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SPECIAL

Environment Protection Act 1970

The Governor in Council under section 16(2) of the **Environment Protection Act 1970** and on the recommendation of the Environment Protection Authority Orders as follows:

Variation of the State environment protection policy (Waters of Victoria) - insertion of Schedule F6. Waters of Port Phillip Bay

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This Order is divided into parts as follows-

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6. Revocation of State environment protection policy (The Waters of Port Phillip Bay)

PART 1 - PRELIMINARY

2. Purposes

The purposes of this Order are to-

- (a) vary the State environment protection policy (Waters of Victoria) to add to Schedule F a new schedule, Schedule F6. Waters of Port Phillip Bay
- (b) revoke the State environment protection policy (The Waters of Port Phillip Bay)

3. Commencement

This Order comes into effect upon publication in the *Government Gazette*.

4. The Principal Policy

In this Order, the State environment protection policy (Waters of Victoria) is called the Principal Policy.

PART 2 - VARIATION OF THE PRINCIPAL POLICY

5. Insertion of new Schedule F6. Waters of Port Phillip Bay

After Schedule F5 of the Principal Policy insert-

"F6. Waters of Port Phillip Bay

1. Title

This Schedule may be cited as Schedule F6. Waters of Port Phillip Bay, referred to below as the Schedule.

2. Contents

The Schedule is divided into parts as follows -

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PART 1 - PRELIMINARY

3. Definitions

In this Schedule, unless inconsistent with the context or subject matter -

"**ambient**" means the environmental condition determined by the level of indicator, measured in a manner at a location specified by the Authority;

"**A.M.G.**" means the Australian Map Grid;

"**artificial structure**" means any man-made structure, except a floating ship, in or adjacent to the waters of Port Phillip Bay including jetties, piers, moles, groynes, boat ramps, causeways, moored platforms, buoys, piles, breakwaters, rockwalls, seawalls, artificial reefs, artificial islands and reclaimed land;

"**Bay**" means Port Phillip Bay;

"**dredging**" means any marine and estuarine dredging, including eductor dredging, but not scallop dredging;

"**high water mark**" means the level established by the highest astronomical tide;

"**N**" means that there is no variation from the background level of water quality;

"**PAR**" means photosynthetic active radiation. The light attenuation extinction co-efficient calculated from the decrease in intensity of light in the range 400 - 700 nm (photosynthetically active radiation) penetrating the water column;

"**protection agency**" means any person or body, whether corporate or unincorporate, having powers or duties under any Act other than the **Environment Protection Act 1970** with respect to the environment or any segment of the environment in any part or parts of Victoria;

"**Secchi disk**" means a 30 cm diameter circular disk used to measure the transparency of water by being lowered into the water column until no longer visible;

"**ship**" includes every description of vessel or craft;

"**stormwater**" means the water directly resulting from rainfall;

"**T**" means

- (i) the national guideline concentration of toxicants in waters specified for the protection of aquatic ecosystems in the Australian Water Quality Guidelines for Fresh and Marine Waters, published by the Australian and New Zealand Environment and Conservation Council (ANZECC); or
- (ii) other criteria specified by the Authority;

"**TC**" means

- (i) the threshold concentration of chemical compounds in water capable of causing toxicity and tainting of fish flesh and other aquatic organisms, specified in the Australian Water Quality Guidelines for Fresh and Marine Waters, published by the Australian and New Zealand Environment and Conservation Council (ANZECC); or
- (ii) other criteria specified by the Authority;

"**waste minimisation**" means the adoption of practices or processes which reduce to the maximum extent feasible the quantity of industrial waste generated and/or the quantity of waste which requires subsequent treatment, storage or disposal. It includes any activity undertaken on the premises by a generator that results in the reduction of total volume or quantity of industrial waste provided that such reduction is not achieved simply by de-watering or compaction.

4. Schedule goal

The goal of this Schedule is to protect the beneficial uses of the Schedule area by minimising the adverse impacts of waste discharges and other impacts associated with human activity and resource use of the Bay and its catchment.

PART II - BOUNDARIES OF THE AREA AFFECTED

5 Schedule Area

- (1) This Schedule protects the beneficial uses within the area represented in Figure 1 being all of the waters of Port Phillip Bay bounded by the high water mark, a line drawn between Point Lonsdale (A.M.G. Co-ordinates E 291250 N 5758900) and Point Nepean (A.M.G. Co-ordinates E 294500 N 5757900) and a line across the mouth of the Yarra River (A.M.G. Co-ordinates E 315300 N 5809000) corresponding with the parallel 37° 50' 30" S.

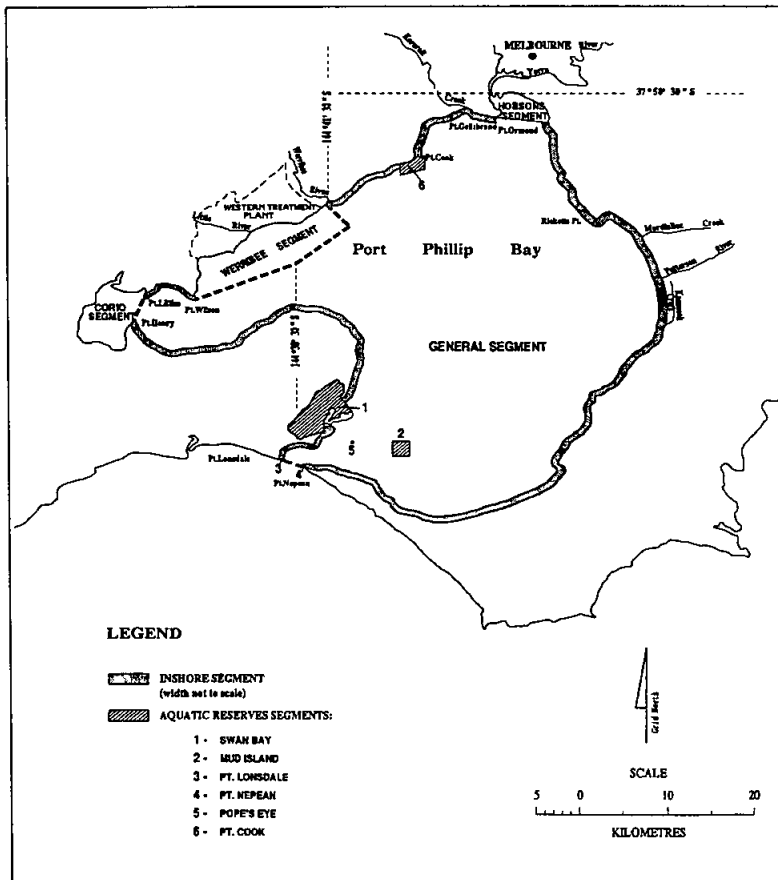


Figure 1. Map of Port Phillip Bay showing environmental segments.

- (2) In order to protect the beneficial uses within the Schedule area, the Attainment Program of this Schedule includes provisions which relate to management of the Port Phillip Bay catchment in the area shown in Figure 2.

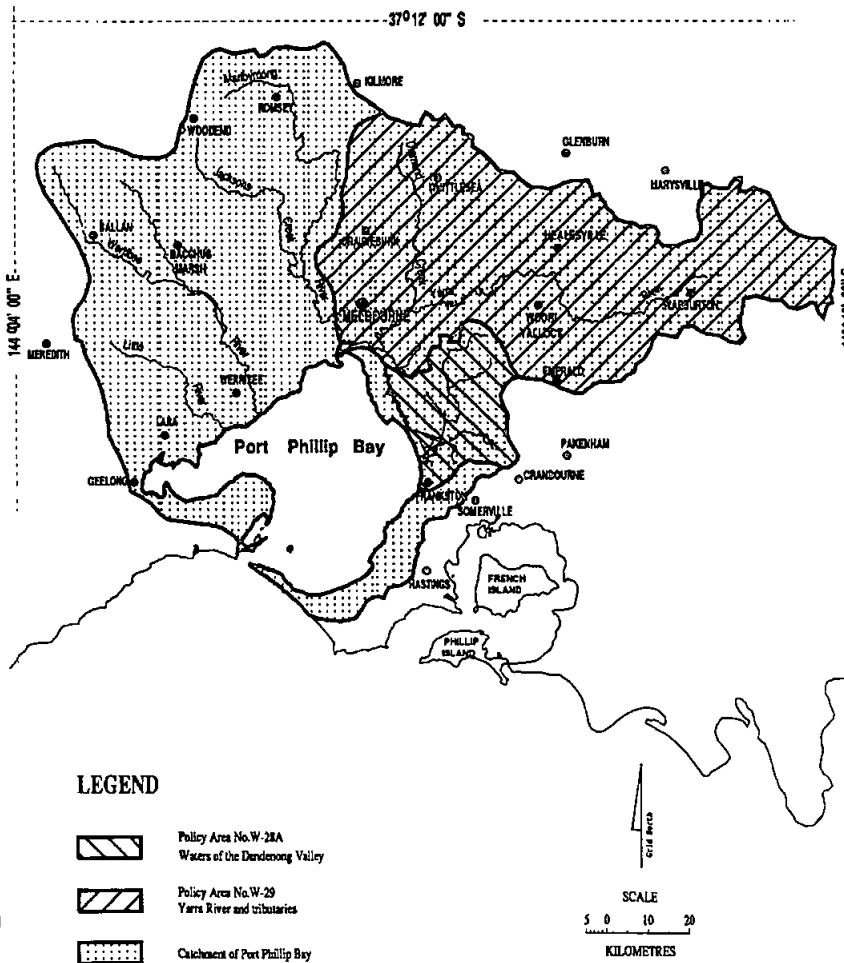


Figure 2. The catchment of Port Phillip Bay

6. *Segments*

- (1) Clause 6 of the Principal Policy does not apply to the Schedule area.
- (2) For the purpose of the Schedule, the following segments of the environment are classified within the Schedule area and represented in Figure 1.
 - (a) *Aquatic Reserves Segment*: consisting of the waters of areas within -
 - (i) reference areas proclaimed under the **Reference Areas Act 1978**;
 - (ii) National and State Parks and reserves proclaimed under the **National Parks Act 1975**;
 - (iii) marine reserves under provisions of Section 88(5) of the **Fisheries Act 1995**; and
 - (iv) Other marine parks and reserves established under the **Crown Land (Reserves) Act 1978**.
 - (b) *Corio Segment*: that portion lying west of a line drawn between Point Henry and Point Lillias and bounded by the high water mark.
 - (c) *Hobsons Segment*: that portion bounded to the north by latitude 37°50'30"S (across the Yarra River), to the south by a line drawn from Point Gellibrand to Point Ormond, and to the west and east by the high water mark.
 - (d) *Werribee Segment*: that portion bounded by a line which spans the shortest distance between the point of intersection of the high water mark and longitude 144°41'30"E and the 10 m depth contour to the south-east, generally south-west following the contour to its intersection with longitude 144°38'30"E, from this point directly to the high water mark at Point Wilson, and along the high water mark to the origin at the intersection of longitude 144°41'30"E.
 - (e) *Inshore Segment*: that portion outside the above four segments and bounded by the high water mark and a line drawn 600 m seawards from the low water mark.
 - (f) *General Segment*: that portion outside of the above five segments.

PART III - BENEFICIAL USES TO BE PROTECTED**7. Beneficial uses**

- (1) Clause 7 of the Principal Policy does not apply to the Schedule area.
- (2) Subject to subclause (3) the beneficial uses shown in Table 1 shall be protected in each segment marked with a tick
- (3) In the Aquatic Reserves segment the beneficial uses of "production of molluscs for human consumption - natural populations," "production of molluscs for human consumption - aquaculture," "commercial and recreational use of edible fish and crustacea", "aquaculture" and "navigation and shipping" are protected only in those parts of the segment where the activity is permitted under management plans approved by the Secretary, Department of Natural Resources and Environment.

Table 1- Protected Beneficial Uses in the Schedule Area

Beneficial Use	Segment					
	Aquatic Reserves	Corio	Hobsons	Werribee	Inshore	General
Maintenance of aquatic ecosystems and associated wildlife						
<i>Natural ecosystems</i>	✓					
<i>Substantially natural ecosystems with some modification</i>					✓	✓
<i>Highly modified ecosystems with some habitat values</i>		✓	✓	✓		
Water based recreation						
<i>Primary contact</i> (-eg. swimming, water-skiing).	✓	✓	✓		✓	✓
<i>Secondary contact</i> (-eg. boating, fishing).	✓	✓	✓	✓	✓	✓
<i>Aesthetic enjoyment</i> (-eg. walking by the water).	✓	✓	✓	✓	✓	✓
Production of molluscs for human consumption						
<i>Natural populations</i> - the consumption of naturally occurring molluscs.	✓#					✓
<i>Aquaculture</i> - the consumption of molluscs from declared aquaculture zones included in a shellfish sanitisation program by the Responsible Authority.	✓#				✓	✓
Commercial and recreational use of edible fish and crustacea - the consumption of seafood other than molluscs.	✓#	✓	✓	✓	✓	✓
Navigation and shipping - the use of Port Phillip Bay waters for shipping transport and harbour facilities.	✓#	✓	✓	✓	✓	✓
Industrial water use - the use of Port Phillip Bay waters as an industrial resource (eg water for salt production, cooling operations).		✓	✓	✓	✓	✓

beneficial use is protected only in parts of the segment where the activity is permitted under approved management plans

PART IV - ENVIRONMENTAL QUALITY INDICATORS AND OBJECTIVES**8. Environmental quality indicators and objectives**

- (1) Clauses 8 and 9 of the Principal Policy do not apply to the Schedule area.
- (2) Subject to sub-clause 3, the water quality objectives to protect beneficial uses shall be the criteria specified in the Australian Water Quality Guidelines for Fresh and Marine Waters, published by the Australian and New Zealand Environment Conservation Council (ANZECC).
- (3) For the purposes of the Schedule
 - (a) Water quality must comply with the objectives specified in Table 2 and water quality is to be maintained as close as practicable to background levels.
 - (b) Statistically based objectives (eg. percentiles, geometric mean or median) may be assessed using monitoring and analytical protocols approved by the Authority.
 - (c) Where specified, the levels for arsenic, zinc, chromium and cadmium prevail over "T" or "TC" concentrations.
 - (d) Where a chemical element or compound is listed as both a toxicant ("T") and a potential taint ("TC") the lower value is the environmental quality objective.
- (4) Settleable material must be at levels that do not result in deposits that adversely affect the beneficial uses of the Schedule area.
- (5) The aesthetic characteristics of the Schedule area must be protected and in particular the following materials must not be discharged to waters of the Schedule area -
 - (a) litter;
 - (b) anthropogenic floatable materials, foams or scums ;
 - (c) materials causing objectionable colour or odours; or
 - (d) visible films of oils, greases or petrochemical products.

(6) Nutrients

Inputs of nutrients to Port Phillip Bay, in particular nitrogen and phosphorus, must be below levels (concentrations, seasonal loads or annual loads) that the Authority determines as posing an unacceptable risk to the chlorophyll-a objectives which are listed in Table 2.

Table 2 - Objectives for Environmental Quality Indicators

Indicators			OBJECTIVES FOR ENVIRONMENTAL QUALITY INDICATORS FOR SEGMENTS OF PORT PHILLIP BAY						
			Aquatic Reserves	Corio	Hobsons	Werribee	Inshore	General	
Dissolved Oxygen % Saturation	%	at 1m below surface	N	>90%	>90%	>90%	>90%	>90%	
		at 1m above bottom	N	>90%	>90%	>90%	>90%	>90%	
pH	(pH units)	annual 90% ile	N	>90%	>90%	>90%	>90%	>90%	
		variation range	N	N ± 0.5	N ± 0.5	N ± 0.5	N ± 0.5	N ± 0.5	
Temperature	°C		N	7.5 - 8.5	7.5 - 8.5	7.5 - 8.5	7.5 - 8.5	7.5 - 8.5	
Transparency			N	N ± 1	N ± 1	N ± 1	N ± 1	N ± 1	
Secchi disk depth	m		N	>3	>2	>3	>3	>4	
Attenuation of Photosynthetic Active Radiation (PAR)	m ⁻¹	annual 90% ile	N	0.45	0.50	0.45	0.45	0.35	
Toxicants									
General			N	<0.5T	<0.5T	<0.5T	<0.5T	<0.5T	
Arsenic	µg/L		N	<3	<3	<3	<3	<3	
Chromium	µg/L		N	<5	<5	<5	<5	<5	
Zinc	µg/L		N	<5	<10	<5	<5	<5	
Cadmium	µg/L						<0.15 (in aquaculture zones)	<0.15	
Salinity		variation	N	N ± 5%	N ± 5%	N ± 5%	N ± 5%	N ± 5%	
Chlorophyll-a	µg/L	annual median	N	1.5	2.5	2.5	1.5	1.0	
		annual 90 percentile	N	2.5	4	4	2.5	2	
Bacteriological (<i>E. coli</i>)	organisms/100 mL	42 day geometric mean	N	<200	<200	<1000	<14 (aquaculture zones) and <200 (rest of segment)	<14	
		42 day 80 percentile	N	<400	<400		<400		
Toxicity and tainting of fish and other organisms	µg/L	maximum	N	TC	TC	TC	TC	TC	

PART V - ATTAINMENT PROGRAM**General****9. Principal Policy attainment measures to also apply to Schedule area**

Clauses 10 to 54 (the Attainment Program) of the Principal Policy apply in addition to this Part for the Schedule area.

10. Responsibilities

- (1) The Authority will identify and promote measures to achieve the best practicable environmental outcomes within the Schedule area.
- (2) The Authority will exercise its powers, duties and responsibilities to -
 - (a) assist the community to understand and contribute to the improvement of water quality in the Schedule area;
 - (b) work co-operatively with all those who use and manage the Schedule area and promote the use of best practices that protect beneficial uses in the Schedule area;
 - (c) ensure that any notice, works approval or licence issued under the Act contains requirements that are consistent the Schedule; and
 - (d) co-ordinate, review and report on the attainment of the provisions of this Schedule.
- (3) Protection agencies with responsibilities in the Schedule area must review existing environmental management systems to ensure operations are managed in compliance with the provisions of this Schedule.

11. Port Phillip Bay Environmental Management Plan.

- (1) The Department of Natural Resources and Environment, with advice from the Victorian Coastal and Bay Management Council, the Port Phillip Regional Catchment and Land Protection Board and in consultation with the Authority, other protection agencies and interested users of the Bay and its catchment, must ensure that a Port Phillip Bay Environmental Management Plan is developed and implemented for the Schedule area to achieve in a timely fashion the objectives of this Schedule.
- (2) The Port Phillip Bay Environmental Management Plan must provide a framework for the-
 - (a) identification of responsibility for particular issues;
 - (b) co-ordination of the management of activities that may affect the protection of beneficial uses;
 - (c) determination of priorities and timing of actions to address particular issues;
 - (d) development of action plans for particular issues, areas or catchments to ensure compliance with the Schedule;
 - (e) development of long term waste management plans for diffuse and point source discharges that may affect the protection of beneficial uses, particularly those sources contributing nutrients, suspended solids, pathogens, litter or foreign organisms; and
 - (f) review and reporting of progress of the plan to the community.

12. Nutrient Management

- (1) The Department of Natural Resources and Environment must, within 12 months of the day upon which the Schedule comes into effect, develop and implement a nutrient reduction plan as a component of the Environmental Management Plan to be developed under Clause 11. The

nutrient reduction plan will aim to reduce the annual load of nitrogen discharged from the catchment to the Bay by 1000 tonne in accord with sub-clause (2) by 2006.

- (2) For the purposes of nitrogen reductions specified in sub-clause (1) the baseline will be determined by the Authority, in consultation with the Department of Natural Resources and Environment, on the basis of an assessment of the nitrogen data for the period 1992 to 1996 inclusive held in the Port Phillip Bay Environmental Study database.

13. *Dredging and disposal of dredged material*

- (1) Protection agencies or bodies undertaking dredging or spoil disposal must ensure that -
 - (a) these activities are conducted in accordance with to current best practice or any code of best practice approved by the Authority;
 - (b) these activities are conducted and managed to ensure local exceedances of the environmental objectives listed in Table 2 are confined to the smallest practicable area and over the shortest practicable time in the vicinity of the dredging and disposal operation;
 - (c) these activities do not re-suspend and/or disperse sediments or accumulated contaminants that will be detrimental to the long term protection of beneficial uses; and
 - (d) dredge spoil is disposed to land in preference to water wherever practicable and environmentally beneficial as determined by the Authority.
- (2) Protection agencies must ensure that any permit issued or approval given in relation to a planning scheme for dredging or de-silting operations contain requirements that are consistent with sub-clauses 1(a) (b) (c) and (d).
- (3) Protection agencies must ensure that works for beach maintenance and beach re-nourishment are consistent with the long term protection of beneficial uses, particularly the maintenance of natural aquatic ecosystems as specified in Table 1.

14. *Operation and maintenance of ships and harbour activities*

Protection agencies and bodies responsible for regulating and/or operating ships must ensure that ships and the harbour facilities do not have an adverse impact on the beneficial uses of the Schedule area and, in particular, must ensure that -

- (1) discharge of wastes from ships, including oil, ballast and hull waters, sediments and litter, is managed in accordance with best practice;
- (2) loading and unloading of ships and other harbour activities are conducted in accordance with best practice;
- (3) potential contaminants from ship maintenance and related activities are contained and disposed of in accordance with current best practice or any code of best practice approved by the Authority;
- (4) sewage produced on board ships is not disposed of to the waters of the Schedule area;
- (5) Programs are developed and progressively implemented to ensure that sewage produced on board any ship that is-
 - (a) seven metres or more in length and which is fitted with toilet facilities; or
 - (b) designed with facilities for overnight accommodation,is contained for subsequent transfer to treatment works or disposal in accordance with current best practice or any code of practice approved by the Authority.

15. Marina and canal developments

- (1) The environmental quality objectives for the waters of marinas and canal estate developments will be those for the segment to which the basin opens.
- (2) Protection agencies must ensure that -
 - (a) any development, such as a marina or canal estate, is not detrimental to the protection of beneficial uses; and
 - (b) any planning permit issued in relation to a planning scheme, or other approvals, or notice issued under the Act, contain requirements that are consistent with this Schedule.

16. Artificial structures

In approving any application for the construction, siting or operation of an artificial structure or for works in relation to artificial structures, protection agencies must ensure that -

- (1) the design, construction and maintenance of the artificial structure will not be detrimental to the protection of beneficial uses;
- (2) the approval contains conditions or requirements that are consistent with this Schedule; and
- (3) the approval contains provision for rehabilitation of the area in which the artificial structure is sited if the structure is no longer required.

17. Aquaculture

- (1) Protection agencies must ensure that aquaculture activities, in particular -
 - (a) the artificial concentration of marine organisms;
 - (b) the operations required to maintain these populations; and
 - (c) harvesting and processing,are undertaken consistent with the protection of maintenance of aquatic ecosystems as specified in Table 1.
- (2) Protection agencies must ensure that aquaculture is conducted in accordance with current best practice or any code of best practice approved by the Authority.
- (3) Any approval granted by a protection agency for an aquaculture project must include provisions for rehabilitation of the area in which the project is sited that may be required to ensure the protection of beneficial uses if the project is relocated, ceases operation or is abandoned.

18. Harvesting of living resources

Protection agencies must ensure that the harvesting of fish, shellfish or other aquatic biota does not adversely affect other beneficial uses.

19. Recreation activities

Protection agencies must ensure that recreational activities are planned and managed to control any current and prevent any anticipated impact on the beneficial uses in the Schedule area.

20. Control of point source discharges

The Authority must ensure that occupiers of premises discharging waste to Port Phillip Bay operate and manage facilities to ensure that-

- (1) future up-grades and augmentation of works shall improve waste water quality and reduce environmental impacts;

- (2) the extent of mixing zones is progressively reduced by the application of best practice including cost effective waste treatment technology, cleaner production principles, waste minimisation and the sustainable re-use of waste water; and
- (3) the sustainable re-use of waste water and treatment sludges is maximised where ever practicable and environmentally beneficial.

21. Sewage management

- (1) Protection agencies responsible for sewage management must ensure programs are implemented to ensure-
 - (a) incidences and impacts of sewer overflows, leakages and collapses are minimised;
 - (b) new sewerage infrastructure has the hydraulic capacity to contain the flows associated with a 1-in-5-year rainfall event; and
 - (c) existing sewerage infrastructure is progressively upgraded to ensure sewerage systems have the hydraulic capacity to contain the flows associated with a 1-in-5-year rainfall event, or other standard established by the Authority, with priority given to those areas which most adversely affect, or have the potential to most adversely affect, beneficial uses.
- (2) Protection agencies responsible for sewage and sewerage management must review sewage and sewerage systems and undertake remedial works to ensure consistency with clause 40 of the Principal Policy, with priority given to those areas which most adversely affect, or have the potential to most adversely affect, the identified beneficial uses.

22. Stormwater management

- (1) Protection agencies responsible for drainage and waterway management, and land use planning, must ensure that -
 - (a) new urban development and drainage systems are designed, constructed and maintained in accordance with current best practice, or any code of best practice approved by the Authority, to ensure beneficial uses are protected;
 - (b) existing stormwater systems are reviewed to identify opportunities for enhancement, and are upgraded where practicable and effective in reducing pollutant loads to the Bay with priority given to;
 - (i) identifying areas posing a risk to the protection of beneficial uses and implementing management programs to address identified risks; and
 - (ii) identifying and exploiting opportunities for improving the environmental performance of drainage systems, including the installation of water quality, litter control, and flow improvement measures, as part of normal infrastructure replacement and refurbishment programs.
- (2) Protection agencies responsible for the management of the catchment in the Schedule area must ensure that contaminants in run-off, including litter, are prevented from adversely affecting beneficial uses. In particular, attention must be given to -
 - (a) waste minimisation and litter control programs;
 - (b) regular maintenance of litter and waste water treatment works;
 - (c) regular removal of contaminants from surfaces by means that do not pollute the waters; and
 - (d) trapping of contaminants in run-off as close as practicable to the source.

23. Sediment management

Protection agencies responsible for approving or undertaking land use and construction activities that may cause disruption to the soil in the catchment of the Schedule area must ensure -

- (1) works and activities are conducted in accordance with current best practice or any code of best practice approved by the Authority to prevent sediment adversely impacting upon beneficial uses; and
- (2) any approval issued by a protection agency for such works or activities must contain requirements consistent with this Schedule.

24. Monitoring, assessment and reporting of environmental quality and policy performance

- (1) The Authority will ensure that -
 - (a) monitoring of environmental quality in the Schedule area, through its programs and those of protection agencies, provides the information necessary to assess compliance with the provisions of the Schedule;
 - (b) protection agencies having powers or duties in respect of the management or use of the natural resources of the Schedule area carry out monitoring of ambient environmental quality to enable assessment of the likely impact of that management or use on the environment; and
 - (c) any works approval, licence or licence amendment in respect of a discharge of wastes to any waters in the Schedule area is subject to conditions that the occupier of the premises shall, at the occupier's cost, carry out monitoring of ambient environmental quality to assess the likely impact of the discharge on the environment.
- (2) The monitoring programs referred to in sub-clause (1) including sampling and analysis methods, quality assurance measures, assessment protocols and reporting protocols associated with the monitoring programs must be those approved by the Authority.
- (3) The Authority will periodically report the quality of surface waters within the Schedule area to the public.
- (4) A report under sub-clause (3) will include-
 - (a) an overview of water quality within the Schedule area;
 - (b) a review of the effectiveness of the implementation of the Schedule; and
 - (c) an assessment of the adequacy of the monitoring program(s).
- (5) Protection agencies must assist the Authority to prepare reports under sub-clause (3) by making available water quality information and data for the Schedule area, and reporting progress of implementation of programs targeted towards achievement of Schedule goals.
- (6) The Authority will prepare and co-ordinate the implementation of a communication strategy to inform the public of the suitability of the waters for recreational uses over the summer period.
- (7) Protection agencies must ensure monitoring and reporting of the suitability of fish and shellfish for human consumption in the Schedule area is undertaken."

PART 3 - REVOCATION OF REDUNDANT STATE ENVIRONMENT PROTECTION POLICY

6. *Revocation of the State environment protection policy (The Waters of Port Phillip Bay)*

The *State environment protection policy (The Waters of Port Phillip Bay)*, as published in the Victorian Government Gazette No 25 on 10 April 1975, is **revoked**.

Dated 26 August 1997

Responsible Minister:

MARIE TEHAN

Minister for Conservation and Land Management

SHARNE BRYAN
Clerk of the Executive Council

Explanatory Notes

Purpose of State Environment Protection Policy

State Environment Protection Policies (SEPP) are declared by the Governor in Council under section 16(1) of the *Environment Protection Act 1970*. SEPPs provide a framework for environmental decision-making and a clear set of publicly agreed environmental objectives that all sections of the community must work together to achieve. Environment protection programs in Victoria are developed within this broad framework.

A State environment protection policy may apply to Victoria generally or to a portion of the State and will include:

- identification of the beneficial uses of the environment that are to be protected (beneficial uses include uses of the environment such as ecosystem support, drinking water, and recreational uses);
- selection of indicators (measures) of environmental quality;
- a statement of environmental quality objectives; and
- may describe the program by which the stated environmental quality objectives are to be attained.

Background to Schedule F6

The beneficial uses of the waters of Port Phillip Bay have previously been protected through two State environment protection policies:

- State environment protection policy (Waters of Port Phillip Bay), (the 'Port Phillip Bay SEPP'), and
- State environment protection policy (Waters of Victoria)

The Port Phillip Bay SEPP, which came into effect in 1975, covered the waters of Port Phillip Bay. It served primarily to guide EPA's works approval and licensing functions in the region and provided a framework for action primarily to reduce the impact of major industrial discharges. With these discharges either eliminated or now effectively controlled, the focus of the Port Phillip Bay SEPP on point sources was of limited relevance to the major potential threats to the Bay. These chiefly derive from non-point sources of pollution (particularly urban stormwater and from exotic organisms capable of disrupting ecosystems which are critical to the Bay's health. For this reason the 1975 SEPP has now been replaced by the new Schedule F6 to the SEPP (Waters of Victoria) which provides an updated framework for dealing with such threats based on the latest scientific understanding of the Bay.

The State environment protection policy (Waters of Victoria) was declared in 1988 to provide a general framework for the protection of beneficial uses of water across Victoria. It addresses both point source and diffuse source pollution, and many of the attainment program provisions are relevant for the management of potential sources of contaminants to Port Phillip Bay. It applies except where it is varied by a separate SEPP or regional Schedule. The provisions of Schedule F6 for Port Phillip Bay are, therefore, supplementary to those of SEPP (Waters of Victoria).

In order to allow for an integrated approach to protection of Port Phillip Bay, the attainment program of Schedule F6 covers both the catchment and the waters of the Bay. Adoption of this approach builds upon the State-wide framework for protection of surface water environments contained in the SEPP (Waters of Victoria) to identify beneficial uses,

environmental quality indicators and objectives and attainment program provisions appropriate to the specific needs of Port Phillip Bay.

Schedule F6 is the result of lengthy scientific investigation and extensive consultation with community representatives, government agencies, water supply and sewerage bodies and major industrial water users.

The Order in Council

The Schedule is preceded by the necessary legal preamble for an Order in Council.

The purposes of the Order are to:

- vary State environment protection policy (Waters of Victoria) to add Schedule F6. Waters of Port Phillip Bay
- revoke the redundant State environment protection policy (The Waters of Port Phillip Bay).

The order commences upon publication in the Government Gazette.

Schedule F6 in detail

Title

Clause 1 gives the title of the new Schedule to the State environment protection policy (Waters of Victoria) "Schedule F6. Waters of Port Phillip Bay".

Contents

Clause 2 divides Schedule F6 into five (5) parts (Preliminary, Boundaries of the Area Affected, Beneficial Uses to be Protected, Environmental Quality indicators and Objectives, and Attainment Program) and outlines their contents.

PART I - PRELIMINARY

Definitions

Clause 3 provides specific definitions of various words and terms used throughout the Schedule. The purpose of these definitions is not to provide a glossary of technical terms but simply to give a specific meaning to a phrase which may be slightly limited or otherwise different to the meaning currently accepted in every-day language.

Definitions contained within this Schedule are additional to terms defined in State environment protection policy (Waters of Victoria) and the *Environment Protection Act 1970*. Some definitions have been reproduced from these sources to assist the interpretation of the Schedule.

Definitions of toxicants ("T") and taints ("TC"), while based on the Australian Water Quality Guidelines, include provision for the Authority to specify other criteria. This allows specific objectives to be set in circumstances where the Australian Water Quality Guidelines are not sufficiently comprehensive or are inappropriate to the particular circumstances of the Bay. For example, while the guidelines have an extensive list of toxicants the list is not exhaustive. It is possible that a discharge, or proposed discharge, may contain a compound

of known toxicity not listed by the guidelines. In such cases the Authority will draw on available scientific information to establish the acceptable level of the compound in the environment that will ensure protection of declared beneficial uses of the segment. In the case of some metals, ambient levels in the Bay are substantially below levels set in the Guidelines. Since it would be inappropriate to set a water quality objective well above current background levels, the SEPP specifies lower values in keeping with the current high level of water quality.

Schedule Goals

Clause 4 sets out the goals of the Schedule.

PART II - BOUNDARIES OF THE AREA AFFECTED

Schedule Area

Schedule F6 applies to the whole of Port Phillip Bay. The provisions of the attainment program also apply to the Bay's catchment. This has allowed an integrated policy framework to be developed, which address catchment processes and activities which are the cause of threats to beneficial uses of the Bay.

Clause 5 defines the boundaries of the Schedule area, i.e. the area to which the Schedule applies. The Schedule area is represented in Figure 1.

Segments

Within the overall boundaries of the Schedule area, Port Phillip Bay has been broken down into a series of geographic areas or "segments". The segments reflect the different types and condition of ecosystems, different surrounding land uses and major inputs, as well as the different beneficial uses within the Schedule area.

Clause 6 divides the Schedule area into six (6) segments, as follows:

- **Aquatic Reserves** - those parts of Port Phillip Bay whose environmental values are afforded statutory protection by a range of acts of Parliament
- **Corio Segment** - Corio Bay
- **Hobsons Segment** - Hobsons Bay
- **Werribee Segment** - that part of Port Phillip Bay adjacent to the Western Treatment Plant outfalls to the Bay.
- **Inshore Segment** - the part of Port Phillip Bay corresponding to the greatest demand for recreational uses.
- **General Segment** - the main body of Port Phillip Bay.

PART III - BENEFICIAL USES TO BE PROTECTED

State environment protection policy establish the basis for maintaining environmental quality sufficient for the protection of beneficial uses of the environment. The beneficial uses of Port Phillip Bay protected by this Schedule are declared in Part III of the Schedule. Protection of a beneficial use means that environmental quality must be such that the risk to that use is within acceptable limits. Declaration of a beneficial use does not confer rights to a use or override management decisions over access to, or use of, natural resources. In the case of the *Aquatic Reserves Segment*, the beneficial uses *Production of molluscs for human consumption*, *Commercial and recreational use of edible fish and crustacea*; and *Navigation and shipping* are explicitly protected only in those parts of the segment where permitted under an approved management plan and can only take place when not precluded by the legislation under which a particular reserve is proclaimed.

Particular beneficial uses must be undertaken in consideration of other beneficial uses of the segment. A beneficial use may not be undertaken if it affects (or is likely to affect) environmental quality in a manner or to an extent such that places the protection of other beneficial uses at risk.

The set of beneficial uses protected under Schedule F6 are similar to those applied throughout Victoria by the SEPP (Waters of Victoria), with variations to clarify their meaning or improve their appropriateness to Port Phillip Bay.

Clause 7 lists the beneficial uses for protection in each segment. These are clearly set out in Table 1 of Schedule F6. The beneficial uses to be protected are:

- *Maintenance of natural aquatic ecosystems and associated wildlife*, which includes the maintenance of stable and healthy aquatic ecosystems of plants and animals, as well as the terrestrial wildlife, particularly birdlife in Ramsar sites, which is dependent upon these ecosystems. This beneficial use is divided into three categories which are applied to ecosystems of different types and condition. These categories are:
 - ⇒ *natural ecosystems*,
 - ⇒ *substantially natural ecosystems with some modification*, and
 - ⇒ *highly modified ecosystems with some habitat values*.
- *Water based recreation*, which falls into three distinct beneficial use categories:
 - ⇒ *primary contact* (e.g. swimming, water skiing),
 - ⇒ *Secondary contact* (e.g. boating, fishing), and
 - ⇒ *Aesthetic enjoyment* (e.g. walking by the waters).
- *Production of molluscs for human consumption*, which ensures a level of protection sufficient to support the populations of molluscs (derived from wild stocks and from aquaculture operations) and which are harvested both recreational and commercially.
- *Commercial and recreational use of edible fish and crustacea* which ensures a level of protection sufficient to support the populations of fish and crustacea (derived from wild stocks and from aquaculture operations) and which are harvested both recreational and commercially.
- *Industrial water use*, including uses of water for cooling and salt production. Some limits on the scope of industrial use have been removed by generalising the title of this beneficial use and by deleting specific references to use for salt production and cooling waters which were made in some segments in the 1975 SEPP.
- *Navigation and shipping*, protects the use of Port Phillip Bay waters for shipping transport and harbour facilities.

Within the Aquatic Reserves Segment water quality should be at least sufficient not to prejudice the beneficial uses of:

- Production of molluscs for human consumption,
- Commercial and recreational use of edible fish and crustacea, and
- Navigation and shipping

However, these uses are not commonly available in aquatic reserves due to potential conflict with management goals of protection of biodiversity and ecological processes. Within this Segment these beneficial uses will be limited, for practical purposes to those areas where the activities are permitted under approved management plans for particular reserves.

PART IV - ENVIRONMENTAL QUALITY INDICATORS AND OBJECTIVES

Indicators of environmental quality provide a standard measure of the condition of aquatic environments. Environmental quality objectives set out targets for particular indicators which will ensure that the beneficial uses identified within each segment are protected.

Clause 8 specifies the environmental quality indicators and objectives that apply to the Schedule area and how these are to be assessed.

The environmental quality objectives specified for each segment reflect the level which needs to be achieved to protect the most sensitive beneficial use specified for that segment. For example, in the Inshore segment, the indicator 'Toxicants-General' has an objective level of <0.5T which is set to protect the most sensitive beneficial use - '*Maintenance of aquatic ecosystems and associated wildlife: Substantially natural ecosystems with some modification*'.

Unless otherwise specified in sub-clause 3, the water quality objectives to protect beneficial uses are the environmental criteria set out in Australian Water Quality Guidelines for Fresh and Marine Waters, published by the Australian and New Zealand Environment and Conservation Council. These are varied in sub-clause 3 for indicators where a quality indicator or objective more appropriate to the Schedule area has been identified. For example, the objective for arsenic in the Australian Water Quality Guidelines for Fresh and Marine Waters is < 50 µg/L, whereas a higher level of quality, < 3 µg/L is set for all segments of Schedule F6 to reflect existing conditions.

The specific quantitative environmental quality indicators for the Segments of the Schedule are set out in Table 2 (Objectives for Environmental Quality Indicators) of Schedule F6. The indicators of environmental quality adopted in the Schedule are:

- dissolved oxygen
- pH (acidity and alkalinity)
- temperature
- transparency
- toxicants
- salinity
- chlorophyll-a
- suspended solids
- *E.coli*
- toxicity and tainting of fish and other organisms

Objectives for environmental indicators are specified on the basis of the sampling and analytical methods approved by the Authority for the specific indicators. Monitoring of environmental quality for assessment against these objectives must also employ these methods.

Any discharge of waste (as defined by the *Environment Protection Act 1970*) to water must not cause any of these environmental quality objectives to be breached.

PART V - ATTAINMENT PROGRAM

The attainment program provisions in Schedule F6 operate in addition to the attainment program provisions of the SEPP (Waters of Victoria) and provide a comprehensive framework to manage actions to protect beneficial uses within Port Phillip Bay. The overall thrust of the attainment program is to promote integrated management of activities in Port Phillip Bay and its catchment, recognising the cumulative effects of different activities on water quality and the consequent need to co-ordinate planning of land, water and waterway management.

Addition to Policy Provisions

Clause 9 sets out that in addition to the Clauses 10-54 of the Attainment Program of the State Environment Protection Policy (Waters of Victoria), a number of additional clauses (clauses 10-24 of Schedule F6) apply specifically to Port Phillip Bay and its catchment.

Responsibilities

Clause 10 specifies the EPA's responsibilities under the attainment program. These involve the identification and promotion of best practicable environmental outcomes, assisting the community to understand and improve water quality, working co-operatively with managers and users of the land and water within the Schedule area, ensuring that any notice issued under the *Environment Protection Act 1970* is consistent with Schedule F6, and co-ordinating, reviewing and reporting on the attainment of the Schedule provisions. Protection agencies must manage their operations to ensure compliance with the Schedule provisions.

Port Phillip Bay Environmental Management Plan

The development and implementation of an Environmental Management Plan for Port Phillip Bay is a key component of the Attainment Program of Schedule F6 and will provide a framework for co-ordinating and linking actions to manage the Bay's resources.

Clause 11 identifies responsibilities for the development and implementation of the Environmental Management Plan and specifies a number of its components to ensure that responsibility and accountability is established for priority issues.

Nutrient Management

Nutrient enrichment is widely viewed as the most important threat to the environmental quality of Port Phillip Bay. Nutrient enrichment (termed eutrophication) could lead to massive changes to ecological processes and the consequent disruption of existing aquatic ecosystems and establishment of persistent noxious algal problems. To prevent this from occurring, the Port Phillip Bay Environmental Study has recommended a target reduction in the overall load of nitrogen of 1000 tonnes.

Clause 12 provides for the development of a nutrient reduction plan (as a component of the Environmental Management Plan) within 12 months of the Schedule's coming into effect. The clause does not specify the management actions which should be adopted in order to achieve the desired environmental outcome. This non-prescriptive approach provides the flexibility for protection agencies to work together with the community to establish cost-effective programs of environmental improvement. It is expected that the nutrient reduction plan would link into other key programs including the Port Phillip Catchment and Land Protection Board's Regional Catchment Strategy, sewerage infrastructure programs of Melbourne Water, City West Water, Yarra Valley Water and South East Water, stormwater quality improvement strategies, etc. This will enable the development of a cost-effective strategy with clear implementation pathways.

The baseline for assessing the effectiveness of actions to reduce nutrient will be established using the database developed for the Port Phillip Bay Environmental Study between 1992 and 1996.

Dredging and disposal of dredged material

Clause 13 makes all dredging operations subject to compliance with the Schedule provisions. This clause recognises the fact that beneficial uses may be adversely affected in the short

term by dredging practices which result in: increased water turbidity (reducing light penetration), physical smothering of ecosystems due to sediment deposits and physical disruption of the seabed. However, the objective of this clause is to ensure that dredging operations are managed so there are no long term adverse impacts on the beneficial uses of Port Phillip Bay. In particular, the maintenance of aquatic ecosystems, as designated in Table 1, must be protected. The clause specifies that operations must be managed in accordance with best practice to ensure the least environmental impact in terms of both the area affected and the time for which this impact occurs. In addition, protection agencies must ensure beach maintenance and beach renourishment do not have an adverse impact on the long term protection of beneficial uses.

Operation and maintenance of ships and harbour activities

Clause 14 requires that agencies responsible for regulating and operating ships and harbour facilities ensure that these activities do not have an adverse impact on the beneficial uses of Port Phillip Bay. In particular, it addresses some of the key impacts of these activities on the environment of Port Phillip Bay by requiring that these activities are managed in accordance with current best practice. The activities specified are the discharge of wastes (including oil, ballast and hull water/sediment), loading and unloading of ships and containment of contaminants generated from ship maintenance. This clause also requires that sewage produced on board vessels is not discharged to Port Phillip Bay. Programs to deliver these outcomes, in particular for preventing the discharge of sewage from ships more than seven metres in length and fitted with toilet facilities or ships designed with facilities for overnight accommodation, will be developed and progressively implemented following the declaration of this Schedule.

Marina and canal developments

The intention of clause 15 is to ensure that any new marina and canal developments do not result in diffuse source pollution of the Bay or adverse impacts on the beneficial uses. Marina and canal developments can interfere with natural coastal processes by providing a barrier to sediment transport and by trapping of sediments. Poor design and location of developments can increase the risks of water pollution. Clause 15 is included to ensure the location, design, construction and operation of marinas and canals are consistent with best practice requirements for the protection of beneficial uses in the Schedule area.

Artificial structures

An "artificial structure" is defined to include all man made structures in or adjacent to the waters of the Bay. The term therefore includes artificial reefs, structures for aquaculture, navigation guides, breakwaters, piers, piles, groynes, boat ramps, causeways, reclaimed land and recreational facilities.

Clause 16 of the Schedule calls for best practice management of these structures during the design, construction and operation stages, as poorly designed and constructed artificial structures pose a threat to the beneficial uses of the Schedule area. Responsibility for the maintenance and management of artificial structures rests with the proponent and extends from construction through to removal, where this is necessary to protect beneficial uses. The proponent has an ongoing responsibility for monitoring and maintenance of the structure. In a case where a structure poses an unacceptable risk to beneficial uses, as a result for example of instability or chemical breakdown of the construction materials (such as may occur later in the life of a structure) the proponent is responsible for taking action to reduce the risk to acceptable levels, either by undertaking necessary repair or by removal of the structure and

rehabilitation of the area. Such responsibilities must be specified as conditions on any permits and/or lease associated with the structure.

Aquaculture

Aquaculture is an environmentally sensitive and important use of the marine environment and as such is recognised by its introduction as a specific beneficial use in some segments of the Bay. However, it must be managed in an ecologically sustainable manner to protect the environment of Port Phillip Bay.

Clause 17 requires aquaculture activities to be managed in accordance with best practice to ensure protection of beneficial uses and ecological processes of Port Phillip Bay. In order to protect the maintenance of aquatic ecosystems, aquaculture operations should not substantially alter ecological processes. The clause also stipulates that aquaculture projects must include provision for site rehabilitation to ensure that private operators do not pass on the costs of rehabilitation to the government and community.

Harvesting of living resources

The objective of clause 18 is to ensure that the harvesting of living resources in Port Phillip Bay must not cause any adverse impact upon beneficial uses and must be done in accordance with best practice.

The *Fisheries (Amendment) Act 1996*, received assent in December 1996. This Act prohibits scallop dredging in Port Phillip Bay, prevents the issuing of new licences for taking scallops from the Bay and revokes existing licences is consistent with this clause. Similarly, the development of a fisheries management plan for Port Phillip Bay by the Department of Natural Resources and Environment will ensure that harvesting of living resources from the Bay is undertaken in a manner consistent with best practice. Activities that cannot meet these requirements must be prohibited in Port Phillip Bay.

Recreation activities

Clause 19 of the Schedule calls for the application of best practice management in the siting and use of recreational facilities to prevent recreational activities creating significant adverse environmental impacts. This clause provides direction for the efficient planning of foreshore developments and infrastructure associated with recreational use to ensure all physical, biological and aesthetic requirements are met and maintained. Planning should ensure that higher impact activities are located away from sensitive areas, such as high conservation value areas in the Aquatic Reserves segment and that the concentration of activities in any area is restricted to levels which will not adversely affect other beneficial uses.

Control of point source discharges

Schedule clauses 20 requires the EPA and protection agencies to ensure that premises discharging waste to the Bay are operated and managed in accordance with the principles of waste minimisation and cleaner production. Identification of opportunities to maximise the re-use of waste water and sludge and to improve the quality of waste water are encouraged through the provisions of this clause. Improved levels of treatment and reduced waste water volumes will assist in reducing the extent of mixing zones, as required under sub-clause 2.

Sewage Management

During heavy rains, leakage into the sewerage system and illegal stormwater connections can result in the capacity of sewers being exceeded. Clause 21 requires releases of sewage from

spills, overflows and leakages to be minimised. This clause requires new sewage infrastructure to have, as a minimum, the hydraulic capacity to contain the flows associated with a 1-in-5 year rainfall event and for existing infrastructure to be progressively upgraded to this standard. This is consistent with Melbourne Water design standards and requirements under the SEPP (Waters of Victoria).

Clause 21 also requires protection agencies, particularly local government, to ensure small sewage treatment plants (including septic tank systems) are managed so as not to adversely impact on any beneficial uses in the Schedule area.

Stormwater Management

Stormwater run-off from urban areas has been identified as a major contributor of pollutant loads to Port Phillip Bay. Improved stormwater management is therefore vital to protect the beneficial uses of the waters of the Bay.

Clause 22 includes provisions to address the impact of stormwater by minimising pollution sources (including litter) and by improving the design and management of the stormwater drainage system. It requires best practice to be incorporated into the planning and design of stormwater systems in new urban developments and that existing systems be reviewed to identify and exploit opportunities for enhancement.

Sediment Management

Poorly managed construction sites and other earth moving activities are a significant source of sediment input to Port Phillip Bay, both directly and indirectly through catchment streams and storms. Clause 23 aims to ensure developers, contractors and protection agencies manage and develop sites in accordance with best practice thus helping to protect the beneficial uses of Port Phillip Bay from the adverse impacts of sediment. EPA has produced a best practice environmental management guideline for the control of sediment run off from major construction sites. This document provides the above groups with clear guidance to ensure the aim of this provision is met by appropriate actions throughout the planning, approval and construction stages.

Monitoring, assessment and reporting of environmental quality and policy performance

Clause 24 establishes the requirement for the monitoring, assessment and reporting of environmental quality of the Schedule area. These activities are essential for effective management of the Port Phillip Bay environment providing the basis for assessing the impact of present land and water based activities and the effectiveness of current management actions.

Monitoring is undertaken by a range of bodies including EPA, protection agencies (managers and users of the resources of the Bay) and private industry (as a condition of discharge licences).

Protection agencies and other private sector agencies are required to provide environmental quality information and data relevant to their activities to EPA for compilation and reporting to Parliament and the public. Occupiers of premises which discharge to surface waters are required to undertake appropriate water quality monitoring. Sampling and analysis methods and protocols must be approved by EPA to ensure that information will be capable of aggregation and assessment on a broader scale.







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