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Dear Ian

**INQUIRY INTO CATCHMENT MANAGEMENT –
ENVIRONMENTAL HEALTH SUBMISSION ON DETRIMENTAL IMPACT OF SEPTIC TANK
EFFLUENT ON WATER CATCHMENTS**

The Australian Government is to be commended on establishing an inquiry into catchment management of Australia's water resources, particularly focussing on the health of our urban and rural waterways and water quality standards.

Firstly, I would like to take this opportunity to discuss with you, a very serious issue which has a detrimental impact on both our waterways and water quality, that is **untreated or poorly treated effluent from failing, defective or illegal on-site domestic waste water systems (septic tanks)** ie. non reticulated sewerage, within declared Sewerage Districts.

Secondly, I would like to discuss the ad-hoc, fragmented, and piecemeal legislative provisions in existence for the management of septic tank systems in Victoria.

Thirdly, I would like to explain the need for an effective management system for the approval, maintenance and monitoring of septic tank systems.

Finally, I would like to advocate the need for a Nationally consistent, with effective Statewide cost recovery, administrative provisions, enshrined in legislation possibly on a catchment basis, for the proper siting, approval and ongoing satisfactory performance of septic tank systems.

ISSUE 1.

DETRIMENTAL ENVIRONMENTAL IMPACT ASSOCIATED WITH DOMESTIC SEWAGE

Untreated or ill treated sewerage and sullage contains high levels of nutrients, especially nitrogen, phosphorous and other toxic substances such as ammonia, surfactants and chlorine.

The cumulative discharge of seepage from untreated or ill-treated sewerage and sullage into storm water drains, ground waters and waterways have potential to:

- Pollute water supplies used for both residential and agricultural purposes;
- Waterlog soils, raise watertable levels and pollute ground water aquifers;
- Cause excessive build-up of soil nutrients and salt concentrations, thereby reducing its productivity;
- Be a health threat to people via the consumption of contaminated crops, fish, crustacea and water by direct contact;
- Result in nuisance plant growth and algal blooms and the reduction of aquatic ecosystem health by nutrient enrichment;
- Be toxic to aquatic life, both directly and by reduction in dissolve oxygen levels; and
- Result in reduced aesthetic enjoyment of waterways due to foam formation, offensive odours and reduced water clarity.

ISSUE 2.

EXISTING VICTORIAN LEGISLATIVE PROVISIONS FOR ON-SITE DOMESTIC WASTE WATER TREATMENT, DISPOSAL AND REUSE.

In Victoria, the legislative and policy provisions which apply to on-site domestic waste water system administration and management, are dispersed amongst a plethora of Acts, Regulations, Policies, Publications and Standards. These are:

ENVIRONMENT PROTECTION ACT 1970

- I. Councils (Local Government Authorities) power and function to issue permits, conditional permits or refusal of a permit to install or alter a septic tank system (Section 53M);
- II. Council power and functions to issue a certificate approving the use of an installed or altered septic tank system (Section 53MB);
- III. Council's power and functions to ensure permits and permit conditions including maintenance conditions are complied with (Sections 53MA and 53N);
- IV. Council's ability for the declaration of 'all sewage' treatment areas within its municipality (Section 53K); and
- V. Council's annual reporting of septic tank systems to the Environment Protection Authority (Section 53 O).

The Act also creates offences and infringements for installing, altering or using a septic tank system without consent and not complying with consent conditions.

WATER ACT 1989

- I. The inspection, measurement and service of notices to repair or maintain a septic tank system, by a Water Authority, where a septic tank system is located in its 'sewerage district' (Sections 150, 151 and 183);
- II. Water Authorities with a Sewerage District, ability to make by laws for or with respect to regulating a septic tank, works or apparatus (Section 55); and
- III. Councils requirement to refer septic tank applications to a Water Authority, within an Authorities sewerage district, or area of interest for requirements which the Council must comply (Section 180).

WATER INDUSTRY ACT 1994

Under the Water Industry Act 1994, a retail licensee may by notice served on the owner of a serviced property, require the owner to connect the property to a licensee's works for the purpose of providing that property with sewerage services if, after consultation with the Secretary, Human Services, or the Chairperson, Environment Protection Authority or both, the licensee is of the opinion that this is necessary in the interests of health or the environment, (Section 65).

PLANNING AND ENVIRONMENT ACT 1987

- I. The referral of planning permit applications for effluent land capability assessment to a referral authority for subdivision applications or where a new dwelling requires a planning permit under a Councils planning scheme (Section 55);
- II. Provisions which relate to the use, development, protection or conservation of land, in Municipal Planning Schemes (Section 6);
- III. The issue of planning permits for the development and use of land, including the 'head of consideration' of any significant effect the use or development may have on the environment or the environment may have on the use or development (Section 60);
- IV. The binding of the owner to covenants for the conditional use and development of land, (section 173 and 174);

HEALTH ACT 1958

The service of a nuisance abatement notice by Council's to remedy nuisances where failing, or leaking septic tank systems can substantiate nuisance (Sections 42 and 44).

BUILDING ACT 1993

The provisions under the Building Act 1993 pertaining to Septic Tanks Are:

- I. To regulate plumbing work (Section 4);
- II. To protect the safety and health of people who use buildings and places of public entertainment (Section 4);
- III. To make plumbing law and to define classes and specialised classes of plumbing work (Section 221B);
- IV. To define plumbing work (Section 221C);
- V. The Registration and Licensing of Plumbers (Division 3);
- VI. Compliance certificates for plumbing work including drainage and sanitary plumbing, (Section 221ZH).
- VII. Referral by licensed plumbers of a sanitary drainage plan to a Water Authority for the construction, installation or alteration of a sanitary drain (Section 221 Z0);
- VIII. A below ground sanitary drain being made available for inspection by a Plumbing Inspector prior to being covered (Section 221 ZP);
- IX. Rectification of defective plumbing work (Division 7);
- X. The referral of inspections from the Water Authority to the Plumbing Industry Commission, where a real threat to health or safety exists (Section 221ZZZD); and
- XI. The sighting of a plumbing certificate of compliance prior to issue of an occupancy permit, (Section 44).

BUILDING REGULATIONS 1994

The consent and report of Council must be obtained to an application for a building permit, which requires the installation of any soil and waste disposal reticulation system in an unsewered area (Regulation 6.1).

PLUMBING REGULATIONS 1988

The definition and specification of plumbing work and specialised plumbing work, (Regulations 7,9,13 and Division 3).

Qualifications and experience requirements of personnel for registration and licensing purposes to carry out various classes of plumbing work (Part 3).

OTHER STATE POLICY FOR THE INSTALLATION & MAINTENANCE OF ON-SITE DOMESTIC WASTE WATER SYSTEMS ARE:

STATE ENVIRONMENT PROTECTION POLICY – WATERS OF VICTORIA

Provides goals and objectives for the protection of beneficial use of waterways, which include:

- No off site discharge from Septic tank systems (since March 1988);
- On-site retention and disposal of septic tank effluent;
- Watercourse status;
- Control of point source discharges;
- Preferred waste water disposal to land;
- Catchment Management water conservation measures;
- Provision of sewage monitoring and sampling;
- Water quality indicators and objectives;
- Emission limits for waste discharges to water; and
- Policy variations.

1996 SEPTIC TANK CODE OF PRACTICE, PUBLICATION 451

The Code provides standards and criteria, on desired objectives, based on best Environment management practices of the day, for the effective treatment and attenuation of household effluent from septic tanks, including:

- Land capability assessment for effluent disposal;
- Soil percolation testing;
- The installation, design, construction, operation and maintenance, effluent disposal, construction of disposal systems and on-site treatment systems, including treatment plants and sand filters.

EPA GUIDELINES AND PUBLICATIONS

Various publications by the Victorian EPA provides criteria for assessment and approval of systems, including

- EPA Bulletin, Development Approvals in Sewered and Unsewered areas, Publication 629
- Guidelines for Waste Water irrigation, publication 168
- Certificate of approval – surface irrigation CA 035/93
- Preliminary nutrient guidelines for Victorian Inland Streams, Publication 478
- Certificate of Approvals, treatment plants

AUSTRALIAN STANDARD 1547 – ‘DISPOSAL SYSTEMS FOR EFFLUENT FROM DOMESTIC PREMISES’

Existing Australian Standard, AS 1547 – 1994 – ‘Disposal systems for effluent from domestic premises’.

This standard specifies requirements for the design and location of Septic tank systems.

THE FUTURE ADMINISTRATION OF SEPTIC TANKS IN VICTORIA

The septic tank legislation in Victoria is currently under review by a working group established under the auspices of the Environment Protection Authority. It is understood that the preferred option of the review is to:

1. Take the regulatory functions from the role of Local Government.
2. Transfer the management functions to the Plumbing Industry Commission, and
3. When doing so, implement an inspection arrangement on 5% of newly installed systems, based on a certificate of compliance being lodged by the installing plumber or drainer with the Commission.

ISSUE 3

THE NEED FOR AN EFFECTIVE MANAGEMENT SYSTEM FOR THE ADMINISTRATION OF SEPTIC TANK SYSTEMS, FROM A CATCHMENT MANAGEMENT PERSPECTIVE

As demonstrated by the recent 'Cryptosporidium' and 'Giardia' contamination of Sydney's water supply and Hepatitis A outbreak following the consumption of contaminated oysters grown in Wallis Lake, an effective and vigilant management regime for on-site domestic waste waters must be developed and maintained in all State jurisdictions.

RYAN V GREAT LAKES COUNCIL, THE STATE OF NSW, 1999 FCA 177 (5 MARCH 1999)

In the Federal Court of Australia, Honourable Justice J Wilcox ordered that judgement be entered in favour of Grant Ryan ('the first applicant) in respect of a personal claim in the sum of \$30,000 against the Great Lakes Council (NSW), The State of New South Wales and Wallis Lake Oyster growers and distributors 'the respondents.' Also, that he is entitled to succeed against each of the said respondents in respect of so much of his representative claim as alleges negligence on behalf of group members who prove damage has been suffered by them and that respondents pay Mr Grant Ryan his costs of the class action incurred to date and that orders be apportioned one third between respondents.

Further, Governments of all levels must take notice that their failure to observe their duty of care for protecting water supplies and catchments from contamination by septic tank effluent, could expose them liable to negligence class action in the future. The treatment, health care and inconvenience caused to the general public by contamination of their water supplies is to high a price and risk to pay.

DRAFT AUSTRALIAN/NEW ZEALAND STANDARD 1547 – ON SITE DOMESTIC WASTE WATER MANAGEMENT/ PERFORMANCE OBJECTIVES

The draft Australian/New Zealand Standard for on-site domestic water management acknowledges by its key performance objectives that a sustainable 'on site domestic waste water' management regime must be established for non reticulated sewerage systems.

THE KEY PERFORMANCE OBJECTIVES OF THE DRAFT STANDARD ARE:

(a) To protect public health by ensuring that:

- I. all discharges comply with the relevant public health requirements;
- II. risks associated with the discharge of human waste and domestic waste water to the environment are avoided;
- III. food crops are safe for consumption by humans or animals;

- (b) To maintain and enhance the quality of the environment by ensuring that:
- I. environmental quality objectives set by the regulator are not exceeded
 - II. surface and ground waters are not polluted;
 - III. soil productivity is maintained or enhanced;
 - IV. the potential for cumulative environmental effects are fully evaluated;
- (c) To maintain and enhance community amenity by ensuring that:
- I. on site domestic wastewater systems are managed so as to achieve sustainable long term performance;
 - II. the on site system design and its implementation contribute to improving and sustaining aesthetic values within individual properties and groups of properties (such as subdivision);
 - III. the requirements of any community resource utilisation program are met.

These key performance standards are consistent with Catchment Management, Water Supply, and State Environment Protection Policy.

ADVOCACIES OF DRAFT STANDARD

Further the Draft Standard advocates that a successful administration system for Septic Tank systems must entail:-

ESTABLISHMENT OF INFRASTRUCTURE

The initiation of a control process together with the establishment of an ongoing support infrastructure, either regulatory or private, to be instigated for the greater benefit of public health and the environment.

DILEGENCE AND COMPETENCIES OF ALL PERSONS

All personnel involved with the implementation and management of investigation, design, installation, operation and maintenance of on site wastewater systems, carry out their responsibilities in a diligent and informed manner in accordance with the standard. To ensure, education, training, knowledge and competencies for all administrative, inspection, and field staff 'role players', together with a system for certification of competencies.

MANAGEMENT AND IMPLEMENTATION PROCESS – CENTRAL DEFINITION

A control process be clearly defined and established for the sustainable management of on site domestic wastewater systems. The control process to include the issue of permits conditional upon operation and maintenance conditions, being complied with.

The empowerment by statute of a ‘body’ responsible for the management and control of septic tank systems.

DOMESTIC WASTE WATER MANAGEMENT – A CATCHMENT MANAGEMENT ISSUE

The objectives of septic tank management and control are consistent with the objectives of water supply, sewerage treatment (ie. water and sewerage authorities) and catchment management objectives. The goals and objectives of the relevant legislation are stated below.

Conversely, performance failure of septic tank systems particularly in the case of cumulative failures, results in the pollution and contamination of our waterways, ground waters and water supplies.

The objectives of the (VICTORIAN) CATCHMENT AND LAND PROTECTION ACT 1994 include:

The objectives of the Catchment legislation in Victoria, includes:

- I. To establish a framework for the integrated and co-ordinated management of catchments which will –
 - (a) maintain and enhance long-term land productivity while also conserving the environment; and
 - (b) aim to ensure that the quality of the State's land and water resources and their associated plant and animal life are maintained and enhanced;
- II. To establish processes that can be used to assess the condition of the State's land and water resources and the effectiveness of land protection measures; and
- III. To establish processes to encourage and support participation of land holders, resource managers and other members of the community in catchment management and land protection;

THE PURPOSES OF THE (VICTORIAN) WATER ACT 1989

The purposes of the Victorian Water Act 1989 includes –

- I. to provide for the integrated management of all elements of the terrestrial phase of the water cycle;
- II. to promote the orderly equitable and efficient use of water resources;
- III. to make sure that water resources are conserved and properly managed for the sustainable use for the benefit of present and future Victorians;

- IV. to provide formal means for the protection and enhancement of the environmental qualities of waterways and their in stream uses; and
- V. To provide for the protection of catchment conditions.

ISSUE 4

A NATIONAL FRAME WORK FOR THE ADMINISTRATION & MANAGEMENT OF SEPTIC TANK AND THE RECOMMENDATIONS OF THIS SUBMISSION

An in principle agreement, for a nationally consistent framework for the effective and sustainable management of 'On-site domestic waste water systems,' throughout Australia, is hereby proposed to the Inquiry.

Within the parameters of the terms of reference, the need for an effective management system, the control of septic tank effluents, the adverse impact of untreated or poorly treated effluent on catchment conditions, and the issues raised herein, are considered relevant to all catchments across the Country.

This proposal is consistent with a draft, National Strategy for the Management of Environment Health, published by the National Environment Health Forum, which recommends:-

1. A system of national environmental health standard setting should be established;
2. Review and upgrade of existing standards and the establishment of new standards (Domestic waste water) to maximise the consistency of management frameworks between sectors and across jurisdictions; and
3. An increase in confidence of communities and industry by providing consistency of standards throughout Australia.

It is respectfully suggested that a national framework comprise:

1. The development of a National 'Model,' for on-site domestic waste water administration and management issues, for agreement and adoption by all State and Territory Governments in Australia.
2. The consolidation of all the provisions pertaining to on-site domestic waste water administration and management, into a 'Model Act'.

Such provisions to include:-

1. Objectives, being the protection of water catchments and water supplies, public health and the environment from septic tank effluents;
2. Planning instruments for effluent land capability assessment for sub-division applications, the use and development of land in unsewered areas and referrals to and from Water and Sewerage Authorities, Catchment Authorities, Public Health and Building Agencies, and the relevant (land use planning) Authority;
3. An approvals process for septic tank installation assessment, the use or conditional issue of permits or refusal of permits to install and use of septic tank systems;
4. Monitoring and maintenance requirements of installed systems, including powers and functions to serve notices to repair or rectify failing, leaking or defective septic tank systems.
5. Certification levels for all trained and competent personnel involved in the various aspects of Septic Tank management, including an installation and maintenance competency level over and above, sanitary plumbing and drainage. Sanitary plumbing and drainage, meaning within the scope of Australia/New Zealand Standard 3500.2.2:1996. – Sanitary plumbing and drainage- Acceptable solutions, ‘the design and installation of sanitary plumbing and drainage from fixtures to a sewer, common effluent system or on-site disposal system.’

Alternatively, due to the detrimental impact of septic tank effluent on water catchments and the shared objectives of Water Catchment and septic tank management legislation, the consolidation of the provisions for septic tank control and administration, being placed under the umbrella of Catchment Management legislation in each State and Territory.

A similar Environmental Health proposal for the future management of septic tank systems in Victoria, has been submitted to the Hon Patrick McNamara, Deputy Premier and Minister for Agriculture and Resources, the Minister responsible for administering the Water, Sewerage and Catchment Management legislation in this State.

Your support for the protection of our waterways and catchment from failing or illegal septic tanks and an Environmental Health approach for the management of these systems would be most appreciated.

Should you require further information on any issues raised herein, please do not hesitate in contacting Mr Patrick Garry, Environmental Health Officer, by telephone on (03) 5320 5663 during office hours.

Yours sincerely

Alex Serrurier
Chief Environmental Health Officer