VICTORIA GOVERNMENT

GAZETTE

No. S 13 Friday 26 February 1988

By Authority Jean Gordon Government Printer Melbourne

SPECIAL

Environment Protection Act 1970

STATE ENVIRONMENT PROTECTION POLICY

WATERS OF VICTORIA

The Governor in Council, under section 16 (1) of the Environment Protection Act, declares the following State Environment Protection Policy (Waters of Victoria) to come into effect on 15 March 1988.

Dated: 23 February 1988

Responsible Minister

T. W. ROPER

Minister for Planning and Environment

LAWRENCE A. FISHER
Clerk of the Executive Council

1. This Order may be cited as the State environment protection policy (waters of Victoria) referred to below as the policy, and shall come into operation upon publication in the *Government Gazette.*

2. This policy is divided into parts as follows:

Part I—Preliminary

Part II—Boundaries of the Area Affected

Part III—Beneficial Uses to be Protected

Part IV—Water Quality Indicators and Objectives

Part V—Attainment Program

PART 1—PRELIMINARY

3. In this policy, unless inconsistent with the context or subject matter:

"Act" means the *Environment Protection Act* 1970 as amended.

"Authority" means the Environment Protection Authority constituted under the Act.

"Background level" means the level of an indicator (measured in a manner and at a location specified by the Authority) in surface waters outside the influence of any waste containing a measurable level of that indicator.

"Beneficial use" means a use of the environment or any element or segment of the environment that is conducive to public benefit, welfare, safety, health or aesthetic enjoyment and which requires protection from the effects of waste discharges, emissions or deposits.

"Buffer Zone" means a vegetated strip of land reserved along stream-banks or shores of waterbodies in which urban development is limited, access restricted and land disturbance activities minimised.

"Dangerous Goods" means any chemical substance defined in regulations made under the *Dangerous Goods Act* 1985 (as amended).

"Estuarine" means of or inhabiting estuaries.

"Estuary" means a partially enclosed coastal body of water characterised by tidal effects and mixing of fresh with sea water.

"Eutrophication" means the unacceptable growth of aquatic plants and algae in receiving waters resulting from excessive nutrient levels in waters.

"Groundwater" means any water contained in or occurring in a geological structure or formation.

"Impoundment" means an enclosed body of freshwater such as a lake, dam or reservoir.

"Indicator" means any physical, chemical or biological characteristic used as a measure of water quality.

"Inert solid waste" means solid waste with negligible activity or effect on the environment.

"Initial dilution" means the rapid and irreversible turbulent mixing of wastewater with its receiving waters around the point of discharge.

"Intensive animal industry" means an operation where animals are confined for the purpose of agricultural production and includes piggeries, poultry farms and cattle feedlots.

"Licence" means a licence issued under the Act.

"Mixing zone" means an area contiguous to a licensed waste discharge point and specified in that licence, where the receiving water quality objectives otherwise applicable under this policy do not apply with respect to certain indicators as specified in the licence.

"Nutrients" means substances necessary for the growth and reproduction of organisms.

"Objective" means a level of an indicator or any other property of a water body as specified by the Authority for the protection of beneficial uses.

"Pathogens" means organisms capable of causing illiness in animals, including human beings, and plants.

"Policy area" means the area in which this policy shall be observed, as specified in clause 5.

"Pollution abatement notice" means a pollution abatement notice served under the Act.

"Potable" means drinkable.

"Regulation" means a regulation made under the Act.

"Responsible authority" in relation to sewerage means any authority with jurisdiction over the provision of or requirements for sewerage, including those authorities with control over the sub-division of land.

"Segment" in relation to the environment means any portion or portions of the environment expressed in terms of volume, space, area, quality or time or any combination of these.

"Sewered property" means any sewered land or premises and any land or premises which have been declared by the responsible authority in the manner prescribed by statute to be a sewered property.

"Sewerage" means works for the collection, treatment and disposal of wastewater.

"Surface waters" means the surface waters of the policy area both perennial and intermittent and includes any river, stream, reservoir, billabong, creek, anabranch, canal, wetland, channel, lake, lagoon, dam, natural or artificial water course, bay, coastal or tidal waters, and excludes waters within waste treatment systems, waters within enclosed water supply distribution systems, farm dams, private ponds, piped or underground drains and the interstitial waters of sediments.

"Toxicant" means a substance which is poisonous to living things.

"Treatment" in relation to potable water supply means disinfection by detention, chlorination or other means and/or clarification to remove turbidity, colour and suspended solids using processes such as flocculation, coagulation, sedimentation and filtration, as these processes may be required by the water supply authority.

"Turbidity" a measure of the cloudiness of water which is determined from the amount of light scattered by suspended particles.

"Waste" includes any matter prescribed to be waste and any matter whether liquid, solid, gaseous, or radioactive, which is discharged, emitted, or deposited in the environment in such volume, constituency or manner as to cause an alteration of the environment.

"Works approval" means approval of works issued under the Act.

4. Policy Goal

The overall goal of this policy is to attain and maintain levels of water quality which are sufficient to protect the specified beneficial uses of the surface waters of the policy area.

PART II—BOUNDARIES OF THE AREA AFFECTED

5. The policy shall apply to all surface waters within Victoria. The catchments of the waters to which the policy applies will be called the policy area.

The provisions of this policy shall be observed for all waters of the policy area, except where varied in Schedule F or where varied by a clause or schedule of any state environment protection policy separately declared by the Governor in Council and published in the *Government Gazette*.

6. For the purpose of this policy the following segments of the environment are classified within the policy area.

(*a*) *Aquatic Reserves.* The surface waters within proclaimed reference areas, national and state parks and marine parks and reserves (as described in schedule A1).

(*b*) *Parks and Forests Segment.* The surface waters within the boundaries of state forests and areas of high conservation value listed in schedule A2. For the purposes of this policy state forests include reserved forests as defined in the *Forests Act* 1958 (as amended) and uncommitted crown land, as designated by the Land Conservation Council.

(*c*) *Estuarine Segment.* The surface waters of all estuaries, between a line drawn across the mouth of the stream at high water mark on adjacent foreshores to the upstream limit of the saline intrusion.

(*d*) *Coastal Waters Segment.* All territorial coastal waters of the State of Victoria.

(*e*) *General Surface Waters Segment.* All surface waters not included in other segments.

PART III—BENEFICIAL USES TO BE PROTECTED

7. The use is protected in a segment if marked in the appropriate column on right.

Table 1

Protected Beneficial Uses of the Policy Area

	Segments				
Beneficial Use	*Aquatic Reserves*	*Parks and Forests*	*Estuarine*	*Coastal*	*General Surface Waters*
Maintenance of natural aquatic ecosystems and associated wildlife					
—pristine (level 1)*	■				
—wide safety margin (level 3)*		■	■	■	
—small safety margin (level 4)*					■
Water based recreation					
—primary contact (swimming)	■	■	■	■	■
—secondary contact (boating)	■	■	■	■	■
—aesthetic enjoyment	■	■	■	■	■
Agricultural water supply					
—stockwatering		■			■
—irrigation (use may be restricted by elevated salinity)		■			■
Potable water supply (protected at town off-takes)	■	■			■
Production of molluscs (mussels, oysters, scallops, squid, abalone) for human consumption	■	■	■	■	■
Commercial and recreational use of edible fish and crustacea	■	■	■	■	■
Industrial water use		■	■	■	■

* "Recommended Water Quality Criteria" EPA (latest edition)

PART IV—WATER QUALITY INDICATORS AND OBJECTIVES

8. The levels of water quality required to protect the identified beneficial uses in each segment and downstream waters, and which are required to be achieved are defined by the water quality indicators and objectives prescribed in schedule B.

9. The water quality indicators and objectives specified in clause 8 shall apply to all surface waters in each segment respectively, except:

(*a*) where provisions are made to the contrary in a works approval or licence by the designation of mixing zones in accordance with clause 16;

(*b*) where the background level of water quality does not comply with the relevant objective, in which case maintenance of the background level shall become the objective;

(*c*) for temporary non-compliance caused by stream and streamside spraying of pesticides and herbicides as provided by schedule C. The application of biocides is prohibited in proclaimed reference areas; or

(*d*) for those areas of the aquatic reserves segment where water quality is affected by activities approved under the National Parks Act. In these areas the objectives of

the Parks and Forests segment shall apply to those activities while they take place.

PART V—ATTAINMENT PROGRAM GENERAL PROVISIONS

10. *Implementation.* The policy applies to private individuals and government agencies conducting activities on public and private land. All state government departments, agencies and instrumentalities are to implement this policy in so far as it relates to their powers, duties and responsibilities. Consideration shall be given to policy requirements by responsible authorities when making land use planning decisions. Implementation may be staged, with priority given to existing problems and areas under immediate threat. The Authority shall initiate and participate in programs to identify priority areas, and shall co-ordinate the implementation of the policy in order to attain and maintain policy objectives.

11. *Planning Policy.* In the development and implementation of planning schemes special attention should be given to this policy and in the implementation of this policy special attention should be given to statements of policy contained in planning schemes.

12. *Amendment and Review.* The policy shall be reviewed and amended as new information and circumstances warrant. For example:

(i) The Authority may recommend amendments to make policies more stringent where:
- —the Authority receives new information on the environmental effects of discharges or the vulnerability of the environment;
- —better treatment technology becomes available;
- —a waste generator moves to a new area and new standards are needed to protect the environment in that area;
- —the level of environment protection expected by the community increases;
- —new beneficial uses need protection; or
- —existing beneficial uses need better protection, and

(ii) The Authority may recommend amendments to make policies less stringent where a person affected by a policy can satisfy the Authority that:
- —it is not possible to meet emission or discharge limits using reasonably available technology for that industry; and
- —the discharge of wastes to nominated levels above such limits would not result in policy objectives being exceeded; and
- —the discharge would not adversely affect any protected beneficial uses of the waters of the policy area.

Control of Point Source Discharges

13. *Compliance with Policy Objectives.* The Authority shall ensure that any works approval, licence or licence amendment which is granted is consistent with this policy, and shall refuse any application which is not. Existing licences shall be amended as necessary to ensure compliance with this policy as soon as practicable. More stringent conditions may be imposed if local environmental conditions warrant, or if more effective pollution control technology is commonly available in the industry. All premises which are not scheduled under the Act and all discharges which are exempted from licensing must nevertheless comply with the policy provisions.

14. *Future Waste Discharges.* In assessing any application for a works approval or licence the Authority shall consider the potential effects of future waste discharges.

15. *Discharge Studies.* In the development of conditions for works approval or licensing, or in the assessment of compliance with these conditions, the Authority may require dischargers to conduct water quality monitoring, biological monitoring, toxicity testing, waste minimisation studies and/or other studies as appropriate. These studies may invlove assessment of the path of discharged wastes and the assimilative capacity of receiving waters.

16. *Mixing Zones.* In granting a works approval or licence the Authority may designate a mixing zone or zones in relation to a specified indicator or indicators. Within such zones the corresponding water quality objectives are not required to be achieved.

(*a*) The designation of a mixing zone is subject to the following requirements:
- (i) there must be no adverse effect on any protected beneficial use within the segment concerned as a result of the presence of the mixing zone;
- (ii) the licence must clearly specify the location and size of the mixing zone and the indicator or indicators to which it applies; and
- (iii) where applicable to the beneficial uses protected in the affected segment or

segments, mixing zones for the relevant indicators shall not be designated in the following:

—areas important for primary contact recreation;

—authorised water supply off-takes;

—recognised spawning and nursery areas of aquatic species, fauna breeding areas and other areas of important ecological significance;

—areas where such zones would create barriers to the passage of migratory species.

(*b*) Licence monitoring programs may require water quality monitoring and/or other studies in and around mixing zones.

(*c*) Within each mixing zone, waste discharges shall not cause:

(i) the level of dissolved oxygen to be less than 2 g/m^3;

(ii) objectionable odours;

(iii) excessive growths of algae or other aquatic plants;

(iv) discolouration which significantly adversely affects beneficial uses in the segment;

(v) visible floating foam, oils, grease, scum, litter or other objectionable matter;

(vi) deposits which significantly adversely affect beneficial uses in the segment;

(vii) mortality of fish or other motile species;

(viii) contamination of fish or crustacea which causes them to be unacceptable on commercial markets or which causes them to exceed food standards established by the Health Department Victoria.

(*d*) The discharge of oxygen demanding substances shall not cause:

(i) the dissolved sulphide concentration of waters in or near sediments to be increased above that level present under natural conditions;

(ii) for the coastal segment: depression of dissolved oxygen concentration of waters outside the zone of initial dilution by more than 10 per cent from natural minimum levels at any time of the year.

17. *Waste Discharge Toxicity.*

Water discharges shall not display acute toxicity.

The toxicity of waste discharges will be assessed by the Authority prior to the granting of works approvals or licences. Where appropriate, toxicity testing will be required.

Where such tests are carried out, the waste shall be deemed to be acutely toxic if more than 50% of a representative test species nominated by the Authority die within a 96 hour toxicity test using 100% waste.

Waste discharges may exceed the above discharge limit where the exceedence is due to the presence of non-persistent toxicants in the waste which will degrade within the specified mixing zone.

Waste discharges shall not be licenced unless there is adequate dilution and toxicant degradation to ensure no chronic or sub-lethal effects on ecosystems outside of the specified mixing zone.

18. *Marine Outfalls.*

(*a*) Waste outfall pipelines to coastal waters shall, at all times, discharge below the low water mark and, where practicable, beyond the surf zone.

(*b*) Clause 18 (*a*) need not apply to discharge pipes which terminate at artificial sea walls, provided such pipes discharge beyond the low-water mark at all times.

(*c*) Outfalls discharging pathogens or viruses shall be located as far as practicable from shell fishing and primary contact recreation areas.

19. *Control Technology.* The minimum acceptable level of treatment required prior to discharging waste to the waters of the policy area shall be by treatment technology commonly available to an industry or trade, or commonly available for the treatment of that type of waste. In particular, wastes, industries, trades or activities listed in schedule D shall be managed in accordance with requirements specified in schedule D.

Where schedule D specifies a certain technology to be applied to a waste discharge, unless otherwise specified, any technology which achieves the same or greater performance than the specified technology shall be acceptable.

More stringent controls than those prescribed in this clause or in schedule D shall be applied if necessary to meet the policy objectives at present or in the future, or if local environmental conditions require a higher level of protection.

20. *Emission Limits.* Shore based waste discharges to the surface waters of the policy area shall not exceed the emission limits given in schedule E unless specific emission limits are given for that indicator and particular class of discharge in schedule D.

Where effluent quality is more appropriately defined by a statistical distribution, percentile emission limits for non-conservative indicators may be specified in licences and works approvals.

More stringent controls than those prescribed in schedule E shall be applied if:

(*a*) necessary in order to meet policy objectives at present or in the future; or

(*b*) local environmental conditions require a higher level of protection; or

(*c*) such controls are consistent with waste minimisation objectives.

More stringent controls than those prescribed in schedule E may be applied to any discharge where lower emissions are achievable by the application of commonly available control technology.

21. *Exemption from Policy Provisions.*

The Authority, may in considering licences and works approvals, exempt a scheduled premises from compliance with any requirement of schedule D or E where the proponent of the works or licensee can demonstrate to the satisfaction of the Authority:

(*a*) that compliance with the requirement would increase or create waste disposal problems in either the land, air or water environments, or

(*b*) that compliance with the requirement would preclude the development of innovative treatment technologies, or

(*c*) that compliance with a requirement contained in schedule E cannot be achieved by the application of reasonably available control technology.

(*d*) that the discharge does not cause its receiving waters to exceed the water quality objectives of the policy and adversely affect beneficial uses of the receiving waters.

22. *Wastewater Disposal to Land.*

(*a*) Wastes should be discharged to land in preference to water wherever practicable and environmentally beneficial. In particular, approval for the discharge of waste to a watercourse shall not normally be given in situations where less than 5:1 dilution is available. A proponent seeking to discharge to a watercourse providing less than 5:1 dilution will be required to demonstrate to the Authority's satisfaction either:

(i) that land disposal is not practicable and that the discharge would not adversely affect identified beneficial uses of the watercourse, or

(ii) that the discharge after appropriate treatment, is considered necessary to maintain flow patterns for the protection of aquatic ecosystems in regulated perennial streams.

(*b*) Facilities for the disposal of wastewaters by irrigation should be designed in accordance with the Environment Protection Authority's publication "Guidelines for the Disposal of Wastewater on Land by Irrigation". In particular:

(i) facilities for wastewater storage and disposal by land irrigation should be designed and constructed to contain all waste in at least the 90th percentile wet year;

(ii) the period and volume of discharge to waters in very wet years should be minimized by optimum management of available wastewater storage and irrigation facilities; and

(iii) persons or bodies employing land irrigation as a means of disposal of wastewater shall seek the advice of the Environment Protection Authority, the Land Protection Division of the Department of Conservation, Forests and Lands, the Rural Water Commission and the Department of Agriculture and Rural Affairs (as appropriate) on the location and establishment of irrigation sites, crop selection and irrigation management, in order to avoid problems of land degradation, including salting;

(iv) persons or bodies employing land irrigation shall ensure that they have made adequate land area provisions for both present and future wastewater disposal.

(*c*) Licences or works approvals shall not permit the establishment or extension of sites for the irrigation or disposal of untreated wastes to land within 100 metres of surface waters.

23. *Minimisation of Waste Generation.* Industrial and trade processes shall be undertaken in such a manner that the generation of wastes is minimised. In particular, the recycling of wastes is encouraged. The Authority may determine acceptable levels of waste generation for particular classes of discharge and recommend inclusion of these in schedule G to this policy.

More stringent controls than those prescribed in schedule G shall be applied if necessary to meet policy objectives.

The Authority may require proponents of works approvals or licence holders to carry out investigations to assess the potential for waste minimisation.

24. *Hazardous Substances.* Wastes containing substances which are highly toxic, persistent and/or may accumulate to toxic levels in the food chain, including, but not limited to:

(*a*) organophosphorus compounds
(*b*) organohalogens
(*c*) organotin compounds
(*d*) persistent petroleum hydrocarbons
(*e*) substances possessing carcinogenic properties in or via the aquatic environment
(*f*) mercury and its compounds
(*g*) cadmium and its compounds
(*h*) arsenic and its compounds
(*i*) radioactive substances
(*j*) lead and its compounds
(*k*) copper and its compounds

shall be treated, recycled or otherwise controlled at source to reduce the amount of these substances present in the discharge to the lowest practicable levels.

25. *Disinfection.* Waste disinfection methods which do not increase discharge toxicity and which constitute the least environmental and human hazards in their production, transport and utilisation shall be employed where practicable. In particular, the use of chlorine as a wastewater disinfectant shall be avoided where there is a practical alternative.

26. *Contingency Plans.* Industries or any activities which use or store environmentally hazardous substances in the policy area shall develop and maintain contingency plans for the avoidance and control of spills, leakage or breakdowns so as to prevent pollution of surface waters. All applications for works approvals shall include appropriate contingency plans. Such plans should include:

(*a*) emergency holding and clean-up procedures;
(*b*) action to minimise any adverse environmental effects;
(*c*) methods for disposal of spilled materials; and
(*d*) training of personnel in adequate identification of materials and correct operating procedures to avoid or minimise the likelihood of spills.

Such contingency plans shall be developed in conjunction with any requirements of the Department administering the Dangerous Goods Act (as amended).

27. *Oil Spills.* All necessary precautions shall be taken to ensure that no oil or grease is spilled into the surface waters of the policy area, including mixing zones. Where practicable spills should be physically reclaimed. In other circumstances clean-up methods which cause least damage to aquatic biota and the environment should be adopted. Any dispersant used shall be of minimal toxicity and used only where the untreated oil spill would endanger directly any breeding or similarly sensitive areas of aquatic biota.

28. *Discharge to Sewer.* The discharge of wastewater from any sewered property or any property where sewerage reticulation is available should be to the sewerage system, if that waste (with pre-treatment, if necessary) is acceptable to the responsible sewerage authority.

29. *Disposal of Solid Wastes to Land (including garbage and sludge).* The disposal of solid wastes into or onto land shall be carried out in such a manner and at such locations so as not to cause the pollution of groundwater or surface waters.

Without limiting the generality of the above, no works approval or licence shall permit the establishment or extension of a solid waste disposal site within 100 m of surface waters or in a proclaimed potable water supply catchment except:

(i) where waste disposal at the site is limited to inert solid wastes, or
(ii) where the site is specified in a general plan for refuse disposal approved by the Authority.

The disposal of municipal wastes to land shall be conducted in accordance with the municipal waste disposal policy to be developed by the Authority.

30. *Groundwater.* Groundwater quality shall be managed in accordance with a groundwater protection policy to be developed by the Authority. No new licence shall be granted for the direct injection of waste to the groundwaters by means of a bore, mineshaft, well, infiltration basin or other similar structure specifically designed for the purpose, except for the purpose of aquifer recharge, provided that no adverse effects on existing or anticipated beneficial uses of groundwaters or surface waters would result. Existing waste discharges of this nature to groundwater which do not comply with the above requirements shall cease within three years of the date of gazettal of this policy.

31. *Rules for Proclaimed Reference Areas.* For the purpose of section 17 (1) of the Act, reference areas and their buffer zones proclaimed under the *Reference Areas Act* 1978 are set aside as areas of the environment where the discharge, emission or deposit of wastes and the streamside spraying of pesticides and herbicides are prohibited.

32. *Areas of Significant Conservation Value.* For the purpose of section 17 (1) of the Act, the following areas are set aside as areas of the environment where the discharge of wastes is limited as follows:

(*a*) Areas of marine conservation significance

(i) Proposed Bunurong Marine Reserve, Shallow Inlet Marine and Coastal Park (west of Wilson's Promontory) and the Wilson's Promontory Marine Park and Reserve—no licence shall be granted for the discharge of wastes to these areas.

(ii) Corner Inlet and Nooramunga Marine and Coastal Parks (including Shoal Inlet, east of Wilson's Promontory)—no new licence shall be granted for discharges to these areas. Where and when practicable, consideration will be given to phasing out existing waste discharges.

(iii) Coastal mangrove and saltmarsh areas—no new licence shall be granted for a discharge of wastes to these areas.

(*b*) Other aquatic environments of high conservation value listed schedule A2.

As sufficient information becomes available, areas of significant conservation value where water quality has not been substantially modified by human activities, shall be included in the aquatic reserves segment and restrictions placed on waste discharges to these areas.

Wastes shall not be discharged to high value wetlands or wetlands with a high priority for restoration unless such discharges would be permitted under the state wetland conservation policy.

33. *Potable Water Supplies.* No licence or works approval shall be granted for the discharge of wastes within 800 m upstream of any potable water supply off-take. No mixing zone shall be designated such that an authorised potable water supply off-take falls within its boundaries. Where waters are used for authorised potable supplies with little or no treatment, new waste discharges shall not reduce the existing quality of those waters at the point of off-take.

Within proclaimed potable water supply catchments, which supply potable water:

(*a*) No licence to discharge waste to water will be granted, unless the Authority is satisfied that:

(i) no practicable alternative to discharge exists; and

(ii) the discharge will not cause water quality objectives to be exceeded.

(*b*) No new intensive animal industry shall be established except where the Authority is satisfied that no off-site discharge of wastes, including contaminated stormwater, will occur.

(*c*) Land use determinations should be made under legislation administered by the Minister for Conservation, Forests and Lands and implemented as soon as possible.

CATCHMENT MANAGEMENT

34. *Land Use.* In the development and administration of land use planning schemes, the appropriate authorities, in consultation with the Authority, shall ensure that land use is planned and managed in such a way that polluted run-off, both from specific sites and within the catchment as a whole, is reduced as far as practicable.

35. *Flood-Plains.* The control and management of activities within flood-plains shall include provisions to ensure policy objectives are achieved and maintained. In particular:

(*a*) Sewage treatment and pumping works shall not be located on a flood-plain (as defined by an average flood recurrence interval of one hundred years). Where the Authority is satisfied that no practicable alternative exists, works may be located on flood-plains, provided they conform with the requirements of the relevant drainage authority and are constructed so as to prevent the entry of flood-water from a flood with an average recurrence interval of one hundred years.

(*b*) The storage and/or disposal of environmentally hazardous industrial and agricultural chemicals or wastes and other dangerous goods is prohibited on flood-plains (as defined by an average flood recurrence interval of one hundred years), unless the storage is designed to the satisfaction of the Authority to prevent the contact of its contents with flood-waters.

36. *Releases from Water Storages and Environmental Flows.* The management of the State's water resources should provide adequate flow patterns to protect identified in-stream beneficial uses including the maintenance of wetlands. Guidelines shall be developed to ensure that all new diversions, abstractions and operations of impoundments and weirs will accommodate the water requirements for the maintenance of ecological systems and other in-stream beneficial uses. Existing water allocations shall be examined to determine the potential to provide appropriate flow regimes within these guidelines:

(*a*) the degradation and alienation of natural aquatic habitat due to the pattern of downstream releases from dams or weirs, water extractions and diversions is minimised by the maintenance of appropriate flow regimes specifically in-stream flows of an appropriate quality, quantity and seasonal pattern.

(*b*) due regard is given to the importance of adequate stream flows in lake replenishment, management of wetlands, and estuarine salinity and flow regimes.

(*c*) downstream releases of poor water quality from on-stream and off-stream impoundments are avoided, and water quality objectives are met. Indicators of concern include conductivity, temperature, dissolved oxygen, nutrients, iron and manganese.

Measures which should be taken include the timing of releases to avoid periods of poor water quality, the provision of multi-level off-takes and the use of artificial destratification processes.

37. *Water conservation.*

Water conservation will be encouraged as it provides a means to lower the level of water consumption. The benefits of lowered water consumption include the possibility of delaying the construction of any new reservoirs for water harvesting and the opportunity to allocate water to "non-consuming uses" such as environmental flows and recreation purposes.

Measures to conserve water resources shall be implemented where possible, including:

(i) improved management of water-consuming activities in order to reduce water usage; and

(ii) the re-use of wastewater including urban run-off, treated sewage effluent and run-off from irrigated farmland where appropriate, for uses such as irrigation of crops or pasture, watering of parks and gardens, and recharge of wetlands.

38. *Wetlands.* The managment of the State's wetlands shall be carried out in accordance with the State wetland conservation policy or any management plans developed for specific wetlands and adopted by Government.

The Authority shall keep under review appropriate water quality criteria for wetlands and shall conduct research into the impact of waste discharges on wetlands.

Wastes shall not be discharged to high value wetlands or wetlands with a high priority for restoration unless such discharges would be permitted under the State wetland conservation policy.

As sufficient information becomes available, high value wetlands where water quality has not been substantially modified by human activities shall be included in the aquatic reserves segment of the policy.

39. *Salinity Control.* The Government will co-ordinate public and private sector involvement in the development of a salinity control strategy to manage the salinity of the State's land and water resources.

Salt disposal schemes shall be established in accordance with the strategy and the Authority shall ensure that these do not adversely affect the beneficial uses of surface waters in the policy area.

The development of regional plans for salinity control shall include:

—assessment of the beneficial uses of waters in the region and the likely impacts of salt disposal;

—assessment of the likely increases in salinity in these waters as a result of salt disposal; and

—requirements for monitoring the effects of salt disposal on these waters.

40. *Provision of Sewerage.*

(*a*) Responsible authorities shall ensure new sub-divisions of land are provided with sewerage at the time of sub-division or that the allotments created by the sub-division are capable of adequately treating and retaining domestic wastewater within the boundaries of each allotment.

(*b*) In determining whether domestic wastewaters are capable of being adequately treated and retained within the boundaries of each allotment, responsible authorities shall have regard to the Code of Septic Tank Practice to be developed under clause 52 and in particular such factors as the dimensions and area of the allotment, the intensity of the proposed

use, climatic and soil considerations, water supply conditions and physical characteristics of the site.

(c) Sewerage shall be provided as soon as possible to all existing sub-divisions of land where domestic wastewaters cannot be adequately treated and retained within the boundaries of each allotment. Where possible, sewerage shall be provided prior to the commencement of building works. High priority should be given to sewering existing sub-divisions where building works have already commenced.

(d) Where sewerage is not available within two years, the minimum acceptable treatment for all domestic wastes shall be a sewage treatment process approved under the Health (Septic Tank) Regulations, as amended.

Detailed consideration and encouragement shall be given to the reclamation and re-use of wastewater and, in particular, to the discharge of treated sewage effluent to land.

(e) In sewered areas, appropriate steps shall be taken by sewerage authorities to ensure all premises are connected to the sewerage system for the purpose of domestic wastewater disposal.

41. *Impact of Works on Plant and Animal Habitat.* Dredging, construction, river management, reclamation, nuisance weed control measures, spoil disposal and other works should be carried out in a manner which causes minimal disturbance of plant and animal habitats. Where practicable dredged spoil shall be disposed of on land above high water mark clear of floodways and flood-plains (as defined by an average flood recurrence interval of one hundred years).

42. *Recreation Activities.* Recreation activities shall be subject to regulations and/or guidelines administered and publicised by the appropriate management bodies. In particular:

(a) Swimming, boating and camping may be prohibited or otherwise controlled as appropriate to protect the quality of potable water supplies and other beneficial uses.

(b) Where sewage treatment is not available, sewage and sullage wastes generated by campers, boat users and others shall be disposed to land at approved locations and in such a manner as to prevent adverse effects on watercourses and water storages. Management bodies shall provide appropriate disposal facilities where there are identified needs.

(c) The use of power boats shall be restricted in locations where the resulting wave action may result in unacceptable levels of streambank or foreshore erosion, or where exhaust discharges may adversely affect the beneficial uses.

(d) Roads not designed and maintained for continuous use should be closed off to prevent access by recreational vehicles.

43. *Litter.* Management of streams, lakes, coastal areas and environs shall include the formulation and implementation of a litter control strategy which will make provisions for community education and for the regular collection and removal of litter or debris, and to ensure that sufficient resources are devoted to the enforcement of the *Litter Act* 1987 (as amended).

Control of Diffuse Source Pollution

44. *Diffuse Source Control.* Where run-off of water from the land surface is causing or is likely to cause non-compliance with policy objectives, control measures such as elimination or treatment of sources of contaminated run-off and/or changes to land use or land management practices (as outlined in Clauses 45 to 50) shall be applied where practicable.

45. *Land Disturbance and Erosion.* Land disturbance activities shall be carefully controlled and appropriate soil conservation measures shall be taken in order to minimise soil erosion and subsequent run-off of suspended, dissolved, floatable and settleable matter.

(a) Construction works, including building activities and provision of services, should be carried out in accordance with *"Guidelines for Minimising Soil Erosion and Sedimentation from Construction Sites in Victoria"* (1979) and *"Control of Erosion from Construction Sites"* (1982) published by the Department of Conservation, Forests and Lands.

(b) Eroding streambanks shall be stabilised by planting appropriate vegetation or by other means as outlined in *"Guidelines for River Management"* (1980) and *"Revegetating Victorian Streams"* (1982), published by the Rural Water Commission. Where stock access is contributing to the degradation of water quality or the erosion of streambanks, stock shall where practicable be restricted to stabilised watering and crossing points or provided with off-stream watering points and stock access to the stream prevented.

(*c*) Methods for the control of streambank vegetation and nuisance aquatic plant growths should minimise the exposure of streambanks to increased risk of erosion and avoid significant effects on aquatic ecosystems and associated wildlife.

(*d*) Land disturbance activities, particularly excavation or soil removal along stream beds and banks and lake shores, shall be conducted in accordance with guidelines to be developed by responsible river management boards.

46. *Drainage.* Drainage system design shall ensure that the erosion of streams and other drainage lines is minimised and shall make allowance, where practicable, for the attenuation of peak run-off and the retention and trapping of contaminants, including litter, in run-off.

Input of these contaminants to the drainage system should be minimised by the control of activities within the catchment. Regular street sweeping, provision of detention basins and other measures designed to reduce pollutant loads from urban drainage are encouraged.

The design and siting of stormwater drainage lines on coastal Crown land (excluding land within Port Phillip Bay) which discharge to the coastal segment shall be carried out in accordance with guidelines to be developed by the Coastal Management Co-ordination Committee.

47. *Road Construction.* New streets and roads shall be constructed in ways which minimise soil erosion. All existing streets and roads should be upgraded to minimise erosion as soon as practicable. Such construction and upgrading should be carried out in accordance with *"Guidelines for Minimising Soil Erosion and Sedimentation from Construction Sites in Victoria"* (1979), published by the Department of Conservation, Forests and Lands. In steep locations, particularly those close to watercourses, roads and roadsides should be stabilised so as to minimise soil erosion.

Surface drainage from unmade or partially constructed streets and roads should be conveyed through or across appropriate sediment and erosion control structures, including grassed buffer zones and thence to natural drainage lines.

48. *Forestry Operations.* Forestry operations shall be controlled to minimise land disturbance and the input of sediments, pesticides and fertilisers to surface waters.

(*a*) Forest management plans and forest coupe plans shall be developed in accordance with the Victorian Code of Forest Practices published by the Department of Conservation, Forests and Lands and the prescriptions in these plans shall be adhered to, particularly those relating to streamside reserves and filler strips along drainage lines, roading and harvesting practices on steep slopes.

(*b*) The application of biocides and fertilisers shall be controlled to ensure that run-off to surface waters is prevented or minimised and policy objectives are met.

(*c*) All reasonable precautions should be taken to prevent wildfires in order to avoid subsequent loss of soil, nutrients, dissolved and suspended matter to streams.

49. *Run-off from Agricultural Land.* Agricultural practice shall be improved and modified where necessary to reduce contamination of run-off. In particular, the following means of control shall be investigated and applied where practicable:

(*a*) Reduction in nutrient run-off by improved management of the rates, frequencies and methods of fertiliser application.

(*b*) Reduction in sediment run-off by the adoption of appropriate soil conservation practices, including revegetation.

(*c*) Reduction in pesticide run-off by improved management of rates and frequencies of application, and the use of less environmentally hazardous and less persistent pesticides.

(*d*) Establishment of vegetated stream-side buffer zones to filter run-off. Within such zones stock access shall be restricted to stablised watering and crossing points, vermin and noxious weeds controlled and urban development prevented.

(*e*) Reduction or elimination of run-off from irrigated land through improved management of application rates and frequencies.

(*f*) Direction of run-off water from one or more sites to a common point for return and re-use or disposal by evaporation.

50. *Wastes from Mining Operations.* The rehabilitation and re-vegetation of mining sites shall be carried out to minimise erosion. In particular:

(*a*) The treatment, removal or disturbance of contaminated mine spoil shall not be undertaken unless wastes, including those transported by stormwater and run-off from disturbed areas, are contained on site.

(*b*) Operations which disturb waters or sediments shall be restricted in areas where significant risk of toxicant mobilisation is expected.

Related Activities

51. *Monitoring.* Studies of the chemical and ecological condition of the State's waters shall be carried out to provide the information necessary for the effective implementation of this policy, and to assess water quality trends and the attainment of policy objectives.

These programs shall be undertaken by the appropriate government agencies, particularly the Authority, to the extent possible within available resources. The reports of such monitoring will be publicly available.

52. *Codes of Practice.* In co-operation with other public and private bodies the Authority shall initiate and participate in the development of appropriate codes of practice with the aim of minimising the impact of activities which are potentially detrimental to water quality. In particular, urban run-off, soil conservation practices, wastewater re-use and salinisation require early consideration. The Authority may recommend best management practices for activities which influence water quality.

53. *Research.* The Authority will initiate research directed towards specific problem-solving activities and will encourage competent research groups to carry out fundamental and applied studies on water pollution mechanisms and control technology.

54. *Public Education and Participation.* In co-operation with other public and private bodies, the Authority shall promote public education in water quality management, waste disposal and pollution control. The Authority shall also seek, encourage and develop active, well-informed public participation.

SCHEDULE A

A1. Aquatic Reserves Segment

Included in this segment are:

(i) Reference areas proclaimed under the *Reference Areas Act* 1978.

(ii) The following national and state parks listed in schedules 2 and 3 of the *National Parks Act* 1975:

National Parks

Alfred	
Baw Baw	Little Desert
Bogong	Mitchell River
Brisbane Ranges	Mount Buffalo
Burrowa–Pine Mountain	Mount Eccles
Cobberas–Tingaringy	Otway
Croajingolong	Snowy River
Fraser	Tarra–Bulga
The Grampians	Wilsons Promontory
Hattah–Kulkyne	Wonnangatta–Moroka
Kinglake	
Lind	Wyperfeld

State Parks

Big Desert Wilderness	Mount Napier
Cathedral Range	Mount Samaria
Coopracambra	Pink Lakes
Eildon	Wabonga Plateau
Kooyoora	
Langi Ghiran	Warby Ranges
Moondarra	

(iii) Marine parks and reserves established under the National Parks Act or Fisheries Act.

A2. For the purposes of the policy the following areas are defined as aquatic environments of high conservation value:

(i) Wetlands listed under RAMSAR and JAMBA agreements and all high value wetlands classified under the State wetland conservation policy.

(ii) State wildlife reserves established under the Wildlife Act.

(iii) Fauna and flora reserves and flora reserves recommended in the LCC's final recommendations and accepted by government or reserved under the Crown Land (Reserves) Act or Lands Act.

(iv) Parks and reserves not included in schedule A1.

SCHEDULE B

WATER QUALITY INDICATORS AND OBJECTIVES

INDICATORS	OBJECTIVES				
	SEGMENTS				
	AQUATIC RESERVES	PARKS AND FORESTS	ESTUARINE	COASTAL	GENERAL SURFACE WATERS
Dissolved Oxygen					
Concentration of DO shall be sufficient to maintain beneficial uses and shall at all times be higher than	WATER QUALITY SHALL NOT VARY FROM BACKGROUND LEVELS	6 g/m^3 60% sat'n	5 g/m^3 60% sat'n	6.5 g/m^3 85% sat'n	5 g/m^3 50% sat'n
Bacteria (E.coli)					
Number of E.Coli shall at all times be less than					
1) General Requirements		1000 orgs/100ml (geometric mean)[a]			
2) Where swimming occurs and/or in the Coastal Segment, the area bounded by the high water mark and a line 300m offshore		200 orgs/100ml (geometric mean)[a]			
		400 orgs/100ml (80th percentile)			
3) Shellfish harvesting areas as recognised by the Authority			14 orgs/100ml (geometric mean)[a]		
			43 orgs/100ml (80th percentile)		
4) Potable water supply offtakes		100 orgs/100ml (90th percentile)			100 orgs/100ml 90th percent)
pH					
1) Variation from seasonal background value shall at all times not be more than		0.5	0.5	0.5	1.0
2) Range		6.5-8.5	6.5-8.5	7.5-8.5	6.0-9.0
Temperature					
Variations from background shall not affect beneficial uses and shall not exceed		1.0°C	1.0°C	0.5°C	2.0°C
Light penetration		No reduction in light penetration to the detriment of beneficial uses.			
Toxicants					
1) General		Water shall be free of substances in concentrations which either individually or in combination, produce toxic effects or genetic damage to plants, animals, aquatic life or humans, as these relate to the stated beneficial uses of the segment.			
2) Ecosystem protection		The concentrations of toxicants shall not exceed[b]			
		N+0.5(T-N)			T

SCHEDULE B(CONT)

WATER QUALITY INDICATORS AND OBJECTIVES

INDICATORS	OBJECTIVES — SEGMENTS			
	AQUATIC RESERVES	PARKS AND FORESTS	ESTUARINE	COASTAL	GENERAL SURFACE WATERS
WATER QUALITY SHALL NOT VARY FROM BACKGROUND LEVELS					
Toxicants					
3) Protection of human health					a) The concentration of toxicants in water used to supply potable water shall not exceed those specified in Schedule 1 of RWQC[c].
					b) The concentration of toxicants in water shall not exceed levels where bioaccumulation would cause fish, shellfish or crustacea, to lose acceptability on commercial markets or under the food standards established by the Health Commission of Victoria, or exceed values given in Table 10a of the RWQC[c]. Also shellfish should not be harvested where biotoxin content exceeds values given in Schedule 16, part 2b of the RWQC[c].
4) Protection of shellfish growing areas					For the protection of shellfish growing areas toxicant levels shall not exceed values given in Schedule 16, part 1 of the RWQC[c].
5) Protection of agricultural water supply					The concentration of toxicants in water used for stock watering and irrigation shall not exceed those given in Schedules 5 and 6 respectively of the RWQC[c].
Nutrients and Biostimulants					Waters shall be free of substances in concentration which cause nuisance plant growth or changes in species composition to the detriment of the protected beneficial uses.
Total Dissolved Solids (TDS)					The level of TDS shall not vary from background levels by more than 5% — 5% — 5% — The level of TDS shall not prejudice existing beneficial uses
Suspended Solids levels shall not exceed the following levels in receiving waters					
a) 50th percentile		10 g/m^3	25 g/m^3	10 g/m^3	25 g/m^3
b) 90th percentile		25 g/m^3	30 g/m^3	25 g/m^3	80 g/m^3
Aesthetic Characteristics					There shall be no objectionable colours or odours in waters, or objectionable taints in edible aquatic organisms. There shall be no visible floating foam, oil, grease, scum, litter or other objectionable matter. The concentrations of chemical compounds found to cause the tainting of aquatic organisms shall not exceed those specified in Table 11 of the RWQC[c].
Settleable Matter					The level of settleable matter shall not result in deposits which adversely affect the recreation and ecosystem values of the surface waters as expressed in the beneficial uses.

a Based on not less than 5 samples taken over a period of not more than 42 days

b Where T is the threshold concentration of chronic sub-lethal effects on aquatic life, and N is the natural background level of the toxicant. T may be obtained from Tables 14 and 15 of Recommended Water Quality Criteria.

c "Recommended Water Quality Criteria" EPA, Victoria, (latest edition)

SCHEDULE C

STREAM AND STREAM-SIDE SPRAYING OF PESTICIDES AND HERBICIDES

Stream and stream-side spraying of chemicals for the eradication of pests and weeds may cause the receiving water quality objectives to be temporarily exceeded subject to the following requirements:

(*a*) Such exceedance shall not persist longer than 12 hours and shall not occur at a frequency which would endanger existing beneficial uses.

(*b*) The level of the chemical in the receiving waters shall not exceed 100 times the threshold concentration of chronic sub-lethal effects for aquatic life (T) as defined in schedule B and given in tables 14 and 15 of the "Recommended Water Quality Criteria Manual" (EPA—latest edition).

(*c*) The level of the chemical in the receiving waters where potable water supply is a protected beneficial use shall not exceed the objective for the protection of human health, as defined in schedule B, at the point of the water supply off-take.

(*d*) Agencies or bodies conducting stream-side spraying shall—

(i) inform diverters immediately downstream of the area to be sprayed, of the dates and times when spraying will take place; and

(ii) provide information to ensure that procedures for the application of pesticides and herbicides are adequate to achieve the requirements of this schedule.

SCHEDULE D

MINIMUM CONTROL REQUIREMENTS FOR CLASSES OF DISCHARGE

D1. Intensive Agricultural Industries

The siting of intensive agricultural industries and the discharge of wastes from such industries shall conform to the following requirements:

Codes of Practice:	The location and operation of intensive animal industries and milking sheds shall be in accordance with *"Guidelines for the Conduct of Intensive Animal Industries"*, published by the Department of Agriculture and the Authority. The location and operation of piggeries shall be in accordance with *"Code of Practice—Piggeries"*, published by the Health Department of Victoria and the Department of Agriculture.
Waste Disposal:	All farm effluents from intensive animal industries, milking sheds and vegetable washing and processing shall be disposed of by land irrigation in such a manner as to preclude any polluting run-off to surface waters or pollution of groundwater.
Siting:	No solid or liquid effluent from any intensive animal industry, milking shed or vegetable washing and processing operation shall be disposed of within 800 metres of any potable water supply off-take controlled by a statutory authority, or within 200 metres of any watercourse supplying potable water, or within 100 metres of any surface waters.

D2. Potable Water Treatment Plants

Waste waters from treatment plants producing potable water shall be treated and only discharged to surface waters in accordance with this schedule.

Filter Backwash:	Wastewaters from backwashing filters shall be treated in settling lagoons or by other and either— (i) recycled to the clarifier or filters; or (ii) discharged to surface waters in accordance with the requirements given below.
Clarifier Underflows:	Wastes from clarifiers shall be discharged to sewer or treated in settlement ponds or by other means for discharge to surface waters in accordance with the requirements below. Supernatant from settlement ponds shall be recycled where practicable.
Sludge Disposal:	Sludges shall be dried to the point where they can be mechanically handled and disposed of in accordance with the requirements of clause 29 of the policy.

Discharge Requirement: Wastewaters may be discharged to surface waters where the concentration of suspended solids in the waste does not exceed 50 g/m³.

New or Extensively Modified Plants: New or extensively modified plants shall be designed to recycle filter backwash discharges and consideration given to recycling supernatant from sludge lagoons.

D3. Municipal and Commercial Swimming Pools

The discharge of wastes from municipal and commercial swimming pools shall conform to the following requirements:

Filter backwash: Swimming pool filter backwash effluents shall be—

(i) discharged to land; or

(ii) discharged to sewer; or

(iii) treated via a solids settling tank, with the supernatant being recycled back into the pool; or

(iv) treated and discharged to surface waters provided the wastewater complies with the following requirements:

total residual chlorine	$< 0.1\ g/m^3$
suspended solids	$< 10\ g/m^3$

Pool contents: The contents of a swimming pool may be discharged directly to surface waters provided the wastewater complies with the following requirements:

total residual chlorine	$< 0.1\ g/m^3$
suspended solids	$< 10\ g/m^3$

D4. Sewage Treatment Plants

The treatment and disposal of sewage shall be carried out in accordance with the following requirements:

Waste Treatment: Except as provided for below, sewage shall be treated to secondary standard by biological means or equivalent prior to disposal by discharge to the land or water environments. A higher standard of treatment may be required in order to comply with policy objectives.

Lesser standards of treatment may be acceptable where—

(i) the discharge is to land which forms part of the treatment process, as in land or grass filtration;

(ii) the waste is reused in accordance with the *Health (Use of Waste Water) Regulations* 1985; or

(iii) the waste is discharged to the ocean via a marine outfall in accordance with clause 18. Such outfall shall be designed to ensure that beneficial uses are adequately protected.

Coastal Discharges: The preferred minimum treatment for municipal wastewater discharges to the coastal segment shall be primary treatment (removal of floatable and settleable solids), followed by either secondary treatment or an ocean outfall with a design minimum initial dilution of at least 50:1. Lesser standards of treatment may be acceptable, for existing discharges, where the discharger can demonstrate to the satisfaction of the Authority that such treatment does not result in a waste discharge which adversely affects any protected beneficial use of the receiving waters.

In accordance with the above provision, the need for full primary treatment of the Geelong and District Water Board discharge via an ocean outfall at Black Rock will be assessed by monitoring the impact of the discharge after the commissioning of the outfall.

Small Sewage Discharges:	Sewage treatment plants receiving 2–100 cubic metres per day of influent shall be constructed, maintained, operated and monitored in accordance with the Health Department Victoria's *"Code of Practice Small Sewage Treatment Plants"* except where provision is made to the contrary by a waste discharge licence or works approval issued by the Authority.
Waste Disposal:	All dischargers shall be encouraged to investigate land disposal or reuse as alternatives to discharging wastes to surface waters.
Nutrient Removal:	Tertiary treatment of sewage to reduce nutrient levels may be required where receiving waters do not provide at least five to one dilution or where the discharge causes or is likely to cause eutrophication of the receiving waters.
Nutrient Removal Technology:	Nutrient removal may be achieved by biological or chemical treatment technology or a combination. Use of biological treatment is generally preferred, while use of innovative nutrient removal technology is encouraged. Recycling of treated effluents and utilisation of nutrients for agricultural purposes is considered to be an effective means of reducing nutrient loads discharged to receiving waters, and an alternative to treatment of wastewaters to achieve low nutrient concentrations.

SCHEDULE E
EMISSION LIMITS FOR WASTE DISCHARGES TO WATER

E1. pH

All waste discharges are to be maintained in the pH range of 6.0 to 9.0 pH units. Exemptions to this provision may be made for licensed groundwater or stormwater discharges which are maintained within 1.0 pH units of the background receiving water pH.

E2. Floatable Matter

Waste discharges shall not contain any visible floating oil, foam, grease, scum, litter or any other objectionable floating matter.

E3. Settleable Solids

Waste discharges to any segment, other than the coastal segment, shall be treated to reduce settleable solids to the lowest practicable levels. Discharges to the coastal segment shall have an annual median concentration of settleable solids not greater than 0.1% by volume.

E4. Heavy Metals

Waste discharges containing heavy metals shall not exceed the following maximum emission limits.

Heavy Metal	*Limit g/m³*
Arsenic	0.50
Cadmium	0.10
Chromium	0.30
Copper	0.20
Iron—maximum	5.0
Iron—continuous discharges, excluding the coastal segment	2.0*
Lead	0.10
Manganese	0.5
Mercury	0.005
Nickel	0.50
Silver	0.10
Zinc	0.50

* not to be exceeded more than twice per year.

Waste discharges of heavy metals included under Clause 24 shall be treated to reduce the discharge levels of these metals to the lowest practicable levels. The maximum emission limits given for these metals in the above table may not represent the lowest practicable levels which can be achieved.

E5. Oxygen Demanding Substances

For all segments other than the coastal segment: the 5-day biochemical oxygen demand of wastes shall not exceed 40 g/m³ nor shall the annual median concentration exceed 20 g/m³.

E6. Suspended Solids/Turbidity

For all segments other than the coastal segment, the concentration of suspended solids and/or turbidity in waste discharges shall not exceed the following values:

	Dry Weather Discharge		*Contaminated Stormwater*
	Maximum	*Median*	*Maximum*
Suspended Solids g/m³	60	30	80
Turbidity (NTU)	50	25	100

E7. Residual Chlorine

Where chlorination is employed for disinfection of wastes prior to discharge or for other purposes in the waste treatment process, the concentration of total residual chlorine present in the discharge shall not exceed 1.0 g/m³.

SCHEDULE F
POLICY VARIATIONS

The provisions of this policy shall be varied for the areas indicated and to the extent detailed in the following schedules:

F1 Waters of the Werribee and Little River Catchments

This schedule covers the Lerderderg, Werribee and Little Rivers and their tributaries and catchments.

1. Little River Estuary

(*a*) The following beneficial uses are protected: recreation—passive (e.g. aesthetic amenity); passage of fish; maintenance of riparian vegetation; protection of water-associated wildlife.

(*b*) The estuarine segment objectives are varied as follows:

Bacteria (E.coli)—no objective; toxicants—the concentration of toxicants shall not exceed 10T, where T is defined in schedule B.

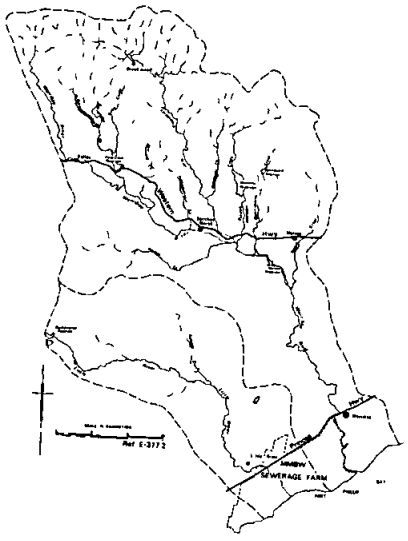
(*c*) The Melbourne and Metropolitan Board of Works shall carry out investigations to assess the feasibility of eliminating sewage effluent discharges to the Little River estuary.

2. Werribee River Catchment

(*a*) Any permanent commitment to maintenance of a minimum flow downstream of the Rural Water Commission diversion weir at Werribee shall be deferred pending enlargement of Merrimu Reservoir to a design capacity exceeding 50 000 ML;

(*b*) Until a permanent commitment is decided as referred to in 2 (*a*), flows shall be provided to pass the diversion weir at Werribee during the months, December through April, subject to the following conditions:

(i) The Rural Water Commission after consultation with the Authority shall determine before 30 November each year the volume of water (if any) which could be provided to pass the diversion weir in the ensuing months, December through April, consistent with maintaining appropriate security of supply to users of water from the Werribee River system;



(ii) The Rural Water Commission after consultation with the Authority, may during the months, December through April, amend the volume determined for that period; and

(iii) The flow passing the diversion weir at any time shall be as near as is operationally practicable to the average flow which would provide the volume of water determined under (i) or (ii).

(*c*) Subject to available funds, water quality downstream of the Werribee diversion weir shall be monitored by the Authority as part of a program to determine an optimum flow regime to maintain acceptable downstream water quality.

3. Priority should be given to the provision of reticulated sewerage for Ballan.

F2. Waters of The Maribyrnong River and Tributaries

The Maribyrnong River catchment includes Deep, Emu and Jacksons Creeks and their

tributaries and is bounded by the Great Dividing Range and the Cobaw and Mount William Ranges to the north-west of Melbourne.

1. *Municipal sewage discharges*

(*a*) Keilor Regional Purification Plant

The Authority shall determine the need to increase the degree of land disposal of sewage effluent; and/or implement a nutrient reduction program.

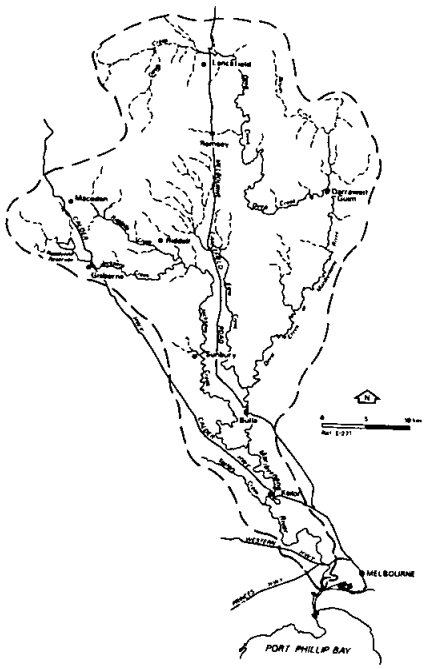
Such determination shall be made on the basis of results of ongoing joint EPA and MMBW monitoring of the impact of this discharge on the Maribyrnong River.

(*b*) Sunbury Water Board

The discharge of treated sewage effluent shall comply with clause 1 (*d*) below.

(*c*) Gisborne Sewerage Authority

The discharge of sewage effluent shall be permitted only where the dilution available exceeds one in ten and shall comply with clause 1 (*d*) below.



(*d*) Phosphorus removal requirements

Polulation served	*Mean phosphorus concentration December-March inclusive*
less than 10 000	2 mg/L
greater than 10 000	1 mg/L

(*e*) New discharges

The discharge of sewage effluent shall be permitted only when the dilution available exceeds one in ten. There shall be no discharge of effluent between December and March inclusive except when rainfall exceeds the 90th percentile for this period.

2. *Sewerage*

The following areas should be examined to assess the need for reticulated sewerage:

—Macedon

—Mt Macedon

—Riddells Creek.

F3. Gippsland Lakes and Catchment Segments

For the purpose of this policy the following segments of the environment are classified:

Segment A: Upper Riverine

(i) the Tambo River and tributaries upstream of the water supply off-take at Bruthen;

(ii) the Nicholson River and tributaries upstream of the water supply off-take at Sarsfield;

(iii) the Mitchell River and tributaries upstream of the water supply off-take at Glenaladale; and

(iv) the Avon River and tributaries upstream of the confluence with Valencia Creek and including Valencia Creek.

Segment B: Lower Riverine

(i) the Tambo River and tributaries downstream of the water supply off-take at Bruthen to the bridge on the Princes Highway at Swan Reach;

(ii) the Nicholson River and tributaries downstream of the water supply off-take at Sarsfield to the bridge on the Princes Highway at Nicholson;

(iii) the Mitchell River and tributaries downstream of the water supply off-take at Glenaladale to the barrage at Bairnsdale;

(iv) the Avon River and tributaries downstream of the confluence with Valencia Creek to the Clydebank Bridge, and the Perry River upstream of the Perry Bridge;

(v) Mississippi Creek and tributaries;

(vi) Toms Creek and tributaries;

(vii) the surface waters of Merriman Creek and tributaries; and

(viii) the remaining waterways that drain directly to the Gippsland Lakes and are not included in any other segment.

Segment C: Lake Wellington

The surface waters of Lake Wellington and McLennans Strait including the Avon River downstream of the Clydebank Bridge, the Perry River downstream of Perry Bridge, and irrigation drains to Lake Wellington.

Segment D: Eastern Lakes Segment

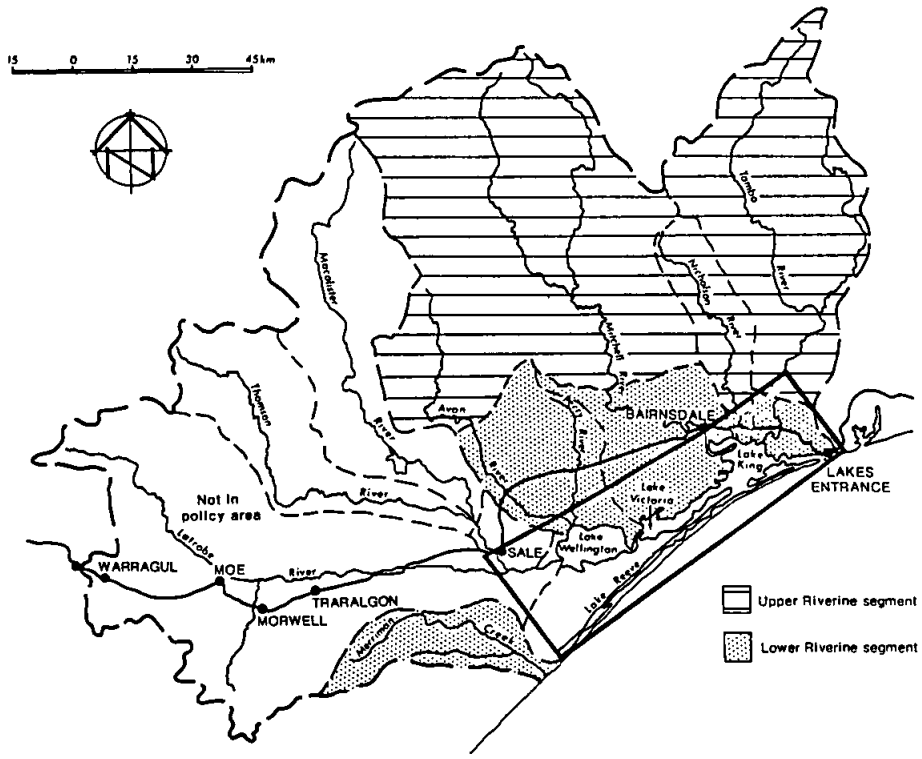
The surface waters of Lake Victoria, Lake King, Cunningham Arm, North Arm, Lake Bunga and Victoria Lagoon. The Tambo River downstream of the bridge on the Princes Highway at Swan Reach, the Nicholson River downstream of the bridge on the Princes Highway at Nicholson and the Mitchell River downstream of the barrage at Bairnsdale.

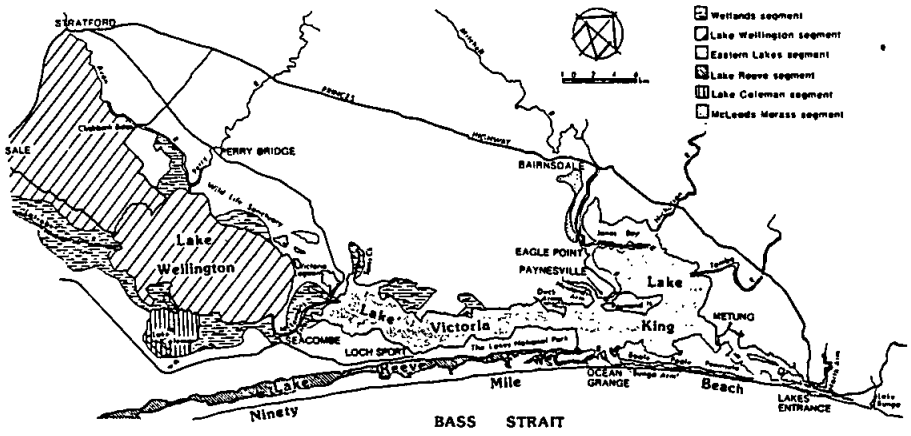
Segment E: Lake Reeve Segment

The surface waters of Lake Reeve, the eastern end being defined by a line drawn due south of Trapper Point on Sperm Whale Head.

Segment F: Lake Coleman

The surface waters within the boundaries of the Lake Coleman State Game Reserve.





Segment G: Wetlands Segment

The surface waters of the wetlands around the shores of Lake Wellington, along McLennans Strait and around the shores of eastern Lake Victoria, shown as swamp on the National Topographic Map series sheets 8321 and 8422. Surface waters within the boundaries of the Dowds Morass State Game Reserve, Clydebank Morass State Game Reserve, Blond Bay State Game Reserve and the Heart Morass to the boundary of the Sale Common State Game Reserve, excluding the surface waters of the Lake Coleman segment.

Segment H: McLeods Morass Segment

The surface waters within the boundaries of the McLeods Morass State Game Reserve.

Attainment Program

1. *Wetlands Segment*

No new licence shall be granted for the discharge of waste to the wetlands segment. This requirement may be reviewed in the light of further research on the use of wetlands for nutrient uptake from wastes and the effects of waste discharges on wetlands.

2. *Lake Reeve Segment*

No licence shall be granted for the discharge of wastes to the waters of the Lake Reeve segment.

3. *Upper Riverine Segment*

(*a*) Licences to discharge waste to the Upper Riverine Segment shall be granted only where the discharge will not cause drinking water objectives to be exceeded. In assessing applications for licences and the approval of works pursuant to the Act, particular attention will be given to this factor and practicable alternatives to discharge.

(*b*) New discharges of treated sewage effluent to the surface waters of the Upper Riverine Segment shall be permitted only when the available dilution exceeds one in fifty (i.e. one part effluent in fifty parts receiving water).

GIPPSLAND LAKES—BENEFICIAL AND OBJECTIVES

Beneficial uses and objectives contained in the policy apply to the Gippsland Lakes catchment except where varied below:

BENEFICIAL USE	SEGMENTS							
	A	B	C	D	E	F	G	H
Maintenance of natural aquatic ecosystems and associated wildlife								
—high protection (level 2)[a]	•			•	•		•	
—wide safety margin (level 3)[a]		•						
—small safety margin (level 4)[a]			•			•		•
INDICATOR	**OBJECTIVES (maxima unless otherwise indicated)**							
Dissolved Oxygen (g/m³) (minimum)	8	7·5	6	6	6·5	6	8	6
% saturation	85	75	60	75	85	60	85	60
pH variation	0·5	0·5	1·0	0·5	0·5	1·0	0·5	1·0
range	6·5–8·5	6–9	6–9	6·5–8·5	6·5–8·5	6–9	6·5–8·5	6–9
Temperature variation °C	0·5	1·0	2·0	1·0	0·5	2·0	0·5	2·0
Taxicants[c]	N+0·2(T-N)	N+0·5(T-N)	T	N+0·2(T-N)	N+0·2(T-N)	T	N+0·2(T-N)	T
(g/m³)	The level of total dissolved solids shall not prejudice beneficial uses							
50th percentile			8000					
90th percentile		250[d]-500				5000		2000
variation					b/g		b/g	
Light penetration Turbidity (FTU)								
50th percentile	5	5[d]-10	15			50		
90th percentile	15	15[d]-20	80		10	80		
Colour (Pt-Co)								
90th percentile						150		
Suspended Solids (g/m³)								
50th percentile	5	10	25	25	15	25	25	25
90th percentile	10	20	80	80	25	80	80	80

[a] Refers to "Recommended Water Quality Criteria" (EPA latest Edition).

[b] Management agencies in conjunction with local communities shall assess appropriate salinity objectives for the Eastern lakes segment.

[c] Where "T" is the threshold concentration of chronic sublethal effects on aquatic life and "N" is the natural background level of the toxicant. "T" may be obtained from tables 14 and 15 of the Recommended Water Quality Criteria Manual.

[d] Merriman Creek Only.

Abbreviations: "g/m³"—gram per cubic metre "b/g"—background.

4. Nutrients

Additional discharges of natrients permitted by new or amended licences after the gazettal of this policy shall not contain a total annual nutrient load in excess of 400 kg of phosphorus and 30 000 kg of nitrogen. Due consideration shall be given to the spatial distribution of nutrient loads (including diffuse sources), to avoid localised problems as a result of excessive nutrient concentrations. After the gazettal of the Policy, existing licences which permit the discharge of nutrients shall be amended to indicate the permitted load of nutrients.

5. Lake Coleman interchange of water with Lake Wellington.

Management agencies shall take necessary steps to rehabilitate Lake Coleman after the discharges from Dutson Downs to Lake Coleman cease.

6. Sewage from Boats

Boats designed or intended principally for use on the Gippsland Lakes should be provided with pump out toilet facilities.

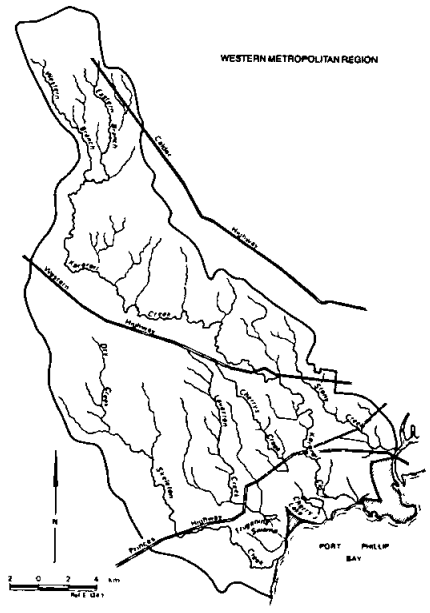
Private operators and management agencies shall as soon as possible make provision for the disposal of sewage from boats at shore based facilities.

F4. Water of the Western Metropolitan Region

The Western Metropolitan Region includes the surface waters of Stony and Kororoit Creeks, Cherry Lake, Laverton and Skeleton Creeks and their respective catchments.

(*a*) Industrial Discharges

No wastes other than contaminated stormwater from the companies of the Altona petrochemical complex and the refinery of Petroleum Refineries (Australia) Pty Ltd shall be discharged to surface waters. This requirement shall come into effect as soon as practicable, but no later than when the western trunk sewer becomes available to accept waste. In the interim, waste discharges to Kororoit Creek shall be upgraded to ensure that the discharges do not result in the death of fish or other aquatic life (as determined by toxicity tests approved by the Authority).



SCHEDULE G

Industries or activities specified in this schedule shall not discharge wastes to the policy area in excess of the maximum generation rates listed below: (refer to Clause 23).

Dated: 23 February 1988

LAWRENCE A. FISHER
Clerk of the Executive Council

Gazette Services

The *Victoria Government Gazette* (VGG) is published by VGPO for the State of Victoria and is produced in three editions.

VGG General is published each Wednesday and provides information regarding Acts of Parliament and their effective date of operation; Government notices; requests for tenders; as well as contracts and contracts accepted. Private notices are also published.

VGG Special is published any day when required for urgent or special Government notices. VGG Special is made available automatically to subscribers of VGG General.

VGG Periodical is published on Monday when required and includes specialised information eg. Medical, Dental, Pharmacist's Registers, etc.

Subscriptions

VGG is available by three subscription services:

General and Special—$100 each year

General, Special and Periodical—$115 each year

Periodical—$60 each year

Subscriptions are payable in advance and accepted for a period of one year. All subscriptions are on a firm basis and refunds for cancellations will not be given.

All payments should be made payable to VGPO.

Subscription inquiries: (03) 320 0217

VGPO Bookshop Inquiries: (03) 663 3760

No. S 13—Special Government Gazette
A Victorian Government Publication
Published by VGPO
Melbourne Victoria Australia

Address all inquiries to the Government Printer for the State of Victoria
PO Box 203 North Melbourne 3051 Victoria Australia
ISSN 0819—548X
Further copies of this publication can be obtained from
VGPO Bookshop
Information Victoria Centre
318 Lt Bourke Street Melbourne
(PO Box 203 North Melbourne 3051)
VGPO Bookshop Inquiries: (03) 663 3760
By Authority Jean Gordon Government Printer Melbourne
Recommended Retail Price $1.70