Department of Local Government
Circular to Councils

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HAWKESBURY NEPEAN RIVER SYSTEM - STATEMENT OF JOINT INTENT FOR INTEGRATED ENVIRONMENTAL MANAGEMENT

The purpose of this Circular is to advise councils of the Government response to the Healthy Rivers Commission Hawkesbury Nepean River System Inquiry.

On 12 March 2001, the NSW Government issued a Statement of Joint Intent (SOJI) for sustainable management of the Hawkesbury Nepean River System in response to the Final Reports of the Healthy Rivers Commission Independent Inquiry (released August 1998 and April 1999). The full reports are available from the Commission.

A copy of the SOJI is attached with a list of the 26 councils in the catchment area. The Government approved strategies for river health are categorised as follows:

1. Regional Environmental Planning
2. Environmental Management by Councils
3. Riverine Corridor Protection
4. Water Management
5. Extractive Industry
6. Data Management

The SOJI represents a binding commitment by State agencies and authorities to adopt an integrated management approach to information sharing and specific action on the approved management strategies. The approved strategies include some actions for which the 26 councils in the catchment area have primary or supplementary responsibility. The SOJI does not bind the councils directly, but council actions will be independently audited by the Healthy Rivers Commission.

The SOJI requires the Department of Local Government to facilitate integrated environmental management arrangements by councils and state agencies and to encourage new revenue raising, including environmental levies, when appropriate. The main outcomes sought from the SOJI actions for environmental management by councils are a strengthening of the environmental component of council management plans, strategic integration of objective setting and strategy development for environmental and other local government objectives, and better State agency support for environmental management by councils. Importantly, the SOJI provides a means for State agencies and councils to better coordinate their strategies and programs for a cost effective, integrated response to the river management problems identified by the Healthy Rivers Commission.

Most councils include some environmental management objectives, programs, resources and evaluation processes in their management plan. However the 26 councils in the Hawkesbury Nepean catchment are asked to review their current plan and ensure that an integrated environmental management statement is included in the 2002/03 management plan and incorporated into any associated evaluation, strategic and operational reviews and objective setting processes .

In simple terms this means that councils should consider and adopt integrated environmental management objectives for their local area. The objectives should reflect local circumstances, be consistent with the council's charter and provide sufficient specificity for program direction and ongoing performance evaluation. The council should identify factors that contribute to or detract from the achievement of the objectives and consider how council activities can be directed to maximise beneficial environmental outcomes while achieving other relevant goals. This may require new performance targets and operational accountabilities to be specified in some cases. Management gaps should also be identified along with details of a strategic response, including any monitoring, community education, provision of service and partnership arrangements with state agencies and other relevant entities. The council resources committed to environmental management should be specified in the plan and the plan should also specify performance assessment and evaluation processes, including consultation with relevant state agencies and other authorities.

The approved strategies for environmental management by councils reflect existing Local Government Act requirements. The management of the environment is a core local government function specified in the council's charter. At this stage there is no intention to further specify the form and content of environmental management statements in council management plans. Councils are encouraged to review the relevant parts of the Local Government Act and General Regulation, to re-read the Management Planning Guidelines and to develop suitable models for their use.

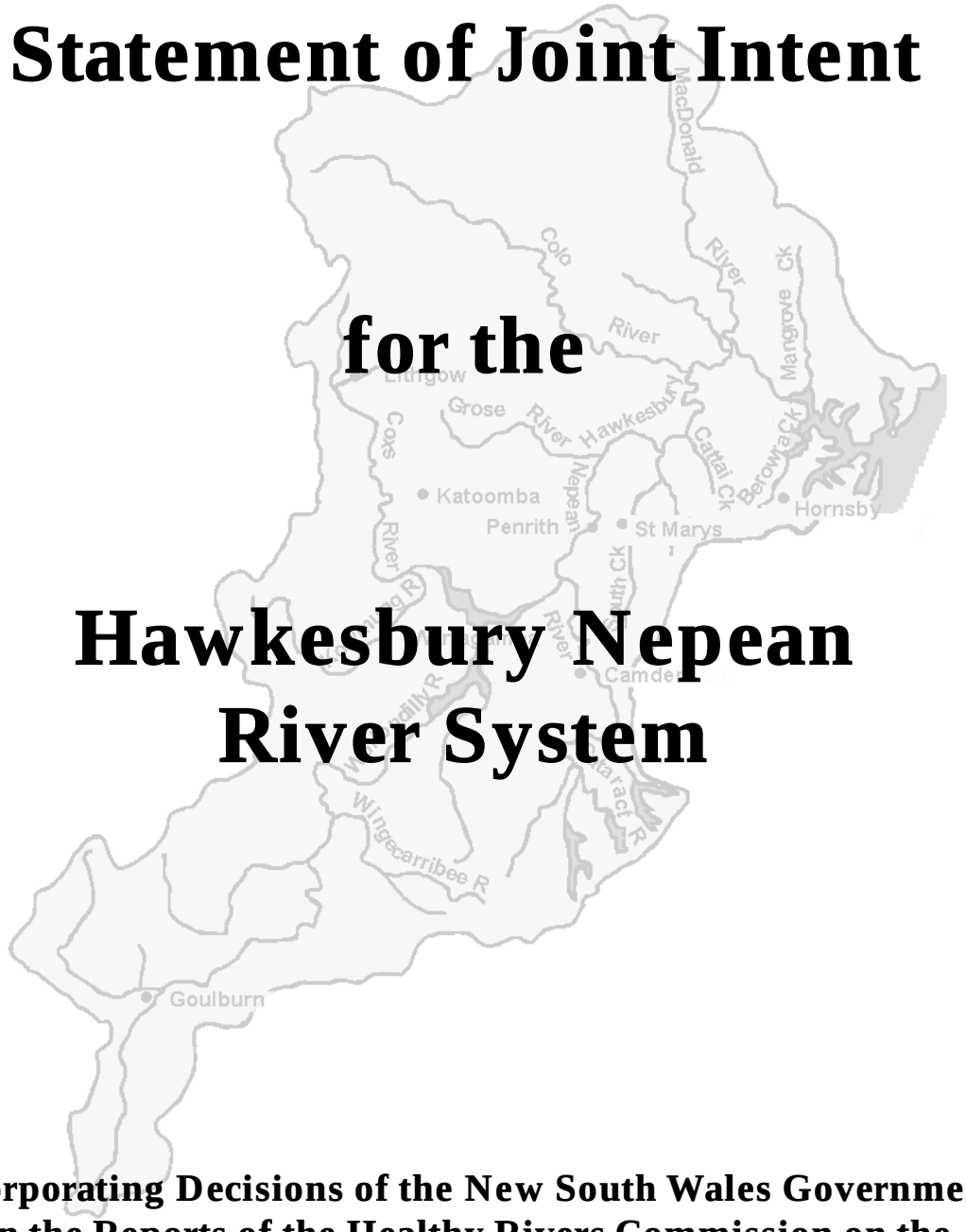
The actions required for environmental management by councils are linked to two related strategies for more effective state agency support and more flexible revenue arrangements. Implementation of the Hawkesbury Nepean SOJI and the related funding and management issues, will be discussed with representatives of councils, state agencies and authorities at a regional forum planned for late February 2002.

For further information please e-mail or phone the contact officer nominated above.

Garry Payne
Director General

Statement of Joint Intent

for the



Hawkesbury Nepean River System

Incorporating Decisions of the New South Wales Government on the Reports of the Healthy Rivers Commission on the Hawkesbury Nepean River System

STATEMENT OF JOINT INTENT
For the Hawkesbury Nepean River System

12 March 2001

This Statement of Joint Intent includes the following Parts:

A – Background
B – Directive Strategies
C – Implementation
Appendices

PART A - BACKGROUND

During 1997, 1998 and 1999, the NSW Healthy Rivers Commission ('the Commission'), an independent public inquiry body established under the *Pollution Control Act*, 1970, conducted a public inquiry into the health of the Hawkesbury Nepean River system. It reported its findings and recommendations in August 1998 in the Final Report of the Independent Inquiry into the Hawkesbury Nepean River System ('the Report') and, in April 1999, in the Hawkesbury Nepean River System Supplementary Report ('the Supplementary Report').

On 29 February 2000, the New South Wales Government made decisions in respect of the Commission's findings and recommendations in those Reports. ('The Decision')

In its Decision, the Government endorsed many of the recommendations of the Commission and in other instances determined an alternative strategy for addressing the Commission's findings.

In its Decision, the Government approved the development of a Statement of Joint Intent (SOJI) to record the commitments of State agencies and relevant Councils to implement the endorsed recommendations of the Commission (as outlined in Recommendation 1A1 of the Report) in respect of the Hawkesbury Nepean catchment. This Statement of Joint Intent is the outcome of that Decision.

This Statement of Joint Intent is made by the following New South Wales Government Agencies ('Agencies'):

Environment Protection Authority (EPA)
Department of Land and Water Conservation (DLWC)
Department of Urban Affairs and Planning (DUAP)
NSW Agriculture
NSW Fisheries
National Parks and Wildlife Service (NPWS)
The Cabinet Office (TCO)
Sydney Catchment Authority (SCA)

Department of Mineral Resources (DMR)
Department of Local Government (DLG)
Sydney Water Corporation (SWC)

* Hawkesbury Nepean Catchment Management Trust (HNCMT or 'the Trust')

The 26 Local Government Authorities ('Councils') whose local government areas fall within the Hawkesbury Nepean River System, listed in Appendix B, will be guided by the strategies in the SOJI, in particular those affecting implementation of Council responsibilities.

As a record of Agency commitments, this SOJI provides a framework for implementation of the Government's decision and a whole-of-government response to the Commission's findings on the Hawkesbury Nepean River system.

As a record of Agency commitments and Council support, this SOJI provides clear direction for integration of the various actions required of the Agencies by Government's decision and supported by Councils, and facilitates implementation of the directive strategies comprising the Government's decision.

It is intended that this SOJI will have effect in concerting the actions of the Agencies and Councils in implementation of its directive strategies, and promoting achievement of improved administrative, and environmental, social and economic outcomes for the Hawkesbury Nepean River system.

The Government Decision in respect of the Hawkesbury Nepean Inquiry is necessarily precise in respect of individual recommendations of the Healthy Rivers Commission. Under the SOJI, Agencies and Councils are responsible for ensuring that implementation action in relation to the Decision is consistent with the principles and analyses within the Reports. The Decision must now result in real changes in the relevant aspects of the management of the Hawkesbury Nepean River system.

For the purposes of this SOJI, the 'upper catchment' includes all that area of the Hawkesbury Nepean River system within the area of operations of the Sydney Catchment Authority, and the 'lower catchment' includes all that catchment area within the area of operations of the Hawkesbury Nepean Catchment Management Trust.

*** The Hawkesbury Nepean Catchment Management Trust was abolished on 12 April, 2001. The roles of the Trust are presently assigned to the Department of Land and Water Conservation.**

PART B - DIRECTIVE STRATEGIES

This Part of the SOJI identifies the critical strategies that will direct improved management of the Hawkesbury Nepean River system. Each of the strategies is set out in two parts: firstly, the details of the strategy, and secondly, the responsibility and timeframe for implementation of the strategy.

The implementation responsibilities include reference to "Jointly Responsible Agencies". The commitment required by these agencies is to work together, facilitate and give the necessary priority to implementation of the strategy for achievement of the desired outcome, following the lead of the designated lead agency.

The strategies are categorised under the following headings:

1. Regional Environmental Planning

2. Environmental Management by Councils

3. Riverine Corridor Protection

4. Water Management

5. Extractive Industry

6. Data Management

For each category, summary statements of the desired outcomes provides a context for the relevant strategies. The strategies that comprise this SOJI refer precisely to the Government Decision in relation to individual recommendations of the Healthy Rivers Commission Hawkesbury Nepean Inquiry Reports. In total, they comprise the revised approach to management of that system that Government has agreed to apply. Appendix A comprises the Healthy Rivers Commission recommendations that have been endorsed by Government. Reference to the Appendix may assist to clarify the context of, and the analysis behind, the Government's Decision.

1. *REGIONAL ENVIRONMENTAL PLANNING*

Desired Outcomes

The main outcome sought from implementation of these strategies is establishment of an integrated planning framework for the catchment to facilitate decision making from a system-based view of the catchment. It is sought to provide a framework for integration across the three main planning instruments that will operate in the catchment and across the range of management issues.

The specific tools to be used to pursue this direction and desired outcome include:

- the development of new instruments: the Sydney Catchments Regional Environmental Plan (REP) for the upper catchment; and Strategic Plan[1] for the lower catchment; and
- changes to existing instruments: Sydney Regional Environmental Plan 20, and licence renewal and other point source control processes

Sydney Catchments REP for the Upper Catchment

1.1 The Sydney Catchments Regional Environmental Plan (REP) is to take account of HRC findings and endorsed recommendations of the Hawkesbury Nepean Inquiry (as detailed in Appendix A of this SOJI).

Implementation

Lead Responsibility – Department of Urban Affairs and Planning
Timeframe – By completion of the Sydney Catchments REP in November 2001
Monitoring of Implementation – By the Water CEOs Committee.[2]

1.2 The Regional Environmental Planning process is to:

1.2.1 Take account of the findings and recommendations of the Healthy Rivers Commission as endorsed by Government.

1.2.2 Develop a risk management zone approach, (as outlined in the Hawkesbury Nepean Supplementary Report).

[1] Since the Commission presented its Reports, the Trust has commenced preparation of a Strategic Plan for the lower catchment, as required by its new operational regulation under the catchment management legislation. This will replace the catchment management strategy previously prepared in draft form by the Trust.
[2] The members of the Water CEOs Committee are described in Part C of this SOJI.

1.2.3 Adopt for use as guidelines for planning purposes, the recommended water quality objectives (from Table 2 in the Report, and from ANZECC Guidelines where specified).

1.2.4 Incorporate an integrated approach to stormwater management across the catchment, taking into account the HRC's recommendations. This approach entails attention by councils and developers to water quality and ecological integrity as well as flood mitigation and drainage and other matters, as outlined in recommendation ST1. It is to include arrangements for cost sharing, as outlined in recommendation ST2 of the report.

1.2.5 To incorporate, in areas not serviced by Sydney Water, a requirement for new developments to demonstrate that they can sustainably manage the effluent produced (either through connection to reticulated sewerage or through an effective on-site system), as outlined in SE2 of the Report.

Implementation

Lead Responsibility -Department of Urban Affairs & Planning
Jointly responsible Authorities – All agencies and councils with responsibilities under the REP will need to contribute to the implementation of this strategy.
Timeframe – By completion of the Sydney Catchments REP in November 2001
Monitoring of Implementation – By the Water CEOs Committee.

Strategic Plan for the Lower Catchment

1.3 The Strategic Plan of the Hawkesbury Nepean Catchment Management Trust is to:

1.3.1 Take account of HRC findings and endorsed recommendations of the Hawkesbury Nepean Inquiry (as detailed in Appendix A).

1.3.2 Incorporate an integrated approach to stormwater management across the catchment, taking into account the HRC's recommendations. This approach entails attention by councils and developers to water quality and ecological integrity as well as flood mitigation and drainage and other matters, as outlined in recommendation ST1. It is to include arrangements for cost sharing, as outlined in recommendation ST2 of the Report.

Implementation

Lead Responsibility – Hawkesbury Nepean Catchment Management Trust
Jointly Responsible Authorities – All agencies and councils with responsibilities under the Strategy will need to contribute to the implementation of this strategy.
Timeframe – By September 2000
Monitoring of Implementation – By the Water CEOs Committee.

Sydney Regional Environmental Plan 20 for the Lower Catchment

1.4 The Sydney Regional Environmental Plan 20 is to:

1.4.1 Adopt for use as guidelines for planning purposes, the water quality objectives (from Table 2 in the Report, and from ANZECC Guidelines where specified).

1.4.2 Incorporate an integrated approach to stormwater management across the lower catchment, taking into account the HRC's recommendations. This entails attention by councils and developers to water quality and ecological integrity as well as flood mitigation and drainage and other matters, as outlined in recommendation ST1. It is to include arrangements for cost sharing, as outlined in recommendation ST2 of the Report.

1.4.3 Incorporate, in areas not serviced by Sydney Water, a requirement for new developments to demonstrate that they can sustainably manage the effluent produced (either through connection to reticulated sewage or through an effective on-site system), as outlined in SE2 of the Report.

Implementation

Lead Responsibility – Department of Urban Affairs and Planning
Jointly Responsible Authorities – Relevant councils from Appendix B
Timeframe – Within six months of completion of the Sydney Catchments REP: By April 2001
Monitoring of Implementation – Water CEOs Committee.

Cumulative Impacts of Discharges

1.5 Licence reviews under the *Protection of the Environment Operations Act*, 1997 are to consider the cumulative impacts of discharges within the relevant sub-catchment. Load based licensing is to continue to be used as a means of better aligning water quality objectives and discharges from licensed premises as outlined in recommendation WQ5 of the Report.

Implementation

Lead Responsibility – Environment Protection Authority
Related Strategy[3] – Investigation of opportunities to use load-based licensing to ensure an integrated approach to the management of water quality and river flows. (Strategy 4.7)
Timeframe – As each licence comes up for review, the Environment Protection Authority is to consider the cumulative impacts of the discharge within the sub-catchment. Details of how load-based licensing can be used to address cumulative impacts of discharges, are to be identified in an Options Paper to be released for public consultation by the end of 2001.
Monitoring of Implementation – By the Water CEOs Committee.

1.6 In areas not serviced by Sydney Water, the Environment Protection Authority is to consider variation of Class P requirements for areas identified under the Priority Sewerage Program where this would result in significant and timely environmental improvements, as outlined in recommendations SE5 and SE6 of the Report.

Implementation

Lead Responsibility – Environment Protection Authority
Timeframe – By July 2000 for current round, and within three months of announcement of subsequent rounds of priority areas.
Monitoring of Implementation – By the Water CEOs Committee.

2. *ENVIRONMENTAL MANAGEMENT BY COUNCILS*

Desired Outcomes

The main outcome sought from implementation of these strategies is the strengthening of the environmental management component of Council Management Plans. The focus of the strategies directed to this outcome is on state agencies providing greater support to Councils in the development of their management plans.

[3] Reference is made to 'related strategies', where there is a close relationship in implementation, in other sections of this SOJI, but not those in the same section. Within each section, strategies will, of course, have a close relationship, and therefore be considered and implemented in conjunction with each other.

State Agency Assistance to Councils

2.1 State agencies are to work with local councils in the Hawkesbury Nepean to assist them with developing the environmental management component of their Council Management Plans, as outlined in recommendations LG1, LG2 and LG3 of the Report.

Implementation

Lead Responsibility –Department of Local Government
Jointly Responsible Authorities –Department of Urban Affairs and Planning, Environment Protection Authority, Department of Land and Water Conservation, NSW Agriculture
Timeframe – By December 2000
Monitoring of Implementation – By the Water CEOs Committee.

2.2 In areas not serviced by Sydney Water, State agencies are to provide advice and technical support to Councils in the development of sewage management plans, as outlined in recommendation SE3 of the Report.

Implementation

Lead Responsibility – Department of Local Government
Jointly Responsible Authorities – Department of Urban Affairs and Planning, Environment Protection Authority, Department of Land and Water Conservation, NSW Agriculture
Timeframe – By December 2000
Monitoring of Implementation – By the Water CEOs Committee

Special Levies

2.3 Councils are to be encouraged to raise special environmental levies where this is necessary to implement the Healthy Rivers Commission's recommendations, where appropriate, as outlined in recommendation LG5 of the Report.

Implementation

Lead Responsibility – Department of Local Government
Jointly Responsible Authorities – All catchment councils, as listed in Appendix B
Timeframe – By June 2001
Monitoring of Implementation – By the Water CEOs Committee.

3. *RIVERINE CORRIDOR PROTECTION*

Desired Outcomes

The main outcome sought from implementation of this strategy is to require all levels of decision-making processes governing development to explicitly address the need for protection of riverine corridors so that rivers and streams can fulfil their full range of ecological functions, as well as drainage. It is sought to improve the health and management of riverine corridor areas throughout the Hawkesbury Nepean River System.

Development of State Riverine Corridor Policy

3.1 A State Riverine Corridor Policy is to be developed by an Inter-departmental Committee, chaired by the Department of Urban Affairs and Planning. In this process, the Committee is to consider changes to planning processes that may be necessary for better protection of the riverine corridor, review existing programs, investigate zoning options, and raise awareness of existing options for protection of the riverine corridor.
The Committee is to report to the Water CEOs within twelve months of being established, as outlined in recommendations RC1 and RC2.

Implementation

Lead Responsibility – Department of Urban Affairs and Planning
Jointly Responsible Authorities – All of the Agencies participating in this SOJI including especially the Department of Land and Water Conservation and other agencies appointed to the Committee
Timeframe – Establishment of Committee by February 2001; Interim Report on progress by July 2001. Draft Policy by December 2001
Monitoring – By the Water CEOs Committee.

4. *RIVER FLOW MANAGEMENT*

Desired Outcomes

The main outcomes sought from the implementation of these strategies are to improve the health of riverine and estuarine ecosystems by protecting an appropriate pattern and proportion of river flows and removing redundant weirs (where alternative secure water sources can be developed / maintained); clarifying the entitlements of various categories of water users by containing growth in water demand, integrating the management of river flows and wastewater disposal, improving the measurement and reporting of water use and supporting proposals for introduction of market mechanisms for trading water entitlements.

While these strategies are directed in particular to river flows, they would also have beneficial impacts on water quality. In particular, implementation of strategies relating to the river management forum, the review of the Nepean weirs, the integrated effluent management strategy, integrated water quality and river flow management, are intended to contribute to achievement of the outcomes sought from the implementation of the regional environmental planning strategies, listed above.

Water Allocation

4.1 Water licence conditions are to restrict water access in accordance with application of the following water allocation and sharing rules:

4.1.1 No extraction of water from rivers during periods of no flow;

4.1.2 No extraction of water when flows are less than the 95th percentile limit to be described in megalitres per day at selected locations for the Sydney Catchment Authority and town water supply authorities seeking augmentation;

4.1.3 No extraction of water when flows are less than the 99th percentile condition to be described in megalitres per day at selected locations for other extractors, except for the Cox's River downstream of the Lyell Dam;

DLWC will develop and apply a limited number of exemptions to this restriction for those users who would otherwise need to augment their water supply substantially, including riparian users for internal domestic and stock watering purposes. (The latter exemption would accommodate the needs of landholders wishing to exclude stock from streams.)

[Water volumes should be calculated using the flow records which exclude zero flows, but should be expressed as percentiles based on the full period of flow record, including episodes of no flow, to provide an indication of actual impact.]

Implementation

Lead Responsibility – Department of Land and Water Conservation
Timeframe – July 2000 for Delta Electricity; By 31 March 2001 for the Sydney Catchment Authority (for all rivers from which it extracts and/or stores water); By 30 June 2001 for all licensed water users who extract water from the fifteen highly-stressed sub-catchments (S1, S2 or S3) (including the tidal reaches of tributaries upstream of the Colo River confluence); By 30 June 2002 for the remaining sub-catchments.
Monitoring - By the Water CEOs Committee.

4.2 The water management licence of the Sydney Catchment Authority is to describe the conditions and circumstances under which the water supply operations of the Sydney Catchment Authority could appropriately incorporate transfers from the Shoalhaven and Woronora river systems, as outlined in recommendation FL8 of the Report.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Timeframe – The water management licence for the Sydney Catchment Authority will set out a process whereby the needs of Shoalhaven and Woronora river users and the environment will inform the development of inter-basin transfer rules in time for the six-month statutory review of the licence in September / October 2001.
Monitoring – By the Water CEOs Committee.

Measurement of Water Use

4.3 Water licence conditions are to include the following requirements:

4.3.1 The installation of time event meters (consistent with technical standards specified by the Department of Land and Water Conservation) by water users who extract a *high level* of water (wherein a 'high level' of use is defined on the basis of those users who collectively use 80 percent of the total volume of water extracted from a specific river);

4.3.2 A calibrated measure of water use derived from electricity or diesel consumption records, as part of the volumetric conversion process, by water users who extract a *medium level* of water; and

4.3.3 Measurement of water use through time events and a pump diary, by *low level* extractors.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Timeframe – Monitoring of water extraction for Delta Electricity, Sydney Catchment Authority, Sydney Water and Penrith Lakes Corporation by September 2000. Monitoring of water extraction by other users by 30 June 2002.
Monitoring - By the Water CEOs Committee.

River Management Forum

4.4 A Hawkesbury Nepean River Management Forum is to be established to make recommendations to the Ministers for Land and Water Conservation and the Environment on environmental flow provisions for inclusion in the water management licence of the Sydney Catchment Authority.

In making its recommendations, the Forum will draw on flow trials already completed and propose further trials as needed, and seek advice from an expert panel, as constituted in the Sydney Catchment Authority's Operating Licence, as outlined in recommendation FL4 of the report.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Jointly Responsible Authorities – Sydney Catchment Authority, Department of Urban Affairs and Planning, Environment Protection Authority, NSW Fisheries
Related Strategies – Regional planning and management processes (Strategies 1.2 to 1.5)
Timeframe – Establishment of Forum by October 2000; Recommendations to Ministers on environmental flow provisions by October 2001.
Monitoring - By the Water CEOs Committee.

Review of Nepean Weirs

4.5 The NSW Weir Review Committee, as a priority, is to review the nine weirs on the upper Nepean, and co-opt experts to assist as necessary.

The review is to be in accordance with the principles already established by the NSW Weir Review Committee. Its primary goal is to remove the maximum number of weirs, consistent with providing alternate, secure water supply to existing users, and to ensure that any remaining weirs provide for fish passage.

The Committee will make recommendations for the most cost-effective means of mitigating or removing the impacts of structures on river health (as outlined in recommendation FL5 of the Report). Any future requests for funding arising from the weir review are to be referred to the Cabinet Standing Committee on the Budget.

Implementation

Lead Responsibility – Department of Land and Water Conservation

Jointly Responsible Authorities – Department of Land and Water Conservation, NSW Fisheries, NSW Agriculture, Department of Urban Affairs and Planning, Sydney Water Corporation
Related Strategies – Regional planning and management processes. (Strategies 1.2 to 1.5)
Timeframe – Identification of weirs to be removed by June 2001.
Monitoring – By the Water CEOs Committee.

Integrated Effluent Management Strategy

4.6 An independently chaired working group is to be established to assist the Sydney Water Corporation to investigate cost-effective options for developing an integrated effluent management strategy.

The Working Group is to comprise the Sydney Water Corporation, the Department of Land and Water Conservation, the Environment Protection Authority, the Sydney Catchment Authority, the Penrith Lakes Development Corporation, the LGSA and representation from irrigators currently extracting from the Nepean River and South Creek, as outlined in recommendation FL6 of the Report.

FL6 proposes that in the formulation of an integrated effluent management strategy, the following options for use of highly treated effluent are to be evaluated:

- **Offset the potential impact of requiring additional releases from Warragamba Dam for environmental flow purposes.**
- **At other times, provide a water supply to water users along the Hawkesbury estuary (*via* a reticulated and/or river delivery system).**
- **Establish a variable flow regime in South Creek and its tributaries.**
- **Accommodate, in part, the water needs of the Penrith Lakes Scheme.**

Implementation

Lead Responsibility – Environment Protection Authority
Jointly Responsible Authorities - Department of Land and Water Conservation, Sydney Catchment Authority, Sydney Water Corporation
Related Strategies – Regional planning and management processes (Strategies 1.2 to 1.5)
Timeframe – Appointment of Independent (non-agency) Chair by September 2000. Report on cost-effective options by October 2001.
Monitoring – By the Water CEOs Committee.

Integrated Water Quality and River Flow Management

4.7 The Environment Protection Authority is to investigate, with other relevant agencies, opportunities to use the load-based licensing system to ensure an integrated approach to the management of water quality and river flows, as outlined in recommendation FL7 of the Report. This approach includes:

- **Incorporation of design features, in situations where effluent is to be discharged to rivers, which allow for variable patterns of effluent release, particularly during periods of low river flows;**
- **Provision for the use of effluent (where possible via a reticulated system) to replace riverine water supplies to existing licensed water users, in preference to fostering *new* demands; and**
- **Provision for the use of sewage effluent in the make-up of environmental flows, subject to satisfying water quality safeguards and discharging the effluent in a variable pattern at an appropriate location.**

Implementation

Lead Responsibility – Environment Protection Authority
Related Strategies – Regional planning and management processes. (Strategies 1.2 to 1.5)
Jointly Responsible Authorities – Department of Land and Water Conservation, Department of Urban Affairs and Planning
Timeframe – Investigations of opportunities to use load-based licensing are to be reported in an Options Paper to be released for public consultation by the end of 2001.
Monitoring – By the Water CEOs Committee.

Managing the Impacts of Mining on River Flow and Health

4.8 The Department of Mineral Resources is to review the environmental aspects of its section 138 approvals for second workings in existing coal mines to ensure the environmental aspects of existing mines are properly considered, as outlined in recommendation FL11 of the Report.

Implementation

Lead Responsibility – Department of Mineral Resources
Jointly Responsible Authorities – Department of Land and Water Conservation
Timeframe – July 2001
Monitoring – By the Water CEOs Committee.

4.9 The new water licensing arrangements are to require the licensing of groundwater extractions from mines, as outlined in recommendation FL12 of the Report.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Jointly Responsible Authorities – Department of Mineral Resources
Timeframe – By the time of introduction of the new water management legislation.
Monitoring – By the Water CEOs Committee.

4.10 Groundwater management plans for the Hawkesbury Nepean are to take into account the Report's recommendations for the management of river flows, as outlined in recommendation FL13 of the Report.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Timeframe – Final plans for upper Nepean / Wollondilly and Blue Mountains by June 2000; Interim plan for Maroota and Kulnara / Mangrove by June 2002.
Monitoring – By the Water CEOs Committee.

5. EXTRACTIVE INDUSTRY

Desired Outcomes

The main outcome sought from implementation of these strategies is establishment of a framework which addresses the needs of Sydney's construction industry whilst protecting rivers and their estuaries from the adverse effects of extraction, especially that carried out instream.

Integrated Framework

5.1 An integrated framework for the management of all existing and potential extractive industry sites in the catchment, as outlined in recommendation E11 of the Report, is to be developed by an Interdepartmental Committee, chaired by the Department of Urban Affairs and Planning.

Implementation

Lead Responsibility – Department of Urban Affairs and Planning

Jointly Responsible Authorities – Department of Land and Water Conservation, Environment Protection Authority , Department of Mineral Resources
Timeframe – By March 2001 for establishment of Inter-Departmental Committee; By September 2001 for development of integrated framework for Government decision.
Monitoring – By the Water CEOs Committee.

5.2 The Inter-Departmental Committee is to consider amendments to SREP9 and SREP20 to extend prohibition of in-stream extraction to the Upper Nepean River System, as outlined in recommendation E12 of the Report.

Implementation

Lead Responsibility – Department of Urban Affairs and Planning
Jointly Responsible Authorities – Department of Land and Water Conservation, Environment Protection Authority
Timeframe – Committee to consider and report by June 2001
Monitoring – By the Water CEOs Committee.

Strategic Plan

5.3 The Interdepartmental Committee is to develop a strategic plan for the provision of navigation safety in the Hawkesbury estuary which, in the first instance, is managed by channel marking, navigation training and advisory systems. Small scale dredging for access to navigation channels should be permitted in specific situations as outlined in recommendation E13 of the Report. Any proposals for regular maintenance dredging in the Hawkesbury Nepean arising from the strategic plan are to be subject to cost/benefit analysis and are to be funded from within existing resources.

Implementation

Lead Responsibility – Department of Urban Affairs and Planning
Jointly Responsible Authorities – Department of Land and Water Conservation, Environment Protection Authority, Department of Mineral Resources, Waterways Authority
Timeframe – To be developed by June 2001
Monitoring – By the Water CEOs Committee.

6. *DATA MANAGEMENT*

Desired Outcomes

The main outcome sought from implementation of these strategies is to ensure public access to data collected relating to the health of the Hawkesbury Nepean River system, subject to the noted caveats. It is sought to improve the arrangements for recording and collating all the information gathered on the river system, which in turn will facilitate the provision of public access to the data.

Data Inventory

6.1 The Steering Committee developing an Integrated Water Monitoring Framework for the Hawkesbury Nepean should consider assigning a specific responsibility to the Hawkesbury Nepean Catchment Management Trust to maintain an inventory of data pertaining to the health of the Hawkesbury Nepean River System, as outlined in recommendation 1A5 of the Report.

Implementation

Lead Responsibility – Department of Land and Water Conservation
Jointly Responsible Authorities – All other State Agencies participating in this SOJI
Timeframe – Development of database by December 2000
Monitoring – By the Water CEOs Committee.

Data Availability

6.2 The Sydney Catchment Authority and the Sydney Water Corporation (where the information is held by the Corporation) are to make their unpublished data in relation to river health publicly available in accordance with Government policies about access to information, and subject to the caveats noted by the Healthy Rivers Commission about cost recovery for value adding, processing and servicing information requests, as outlined in recommendation 1A6 of the Report.

Implementation

Lead Responsibility – Sydney Catchment Authority and the Sydney Water Corporation
Jointly Responsible Authorities – All other State Agencies participating in this SOJI especially those agencies with licensing jurisdiction over the Authority and Corporation
Timeframe – Immediate and on-going responsibility
Monitoring – Water CEOs Committee.

PART C - IMPLEMENTATION

Reference has been made in Part B of this SOJI to implementation of the strategies. This section provides further explanation of the implementation process.

In its Decision of 28 February 2000, the New South Wales Government approved The Cabinet Office and the Healthy Rivers Commission developing a "Statement of Joint Intent" to record Agency and Council commitments to implement the endorsed recommendations of the Commission, as outlined in Recommendation 1A1 of the Report.

The implementation processes outlined here are designed to ensure that the Government's Decision encompassed in this SOJI is promptly translated into effective changes in management of the river system, consistent with the principles and analyses that underpin those recommendations.

The Government established arrangements for the oversighting of Agency and Council responses to the Reports. Those arrangements refer to the role of the Water CEOs Committee whose members comprise the Chief Executive Officers (CEOs) of the Environment Protection Authority, the Department of Land & Water Conservation, the Department of Urban Affairs & Planning, NSW Agriculture, NSW Fisheries and the National Parks & Wildlife Service. It also includes representatives of The Cabinet Office and NSW Treasury. The Committee has become known as the 'Water CEOs Committee' as each of these Agencies has responsibilities affecting the management of the water cycle.

Monitoring Implementation

7.1 The Water CEOs Committee is responsible for monitoring implementation of the Government's response, as contained in this SOJI, to the Hawkesbury Nepean River System Inquiry Report.

Implementation

Lead Responsibility – Water CEOs Committee
Jointly Responsible Authorities – All Agencies participating in and Councils guided by this SOJI
Timeframe – By reference to the timeframes provided for implementation in the individual strategies
Monitoring – The outcomes of this process will be referred to the Public Audit process.

Independent Review

The Responsible Agencies signatory to this SOJI and Councils listed in Appendix B, recognise and support the conduct of independent review of

implementation of Agency and Council responsibilities, against the framework provided by this Statement of Joint Intent and Government decision, within two years of the date of this SOJI. This review is to be carried out by the Healthy Rivers Commission or such other independent body, determined by the Government at that time. Such a review will assess and report on the state of implementation action to establish whether it has been consistent with the strategic intentions of Government and the terms of the SOJI in the context of relevant sections of the Inquiry Report.

APPENDIX A

RECOMMENDATIONS OF THE HEALTHY RIVERS COMMISSION AS ENDORSED BY THE NEW SOUTH WALES GOVERNMENT

This Appendix A sets out all endorsed recommendations for the Hawkesbury Nepean River System. They are derived from the Commission's Reports and incorporate modifications to reflect the Government's decision and endorsement.

The endorsed recommendations include recommendations to be actioned in this Statement of Joint Intent, and those where implementation is already under way and will continue consistent with strategies in this SOJI.

Recommendations that have been superseded by other action or where implementation is proceeding by alternative action have not been included and are not the subject of this SOJI. These are SL9 Criteria for Construction of New Farm Dams, AW1 Amendments to the Noxious Weeds Act 1993, AW3 A State-wide Policy for Willow Management and the Boating recommendations, BO1 Protection of Riverbanks from the Impacts of Boating, BO2 Requirements for Holding Tanks and BO3 Provision for Adequate Pump Out Facilities.

Presentation of the endorsed recommendations includes the main text and subtext of each recommendation, and summary commentary indicating how they are to be implemented under the SOJI. They are assembled under the main headings of the directive strategies to which they relate in the SOJI. The particular strategies to which they relate are referenced below the recommendation.

1. *REGIONAL ENVIRONMENTAL PLANNING*

Sydney Catchments REP

1A2 Catchment Management Plans

Catchment Management Plans should provide unambiguous guidance for the decisions of State agencies and local councils which have potential impacts on natural systems and natural resources (of all types but, in the context of this Inquiry, with particular emphasis on rivers).

> *These plans should provide a firm basis for accountability of State agencies by incorporating explicit commitments to apply their powers and resources in agreed ways, following the accepted community consultative processes. By providing the catchment-based context for council-based Environmental Management Plans they should also provide a strong basis for local government accountability.*

Such Catchment Management Plans should ensure that a focus on land-based planning does not compromise the achievement of river health outcomes. In fact, the relationship between land use planning and catchment management planning of the type recommended by the Commission should be mutually supportive.

To be implemented. The REP for the upper catchment should provide unambiguous guidance, as should the Catchment Management Strategy (Strategic Plan) for the lower catchment.

(Strategies 1.2 and 1.4)

1A4 Review of Part 3 of *The Environmental Planning & Assessment Act*, 1979

The current Review of Part 3 of *The Environment Planning & Assessment Act*, 1979 should promote maximum linkages between the land use planning system and broader catchment planning, spanning the full natural resource base.

Being implemented through the current review of plan making under Part 3 of the EP&A Act.

WQO1 Water Quality Objectives (WQOs)

The WQOs for nutrients shown in Table 2 should be adopted as criteria for the initial phases of an adaptive management regime for water quality.

For other substances, the ANZECC guidelines should be adopted.

WQOs should be explicitly recognised, and used as part of an adaptive strategy, in Protection of Environment Policies and land use planning instruments.

- Environmental values/river uses should underpin and provide the directional impetus for a 'whole-of-government' water quality management strategy for the catchment. (*These are identified in the Reports.*)

- WQOs should be used to strengthen accountabilities of entities with river health responsibilities. They are most applicable where the linkages between action and outcomes are strong and under the control of the nominated entity. Clear and strong accountabilities are no less important in other circumstances though they cannot be based on specified WQOs.

- Reductions in phosphorus inputs to the river should at this stage remain the priority strategy for algal control in freshwater sections. Nitrogen reduction is necessary in many situations where the health of other aquatic life has become an issue, and in estuarine sections. Therefore strategies for nitrogen reduction should be initiated and evaluated over time as part of the proposed adaptive management approach.

Table 2: Water Quality Objectives for Nutrients

For derivation of the values in this Table, and considerations relevant to their application, see Appendix 4.

Water Quality indicator (all values µg/L)	Forested areas and drinking water catchment	Mixed use rural areas and sandstone plateau	Urban areas – main stream	Urban areas – tributary stream	Estuarine areas
Total Phosphorus					
NWQMS range	10-100	10-100	10-100	10-100	N / A
HRC recommendation	**50**	**35**	**30**	**~50**	**30**
Measured range (a)	7-50	10-740	10-100	50-360	15-30
Total Nitrogen					
NWQMS range	100-750	100-750	100-750	100-750	N / A
HRC recommendation	**700**	**700**	**500**	**~1000**	**400**
Measured range (a)	100-800	200-3200	400-2200	500-15,000	200-500
Chlorophyll-*a*					
NWQMS range	N / A				1-10
HRC recommendation	**7**	**7**	**10-15**	**~20**	**7**
Measured range (a)	-	2-7	3-20	2-70	5-9

NOTE (a): The values shown are the range of average (mean) values calculated for the sites in that region.

The recommended water quality objectives (from Table 2 in the Report, and from ANZECC Guidelines where specified) will be adopted for use as guidelines for planning purposes during the REP and Catchment Management Strategy (Strategic Plan) development processes.

(Strategies 1.2 and 1.4)

WQ1 Framework for Water Quality Management

NOTE: Recommendation WQO1 contains the Commission's recommended water quality objectives (WQOs) and its recommendation about the role those WQOs should play within a comprehensive strategy for water quality management. All recommendations of this Report should concern improved management of river health in its broadest sense. It follows that the majority of them have implications for water quality. The following have particular relevance to water quality management.

A whole-of-catchment management strategy, complemented by Sydney Regional Environmental Plan 20 in the lower catchment, which sets out the strategies and requirements relating to development in the catchment, should

provide the overall framework for a whole-of-government approach to water quality management. The framework should provide:

- clear specification of the accountabilities of State agencies and councils for water quality management;
- performance milestones, which may be:
  either: precisely-specified WQOs under appropriate circumstances, namely where there are clear linkages between pollutants and water quality outcomes *and* where relevant processes are controllable by nominated management entities,
  and/or: defined stages in the implementation of endorsed management approaches - that is, the ways in which the responsible management entities will apply their powers and resources;
- a performance monitoring and assessment schedule that encompasses auditing of management processes and/or outcomes under the circumstances in which either or both are appropriate.

To be implemented per responses to 1A2 - Catchment Management Plans.

(Strategies 1.2 and 1.4)

WQ2 Reference Points for Adaptive Water Quality Management Strategies

The WQOs for nutrients shown in Table 2 should serve as reference points for the derivation of adaptive water quality management strategies under appropriate circumstances, as outlined in Section 1.4.1 of the Report.

To be implemented per responses to 1A2 - Catchment Management Plans.

(Strategies 1.2 and 1.4)

WQ3 A System View of Water Quality

Eutrophication should be managed in the context of the whole river system, with nutrient reductions considered together with other options such as flow management.

> *Such considerations could lead to less stringent nutrient objectives than might apply if nutrient reduction were the sole strategy for water quality improvement. The overall management strategy should address also the need to manage other factors such as weed infestation, that have the potential to alter the effectiveness of nutrient control and flow management measures.*

To be implemented per responses to 1A2 - Catchment Management Plans.

WQ4 Prevention of Adverse Water Quality Impacts

There should be an increasing focus, with a commensurate allocation of resources and effort, on the prevention of the adverse water quality impacts that arise from inadequate management of local (non-Sydney Water) sewage, urban stormwater, effluent from boats, and run-off from agricultural lands.

> *This recommendation is aimed at achieving a cost-effective balance in the overall allocation of resources to water quality management. It should not lead to a reduced emphasis on the obligations of Sydney Water to achieve Government-endorsed standards for the water quality outcomes of its activities.*

To be implemented per responses to 1A2 - Catchment Management Plans.

WQ5 Incorporation of the Cumulative Impacts of Discharges in Licence Renewal Processes

All licence renewal processes should incorporate assessment of the cumulative impacts of discharges within the relevant sub catchment.

Both load-based licensing and tradeable discharge entitlements should be explored as means of determining individual contributions / obligations.

> *Those assessments, which would vary in sophistication according to location, should be in terms of the implications of the subject activities for river health outcomes. They should be demonstrably consistent with the community's environmental values for water quality and, where appropriate, the associated WQOs recommended by this Inquiry (subject to Government endorsement of the recommendations).*
>
> *Where the cumulative impacts of existing activities already exceed the limits consistent with those outcomes, the target reduction in overall impact should be distributed among contributing sources in an equitable and cost-effective manner. Both load-based licensing and tradeable discharge entitlements should be explored as means of determining individual contributions/obligations.*

To be implemented.

(Strategy 1.5)

Risk Management Zones Approach

When and if standards for Cryptosporidium and Giardia become available, the standards must be linked with appropriate strategies. Strong and direct action to deal with known contributors must be initiated now, in advance of the new science, new data and / or more sophisticated modelling required for more precise numeric targets.

A system of risk management zones should be developed upstream of water supply off-take points.

To be implemented through the catchment planning process.

(Strategy 1.2)

FL10 Requirements on Stormwater Works in New Urban Areas

Stormwater works for all new urban areas should be required to mitigate changes in river flows up to the level of the natural bankfull flow condition.

A responsibility of local councils. To be implemented through the catchment planning process.

ST1 Local Government Responsibility for Stormwater Works

Responsibility for effective stormwater planning, design, management, maintenance and retro-fitting should be clearly vested in local government. This would require:

- active support and recognition by State and Federal agencies with specific interfacing powers such as planning, local government administration, resource management, and flood mitigation funding;
- strengthening local government powers to allow councils to develop effective sanctions, incentives (eg. stormwater detention) and trade-offs which explicitly favour better catchment outcomes in the land development process;
- attention by both councils and developers to water quality and ecological integrity as well as flood mitigation and drainage (Stormwater Management Plans should give prominence to the fact that stormwater management is as much about managing the water quality, ecological integrity and overall health of rivers as it is about drainage and flood mitigation.);
- site-specific studies including assessments of land capability and cumulative impacts to be undertaken by proponents of significant new residential developments in formulating proposals for stormwater management; and
- approval for new urban development to be granted only when it can be demonstrated that both the land and neighbouring aquatic systems are capable of coping with the developments proposed, both individually and collectively.

To be implemented through the catchment planning process.

(Strategies 1.2, 1.3 and 1.4)

ST2 Framework for Equitable Cost Sharing Across Local Government Boundaries

A framework should be established for equitable cost sharing of stormwater planning, management, maintenance and retro-fitting where it transcends local government boundaries. The following principles should apply in the determination of contributions:

- Each council should meet its share of the common obligations calculated on the basis of local land forms and land uses.

- The contribution of authorities or corporations, such as Sydney Water, should be calculated based on the impacts of trunk drainage systems.

To be implemented through the catchment planning processes.

(Strategies 1.2, 1.3 and 1.4)

AW1 Weed Management on a Catchment Basis

Weed management should be pursued at regional or catchment level. Strategies should be informed by the framework and principles being developed by the Hawkesbury Nepean Catchment Management Trust and should, in particular, take account of Regional Vegetation Management Plans.

To be implemented through the catchment planning process.

(Strategies 1.2 and 1.3)

SE1 Councils Empowered and Required to Manage Sewage Treatment and Disposal

Councils, in areas that are not serviced by reticulated sewerage (other than isolated, single residences), should be empowered and required, to manage sewage treatment and disposal to achieve designated public health and river health outcomes.

That would entail:

- development by councils of sewage management plans which demonstrate how questions of design, installation, operation, maintenance and inspection will be dealt with, as well as addressing issues such as cumulative impact and management of total water cycle; and
- empowerment of councils to permit on-site management solutions that can be shown to be effective in terms of public health and environment goals as well as cost, subject to adequate scrutiny in these terms.

  (The intention of this recommendation has now largely been addressed by the new Local Government (Approvals) Amendment (Sewage Management) Regulation), *1998.)*

Already implemented by the new Local Government (Approvals) Amendment (Sewage Management) Regulation), *1998.*

SE2 New Urban Developments

Councils should discourage, or evaluate with caution, proposals for new on-site sewage disposal at sites where known or potential sewage problems exist, or where reticulated water supply has been provided.

If development proponents are able to demonstrate that problems could be avoided, there should be provision for on-going accountability for outcomes.

To be implemented through the Sydney Catchments REP.

(Strategies 1.2 and 1.4)

SE4 Decision Criteria for New Sewage Treatment Plants

Where existing developed areas warrant sewage treatment by a new sewage treatment plant, the decision criteria should include public health risk and risks to sensitive receiving environments as well as population density and cost.

The current prioritisation process, initiated by the Environment Protection Authority, is endorsed; it should be regularly re-evaluated and updated in light of development pressures and emerging public health and river health concerns.

Licence conditions on new plants should not allow desirable ambient water quality in receiving waters to be significantly compromised.

Already being implemented.

SE5 Variation of Class P Requirements Where Existing Sewage Treatment Plants Are Performing Inadequately

Where existing sewage treatment plants are performing inadequately, urgent improvements to public health and river health should not be delayed pending the commitment of the large amounts of funding often necessitated by a Class P classification on the receiving waters. Variation of the relevant Class P requirements should receive favourable consideration where that would achieve significant and timely improvements in outcomes.

To be implemented where appropriate. The EPA will consider variation of a classification where this would result in significant and timely environmental improvements.
In line with this approach, the EPA supports the installation of reticulated sewerage systems in unsewered areas given a high environmental ranking through the Priority Sewerage Program, and would consider varying Class P requirements to enable this.

(Strategy 1.6)

SE6 Variation of Class P Requirements to Facilitate Installation of Reticulated Sewerage

For areas within the Hawkesbury Nepean catchment listed within the Priority Sewerage Program and draining to Class P waters, the relevant requirements of the Class P classification should be varied so as to facilitate installation of reticulated sewerage (to replace on-site disposal systems) *provided* that downstream water quality is demonstrably improved.

> *Further development in the regions which may be facilitated as a result of the provision of reticulated sewerage should be subject to the constraints implied by the Water Quality and other river health objectives adopted by the Government following consideration of this Inquiry's recommendations.*

To be implemented as detailed in the response to Recommendation SE5 above.

(Strategy 1.6)

AG1 Evaluation of Agricultural Strategies for Potential Impacts on River Health

Strategies designed to promote, develop, assist or protect agriculture should incorporate explicit evaluation of their potential impacts on river health.

Such strategies should:

- promote adequate scale and viability in agriculture so that best management practice is customarily implemented;
- define 'best management practices' in ways that recognise river health outcomes as well as land productivity and similar outcomes - that is, they should modify programs and approaches which currently focus on sustainable land management so that they also encompass sustainable river management; and
- assist the planning decisions of local government to achieve a balance between urban development and agriculture consistent with the maintenance of river health.

To be implemented through catchment planning processes.

AG2 Incentives for Best Management Practice

Whole-of-government incentives, and sanctions if necessary, should be developed to encourage farmers to implement best management practices to improve the quality of run-off from agricultural lands and to re-establish riverbank vegetation.

> *These should be incorporated into the conditions for access to funds from all government assistance programs and in any licensing or approval arrangements (including for water usage and pollution control).*

*Where incentives and sanctions are to be related to adoption of 'Best Management Practice', **local** farmers and specialists should be involved in the determination of appropriate benchmarks, find tuned from more global standards to reflect regional/local circumstances.*

To be implemented through property management planning and extension services.

Strategic Plan

All recommendations in this Appendix were endorsed as relevant to the development of the Strategic Plan. Specific recommendations to be implemented through the catchment management strategy are indicated above as recommendations referred to in strategy 1.3.

Sydney Regional Environmental Plan 20

Specific recommendations to be implemented through Sydney Regional Environmental Plan 20 are indicated above as recommendations referred to in strategy 1.4.

Cumulative Impacts of Discharges

Specific recommendations to be implemented through the licence renewal processes are indicated above as recommendations referred to in strategy 1.5.

2. *ENVIRONMENTAL MANAGEMENT BY COUNCILS*

LG1 Integration of Environmental Management Plans into Council Management Plans

Councils should be required to develop explicit Environmental Management Plans (EMPs) as part of the management plans they are currently required to prepare.

To be implemented within the parameters of existing legislation.

LG2 Components of Council Environmental Management Plans

Council Environmental Management Plans should:

- Demonstrate how environmental systems and natural resources, including river and water based systems, are to be managed;
- Report on natural assets (including riverine corridors and ecosystems) in ways which recognise their values and those steps necessary to restore, protect and maintain them;
- Adhere to guidelines (including ways of valuing assets), standards and protocols established by the Department of Local Government and other relevant bodies;

- Be formulated so that the Environmental Management Plan in one local government area can readily be integrated with those for contiguous areas; and
- Be informed by and revised in the light of State of the Environment reporting.

To be implemented within the parameters of existing legislation.

(Strategy 2.1)

LG3 Agency Assistance with Council Environmental Management Plans

Councils should be further assisted and guided by agencies in the preparation and implementation of Environmental Management Plans. In particular, the Department of Urban Affairs & Planning should explore further with councils the options for providing more explicit guidance about river health management without compromising the independence and self-determination of councils. Notably, guidance about the incorporation of cumulative impact considerations in councils' decision making should be enhanced.

To be implemented.

(Strategy 2.1)

LG4 Improving the Effectiveness of Environmental Management by Councils

More effective environmental management by councils should be complemented by other strategies to protect and improve river health, such as:

- monitoring and action by councils to ensure compliance with development consent conditions;
- continuing review by the Department of Urban Affairs & planning, councils and the Hawkesbury Nepean Catchment Management Trust of the effectiveness of Sydney Regional Environment Plan 20 in achieving planning decisions that are consistent with protection of river health; and
- the gearing of State and Federal funding assistance programs towards priority support for proposals demonstrating consistency with defined river health goals including, but not limited to, proposals for reticulated sewerage and water supply, and flood mitigation.

To be implemented.

(Strategy 2.1)

LG5 Funding for Councils to Implement Environmental Management Planning

Councils should be granted access to designated public funds and be permitted to raise special rates, and/or to apply existing rates and funds as necessary, to empower them to undertake the strengthened roles advocated by the

Commission. (The proposed environmental management planning and reporting processes would establish mechanisms to ensure accountability for funds so raised.)

The following funding options should be explored:

- Expansion of existing public funding programs to the extent required to deal with urgent local sewage in a shorter time frame than is currently possible.
- Revenues raised by councils through special rates, to fund environmental management initiatives, including those associated with river health. (Councils should be able to raise special rates for application to environmental management initiatives undertaken on a sub-catchment or 'eco-regional' basis spanning several council areas.)

Councils will be encouraged to use special levies where appropriate.

(Strategy 2.2)

SE3 Agency Support for the Preparation of Sewage Management Plans

Councils should receive strengthened support, in the preparation of sewage management plans, from agencies with responsibilities for public health, environment protection, planning and water management.

This would entail State agencies ensuring that:

- all guidelines *are effective* in assisting councils to secure satisfactory public health, environmental and river health *outcomes*;
- administrative and / or legislative change occurs as required to permit new approaches, such as community title, to be introduced as components of effective local sewage management strategies;
- councils have access to existing public funds to support urgent works as cost effectively as practicable; and
- further evaluation of the Priority Sewerage Program should be undertaken to identify all possible opportunities for accelerating the rate at which river health problems arising from inadequate sewage management in non-Sydney Water areas can be resolved. The cost-effective application of existing funds should be maximised, but the case for *increased* funding to deal with these problems *expeditiously* should be closely examined.

To be implemented.

(Strategy 2.1)

3. RIVERINE CORRIDOR PROTECTION

Each of the following recommendations is to be implemented through a State Riverine Corridor Policy to be developed by an Inter-Departmental Committee, as explained in *Strategy 3.1*.

RC1 Protection of Riverine Corridors in Urban Development Decision-Making Processes

All levels of the decision-making processes governing urban development should explicitly address the need for protection of riverine corridors so that rivers and streams can fulfil their full range of drainage and ecological maintenance functions.

To be implemented through a State Riverine Corridor Policy to be developed by an Inter-Departmental Committee (IDC).

(Strategy 3.1)

RC2 Assistance for Councils in Management of Riverine Corridors

Action should be taken to encourage and assist councils to establish the pre-conditions for better management of riverine corridors. The development of an overall strategy should include key elements outlined in Recommendations RC2a to RC2e.

See responses to RC2a - RC2e.

(Strategy 3.1)

RC2a Expansion of Programs to Include Sensitive Riverine Corridors

Existing programs, such as the National Parks & Wildlife Service's Reserves Selection and Acquisition Program, and the Sydney Regional Development Fund, should be expanded, subject to evaluation of overall priorities, to include sensitive riverine corridor land for which public management is the preferred or most feasible option. Correspondingly, opportunities to protect private riverine corridor land through the Voluntary Conservation Agreement Program of the National Parks & Wildlife Service should also be maximised.

To be implemented through a State Riverine Corridor Policy to be developed by an IDC.

(Strategy 3.1)

RC2b Department of Urban Affairs & Planning Assistance to Councils on Management of Acquisition Liabilities

The Department of Urban Affairs & Planning should provide specific advice and other assistance to councils as to how they can best manage their

acquisition liabilities whilst also affording protection to riverine corridors. A particular aspect of such assistance to councils should be guidance as to the ways in which councils can ensure that environment protection zoning does not sterilise the land and generate acquisition liabilities. Councils should receive advice on the formulation of a suitable range of uses within such zones and the potential for designation of environment protection lines in the same way as coastal protection lines.

To be implemented through a State Riverine Corridor Policy to be developed by an IDC.

(Strategy 3.1)

RC2c Development of Criteria for the Sterilisation of Land

As an adjunct to the provision of guidelines for multiple uses, criteria are also needed on which to base decisions where multiple uses are not appropriate. Associated with the specification of those criteria, the Hawkesbury Nepean Catchment Management Trust should co-ordinate a catchment-wide assessment of the amount of land for which sterilisation would be the only effective management option. This would enable estimates of the total compensation liability to be considered in the course of State budget allocation processes.

To be implemented through a State Riverine Corridor Policy to be developed by an IDC.

(Strategy 3.1)

RC2d Mechanisms for Effective Management of Riverine Corridors – Department of Urban Affairs & Planning Assistance to Councils

The Department of Urban Affairs & Planning should further assist councils by promoting awareness, and developing guidelines for the use of mechanisms such as Community Title, Section 88B Covenants, Development Agreements (in which development opportunities are 'traded-off' for protection of sensitive areas), and Conservation Agreements. Each of these has the potential to promote and facilitate appropriate and effective management of riverine-corridor land (whether under public or private ownership).

To be implemented through a State Riverine Corridor Policy to be developed by an IDC.

(Strategy 3.1)

RC4 Licence and Lease Fees to Fund Programs to Mitigate Degradation

A dedicated proportion of revenues derived from licence and lease fees for State Land should contribute to the funding of a program to mitigate land, water and vegetation degradation within State Land areas and their impacts in river health.

A program to mitigate land, water and vegetation degradation on Crown Land will be developed, but its funding through hypothecation from lease fees is not supported.

RC5 Ecological Considerations Relevant to Flood Mitigation Works

Where State and Commonwealth funding programs assist local government to undertake flood mitigation works, such funding should be contingent on the demonstrated compatibility of the project with sound ecological, as well as flood mitigation, outcomes.

Already implemented.

4. WATER MANAGEMENT

FL1 Restrictions on Water Access for Existing Users

Water allocation and sharing rules should include such restrictions on access by all *existing water users*, with the exception of existing riparian users for internal household and stock watering purposes, as are necessary to ensure the following:

- There is no extraction of water from rivers during periods of no flow.
- There is no extraction of water from rivers when river flows are less than the natural 99th percentile condition.

  A limited number of exemptions to these restrictions should be provided for those users who would otherwise need to augment their water supply substantially, including riparian users for internal domestic and stock watering purposes. (The latter exemption would accommodate the needs of landholders wishing to exclude stock from streams.)

  This requirement should prevail until the outcomes of a program of environmental flow trials are available and used in the determination of longer-term flow protection levels.

To be implemented, but with tougher restrictions for the institutional extractors. The 95th percentile limit will be applied immediately to Sydney Catchment Authority and town water supply authorities seeking augmentation, with the 99th percentile to be applied to other extractors. Any changes to either of these rules should only occur in the context of environmental flow trials.

(Strategy 4.1)

FL8 Regulation of Sydney Water

The rights and obligations of the Sydney Water Corporation, with regard to the management of water resources, should be formalised and specified through the creation of a licence for the Corporation under *The Water Act*, 1912. (Since the release of the Commission's Draft Report, *The Water Act*, 1912 has been amended to include provision to license Sydney Water.)

In particular, Sydney Water's Operating Licence should explicitly describe the conditions and circumstances under which the water supply operations of Sydney Water could appropriately incorporate transfers from the Shoalhaven and/or Woronora river systems. (The Commission's Shoalhaven and Woronora Inquiries will contribute to the determination of the operational conditions, through its consideration of river flow objectives for those rivers.)

To be implemented.

(Strategy 4.2)

FL2 Improving the Measurement of Water Use

Action should be taken to improve significantly the measurement of water use.

Background HRC text

> *Although the introduction of metering could be a staged process, it is essential that data relating to the larger water users in the more stressed streams are available for consideration in the flow trials, and in the Commission's formulation of final flow recommendations from the results of the trials.*
>
> *The Commission recommends installation of water meters (with limited exceptions) to substantially improve the measurement of water use and water needs in order to:*
>
> - *determine reliably the extent of water use and its impact on instream ecosystems;*
> - *provide the basis for an effective monitoring and compliance program to ensure that longer-term flow protection arrangements are implemented effectively and the rights of licensed users are protected;*
> - *provide the required quantitative basis for converting licence entitlements to volumetric allocations; and*
> - *assist water users to maximise the efficiency of their water practices.*

Larger users will be required to install meters immediately, to be followed, through the volumetric conversion process, by medium users measuring their usage through electricity or fuel use, and low-level extractors measuring their usage through time events and a pump diary. See Appendix B for further details.

(Strategy 4.3)

FL4 Trial Environmental Flows Program

A program of trial environmental flows should be conducted, under the guidance of independent experts, for those rivers affected by all components of Sydney Water, Gosford-Wyong Joint Water Supply, Delta Electricity and Goulburn, Mulwaree (Marulan), Wingecarribee (Medway Dam) and Lithgow councils water supply schemes.

Background HRC text

> *The key principle that is to be applied in the design and implementation of the Flow Trials and Weir Review Program* (Recommendation FL5 below) *is that equal recognition is to be given to the two objectives of protecting riverine ecosystems and meeting the needs of existing water users within the context of a precautionary and adaptive management approach to managing the environment and associated uncertainties*

It is proposed that a Hawkesbury Nepean River Management Forum will be established, with representatives from upstream interests, including the Sydney Catchment Authority, and downstream interests including the Trust. The Forum would make recommendations to the Minister for Land & Water Conservation on environmental flow provisions for inclusion in Sydney Catchment Authority's water licence, drawing on flow trials already completed and proposing further trials as needed. The Minister would consult with and seek the agreement of the Minister for the Environment and other Ministers as appropriate before making a decision on the water licences.

(Strategy 4.4)

FL5 Weir Structure Review

A program of structural review of the weirs on the upper Nepean should be conducted under the guidance of independent experts. A works program should be developed for implementing the most cost-effective means of mitigating or removing the impacts of structures on river health, with priority given to addressing the impacts of Penrith Weir and the other structures identified by NSW Fisheries as being of priority concern.

In cases where structural works are required, implementation should be completed as soon as possible thereafter. The program should be developed in consultation with river users, under the guidance of independent people with expertise in the relevant instream ecosystem and resource-use disciplines.

To be implemented through the existing Weir Review Program.

(Strategy 4.5)

FL6 Medium-Term Integrated Management of Effluent and River Flows

Sydney Water's waste water management strategy should include expert assessment, and associated community consultation, of options for diverting highly-treated effluent from sewage treatment plants in the South Creek sub-catchment to the Nepean River to:

- offset the potential impact of requiring additional releases from Warragamba Dam for environmental flow purposes;
- at other times, provide a water supply to water users along the Hawkesbury estuary (*via* a reticulated and / or river delivery system);
- establish a variable flow regime in South Creek and its tributaries; and
- accommodate, in part, the water needs of the Penrith Lakes Scheme within the proposed cap on total extractions.

An independently chaired working group, comprising representatives of Sydney Water Corporation and Penrith Lakes Development Corporation, should investigate options for integrated effluent management. The necessary investigations should be expedited so that the results can be progressively assessed and ultimately considered in conjunction with the results of the trials of environmental flows, as part of the Commission's finalisation of this Inquiry.

To be implemented.

(Strategy 4.6)

FL7 Longer-Term Integrated Management of Effluent and River Flows

Future modifications of *Water Plan 21*, and proposals by other water supply and sewage authorities to develop or augment sewage treatment plants, should:

- incorporate design features, in situations where effluent is to be discharged to rivers, which allow for variable patterns of effluent release, particularly during periods of low river flows;
- provide for the use of effluent (where possible *via* a reticulated system) to replace riverine water supplies to *existing* licensed water users, in preference to fostering *new* demands; and
- provide for the use of sewage effluent in the make-up of environmental flows, subject to satisfying water quality safeguards and discharging the effluent in a variable pattern at an appropriate location.

Current load-based licensing provisions may need to be amended to support the above requirements. The above recommendations also apply to other point source discharges (eg. from mines).

To be further considered.

(Strategy 4.7)

FL3c Establishment of a Water Market

The introduction of a water market should be expedited.

Already being implemented. Amendments to The Water Act, *1912 in 2000 should address this point.*

FL11 Mitigating the Impacts of Underground Coal Mining

The process for approving new underground (long wall) coal mining should be strengthened to require explicit assessment of the impacts on river health, including groundwater, river flows, geomorphology and water-related ecosystems, and the implementation of measures to mitigate adverse impacts.

> *More rigorous conditions should be incorporated in authorities to mine coal to require monitoring and restoration of riverine ecosystems. Bond or bank guarantees should be required, at the time of granting the authority, commensurate with the scale of the potential impacts.*

Department of Mineral Resources will examine conditions for approvals of second workings.

(Strategy 4.8)

FL12 Licensing of Groundwater Extractions from Coal Mines

The Water Act, 1912 should be amended to require licensing of all groundwater extractions from mines, including groundwater extractions associated with dewatering activities and subsequent discharge of water to rivers in the operation of long-wall coal mining.

> *Licensing of these activities would enable appropriate monitoring and reporting of groundwater extractions and discharges, and management of discharges to achieve a more natural variable pattern of releases to rivers.*

To be implemented.

(Strategy 4.9)

FL13 Consistency in Groundwater and River Flow Access Conditions

Conditions should be applied to licences issued for the extraction of groundwater under *The Water Act*, 1912 to ensure that they are consistent with the Commission's recommendations for the management of river flows.

To be implemented.

(Strategy 4.10)

5. EXTRACTIVE INDUSTRY

EI1 Framework for Management of Extractive Industry Sites

An integrated framework should be developed for the management of all existing and potential extractive industry sites in the catchment.

- Government should set the overall planning context for extractive operations, by the earliest possible announcement of its preferred option for the next prime source of sand supplies for the Sydney market. In reaching that decision the risks, benefits and costs associated with any proposals for large-scale extraction of the Richmond Lowlands should receive particular consideration.
- A management framework, at the Sydney market and district operational levels, should incorporate sufficient regulation, incentives and sanctions, supported by adequate monitoring, to ensure that all existing and potential riverine, estuarine floodplain and hard rock extraction operations are managed effectively, consistently and in an integrated way to mitigate adverse impacts on ecosystems, river stability, water quality and groundwater resources. It may include provision for lodgment of bonds where proposed activities could have environmental consequences requiring remediation.
- Mechanisms should be introduced to promote contemporary best practice management in all existing extractive operations. Measures should be implemented to ensure on-going compliance with standards, and adjustment of operations where required, regardless to existing consent conditions.
- There should be a review of the provisions of the *Rivers and Foreshores Improvement Act*, 1948, with regard to 'damage to protected river land' and amendment of the Act, if necessary, to encompass the full range of ecological considerations.

To be implemented. The Mining & Extractive Industries Working Party will develop an integrated framework for the management of all existing and potential extractive industry sites in the catchment.

(Strategy 5.1)

EI2 Management of Extractive Industries in the Upper Nepean

The actual and potential adverse impacts of extractive industry operations on sensitive riverine ecosystems should be addressed through the implementation of the following measures:

- {Amendment of the Sydney Regional Environment Plans Nos.20 and 9(2) to extend the current prohibition applying to new instream extraction operations along the Nepean River downstream of the Wallacia Bridge, to include upstream reaches and other tributaries (including Wrights and Wellums creeks). Existing permits should not be renewed when they expire.}

- Prohibition of new bank extraction operations except where independent experts can demonstrate that there will not be an adverse impact on the riverine ecosystems. (The further destruction of remnant native riparian vegetation should not be permitted.)

To be considered during development of the integrated framework referred to in Recommendation EI1 above.

(Strategy 5.2)

EI3 Management of Extractive Industries in the Hawkesbury Estuary

The actual and potential adverse impacts of extractive industry operations on sensitive estuarine ecosystems should be addressed as follows:

- Any variations in navigability which may occur from time to time as a result of shifting sands which are deemed dangerous by the Waterways Authority should, in the first instance, be managed by channel marking, navigation training and advisory systems.
- Small-scale dredging for access to navigation channels should be permitted in specific situations where commercial marinas or residential properties were bought by their current owners with access to the navigation channel which has since silted. Appropriate restrictions should be applied to address matters involving potential pollution resulting from the movement of acid sulphate soils or contaminated silt.
- Proposals for extensive navigation dredging (which may or may not include a commercial element) in the Hawkesbury and the estuarine reaches of its tributaries should generally not be permitted, but should not be categorically prohibited. Proponents of such developments should demonstrate that potential damage could be contained and be required to undertake full environmental impact statement processes. If dredging were permitted under stringent controls, bonds should also be lodged to fund environmental remediation in the event of unexpected damage or enterprise failure.

To be considered during development of the integrated framework referred to in Recommendation EI1 above.

(Strategy 5.3)

6. DATA MANAGEMENT

1A5 Management of River Health Data

The Hawkesbury Nepean Catchment Management Trust should be assigned a specific responsibility for maintaining an inventory of data pertaining to the health of the Hawkesbury Nepean River System. The Trust should devise protocols for assessing the usefulness of data sets and the significance of

information gaps, and recommend priorities for the remediation of data deficiencies.

> *Such assessments by the Trust should have a major influence on the allocations of public funds for future data collection and research efforts in the Hawkesbury Nepean River system.*

To be referred to the committee preparing the integrated Water Monitoring Framework for the Hawkesbury Nepean.

(Strategy 6.1)

WQ6 Funding of Future Water Quality Monitoring, Data Collection and Research

Proposals for future water quality monitoring, data collection, and research which are to attract any degree of public funding (from any level of government) should be subject to strategic assessment as to their relevance and usefulness in meeting the challenges of managing water quality cost effectively and on a catchment-wide basis.

> *Such data should be readily available and open to peer review and public scrutiny. The Hawkesbury Nepean Catchment Management Trust should play a major role in maximising the usefulness of data collection. Such data should be readily available and open to peer review and public scrutiny. The Hawkesbury Nepean Catchment Management Trust should play a major role in maximising the usefulness of data collection.*
>
> *Water quality data collected by corporatised water and power supply entities should be publicly available, unless they can reasonably be classified as 'commercial in confidence' on the grounds of agreed criteria, which may be specified in operating licences or pre-specified in other appropriate forms.*

To be referred to the committee preparing the integrated Water Monitoring Framework for the Hawkesbury Nepean.

1A6 Access to Data Held by Sydney Water (now Sydney Catchment Authority)

Data collected by Sydney Water Corporation for its planning and operational purposes and/or for its reports to regulatory authorities should, as a general principle, be made freely available (except for the recovery of costs incurred in 'value-adding' activities by the Corporation, and of processing or servicing costs) to all agencies, councils, catchment management committees and recognised stakeholder groups.

To be implemented in accordance with Government policy about access to information, and subject to the caveats noted by the Healthy Rivers Commission, ie. *that the Sydney Catchment Authority recover costs for value adding, processing and servicing information requests.*

(Strategy 6.2)

1A1 River Manager

A river manager should be established for the Hawkesbury Nepean River System. This body should have the ultimate accountability for the health of the river, and the powers and resources consistent with that accountability.

In the absence of a River Manager, a Statement of Joint Intent should be established by relevant agencies and councils.

To be implemented. A Statement of Joint Intent will be established.

APPENDIX B

List of Local Government Councils Whose Local Government Areas Fall Within the Hawkesbury Nepean River System

Blacktown City Council
Blue Mountains City Council
Camden Council
Campbelltown City Council
Cessnock City Council
Council of the Shire of Baulkham Hills
Crookwell Shire Council
Fairfield City Council
Gosford City Council
Goulburn City Council
Gunning Shire Council
Hawkesbury City Council
Hornsby Shire Council
Ku-ring-gai Municipal Council
Lithgow City Council
Liverpool City Council
Mulwaree Shire Council
Oberon Council
Penrith City Council
Pittwater Council
Rylstone Shire Council
Singleton Shire Council
Warringah Council
Wingecarribee Shire Council
Wollondilly Shire Council
Wollongong City Council