements" although they were simple extrapolations from their own reports. Clearly the Board realised that when the information was presented as total tonnages it was bad for public relations and they preferred that it be presented as concentrations.

It cannot be emphasised too heavily that when considering the effects of toxic wastes such as these on a part of the environment such as ocean waters off Sydney, the significant parameter is concentration rather than total mass. This is because...discharges to the ocean off Sydney are known to be dispersed very rapidly over very, very large volumes of water through the natural movement of ocean currents, tides, etc. Although the ocean clearly is not an infinite sink for pollutants such as heavy metals, it does have, in this case, an exceptionally large assimilative capacity.¹⁰¹

The Board tries to ensure that the public considers pollution in terms of dilution by recording and always referring to quantities of substances being discharged in terms of concentrations rather than total quantities. When these figures were given by STOP the Board denied them outright and accused STOP of fraud but when the same figures were brought up in parliament they were unable to get away with this and suggested the concentrations they had given were mainly upper limits because of the inability of their equipment to detect lower levels. The Board claimed that 1987 monitoring results were unable to detect arsenic, organochlorine pesticides or lead but it is now known that the concentrations in the sludge were not included in these measurements although this was not made clear at the time.¹⁰²

The Board insisted that a "series of publicly released studies" since 1972 (which this researcher has not been unable to locate) had consistently found that concentrations of potentially hazardous chemicals were well below the limits set by health authorities and that whilst some elevated results had been found in the case of DDT and Dieldrin (both chlorinated hydrocarbons and used as

⁹⁸ Greenpeace, Sun, Surf and Cyanide, pamphlet, 1987.

⁹⁹ STOP, submission to Waverly Council, July 1986.

¹⁰⁰ M.W.S.&D.B., 'The Sydney Water Board's Beach Protection Programme', pp3-4.

¹⁰¹ ibid., p17.

¹⁰² Sydney Water Board, Background Briefing 5, Nov 1987.

pesticides) residues in fish, "the levels observed have not been sufficiently high to cause immediate health concern."¹⁰³

The Board's General Manager and publicity material also tried to downplay the significance of the toxic chemicals in the ocean by saying that concentrations of these toxic substances (such as cadmium, arsenic and zinc) were already found naturally in the ocean in large quantities and that the concentrations being discharged were well within the SPCC limits specified under the Clean Waters Act. They argued that even if the total tonnages that STOP worked out were correct, they were "infinitesimal in comparison with the quantities of the chemicals already in the ocean, due entirely to natural causes, off Sydney."¹⁰⁴ These are arguments that do not fit well with surveys of fish near the outfalls. (see chapter 7)

At the annual POOO protest march at Manly in 1987 the Board handed out to the press kits containing a range of their glossy brochures and a six page handout on industrial wastes. It stated that the Board shared the concern of some environmental groups that adverse environmental and health impacts might arise from the disposal of industrial waste. The handout claimed that errors in the Greenpeace leaflet, which had also been distributed at the POOO rally, had arisen from incorrect advice given to Greenpeace by another organisation.¹⁰⁵ It is not clear whether the Board was attempting to drive a wedge of misunderstanding between Greenpeace and STOP or whether they were just trying not to be insulting to Greenpeace in an attempt to keep them on side.

MEDIA MANIPULATORS AND CAMERA SHY DISSIDENTS

The sewage issue seems to be one readily taken up by the media. It is controversial, is of concern to a large number of people and can be easily illustrated. Shocking pollution stories sell papers. The tabloids, in particular, have often revelled in the shock headlines such as "Filth Left on Beach"¹⁰⁶, "Beach Filth-New Scandal"¹⁰⁷, "Hepatitis from a Day in the Surf"¹⁰⁸, "Muck Rolls on Beaches"¹⁰⁹, "Typhoid Peril at Bondi Beach"¹¹⁰, "Filth Closes Beaches"¹¹¹ etc.

However, newspapers are not always ready to take up such a stance. A newspapers policy towards pollution may be affected by its advertisers or its readership as well. Dorothy Nelkin, in her study of how the press covers science and technology has observed that newspapers need to make a profit and to do this they must maintain circulation and attract advertisers, without offending

¹⁰³ M.W.S.&D.B., 'The Sydney Water Board's Beach Protection Programme', p9.

¹⁰⁴ M.W.S.&D.B., 'Control of Industrial Wastes Discharged to Sewers'.

¹⁰⁵ M.W.S.&D.B., 'Control of Industrial Wastes Discharged to Sewers', pamphlet, 1987.

¹⁰⁶ Mirror, 16th February 1966.

¹⁰⁷ Telegraph, 18th December 1969.

¹⁰⁸ Mirror, 16th January 1970.

¹⁰⁹ Sunday Telegraph, 4th April 1971.

¹¹⁰ Mirror, 24th November 1972.

¹¹¹ Sun, 25th November 1975.

their owners or advertisers. "Newspapers must operate according to the commercial realities imposed by their dependence on advertising."¹¹²

The incident in 1929 (chapter 4) is an alleged example of this where it was argued that the the Telegraph ran a pollution photo and the Sun a follow up series of articles after the Bondi Publicity League cancelled advertising campaign.¹¹³ An indirect affect of the Water Boards huge publicity campaign from 1985-87 may well have been the suppression of anti-submarine outfall stories in papers and magazines which ran their double page colour advertisements.

Similarly, local newspapers can be affected by the perceived affect a story may have on the development, businesses and real estate in the local area.¹¹⁴ Beachside newspapers can be reluctant to publish pollution stories that turn people away from the local beaches. Often local papers are dominated by political interests. For example a Liberal aligned paper in Bondi may emphasise problems associated with the proposed outfalls whilst the Liberal Party is in opposition but after they win State government, the paper may no longer be interested in such stories.

Certainly the newspapers are not concerned with consistency. For example the Sun, which had published many shock headlines about pollution, published a series of articles in 1972 in favour of the Board's new scheme, the first of which was headlined, "It's Time the Sewerage Whingers Faced the Facts, We're Better Off Than You Think". The article argued that Sydney siders were better off than others in comparable cities overseas and that ocean disposal was the most economically and practically preferred option by engineers all over the world.¹¹⁵ The second article, headlined "The Wonderful Thermoclyne" explained how, once the submarine outfalls were built, the sewage would remain submerged beneath the thermoclyne.¹¹⁶

Yet a few years later the Sun published its own pollution readings under the headline 'The Alarming Truth About Pollution' and reported that despite the slump in trade on dirty beach days there were new sales because "Some die-hard board riders wanted drinks to take their penicillin tablets!". In 1985 the Sun editorial said

Nowhere else would such pollution be tolerated to anything like the extent and duration of that endured here.

Yet here we are for the umpteenth year in succession forced to splash around in a cesspool.

The attitudes of the Water Board and the State Pollution Commission are a constant source of amazement.¹¹⁷

¹¹² Nelkin, *op.cit.*, p121.

¹¹³ Guardian, 22nd March 1929.

¹¹⁴ Dorothy Nelkin, Selling Science: How the Press Covers Science and Technology, W.H.Freeman & Co, New York, 1987, p122.

¹¹⁵ Sun, 5th December 1972.

¹¹⁶ Sun, 6th December 1972.

¹¹⁷ Sun, 14th January 1985.

This readiness of the newspapers to take up the pollution issue, whilst being a bonus for the Board's detractors, has not always meant automatic publication however. Firstly, the papers usually need some sort of event upon which to hang their stories so that they are defined as news. Each story competes for priority and an emphasis on "breaking news" does not encourage any coverage of long-term issues. Not only must the story be newsworthy but it has to attract and hold the attention of readers.¹¹⁸

An environmental group which makes claims is often not considered to be news nor interesting unless their claims are judged to be astounding. STOP has often had the experience of spending hours with a reporter who was enthusiastic about the story only to find that the story had been cut by an editor who thought it was boring.¹¹⁹ Reporters, in fact try to get opponents to make exaggerated and unqualified statements because this is more newsworthy.¹²⁰ For this reason groups and individuals opposing a government decision are forced to either sound an alarm or otherwise to stage "actions" or demonstrations.

Eric Ashby has written about the dilemma that environmentalists face in this situation.

Since the public will not respond to anything that is not news, the would-be protector of the environment is faced with an ethical problem: Is it legitimate to dramatize some potential environmental hazard in order to overcome indifference among the public?...¹²¹

For some groups the choice has been clear. For example, Greenpeace engaged in a publicity stunt when three members, dressed in contamination suits and gas masks arrived at Bondi beach in an inflated motor boat and proceeded onto the beach, erecting signs warning of toxic waste in the water.¹²² Similarly, Ian Cohen, when candidate for the Senate, staged an action to draw attention to the sewage pollution by climbing down the cliff above the Bondi outfall, paddling out on his surfboard into the murk, collecting a jar full of sewage, and then paddling round to Bondi beach where he showered ("decontamination") and after speaking to reporters delivered the jar to a local Federal Ministers office).¹²³

Although alarming statements and "actions" or "stunts" can be successful at getting media attention they can also be counterproductive in that such groups are tainted with a less than respectable image which may damage their credibility and turn away middle class membership. Ashby has noted that the influence a group has as a public interest lobby often depends on the reputation they gain for integrity.¹²⁴ Fearing the loss of this, some of the more institutionalised environmental groups in Australia, such as the Australian

¹¹⁸ Dorothy Nelkin, Selling Science, p111.

¹¹⁹ interview with Richard Gosden.

¹²⁰ personal experience with reporter from Mirror, January 1987.

¹²¹ Eric Ashby, Reconciling Man with the Environment, Stanford University Press, 1978, pp29-30.

¹²² Sydney Morning Herald, 16th February 1987; On the Street, 18th February 1987.

¹²³ Eastern Herald, 9th July 1987.

¹²⁴ Ashby, Reconciling Man with the Environment, p26.

Conservation Foundation, avoid "actions" and dramatic statements. Recently Stuart White of Friends of the Earth (FOE) found an innovative way to organise an event that would attract media attention in a respectable way. He organised a "crap walk" along part of the coastline. Those who took part were able to hear speakers and talk to members of STOP and FOE about the sewage and beach pollution problems.

In contrast, the Water Board is able to centre its press releases around each new stage in the submarine ocean outfall development, which can then be classed as news. Although the Board and associated Ministers are not averse to their own publicity stunts. Numerous public swims have been taken for example. In 1979, the Environment Minister, Mr Paul Landa, was photographed in the surf and quoted as saying that the only answer to pollution was to extend the outfalls.¹²⁵ In November 1983 Crawford, the Board's new General Manager, was pictured in the Sun coming out of the surf, as a regular swimmer at Manly. Crawford was reported as saying that if the water looks clean its okay to swim in.¹²⁶ Janice Crosio, Minister for Natural Resources, was the next one to be photographed in the Bondi surf to show that it was safe. Mrs Crosio declared the water "crystal clear". The beach pollution level over the last few days had been "the same pollution as if a child went to the toilet in a swimming pool". She suggested that people who said they had got ear and throat infections had picked them up from swimming pools or from sitting on the sand.¹²⁷ The tactics of the politicians were satirised in the Sun-Herald (see figure 9.4).

The Leader of the Opposition, Nick Greiner took a boat load of journalists on a sight seeing tour through the murk.¹²⁸ This was just one example of how those with financial resources, particularly government authorities, can use them to woo the media. The Board can and do offer boat rides, helicopter trips and tours of sewage works and sewers, the latter perhaps not so desirable, that help to make the journalists feel important and give good picture opportunities to camera crews and photographers.

Another advantage that the Board has in its dealings with the media is its near monopoly on information and authorised experts. Reporters often rely on the authorised experts for their information, having little time or incentive to seek out conflicting views. Public relations people, in particular, can often provide information in a suitably packaged form, that can be easily used by a reporter working to a deadline.¹²⁹

Environmentalists, no matter how much research they may have carried out, find it difficult to compete with the authorised experts and public relations personnel for credibility. Credibility is especially important when dealing with the media. Reporters seldom have the ability or confidence to know who can be trusted when it comes to technical information and will usually just accept the 'official' version rather than be caught out believing a "crackpot" or extremist.

¹²⁵ Mirror, 11th November 1979.

¹²⁶ Sun, 23rd November 1983.

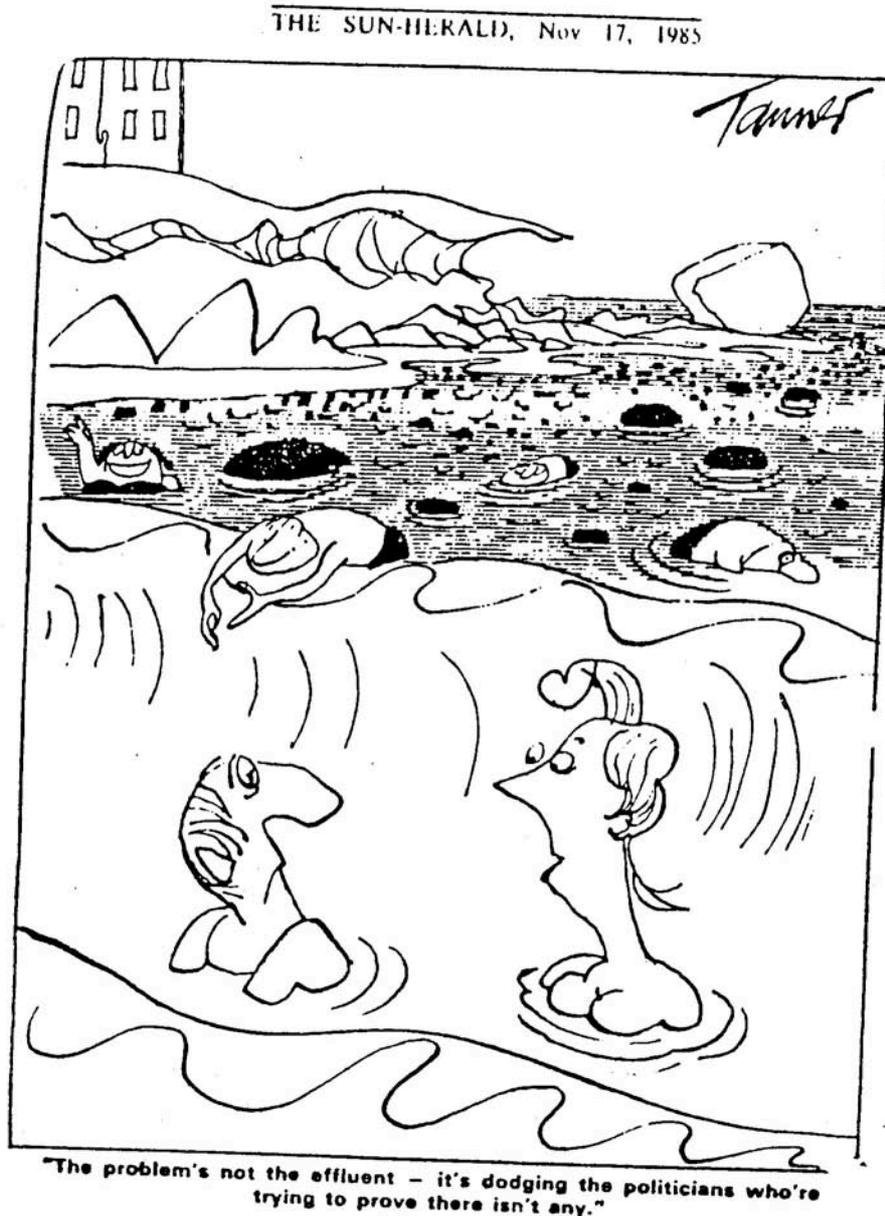
¹²⁷ Sun, 20th and 21st Decemer 1984; Sydney Morning Herald, 21st December 1984; Telegraph 21st December 1984.

¹²⁸ Telegraph, 21st December 1984; Sydney Morning Herald, 20th December 1984.

¹²⁹ Nelkin, Selling Science, p113.

This is easier than taking the time to check out either the official versions or the opposing versions.¹³⁰

Figure 9.4



The Board began releasing a series of press releases in 1984 which announced every small step forward in the progress of the ocean outfalls and each press release put forward the case for the submarine outfalls. Local papers happily reprinted the releases almost word for word. Every milestone in the construction was marked with pictures of politicians and local dignitaries happily standing over spades with hard hats on. For example in March 1984, local headlines

¹³⁰ Joel Primack & Frank von Hippel, *Advice and Dissent: Scientists in the Political Arena*, Basic Books, New York, 1974, pp244-5.

announced that work would start "soon".¹³¹ Every article carried the Board's claim that

Environmental studies have demonstrated conclusively that, under local oceanographic conditions, beach and marine pollution of sewage origin will be eliminated by the discharge of primary treated effluent through deepwater submarine outfalls three to four kilometres off-shore.¹³²

A further press release in May announced that the work would begin on June 8th and claimed the submarine outfall tunnels would eliminate "occasional high pollution levels in swimming waters, the visible effluent in near shore waters, the occasional deposits of grease and sewage on beaches and reduce the concentration of chemicals and other "restricted substances" to acceptable levels.¹³³ Another press release at the beginning of October put forward the same claims when construction finally began.¹³⁴

Most larger papers make some attempt to get both sides of a story which is controversial rather than merely relying on a press release. Rather than checking out the claims of each side these papers will often overcome the problem by merely quoting the views of each side without analysis or judgement. Some papers such as the Sydney Morning Herald are much more careful about what they will print and like to check out the claims of uncredentialed spokespeople.

Nor is it easy for reporters to find independent "experts". Medical people, scientists and engineers are often loath to be named by newspapers or to commit themselves in a public dispute. Criticism of the submarine outfalls by engineers, if it existed, was fairly well suppressed. The Telegraph reported that "private and government civil engineers" had criticised the proposed submarine outfall plan arguing that it would do little to solve the pollution problem.¹³⁵ Such critics were not willing to put their names to their criticisms, however. Indeed it is an unwritten part of the engineering ethos, not to criticise engineering works designed by other engineers.

When the Institution of Engineers, Australia was first established just after the first World War the proposed code of ethics, which was modelled on that of the American Society of Civil Engineers, had two provisions out of six which was related to criticism of other engineers. These were

It shall be considered unprofessional and inconsistent with honourable and dignified bearing for any member...

To attempt to injure falsely or maliciously, directly or indirectly, the professional reputation, prospects, or business of another engineer.

¹³¹ for example Messenger, 28th March 1984; Weekly Courier, 28th March 1984.

¹³² ibid.

¹³³ For example, Sydney Morning Herald, 21st May 1984; Weekly Courier, 23rd May 1984.

¹³⁴ For example Southern Courier, 3rd October 1984; Bondi Spectator, 4th October 1984.

¹³⁵ Telegraph, 17th January 1977.

To review the work of another engineer for the same client, except with the knowledge and consent of such engineer, or unless the connection of such engineer with the work has been terminated.¹³⁶

The President of the Institution, claimed at the time that "the development of the spirit of loyalty among engineers" was essential to raising the status of the profession and that it should be taught to all new engineers. He noted that it happened that engineers sometimes gave opposing evidence as expert witnesses in court and that this tended "to lower the dignity of the profession and bring it into contempt."¹³⁷

Today this ethos is not so clearly stated but is nonetheless still felt. The 1988 Code of Ethics states that engineers shall act "so as to uphold and enhance the honour, integrity and dignity of the profession" and even exhorts engineers to contribute to public discussion on engineering matters in their areas of competence if they consider that this can constructively advance the well-being of the community. ¹³⁸ Nevertheless engineers do tend to avoid public criticism of each other for fear of downgrading the status of engineers. When the author of this work made some public statements about the submarine ocean outfalls and the nature of engineering work, she received a phone call from a senior member of the Institution of Engineers. This man questioned her competence, referred her to the code of ethics and threatened to take her before an Institution tribunal for breaching the code of ethics by being disloyal to the profession.¹³⁹ Shortly afterwards the President of the Institution made a public statement supporting the submarine outfalls and deploring "the denigration of Australian engineering endeavours which seems to occur all too frequently these days."¹⁴⁰

The other problem is that engineers feel only able to comment on their own areas of competence which means that, in general, only sewerage engineers would feel able to comment on the submarine ocean outfalls. Since most sewerage engineers are employed by government departments or organisations and those that don't are employed by, or are consultants, dependent on those government departments for work, a potential critic faces the possibility of severely limiting their career prospects by making such criticism. Moreover, such engineers will subscribe to the paradigm and be less likely to find fault with a scheme that emerges from that paradigm.

The one major exception in the case of Sydney Submarine Ocean Outfalls has been Robert Brain, a retired SPCC engineer. His retired status has given him the freedom to speak out and his treatment within the SPCC seems to have given him the moral justification to. His role within the SPCC make him uniquely qualified and competent to do so. Yet even Brain did not speak to the media whilst employed by the SPCC. This is indicative of the constraints on employees who don't have to work for a private firm to be classed as whistleblowers if they divulge information to the media.

¹³⁶ W.H.Warren, Presidential Address, Transactions of IEAust, vol I, 1920, p165.

¹³⁷ ibid., p166.

¹³⁸ I.E.Aust, Code of Ethics, 1988.

¹³⁹ phone call from E.C.Fox, 12th January 1987.

¹⁴⁰ Sydney Morning Herald, 21st January 1987.

Public authorities, like private industry, attempt to control the flow of information to the public by confining it to certain approved channels. In the case of the Water Board, a public relations department plays this role and outside of this department there are attempts to restrict liaison with the media. Public statements are limited to certain high ranking engineers who understand the sensitivities of the Board. The Board does not like journalists interviewing employees that have not been specially selected for this role.¹⁴¹

Whilst engineers are loath to publicly criticise engineering projects, scientists too, are discouraged by their peers from speaking to the media. Rae Goodell argues that the high profile scientists who get media attention "are typically outsiders, sometimes even outcasts among established scientists,... seen by their colleagues almost as a pollution in the scientific community".¹⁴² Often the scientists who are conversant with the issues are employed by government departments or authorities and are restricted, like engineers, by their employers.

Similarly, medical people have been loath to speak out about the health risks involved with swimming and the fact that the health authorities have always downplayed those risks does nothing to encourage them. As in the case of engineers, unnamed medical people have been quoted in the papers but, whilst the doctors in seaside suburbs may admit privately that they see many cases of people with infections resulting from bathing in polluted waters, they are unwilling to stake their reputation on it.

Some enterprising papers have attempted to by-pass the need to depend on the authorities for information by taking their own samples of sea water and having it analysed. This occurred as far back as 1929 (see chapter 4) but then and now the papers have not been too successful at it. Firstly, the papers have often confused total numbers of coliforms with faecal coliforms (most commonly e-coli) which came from the human and animal gut. This enabled the Board and health officials to dismiss high levels of total coliforms as marine pollution and pollution from vegetable matter and soil.¹⁴³

Moreover, the occasional sampling by newspapers can easily be shown to be less significant than the regular sampling undertaken by the authorities and where the authorities argue that their findings are less, the paper can suffer from a credibility problem. Moreover, the officials are always able to deny any connection between coliform levels (faecal coliform or not) and proven health risks and use this to their advantage in denying that high coliform levels are meaningful.

The reporting of the new submarine outfalls has tended to be rather simplified. The arguments over whether the outfalls will perform as claimed can be complex and are not readily seen as media material, especially on the radio or television where there are only a few minutes allotted to each item. Both sides are forced in such situations to make simplistic claims that cannot be supported by detailed argument and which are, in the end, judged according to such factors as strength of personality, confidence and the authority which the person carries.

¹⁴¹ interview with journalist, Sydney Morning Herald, 29th December 1988.

¹⁴² quoted in Nelkin, Selling Science, p160.

¹⁴³ for example, Telegraph, 18th December 1969; Sun 19th November 1979.

Even in the newspapers there are similar constraints. Journalists have limited time and incentive to become fully immersed and well versed in a subject. The complexities of just how contrived the official claims are, is not only difficult to show but considered to be boring to readers. In an area such as health risks, for example, journalists want to know if it is safe to swim at Bondi or not; they are seldom interested in whether faecal coliforms are a poor indicator of health risk. Moreover they will need to check claims with medical experts even though environmentalists may have read more scientific papers on the subject of health risks from bathing in sewage polluted sea-water.

Powerful organisations with government backing are often able to exert considerable pressure on newspapers and journalists, particularly when they think that they are not getting favourable coverage. In such circumstances, journalists need to be convinced of their information and sources if they are critical of these organisations and they also need to be sure of editorial support. This isn't always possible but if a journalist is courageous enough to take a chance on partly verified information or a sceptical editor, other media reporters may quickly follow him/her into an unfolding story.

Alan Tate, a Sydney Morning Herald journalist wrote a series of investigative articles commencing on the 7th January 1989 which successfully turned the tide on the Water Board. Throughout the first week of his series he was subject to verbal abuse from Water Board officers, accusations of taking uninformed advice and also accusations of not printing Water Board statements.¹⁴⁴ Two days after a full page Water Board advertisement was published in the Herald, the following letter to the editor from Bob Wilson appeared.

The Water Board has responded to these articles by way of a number of press releases and statements. In my view, the Herald has not adequately published this information. Nor has it so far published information provided in response to these claims by the State Pollution Control Commission (SPCC), the Department of Fisheries or the Department of Health.¹⁴⁵

However, despite these protests, the Board did not accuse the Herald of printing anything that was untrue and other media soon took up the story. Successive waves of embarrassing revelations of the Board's activities continued for weeks.

POLITICIANS - ELECTION PROMISES AND EMPTY RHETORIC

Beach pollution and its solutions have always been a highly politicised affair partly because of the media coverage it gets and voter interest in the subject. Politicians have sought media attention by making public statements about pollution and, whilst in opposition, by criticising the Board's proposals for dealing with it. Yet it is also one issue on which the two main parties have very little differences in approach. Politicians in government have tended to downplay the pollution and deny the health risks whilst politicians in opposition have played it up and criticised the Water Board's proposals. As can be seen in figure

¹⁴⁴ Alan Tate, Sydney Morning Herald, personal communication, January 1989.

¹⁴⁵ Sydney Morning Herald, 19th January 1989.

9.1, the various changes of government seem to have had little influence on the development of the submarine ocean outfalls.

Whilst in government various politicians have attempted to speed up progress on the outfalls and to get extra funds for it. After a concerted campaign against the pollution by the Telegraph in the 1969-70 swimming season and taken up by the Mirror, the Premier, Mr Askin, approached the Prime Minister, Mr Gorton for loan funds to combat beach pollution.¹⁴⁶ Early the next year the opposition (Labour) state member for Maroubra, W.H.Haigh, unsuccessfully tried to put an Urgency Motion calling on the government to provide special grants to the Water Board to enable it to complete sewage works to "stop the destruction of the beaches and foreshores by sewage pollution". He said that the discharge of partially treated sewage was a health hazard, damaged the tourist industry, lost sales for beaches businesses and affected property values at beachside locations.¹⁴⁷

The Daily Mirror featured a photo a few days later headlined "Revolting! The filth that pours out on to Sydney beaches" and suggested that the pollution "menace" was causing an uproar in State and Federal parliaments, council meetings and among surfers.¹⁴⁸ A week later it was announced, in response to an Opposition no confidence motion in the NSW Legislative Assembly that the Federal government would be making \$17 million available over five years toward the completion of the Board's sewerage treatment works.¹⁴⁹

Whilst in opposition, Lionel Bowen, a Federal MP for an electorate with beachside suburbs, spoke out strongly in parliament against the proposed submarine outfalls. He argued that overseas investigations had shown that no matter how far off-shore the effluent was disposed of it would still pollute the water and end up "virtually destroying whatever marine environment we have left there. He argued that the matter should be taken up by the Federal government because otherwise it would be left in the hands of the Water Board Engineers.

The biggest problem with sanitary engineers, if we may use that expression, is that they are interested only in the disposal of the effluent. They have no real knowledge, nor is it their duty to have any knowledge, of the problems associated with disposing of that sewage, effluent or industrial waste onto the marine floor and the dangers it is causing.¹⁵⁰

Both Bowen and his fellow MP Tom Uren called for a closer examination of the recycling option.¹⁵¹

¹⁴⁶ Mirror, 21st January 1970.

¹⁴⁷ Telegraph, 19th February 1970.

¹⁴⁸ Mirror, 24th February 1970.

¹⁴⁹ Sydney Morning Herald, 4th March 1970.

¹⁵⁰ Lionel Bowen, House of Representatives, 8th May 1970, p1936.

¹⁵¹ Lionel Bowen, House of Representatives, 21st May 1970, p2572; Tom Uren, House of Representatives, 9 June 1970, p3134.

The change of State Government in 1976 from Liberal to Labour did not change the plans for submarine outfalls and although the deputy premier, Mr Ferguson, argued that the neglect of the previous government had left him with a massive task, denials about the extent of pollution continued to be put out by the Labor government as they had been by the Liberal government. For example, at the end of 1976, newspaper reports that several beaches had been closed because of pollution by beach inspectors who realised a potential health threat were accompanied by denials from deputy premier and the Minister for the Environment, Mr Landa.¹⁵²

The State Opposition Leader, Mr Mason (Lib), also got involved. He argued that sewage pollution of beaches was not only threatening health but also causing "huge financial losses for hundreds of small local businesses reliant on tourist trade".¹⁵³ Predictably the State MP for Coogee, Mr Cleary (Lab), said the current campaign against beach pollution had "greatly exaggerated the danger of the situation" and he quoted the director of the Health Commission of NSW that hepatitis could not be contracted from swimming in polluted water and that the worst swimmers might get would be minor infections of the ear, eye and skin.¹⁵⁴

Rosemary Foot, the member for Vaucluse, argued for secondary treatment at the outfalls as used in other Western countries and she pointed out that there would be no relief from sewage pollution for seven to nine years under the existing Water Board plans. Even when the submarine outfalls were built, she claimed, the "future of some of Australia's finest beaches" would depend on which way the wind blew and they would still be at the mercy of union strikes.¹⁵⁵ The President of the Water Board attacked Mrs Foot saying that he was astounded that she "should seek publicity by making "ridiculous" statements which suggested experts were incompetent fools." Her statements proved "how sadly uninformed she was".¹⁵⁶

The Democrats also got involved in the argument, tending to favour the recycling options. Tom Mullins spoke to a branch meeting of the Democrats in Bondi¹⁵⁷ and later Dr Jim Boow of the Democrats supported Mullins in an argument in the print media.¹⁵⁸ Elisabeth Kirkby, the State leader of the Democrats accused Wran of squandering the State's most precious resource by not recycling waste water. She promised that her party would introduce legislation to recycle waste for industrial use.¹⁵⁹

The run up to the 1984 State elections produced a whole spate of political offerings. The Herald suggested that 'muck' might bring down Labor in the key

¹⁵² Telegraph, 25th and 26th November 1976.

¹⁵³ Sun, 13th November 1979.

¹⁵⁴ Southern News, 20th November 1979.

¹⁵⁵ Messenger, 11th June 1980; Southern News, 7th October 1980; Telegraph, 14th February 1981.

¹⁵⁶ Telegraph, 17th February 1981.

¹⁵⁷ Messenger, 10th June 1981.

¹⁵⁸ Messenger, 29th November 1981.

¹⁵⁹ Bondi Spectator, 17th September 1981.

marginal seat of Manly.¹⁶⁰ The Liberal Candidate for Manly, David Hay, bemoaned the failure to clean up Manly Beach which risked investment in the area, their tourist trade and their enjoyment.¹⁶¹ The sitting Labor member, Alan Stewart, told Manly residents that he "shared their frustration and anger" at the delays in the submarine outfall project, deliberately spoke of the treatment at North Head as primary treatment and made an announcement that construction of North Head submarine outfall would begin in four months.¹⁶²

To aid State Labor candidates in beleaguered beachside electorates, the Commonwealth Government announced, in the week before the election, that it would consider funding "a multi-million dollar program" to clean up the beaches, especially Bondi, Malabar and Manly and that it would certainly look favourably at a request by the NSW government for a special Loan Council borrowing to help finance sewage works.¹⁶³

Not to be outdone, Nick Greiner, Leader of the State Opposition, took a helicopter flight to inspect sewage at the three major outfalls from the air. He stated after his flight that much of the water around the cliffs was murky brown and "it was unthinkable" that the Government allowed the beaches to be threatened like that. He described Manly beach as an "open sewer" and condemned the "unbelievable bungling and waste of public money" that had occurred in regard to North Head sewerage treatment works.¹⁶⁴

Both parties promised to clean up the beaches.¹⁶⁵ Max Smith, Liberal MP for Pittwater accused the State Government of "blatant pork barrelling" over sewerage.¹⁶⁶ The Labor Member for Maroubra, Bob Carr, claimed that the Liberals would not have spent the money that they were spending on the submarine outfall project with the only return being health and cleaner beaches.¹⁶⁷ The election caused the sitting Labor member, Alan Stewart, to lose the marginal seat of Manly whilst Bob Carr, the sitting Labor member for the safe seat of Maroubra retained his.

The debate did not finish after the election however. Max Smith, Liberal Member for Pittwater, took a two month "study tour of sewerage systems in Holland, England and Scandinavia" and came back to report that the Water Board's plans were outdated and "governed by penny-pinching seeking to cheapen possible solutions instead of planning for the best".¹⁶⁸ Smith, trained as an engineer himself although not a sewerage engineer, criticised the submarine outfalls pointing out that the EIS's showed that 82% of the solid material in sewage would go into the sea. He said that the Government should have considered more seriously alternative methods of sewage treatment such as deep shaft

¹⁶⁰ Sydney Morning Herald, 12th March 1984.

¹⁶¹ Manly Daily, 21st February 1984.

¹⁶² Sydney Morning Herald, 12th March 1984; Manly Daily, 23rd March 1984.

¹⁶³ Sunday Telegraph, 18th March 1984.

¹⁶⁴ Sydney Morning Herald, 19th March 1984; Manly Daily, 22nd March 1984.

¹⁶⁵ Telegraph, 19th March 1984.

¹⁶⁶ Manly Daily, 22nd March 1984.

¹⁶⁷ Maroubra Magazine, 21st March 1984.

¹⁶⁸ Manly Daily, 7th July 1984.

technology.¹⁶⁹ He quoted the Dutch authorities he had visited on an overseas trip to argue that dilution was not the solution. Smith cited the case of a high rate primary treatment plant at The Hague where a 2.5 km submarine outfall had been installed ten years before and where secondary treatment was now being installed because of the unsatisfactory results.¹⁷⁰

The Opposition raised the matter in State Parliament, arguing that the government had not only been guilty of allowing pollution to reach this stage but also of neglecting to warn people of the possible dangers. Crosio, Minister for Local Government and Water Resources, replied that pollution occurred only occasionally.¹⁷¹

In mid 1986 a bi-election was held for the State seat of Pittwater which was such a safe Liberal seat that the Labor Party decided not to contest it. However, a well-known surfer, Nat Young, stood as an independent and one of his main platforms was the sewage question. He said that he had decided to run when he was competing in a surf competition and sitting in a sea of detergent with foreign material floating around him.¹⁷²

Young campaigned against the proposed submarine outfalls with the help of STOP, arguing that the Pittwater Beaches, less affected by pollution than those closer to the outfall, would be worse off when the outfalls protruded further out to sea and spread their load further.¹⁷³ The final result was extremely close and whilst preferences were being counted, Nick Greiner, Leader of the Liberals, admitted that the result could go either way.¹⁷⁴ Nat Young lost, but only just and the Liberals were badly shaken.

That same year, Tim Moore, the Liberal State Shadow Minister for the Environment began criticising the submarine ocean outfalls. He argued that effluent should be recycled for such purposes as watering sports grounds and for industrial purposes whilst the solids removed could be used as fertiliser.¹⁷⁵ He had returned from an overseas "fact-finding mission" into sewage treatment systems around the world. Moore said that in Germany secondary treatment was adapted to small land areas so that instead of having very wide shallow ponds they had narrow deep ponds that took only one tenth of the space of conventional secondary treatment. He argued that since an engineering solution existed the only other difficulty was cost and that involved a political consideration which would determine how fast secondary treatment was installed but should not determine whether it was installed. Most of the cities he visited, he said, either had secondary treatment or were moving towards it.¹⁷⁶

¹⁶⁹ Manly Daily, 10th December 1983.

¹⁷⁰ Manly Daily, 12th January 1985.

¹⁷¹ Sydney Morning Herald, 29th May 1987; Weekly Courier, 3rd June 1987.

¹⁷² Sun, 9th May 1986.

¹⁷³ Nat Young, election pamphlet, 1986.

¹⁷⁴ Sun, 2nd June 1986.

¹⁷⁵ Mirror, 7th February 1986.

¹⁷⁶ Sun Herald, 5th October 1986.

He argued that the submarine outfalls would provide, "at best, medium-term cosmetic solutions to Sydney's sewerage problems".¹⁷⁷

The blind insistence that the deepwater ocean outfalls are the solution to the problem represent a stubborn refusal to face the reality, revealed from the Water Board's own documents, that there will still be visible pollution in summer, at Sydney's beaches, on a minimum of one day in every twenty.¹⁷⁸

The Liberals came to power in 1988 and although construction of the submarine ocean outfalls continued, Tim Moore was left with a problem, given his earlier statements. Towards the end of October Moore announced that he had ordered his senior policy adviser to review all Water Board and State Pollution Control Commission documents on the submarine outfalls. It was reported that Moore was sceptical about the accuracy of the Board's claims that the outfalls would clean up the beaches completely but that there was not much he could do if he found the claims were untrue because the project was almost half finished.¹⁷⁹

Moore also took advantage of the planned monitoring programme that was being carried out as part of the approval conditions imposed by the SPCC. Moore announced the start of this monitoring programme as if it was his own initiative and was a response to growing doubts about the likely effectiveness of the submarine outfalls.¹⁸⁰

MUNICIPAL COUNCILS - PROTECTING LOCAL INTERESTS

Councils have played a variable role in debates over pollution. On the one hand, they have sought to suppress publicity that would reflect badly on their area (see chapter 4) but on the other hand they have consistently lobbied the Board to do something about the pollution and have occasionally used publicity when they have felt it might be effective in putting pressure on the Board. Moreover, local aldermen, like the politicians have used the issue to promote themselves and their parties, especially at election time.

In April 1966 Randwick Council, which covers Malabar, Maroubra, Coogee and Clovelly beaches, threatened to take the Board to court and sue for compensation for residents who had paid high prices for property in the area so that they could be near the beaches which were not able to be used because of pollution.¹⁸¹ The Telegraph supported the Randwick Council and in its editorial forecast the ruin of Sydney's "priceless assets".

The ancient - many say outmoded - method of disposing of sewage by flushing it into the sea might have been tolerable when Sydney was a small city.

¹⁷⁷ Tim Moore, 'Labor Sewerage Priorities Misguided', Environment Newsletter, June 1987, p1.

¹⁷⁸ Tim Moore, 'Pollution', Environment Newsletter, August 1987, p7..

¹⁷⁹ Sun-Herald, 23 October 1988.

¹⁸⁰ Sydney Morning Herald, 18th November 1988.

¹⁸¹ Sun, 6th April 1966; Telegraph, 7th April 1966.

With the growth of population and waste producing industry it could become a serious health hazard...¹⁸²

The pollution testing of the beaches has always been a sore point with the councils and they have sought to control it themselves. In 1979 Manly Council was going to do its own tests of beach waters, warning signs were erected and warnings were broadcast over loudspeakers.¹⁸³ Randwick Council also complained about the Board's testing procedures. The taking of only five samples per month could be used to show the water was polluted or clear, depending on the choice of days and the morning readings avoided the onshore winds that usually came up on summer afternoons.¹⁸⁴

The desire for control of pollution testing was not necessarily to protect the interests of beachusers however. In 1981 when local residents had complained about the lack of warning signs at Randwick beaches when the water was very polluted, the Council's chief engineer had responded that surf pollution received a lot of publicity "without council erecting signs on the beach."¹⁸⁵

When the Board instituted Surfline in 1985, a service to inform surfers which beaches were polluted (more about this in the next section) Randwick Council retaliated, accusing the Board of "squandering money on publicity" rather than cleaning up the beaches. The Council's questioned the accuracy of Surfline reports. The Mayor, John Scullion, said the reports were misleading and that the council's own beach inspectors provided more accurate and up-to-date reports. Beach inspectors, themselves argued that they were able to determine when beaches should be closed since they were there all day and every day. Scullion said that the public would be better informed if they contacted the council and that the council erected warning signs and notified the public through a public address system, "in a responsible manner", when beach pollution was detected.¹⁸⁶

The Manly Council was also reported to be "irate". The concern of the beachside councils was that bad reports turned people away from their beaches and this affected local businesses particularly badly. Randwick Council superintendent of beaches, Brad Burke, estimated that about 20,000 beachgoers had gone swimming elsewhere because of the bad publicity for Maroubra. Scullion estimated a fall of 10% in small business in the area and other areas were also concerned.¹⁸⁷

In a column in the local Bondi paper, Wally Glover, a well known beach identity also tried to downplay pollution because of its effects on local businesses. He claimed that pollution had always been used as a political weapon and that media alerts about blue bottles, sharks and pollution only hurt those they

¹⁸² Telegraph, 7th April 1966.

¹⁸³ Sun, 13th November 1979.

¹⁸⁴ Sun 17th February 1981; Weekly Courier, 8th April 1981.

¹⁸⁵ Messenger, 1st April 1981.

¹⁸⁶ Telegraph, 7th January 1987; Sydney Morning Herald, 9th January 1987; Southern Courier, 14th January 1987.

¹⁸⁷ Sydney Morning Herald, 9th January 1987; Maroubra Magazine, 21st January 1987, Sydney Morning Herald, 24th January 1987.

claimed to be helping. He called upon the recently revived Bondi Beach Chamber of Commerce to set up a "virile public relations campaign to destroy these mischievous stories which do so much harm to local business."¹⁸⁸

The proposals for submarine outfalls were welcomed by all the beachside councils and their support was enlisted in a series of special joint meetings of the Eastern suburbs councils during 1979 leading up to the display of the EIS's. Randwick, Woollahra, Botany and Waverley Municipal Council representatives were present at the first meeting held in April of that year which was addressed by Marshall Whyte, Investigative Engineer, Sewerage, from the Water Board. Whyte explained to the meeting what would be in the environmental impact statements and put forward the case for the submarine ocean outfalls. He emphasised that the submarine outfalls would not be built unless the State government allocated money for them and as a result the meeting resolved to form a Joint Council Action Committee to do whatever was necessary to ensure that money would be quickly allocated to the project.¹⁸⁹

Michael Cleary, M.P. for the Coogee area, spoke to the joint council meeting in November 1979 shortly before the release of the EIS's using background information prepared by the Board for him. He spoke of the benefits of submarine outfalls.¹⁹⁰ Having been sold on the concept all the councils (except Woollahra which made no submission) supported the EIS's (see table 9.1) with Randwick making a plea that some interim measures be instituted to deal with the sewage until the new outfalls were built and Botany asking that no more sewage be directed to Malabar whilst the plant was so overloaded. However the support seems to have been less than unanimous amongst the Councillors and the Mayor of Randwick, Ken Finn (Lib), argued that even when the submarine outfalls were built, the sewage would still be washed back to the beach given the right tides and winds. The answer he said was to treat the sewage to a higher degree with secondary and even tertiary treatment.¹⁹¹

When STOP representatives gave their presentation to the Liberal dominated Waverley Council in 1986, Councillors seemed to be shocked to find that there was some doubt that the submarine ocean outfalls would work and angry that they had been sold the scheme so easily. Alderman Collins threatened to get the beachside councils to sponsor a scientific investigation of the entire issue.

There can be no doubt that the response of the Board, which sent along five of its senior people and three SPCC experts as well as a three metre long model and posters full of charts and diagrams to cover the council chamber walls, overwhelmed the councillors. The public relations barrage left the council, as the local paper reported, "scratching their heads". Alderman Collins was reported as saying that this was "an enormous scientific and technical question which is very difficult to comprehend".¹⁹²

¹⁸⁸ *Spectator*, 2nd and 16th October, 1986.

¹⁸⁹ Minutes of the Special Joint Conference of Eastern Suburbs Councils on Beach Pollution, 19th April 1974.

¹⁹⁰ M.W.S.&D.B., "Pollution of Beaches", information prepared for M.Cleary to joint meeting of eastern suburbs councils, 15th November 1979.

¹⁹¹ *Southern News*, 13th November 1979.

¹⁹² *Southern Courier*, 6th August 1986.

THE WATER BOARD DEFENCE

The public relations effort at Waverley Council was an example of the new public relations strategy of the Board adopted after organisational and management changes. At the end of 1983 Dr Peter Crawford (previously of SPCC) was appointed General Manager and Dr Rhonda McIver chair of the Water Board after a major reorganisation of the Board following recommendations from a task force headed by McIver. The Board was, at this time, placed under the direction and control of the Minister to ensure greater government control.

Amongst the favourable findings of the task force was that the SPCC was "relatively happy" with the standard of effluent coming from the Board's sewage plants and that the cost of services in Sydney were relatively cheap compared to other cities.¹⁹³ The task force noted that there was an increasing community concern with environmental protection as well as increasing governmental control and scrutiny and community pressure for the Board to be more accountable, accessible, efficient and effective.¹⁹⁴

In recommending against having local government representatives on the Board as had happened prior to 1972, the task force argued that the benefits of having such representatives on the board could be met by encouraging community participation and the systematic canvassing of community opinion and the opinion of interest groups such as local government to ensure their views were taken into account in decision making.¹⁹⁵

In a section on 'areas of concern' the task force included the lack of public participation and the fact that the Board was seen by the public as secretive. To overcome this they suggested that financial aspects of large projects should be published "to permit informed debate", that the Board communicate more openly with the media and the public, that more effort be put into "selling" the Board and that senior managers and Board members attend media courses. Additionally the Public Relations and Publicity Sections should merge and report directly to the General Manager.¹⁹⁶

In the summer of 1985/6 the Board began its submarine outfalls propaganda campaign in earnest. 'Surflines' was launched—a telephone line which swimmers and surfers could call to find out which beaches were polluted and which were clean. Also education kits were made available and an advertising campaign begun with a stated budget of \$500,000 for that year.¹⁹⁷

The Board's annual report stated that the Board's public relations programs were aimed at

developing and maintaining perceptions of the Board as a modern, customer-oriented and innovative organisation that effectively and

¹⁹³ Dr. R. McIver, Report of the Ministerial Task Force to Review Sydney Water Board, 31 August 1983, p20.

¹⁹⁴ ibid., p35.

¹⁹⁵ ibid., p47.

¹⁹⁶ ibid., ppp84-6.

¹⁹⁷ Manly Daily, 12th November 1985; *Sydney Morning Herald*, 9th and 12th November 1985.

efficiently provides water, health and environmental protection services to the community.¹⁹⁸

The report noted that there was significant dissatisfaction with the "Board's perceived performance" with regard to sewage pollution of the ocean beaches in Sydney and their major public relations campaign for the year had been the first phase of their "beach protection program". As well as advertising the submarine outfalls the campaign, the report said, also sought to encourage the use of the Surfline beach inspection service and to educate householders and industry on the steps they could take to reduce beach pollution.¹⁹⁹

The Water Board has become particularly adept at public relations and the presentation of information in the most favourable light. Because the impact of technological projects must be done in the face of technical uncertainties, and this is particularly so with a unique and untried project such as submarine ocean outfalls off the Sydney coastline, there is no conclusive data and almost no "accepted theoretical framework from which to draw definitive quantitative conclusions".²⁰⁰ Given this atmosphere of uncertainty there is scope for various interpretations, predictions and conclusions to be drawn from available data.²⁰¹

Yet the Board has put their case more strongly than can be supported by the evidence so that the results seem decisive when in fact they are uncertain.²⁰² When uncertainties exist the degree to which a firm conclusion can be reached is debatable at the best of times²⁰³ but in advocating a particular proposal, engineers tend to ignore the uncertainties or keep them from the public view. In this way the Sydney Water Board has always claimed that there is no doubt about the efficacy of their various sewerage treatment and disposal schemes. The submarine outfalls would, they said, end sewage pollution of the beaches totally and forever and this was the message put across by the brochures and the advertisements.

An example of deliberate removal of all reference to uncertainties in an environmental impact statement can be shown in the case of the proposed sewerage scheme for Byron Bay. The draft impact statement prepared by Byron Shire Council at the end of 1987 and given to me the week before publication contained the sentences;

There should be little, if any, impact from the development, upon the S.E.P.P. 14 wetland within the site.

A less than satisfactory result in the performance of the works and associated artificial wetlands would result in a forced abandonment of the wetlands disposal option and cause Council to again pursue the

¹⁹⁸ M.W.S.&D.B., 98th Annual Report, Year Ended 30th June 1986, p27.

¹⁹⁹ M.W.S.&D.B., 98th Annual Report, Year Ended 30th June 1986, pp27-8.

²⁰⁰ This sort of situation is described by Dorothy Nelkin, 'Scientists in an environmental controversy', Science Studies 1, 1971, p253.

²⁰¹ This sort of situation is described by Dorothy Nelkin, 'The political impact of technical expertise', Social Studies of Science, vol 5, 1975, p48.

²⁰² This device is covered by R.V. Jones, 'Temptations and Risks of the Scientific Adviser', Minerva x(3), July 1972, pp442-3.

²⁰³ Allan Mazur, 'Opposition to technological innovation', Minerva xiii(1), Spring 1975, p252.

ocean outfall option with its inherent high cost and public opposition.²⁰⁴

These sentences were omitted from the final version of the EIS as published and the following inserted

Monitoring results indicate no effect on the adjoining wetland areas. A close monitoring programme will enable Council to assess the performance of the proposed ponds and to determine the need for additional wetland areas.²⁰⁵

Similarly the Sydney Water Board has eliminated all mention of uncertainty in its television advertisements which featured majestic aerial views of the beaches and its series of double page colour ads in the Sydney Morning Herald, weekend magazine and in various other magazines. The first of these newspaper advertisements featured a view of a pristine and unpopulated beach was headlined 'We're spending millions and there'll be nothing to show for it.' The text of the advertisement said that it had become "more than a little apparent" that the outfall sewerage works needed serious upgrading and that the Board was spending "the \$450 million it will take to do the job properly". (\$300 million for the submarine outfalls and \$150 million that included completion of the North Head treatment works.) It claimed the submarine outfalls would allow the salt, the depth and the movement of the ocean to naturally bio-degrade the treated sewage.

In the future neither winds nor currents will be able to wash partly treated sewage onto our beaches.²⁰⁶

Other advertisements were worded in a similar vein. All were visually beautiful. Sparkling clean beaches alluded to what the future held. The amount being spent was repeated over and over as if just spending this amount of money must guarantee good results. They emphasised how the beaches and bathing waters would be absolutely clean and clear after the submarine outfalls were built and that this would be achieved by natural means in the ocean. The radio advertisements won the Gold Medal in the Utilities (Products and Services) category of the International Radio Festival of New York in June 1986.²⁰⁷

Uncertainties were often denied by emphasising the scope of the study or investigation that had been undertaken.²⁰⁸ For example, the oceanographic study of Sydney's coastal waters was said to be one of the most comprehensive ever carried out, taking five years and cost one million dollars to do. It was implied that after all this investigation there could be nothing left to uncover and no uncertainties remaining.

²⁰⁴ Byron Shire Council, Byron Bay Sewerage Augmentation Environmental Impact Statement, draft, December 1987, pp5,12.

²⁰⁵ Byron Shire Council, Byron Bay Sewerage Augmentation Environmental Impact Statement, December 1987.

²⁰⁶ For example Good Weekend, Sydney Morning Herald, 21st December 1985, pp2-3.

²⁰⁷ M.W.S.&D.B., 98th Annual Report, p28.

²⁰⁸ Mazur, 'Opposition to technological innovation', p247.

In fact a lack of evidence, rather than putting the experts conclusions in doubt, can be used to reinforce them by using the phrase, "there is no evidence to show that" or something like it.²⁰⁹ In this way the lack of fish and sediment studies carried out in Sydney was used by the Water Board to assure the public that there was no evidence of a problem with toxic substances accumulating in the food chain. Similarly the lack of studies into the health of Sydney swimmers allowed them to argue that there was no evidence that swimming in sewage is damaging to the health.

Exaggeration has also been used effectively whilst details are glossed over. One advertisement headlined, "The Water Board's commitment to clean beaches is 4 kilometres long and 80 metres deep",²¹⁰ gave the impression that the outfalls were 4 kilometres off-shore even though the Bondi outfall was 2.2 kilometres from the shore with effluent coming up from 1.5 kilometres out, where the diffuser section begins, and the longest outfall was North Head at 3.85 kilometres from the shore, at the end of the diffuser. The most recent advertisement says that the outfalls will go between 3 and 5 kilometres off the coast and will discharge effluent into between 60 and 80 metres of water.²¹¹

Earlier Water Board brochures mentioned that ocean currents were not normally directed onshore in summer. For example a brochure defined "Subsequent Dispersion" as follows

This occurs as the effluent/seawater mixture moves away from the initial dilution zone under the influence of ocean currents. In Sydney, these currents are not normally directed onshore during the summer months.²¹²

A reprint of the same brochure defined the same term as follows

This occurs as the effluent/seawater mixture moves away from the initial dilution zone under the influence of strong offshore ocean currents during the summer months.²¹³

The Water Board press releases and the advertisements stressed that the treatment works would be upgraded as well as submarine outfalls constructed. This upgrading was never spelt out in these public announcements but in the annual report reference was made to more efficient screening, grit and grease removal and the amplification of facilities at Bondi to provide greater capacity.²¹⁴ This seemed a bit different from the impression given by Crosio's statement that the submarine outfalls "will be releasing a more highly treated effluent at a concentration hundreds of times less than it is released at present."²¹⁵

²⁰⁹ *ibid.*, p248.

²¹⁰ For example, *Sydney Morning Herald*, 8th November 1986.

²¹¹ *Sydney Morning Herald*, 16th January 1989.

²¹² M.W.S.&D.B., *Deepwater Submarine Outfalls for Sydney*, brochure, undated.

²¹³ M.W.S.&D.B., *Deepwater Submarine Outfalls to Protect Sydney's Beaches*, brochure, undated.

²¹⁴ M.W.S.&D.B., *98th Annual Report*, p 45.

²¹⁵ *Weekly Courier*, 27th November 1985.

Problems can be variously interpreted by defining them differently.²¹⁶ Much of the disagreement about the health risks of bathing in polluted water resulted from the Board's focus on acute or chronic or serious illness which does not take into consideration the public's experience with more minor infections and stomach upsets which are not fatal but nevertheless not considered to be a tolerable consequence of ocean bathing or surfing. Official surveys concentrate on statistics that only record the more serious notifiable disease.

Similarly, the official concern with an obvious accumulation of pollutants locally allows them to argue that the ability of the submarine outfalls to dilute and diffuse pollutants will solve beach pollution problems. The different perspective of environmentalists who are concerned with a build-up of pollutants in the environment means that they are not comforted that pollutants might be discharged in a more dilute form.

The Board can obviously bias the picture by suppressing awkward evidence²¹⁷ or selectively using favourable evidence. For example, overseas studies and papers, especially those done by Moore in England, which minimised the health risk were cited and those which pointed towards possible health risks were ignored or quickly dismissed. When opponents have then quoted those awkward studies that the Board would prefer to ignore, the Board has accused those opponents of misleading the public through selective quotation.

As for the impact of the submarine outfalls on the marine environment, the EIS's conveniently ignored evidence to the contrary when they argued that

Experience overseas has shown that effluent and digested sludge may be discharged through a deepwater outfall without any significant adverse effects where ocean conditions are favourable. Most constituents of sewage are in fact beneficial to marine life, providing that the assimilative capacity of the waters for the additional organic nutrient load is not exceeded.²¹⁸

Argumentum ad Hominem is a favourite of the Board and they have happily accused opponents, be they politicians, dissident experts or members of protest groups of being self-appointed, misunderstanding the facts, alarmist, pseudo-scientific etc.

The concept of comparative risk was also one that the Board utilised by considering natural and common risks which people were regularly exposed to.²¹⁹ The health risks of swimming in sewage polluted water were compared to those of swimming in a community or neighbour's swimming pool or travelling on public transport. The discharge of heavy metals into the ocean was juxtaposed against the presence of natural levels of heavy metals in the marine

²¹⁶ Mazur, 'Opposition to technological innovation', p251.

²¹⁷ Jones, 'Temptations and Risks of the Scientific Adviser', p444

²¹⁸ Caldwell Connell, Environmental Impact Statement Malabar Water Pollution Control Plant, M.W.S.&D.B., 1979, pviii.

²¹⁹ Mazur, 'Opposition to technological innovation', p247

environment. And a favourite Water Board comparison is to cite the massive faecal pollution by anchovies off California.²²⁰

The Water Board campaign was also at pains to make the submarine outfalls appear to be scientifically sound and technologically sophisticated. The second summer of advertisements became more technical following the onslaught of criticism and the popular notion that all the outfalls would achieve would be to take the effluent further out to sea from where it would blow back inshore. Several advertisements featured pictures of the diffusers operating. The text put forward the idea of dilution, dispersion and underwater biodegradation arguing that salt water was extremely hostile to bacteria. The little sewage that might actually get to the surface would "get the sunshine cure".²²¹

They argued that the ocean actually provided secondary treatment and so the calls for secondary treatment facilities were superfluous.

These on-shore treatment facilities would, by and large, be merely duplicating what the ocean's own natural biological purification and dispersion processes will be able to do, free of cost, once the deepwater outfalls are commissioned.²²²

Another technical looking advertisement appeared in Billy Blue, a free magazine that appeared in trendy restaurants. Headlined "The Debate About Sewage Treatment is Getting Cilia and Cilia", the advertisement argued that the sewage was simply inserted into the natural cycle. But by talking about treatment at inland treatment plants as well as ocean outfalls in the advertisement text the impression was put forward that all sewage treatment was very scientifically complex and technologically advanced. It ended saying

The next time someone starts moaning about effluent treatment and beaches covered in !*##* you can raise the standard of public debate and put them straight...Naturally we prefer to talk to people who like facts rather than whinging or idle gossip.²²³

The Water Board also avoided mention of industrial waste in their advertisements apart from one advertisement that was replete with hyperbole. It stated

We are revolutionising the way industry disposes of its waste products, so that the environment will never suffer as a result of industrial pollution in our waste water.²²⁴

The advertisement referred to "an army of inspectors" (30 or so in reality for the whole of metropolitan Sydney) and also to the role Greenpeace was playing in "helping us objectively review our control measures to make sure they continue

²²⁰ Sydney Water Board, Background Briefing 3, 1987, p1.

²²¹ for example, Sydney Morning Herald, 6th December 1986; Mosman Daily, 27th November 1986; Weekly Courier, 26th November 1986.

²²² Sun-Herald, 19th October 1986.

²²³ Billy Blue 92, Summer 1986.

²²⁴ Good Weekend, Sydney Morning Herald, January? 1987.

to be effective" (Greenpeace attended one or two meetings at which nothing significant was decided before dropping the issue.) The advertisement also used the term "up to" in a purposely misleading way. The chemicals were said to be in sewage effluent in concentrations "up to 10 times less than is already present in the natural ocean environment" and chemical concentrations would be "up to 100 times less than the SPCC's current limits."²²⁵ One might be forgiven for interpreting these statements as saying that the worst case concentrations were 1/10 of natural background levels and 1/100 SPCC levels but the Board was referring to the best case.

The reference to industrial wastes was otherwise downplayed. In fact until STOP and Greenpeace campaigns brought the matter of industrial waste to the attention of the public, people were generally unaware of the extent to which the sewage contained industrial waste. The SPCC received a number of Ministerial enquiries concerning the discharge of toxic waste to sewers after the Greenpeace campaign.²²⁶

By ensuring the problems of beach and marine pollution are sourced back to the public rather than to industry, then public criticism is headed off. The Board aimed a set of advertisements at the domestic kitchen virtually putting the blame for grease and oil pollution onto the housewife, ignoring in the ads the contribution industry made to this problem. Readers were told not to pour grease or oil down the sink because their detergents caused grease and oil to mix "so thoroughly with the water" that the Board were unable to separate them again in the treatment plants and this was what caused the millions of tiny grease balls in the ocean, "Yuk!"²²⁷

Similarly, when the results of the Malabar Accumulation Study were leaked to the Herald after being kept secret for over a year and it was reported that the Red Morwong caught had average concentrations of Benzene Hexachloride (BHC) 120 times the NH&MRC recommended maximum, Keith Mullette, Manager of Scientific Services of the Water Board, claimed that since such the dumping of such chemicals by industry was "effectively prohibited", the problem lay with private individuals who were disposing of pesticides and household chemicals down the toilet.²²⁸

This theme was repeated in a new style advertisement put out by the Board in January 1989. A full page advertisement, that consisted mainly of text with the picture of Bob Wilson, Managing Director of the Board, was headlined "We are committed to ending sewage pollution of Sydney's beaches." It told the story of a woman who had "rung up the other day" because she had found 50 kg of Cyanide in her garage and wanted to know if she could put it down the toilet.²²⁹ This was a blatant attempt to blame householders for toxic waste in the sewers.

²²⁵ *ibid.*

²²⁶ SPCC, Internal Report on Concerns Expressed by Greenpeace, 12th March 1987.

²²⁷ for example, *Sydney Morning Herald*, 13th December 1986 and 17th January 1987; *Southern Courier*, 10th December 1986;

²²⁸ SBS.TV News Broadcast, 7th January 1989; 2BL 7pm News, 7th January 1989.

²²⁹ *Sydney Morning Herald*, 16th January 1989.

The "effective prohibition" of toxic chemicals was another myth the Board liked to put out. In its "fact" sheets the Board claimed that "only the lower strength/least toxic of industrial wastes are permitted to be discharged to the Sydney sewerage system"²³⁰ and Bob Wilson claimed on radio that the Board had told industry that they would not receive wastes with toxic materials in them.²³¹ This is despite the Board's policy that quite plainly does allow toxic materials into the sewers and charges industry to dispose of these substances per kilogram.(see chapter 7)

SURFLINE - RESTORING THE WATER BOARD'S CREDIBILITY

Surflines were an idea which first took shape in the SPCC. The authorities, following Moore, maintained that water was safe to swim in unless it was aesthetically revolting. Sydney bathers were told throughout the 1960s and 1970s that if the water looked dirty then it should be avoided²³² despite the claims by various people that "typhoid-carrying pollution" and viruses were not necessarily visible to the naked eye.²³³ Judgements about whether to post warning signs on beaches were made by council beach inspectors who made a subjective evaluation, after considering the extent of grease and debris on the beach, and the presence of floating scum and turbidity in the water.

In 1984 the SPCC decided that if this judgement could be quantified to a certain degree it would make the judgement less subjective and more consistent²³⁴ (and seem to be more scientific). They tried to develop a beach pollution index, (BPI) a numerical measure similar to the air pollution index, which could be a ready reference for beach goers. The SPCC noted all the problems with using faecal coliforms and said that in recent years there had been a move away from using such measures as a direct and immediate measure of beach pollution and towards the use of visual indicators and aesthetic judgement in deciding whether a beach should be closed.²³⁵

The SPCC failed to find any single mathematical equation to relate faecal coliform densities with visual indicators because the relationship was so complex, nonetheless they argued the BPI should be based solely on visual parameters since there were no other established and rapidly determined chemical measures of sewage pollution. "The BPI concept is related to public perception of pollution, namely aesthetics."²³⁶

The SPCC researchers came up with a formulation that had a correlation coefficient of 0.55 as follows:

$$BPI = I1 + I2 - 1 \quad \text{where } I1 = \{(G+1)^5(MB+1)^2(T+1)^2(MWT+1)\}^{1/10}$$

²³⁰ Sydney Water Board, Background Briefing 5, 1987.

²³¹ Radio 2GB, 8.10 am, 17th January 1989.

²³² for example, Telegraph, 18th December 1969.

²³³ Mirror, 24th November 1970.

²³⁴ N.R.Achuthan, et al, 'Development of a Beach Pollution Index for Sydney Coastal Beaches', Water, September 1985, p15.

²³⁵ ibid.

²³⁶ ibid., p17.

and I2=Maximum {G,MB,T,MWT}

G : Code for number of grease particles on beach.

MB: Code for materials of sewage origin on beach.

T: Code for turbidity beyond breakers

MWT: Code for materials of sewage origin in water. ²³⁷

That year Sandy Thomas, spokesperson for the SPCC, told the Sydney Morning Herald that they were trying to refine a system of forecasting beach pollution so that daily beach pollution reports could be issued for the following summer. The SPCC had found that there was a "definite relationship between the severity of visual sewage pollution and the possible risks to health."²³⁸

Both Sandy Thomas and the idea of daily beach reports moved to the Water Board shortly afterwards and Surflines was born. Surflines was aimed at getting surfers on side and it was advertised to them in the local papers. One pictured a surfer in a phone box on the beach with the headline 'If there's *!?!# in the swell, give us a bell' and used surfing idiom in the text to assure surfers that they could ring up and report polluted beaches and the Surflines inspectors would come and take samples, get them analysed and "make a full report about what they find."²³⁹

A second advertisement showed a beach inspector from 1958 holding up a bikini (and referring to the way beach inspectors used to enforce dress standards at the beach) and a modern Surflines 'beach inspector' holding up a test tube and a clip board and looking 'scientific'. The headline: 'Our beach inspectors aren't interested in cover-ups.'²⁴⁰

Surflines was vehemently attacked by the Manly State MP, David Hay (Lib) as "nothing but a costly propaganda machine for the NSW Government". He claimed that he had rung Surflines after he had received several complaints about a five by one kilometre slick of sewage and found that Surflines employees were not aware of the problem and they suggested the pollution was oil and not from the nearby sewage works.²⁴¹

Hay argued that the stain began at the outfall and that the thousands of seagulls proved that the slick was sewage and not oil. The Board denied this and stated that the problem was caused by the illegal dumping of grease near North Head. Hay was accused by the Minister for Natural Resources, John Aquilina, of having "a callous disregard for the truth". He asserted that Surflines's reports on the days in question were 100% accurate.²⁴²

²³⁷ ibid., p17.

²³⁸ Sydney Morning Herald, 20th December 1984.

²³⁹ for example, Weekly-Courier, 8th January 1986, p8.

²⁴⁰ for example, Weekly-Courier, 4th December 1985, p27.

²⁴¹ Manly Daily, 15th February 1986.

²⁴² Manly Daily, 15th February 1986; Manly Daily, 22nd February 1986.

Some surfers also viewed Surfline as a "publicity stunt" according to Kirk Wilcox a surf reporter for an ABC radio station and editor of Waves, a surfing magazine.²⁴³ The surfers in POOO argued along with Hay and Water Board Union officials that the money would be better spent on treating the sewage. As Hay pointed out, any surfer could tell when the water would be polluted, from their experience of wind and tides.²⁴⁴

In the face of all this criticism the Board sent out press releases about Surfline. The ensuing newspaper articles said that members of Surfline were experienced Water Board employees who were "active members of beach communities" who swam, surfed or sailed every day themselves and who had a "proven record of concern for protecting and improving Sydney's beach environment". They checked the beaches several times a day and, in case anyone thought that it was enough just to observe conditions as any surfer was able to do, they were equipped with binoculars, sextants, wind gauges and maritime charts.²⁴⁵ Members of Surfline also wrote into the Manly Daily protesting their honesty and their commitment to clean water.²⁴⁶

Under pressure to be seen as honest and independent the Surfline inspectors occasionally reported gross pollution such as plastic nappies, condoms and plastic bags at Cronulla during the 1986 Australia Day weekend and slabs of decaying meat at South Curl Curl beach on the north shore a week or so later.²⁴⁷ At the end of 1986 the Sun newspaper claimed that its reporters had found rats "gorging themselves on piles of litter along the water's edge" at Maroubra beach at the same time as Surfline was reporting the beaches to be clean and clear of all serious sewage contamination.²⁴⁸

A week later a public argument between the councils and Surfline hit the headlines. The manager of Surfline, Leigh Richardson, accused local councils of putting bathers at risk by ignoring Surfline's advise to close beaches on several occasions. Maroubra beach had been ruled, by Surfline, unfit for swimming 14 times between October and the new year because of high pollution levels and on each occasion Randwick council had refused to close the beach.²⁴⁹ (It should be noted here that the Board reported in its Annual Report that 100% of samples at Maroubra for that summer complied with a monthly geometric mean of 200 faecal coliforms per 100 ml.²⁵⁰) The next day the Surfline report warned that there were maggots on the beach and in the water at Maroubra. The Board later stated that the "land-based fly maggots" had been washed down stormwater drains onto the beach but did not pose any health risk.²⁵¹

²⁴³ Eastern Herald, 9th October 1986.

²⁴⁴ Manly Daily, 14th October 1986.

²⁴⁵ Southern Courier, 15th October 1986.

²⁴⁶ Manly Daily, 1st November 1986.

²⁴⁷ St. George and Sutherland Shire, 4th February 1986; Daily Telegraph 12th February 1986.

²⁴⁸ Sun, 30th December 1986.

²⁴⁹ Sun, 5th January 1987.

²⁵⁰ Sydney Water Board, Annual Report, Year ending 30 June 1988, p34.

²⁵¹ Telegraph, 7th January 1987.

The leaked Health Department report of Salmonella on the beaches in early 1987 (see chapter 8) was followed a few days later the Mirror, with the headline "Aids Alarm Sounded at Beaches". It reported that the Health Department was carrying out emergency tests for AIDS in seawater off some of Sydney's beaches. The reporter went to another member of the Infectious Diseases Unit, Dr Phillip Jones, who said that the AIDS virus could be found with blood in faeces and that if mixed with blood the AIDS virus could persist for hours.²⁵²

Sandy Thomas, spokesman for the Water Board, said that he was not surprised that salmonella had been found and that was why they had established Surflines and that this "confirmed the wisdom" of daily pollution reports which advised bathers when it was safe to swim. However a check of dates made by the Eastern Herald claimed that Maroubra beach had only been closed on 3 of the occasions and Coogee beach had only been closed on two of the occasions on which the Department of Health took samples.²⁵³ Thomas also argued that it was the Department of Health's responsibility to test for viruses, not the Water Board's.

Surflines achieved a number of public relations objectives. One of those objectives has been to highlight the pollution so as to justify the enormous amount of money being spent on the submarine outfalls.²⁵⁴ The Board attempted to tread a fine line between denying that their discharges created gross pollution and yet also admitting that there was a problem which justified the \$450 million dollars they were spending. They would say that "even though most beaches are clean most of the time, sewage-related beach pollution is at unacceptable levels."²⁵⁵

It was reported that the Board had been embarrassed by Surflines reports which had shown up a level of pollution which they were ignorant of. By mid January, 1987 it was estimated that Surflines had recommended that swimmers not swim or swim at their own risk 62 times that summer.²⁵⁶ In an article headlined, "Has Surflines too much dirt on our polluted beaches?", the Herald reported rumours that Surflines inspectors were being too honest and had been told to "tone it down".²⁵⁷

But Surflines had other objectives as well. The Herald argued that Surflines' creation had been "an ingenious move by a government department traditionally perceived as secretive and hostile."²⁵⁸ The campaign (\$700,000 for that summer for television and magazine advertising) had been a success according to an opinion poll which found a 95% awareness and approval rating for Surflines which was receiving 200-300 calls a day during the week and far more on weekends.²⁵⁹

Surflines also serves the purpose of reestablishing Water board employees as experts in analysing whether a particular beach is polluted. Although Surflines

²⁵² Mirror, 7th April 1987.

²⁵³ ibid.; Eastern Herald, 2nd April 1987.

²⁵⁴ Wentworth Courier, 21st January 1987.

²⁵⁵ M.W.S.&D.B., 'Clear Water. Clean Sand.', Fact Sheet 2, 1986.

²⁵⁶ Sun-Herald, 18th January 1987.

²⁵⁷ Sydney Morning Herald, 24th January 1987.

²⁵⁸ Sydney Morning Herald, 24th January 1987.

²⁵⁹ ibid.

inspectors rely mainly on visual indicators for doing this, the Water Board literature and advertisements emphasise the sampling and measurements they make and give them an aura of scientific expertise. (They are usually depicted with beakers or test tubes of liquid and clipboards as shown in figure 9.5. although the containers of liquid are more often assessed visually for turbidity rather than sent to the laboratory for analysis.) This downplays the ability of the ordinary person to judge whether a beach is polluted or not.

When the new submarine ocean outfalls are built the sewage is likely to be less visible, especially when there is a submerged field. This means that the traditional association between visual indicators and health risks will be broken and people will not be able to tell whether the beach is polluted just by looking. It will be interesting to see whether Surfline continues to do its reports according to visual indicators and whether it serves as a new mechanism for denying beach pollution.

The Board also seems to be preparing to meet the possibility that beach pollution is obvious after the outfalls are built. Already Surfline has restored the credibility of the Water Board's determinations of whether a beach is polluted or not and the Board's claims that the sewage outfalls are not the only source of pollution will enable them to blame any pollution on other sources as they have in the past. Crawford, the Board's previous general manager, argued that the first flush of stormwater had "an incredibly high bacterial count" and although this was not the Board's responsibility, it did not want to remove sewage pollution "for all time" with its submarine outfalls only to find that there was still an unacceptable level of pollution on the beaches from other sources.²⁶⁰

Other sources of beach pollution which the Board has pointed to include beach litter, marine pollution, ship spills, algae that looked like a sewage field and even gave rise to the same health complaints such as ear and eye infections, and dark-coloured pumice from volcanic eruptions in the Pacific Ocean which was frequently mistaken for grease from sewage discharges.²⁶¹ For example a Board fact sheet stated

it has been estimated that anchovies off the coast of southern California produce as much faecal matter each year as 90 million people - and anchovies are only one of hundreds of species of marine life in this part of the ocean.²⁶²

Such claims have also been made by the SPCC, which is supposed to regulate the Board's activities. The director of the SPCC, Mr Jenson, said in 1979 that

it has been reported that a school of salmon off the US coast is responsible for more sewage than the whole population of California.²⁶³

²⁶⁰ Sunday Telegraph, 25th January 1987.

²⁶¹ M.W.S.&D.B., 'Clear Water. Clean Sand.', Fact Sheet 2, 1986; Southern Courier, 15th October 1986.

²⁶² M.W.S.&D.B., 'Clear Water. Clean Sand.', Background Briefing 3, 1987.

²⁶³ Sun, 14th November 1979.

Before you take a dip, Surfline has already taken a dip.

Before 6 every morning for eight months of the year the Water Board Surfline teams take a dip at every ocean beach in Sydney.

They dip for water samples. They measure the winds and the currents. They check for any evidence of pollution from any source.

From 7.30 every morning the Surfline report goes to air on Sydney's radio stations. If you miss those reports you can dial 269 5450 and ask for the Surfline report. It's accurate, comprehensive and totally reliable.

If there's pollution SURFLINE will find it and tell you. They'll also tell you where the surf is best.

So if you want to stick a toe in the ocean today talk to Surfline. They're up to their neck in facts about your favourite beach.

WATER BOARD SURFLINE 269 5450

Another part of the New South Wales Government's Beach Protection Programme.

© 1997 Government of NSW



FIGURE 9.5

And despite the Board's assurances that the submarine outfalls would solve pollution problems once and for all, a leaked document, a letter from the Board to the Department of Planning and Environment, gave a hint of the Board's long term plans.

While there are no proposals to provide a higher degree of onshore treatment at Malabar after the outfall is completed, increasing community expectations could require the Government to construct such further treatment facilities in the future.²⁶⁴

More recently since the Liberal Government has come to power, the Board's advertising campaign has been cut back sharply and under the Ministership of Tim Moore, who has expressed doubts about the Board's promises, the Board no longer states that the submarine outfalls will end beach pollution forever. The most recent advertisement only claims that there will be no visual pollution.²⁶⁵ It seems that already the way is being opened for a new stage of treatment (probably some form of secondary treatment) to be implemented in more distant future.

CONCLUSIONS - PUBLIC PARTICIPATION VS PUBLIC RELATIONS

It is clear that the public had very little say in the decision making process that surrounded the submarine ocean outfalls. The decision was made well before public comment was invited and the Board defended itself against all forms of opposition through a well orchestrated public relations effort.

Sherry Arnstein has described various types of public participation and 'non-participation' in terms of a hierarchy based on the degree of participation involved. On the bottom of her ladder are two forms of non participation; manipulation and therapy. Therapy pretends to involve people in planning in order to help those people feel better about themselves; manipulation is also a facade of participation and is concerned to 'educate' people or get them on side.²⁶⁶

The next three levels, Arnstein describes as degrees of tokenism. 'Informing' involves the use of the media, pamphlets and posters to provide a one-way flow of information. 'Consultation' allows citizens to express their views but there is no guarantee that those views will be considered or taken into account. 'Placation' allows some influence to citizens through token membership of committees or boards. The three highest levels which involve real participation involve a redistribution of power.²⁶⁷ (see figure 9.6)

Much of the Board's activities have taken place at the level of manipulation. Thousands of glossy brochures have been distributed at protest meetings, to school children for projects and are available to anyone who is interested. However this "information" is in the same form as the advertisements and in the

²⁶⁴ *Southern Courier*, 18th February 1987.

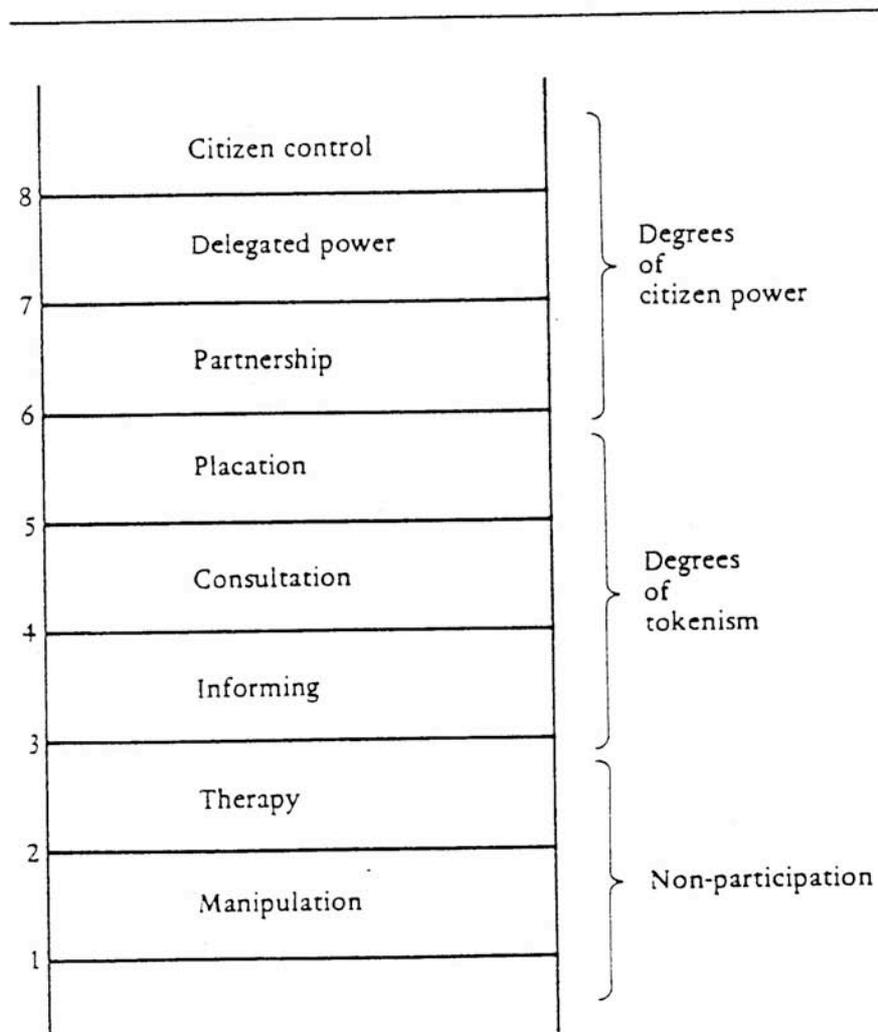
²⁶⁵ *Sydney Morning Herald*, 16th January 1989.

²⁶⁶ Sherry Arnstein, 'A ladder of citizen participation', in Godfrey Boyle, David Elliot & Robin Roy, *The Politics of Technology*, Longman & Open University Press, 1977, p242.

²⁶⁷ *ibid.*, pp243-4.

tradition of all good advertisements, the Board's advertisements have not sought to inform but rather to create an impression. Visually attractive pictures and text that stresses the good job that the Board is doing are accompanied by a careful use of language that emphasises key phrases designed to subtly reassure doubts that people might have and ensures an association with science and natural processes. Public relations employees carefully monitor the activities of opposition spokespersons and quickly repair any damage done through their superior access to the media. Their usual line is that there is obviously no cause for concern and those who suggest there is are portrayed as trouble makers, or well-meaning people misled by the trouble makers.

Figure 9.6 EIGHT RUNGS ON A LADDER OF CITIZEN PARTICIPATION



Source: Sherry Arnstein, 'A ladder of citizen participation' in Godfrey Boyle et al., eds, *The Politics of Technology*, Longman & Open University Press, 1977, p. 240.

Recently the smooth operation of the Water Board's publicity machine has not been able to cope with a series of leaked documents and public airings of Board

secrecy and coverups, as well as raised community consciousness of environmental matters. The new line of public response has been that, yes the Board has been remiss in the past but that has all changed now.

Many of the institutionalised avenues for consultation are of dubious strength and value. These include making submissions on Environmental Impact Statements and public hearings or inquiries. In each case there is no guarantee that real consideration will be given to members of the public putting forward their views in such cases.

Mechanisms for public involvement may increase direct public influence on the formation of policy, or may merely inform policy makers about public concerns. More often they are a means to manipulate public opinion, to win acceptance of decisions already made, and to facilitate the implementation of these decisions.²⁶⁸

All this was true of the EIS's for the submarine outfalls. The public submissions were quickly dismissed since they could not hope to compete with the million dollar study carried out by Caldwell Connell and all seemed puny in comparison. The Board was able to gauge the concerns of the public by the submissions and hone in on them in their public relations efforts, particularly in the advertising campaign.

It is clear that the Sydney Water Board has, throughout its history, largely avoided consultation with and placation of the public. It has shown an obstinate face and relied on local business interests to quell any unrest over pollution. Recently the Board has resorted to a measure of placation because of the increased public pressure for participation. In 1987 they invited Greenpeace to be on a committee that would have input into the Board's trade waste policy, although the Trade Waste Manager assured me that there was no committee, and that he, as the sole decision maker would be consulting various parties.²⁶⁹ The Greenpeace representative found himself invited to meetings at which he was at a bit of a loss to follow what was going on and unable to exert any influence over the Board's trade waste policy. The Board, however, was able to publicise the fact that it was consulting with environmental groups.

At the end of 1988 the Board wrote to the Nature Conservation Council (a group which has not been involved in the issue since it made a submission on the EIS's in 1980) to invite representation on a committee that would advise on the submarine ocean outfall monitoring programme. Moreover, Judy Messer, president of the Nature Conservation Council, was appointed to the Water Board by the Minister, Tim Moore, during 1988. Whilst such representation is unlikely to affect decisions since in all cases the environmental representative only has one vote amongst several, the Board can claim that it consults with environmentalists. Recently Tim Moore has, in fact defended the Board's environmental credentials by referring to Messer's appointment.²⁷⁰

²⁶⁸ Dorothy Nelkin & Michael Pollack, 'The politics of participation and the nuclear debate in Sweden, the Netherlands, and Austria', *Public Policy* 25(3), Summer 1977, p334.

²⁶⁹ interview with Greg Klamus, Trade Waste Manager, M.W.S.&D.B., 2nd March 1987.

²⁷⁰ *Sydney Morning Herald*, 10th January 1989.

The SPCC has similar representation on its Clean Waters Advisory Committee with little effect. Nor does the SPCC seem any more willing than the Board to have the public participate in its decisions. In chapter 6 we saw how the classification process which allowed for some public input was abandoned. More recently when the criteria for quality of ocean bathing waters was revised, supposedly because of public pressure, there was no public consultation. In an attempt to stall its implementation it was suggested by the Clean Waters Advisory Committee that public comment be sought.²⁷¹

The courts seem to be the only institutionalised setting that can effectively force action but legal action is expensive and the courts give a distinct advantage to those with best access to financial resources and information. Legal action is only effective if legislation is adequate to start with and courts tend to judge a case on legal technicalities rather than the environmental merits. This is definitely not a forum where values and priorities can be discussed. Moreover, as was discussed in chapter 6, the Clean Waters Act is not written so as to give the public a role in its implementation.

The media is really the only avenue open to groups with poor financial resources and even then the media reports events and is not inclined to report opinions unless they are the opinions of politicians or superstars. Credibility, as was mentioned previously, is a problem for the uncredentialed and the unaligned.²⁷² Informal activities, including protest activities that gain media attention, and pamphlets, which communicate directly with other members of the community, have some effect in mobilising concern in the community. Media attention seems to be fairly effective at pressuring the government to pressure the Board to implement their plans more quickly but seems to have very little role to play in deciding what it is that will be done, that is, what technology will be used.

The public has very little say in what technologies are used to collect, treat and dispose of sewage. At most they can complain, prompt politicians to promise improvements and get sums of money allocated to the problem. In general, the engineers get to pick the 'suitable' technology and will consider no interference with this decision which they feel only they have the expertise to make. Even the government seems unable or unwilling to interfere with the decision-making process. Government ministers and local government representatives are, like the public, manipulated by the propaganda and, lacking the ability or incentive to evaluate them, are too often taken in by the promises.

²⁷¹ Clean Waters Advisory Committee Meeting Minutes, September 10th 1987.

²⁷² Primack & von Hippel, Advice and Dissent, p244-246