

NEW SOUTH WALES ON-SITE SEWAGE MANAGEMENT REFORMS

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Abstract

In March 1998, the NSW Minister for Local Government announced a package of local government regulatory reforms and guidelines to enable more effective council regulation and performance supervision of decentralised sewage management systems. The *Local Government (Approvals) Regulation* 1993 as amended by the *Local Government (Approvals) Amendment (Sewage Management) Regulation* 1998, specifies performance standards for sewage management and requires council approval for the ongoing operation as well as the initial installation of a *system of sewage management* (as defined). Guidelines to assist councils to develop decentralised sewage management systems (prepared in consultation with the NSW Environment Protection Authority, the NSW Department of Land and Water Conservation and NSW Health) were published by the Department of Local Government in 1998. Financial assistance of up to \$3.8 million over two years is being provided to assist councils to register individual sewage systems, to develop decentralised sewage management strategies and to develop risk based sewage pollution action plans for sensitive areas.

The On-site Sewage Management (OSM) program involves a two-tier approach with financial assistance for OSM strategy projects to identify, and develop supervision strategies for on-site sewage systems in all council areas, and OSM enhancement projects for more comprehensive sewage pollution action plans in sensitive coastal catchments. Assistance will also be provided to develop research, education, data-management and training projects.

This paper describes the NSW sewage management reforms and the process for implementation of the On-site Sewage Management Program.

Keywords:

decentralised sewage management, sanitation, septic systems, water quality.

1 Background to Legislative Reforms

“The problem is not that on-site systems are inadequate; it is that we have not accepted the fact that on-site systems are treatment plants that must be designed and maintained by qualified people.”

-R.J. Otis, *Onsite Wastewater Treatment* (1994).

Surveys have been indicating for some time that both council administrators and individual householders were facing difficulties managing and maintaining on-site wastewater management systems. This was not just a concern for coastal catchments. Effluent from septic tanks poses risks in the Murray Darling Basin especially in settlement areas, in areas discharging to ephemeral waterways, areas which rely on groundwater sources for water, and potable water catchments. The Local Government and Shires Association and councils throughout New South Wales (NSW) called for more effective powers and revenue mechanisms to address this problem.

The *Local Government (Approvals) Amendment (Sewage Management) Regulation* 1998 was gazetted on 6 March 1998. The Regulation:

- prescribes the operation of a system of sewage management (as defined) for the purpose of council approval under section 68 of the *Local Government Act, 1993* (and consequently allows performance conditions to be imposed and regulatory fees to be charged under section 608);
- specifies universal performance standards for on-site sewage management activities, including protection of public health, the environment and public amenity; and
- clarifies the accreditation roles and responsibilities of NSW Health (Hogan *et al*, 1998).

Under Ordinance 44 of the former NSW *Local Government Act, 1919* (repealed in June 1993) local councils were required to seek approval from the NSW Department of Health for the installation of each on-site sewage system and were required to inspect all septic tanks at least once per year.

The requirements for Health Department approval and annual inspection were often seen as impractical and were not always complied with. This system was replaced from July 1993 with a requirement for council installation approval and Health Department accreditation of treatment devices. Councils were given general order powers to enforce maintenance and management requirements. However, as councils were not able to charge fees for regulating on-site sewage systems, the enforcement powers were used in exceptional circumstances only and there was little incentive for councils to develop effective management systems. Growing concerns with public health impacts prompted the development of guidelines and a review of relevant local government regulations. The subsequent 'Wallis Lake Oyster Contamination Incident' in early 1997 confirmed the need for regulatory reform and the establishment of management systems based on universal performance standards and principles of total catchment management, planned risk management and community education and empowerment.

In addition to the existing requirement for council approval to construct, install or alter a sewage treatment device and drains, landowners are now required to obtain council approval for the operation of a system of sewage management on their land unless they are subject to a conditional exemption specified in the regulations or the council's Local Approval Policy. The new operating approval mechanism establishes universal environment and public health protection standards for sewage management and allows each council to determine specific operating requirements in particular circumstances. In low risk circumstances landowners may be exempted from the approval requirement provided they comply with the universal environment and health protection standards. The new operating approval is the basis for decentralised sewage management schemes involving landowners and the council. Councils are required to prepare and publish an on-site sewage management strategy for their area and to link the strategy with other planning and accountability processes including catchment management plans, stormwater management plans, council management plans and budgets and council state of the environment reporting, all of which are required under various Acts and Regulations.

2 On-site Sewage Management Program

The On-site Sewage Management Program has been developed to assist local government and the community to meet the challenge of managing on-site systems sustainably. The OSM Program aims to improve health and environmental outcomes by enhancing the capacity of councils to monitor, manage and regulate sewage pollution in accordance with the principles of Ecologically Sustainable Development.

To achieve this objective the OSM Program will assist councils to:

- identify and assess existing on-site sewage management systems;
- develop and implement local government policies and programs to supervise the operation of those systems and to manage cumulative pollution impacts;
- assess the impact of sewage pollution on sensitive catchments and to implement pollution action plans for those catchments, including monitoring and assessment of pollution risks and the implementation of management programs;
- implement sustainable on-site sewage management practices through a range of local government functions including: land use/settlement planning and development controls; the

supervision of on-site sewage facilities, and environmental monitoring, reporting and management services; and,

- establish ongoing accountability through the Council's State of the Environment Report.

The OSM program involves a two-tier approach with financial assistance for **OSM Strategy Projects** to manage the registration of existing systems and to develop appropriate supervision and support strategies, and for **OSM Enhancement Projects** to further develop comprehensive management models and sewage pollution action plans, particularly for drinking water catchments and waterways used for shellfish production.

3 OSM Strategy and Enhancement Projects

Each council must develop an On-site Sewage Management Strategy which outlines council's and householder's responsibilities, identifies key objectives, programs and performance indicators for sustainable decentralised sewage management in the council's area, and the related management and compliance requirements, including, registration, approval and audit procedures, classification of low, medium and high risk circumstances related to environmental sensitivities and the development of performance requirements for specific areas. The Strategy must also identify procedures for monitoring water quality and the cumulative impact of effluent and bio-solids and the ongoing review of the Strategy itself, with appropriate community involvement and education programs.

The OSM Program has been established by the NSW Government to assist councils with this task and, in addition to financial assistance, the Department of Local Government (DLG) is developing a number of generic implementation tools. These include:

- an OSM Strategy Handbook detailing the development of a decentralised sewage management strategy;
- an OSM Information Management Handbook to assist councils to develop a appropriate database using existing administration systems. The OSM database should identify the location, character, approval conditions and maintenance records for each system;
- an OSM Sewage Pollution Risk Assessment Handbook which will outline a process for integrating council sewage management facility data with relevant planning and catchment management data including information such as soil types, topography, hydrology and hydro-geology, climate, land use, sediment loads and other natural resource management information from government departments;
- an OSM Community Education Handbook providing a plain language guide for householders and community groups;
- an OSM Training Program for council officers and inspectors; and
- an OSM Evaluation Handbook discussing the selection of performance indicators and program evaluation procedures.

The Sewage Pollution Risk Assessment Handbook will assist Councils to develop management systems to identify and monitor environmentally sensitive areas and to ensure that planning for unsewered residential development addresses the cumulative impact of decentralised sewage management, particularly in shellfish food production estuaries and drinking water catchments in the coastal zone.

Councils are encouraged to implement an integrated pollution assessment and management system which complies with the framework of the ISO14000 Environmental Management Systems. This framework will help to ensure that auditing, management, program evaluation and reporting mechanisms fit neatly with other council planning and reporting requirements including the preparation of Council Management Plans and State of the Environment Reports. This approach will help councils implement comprehensive environmental management systems covering all relevant activities, including landfills, depot management and sewage treatment plants.

4 Research Projects - Progress and Verification

Councils require access to good quality research data if they are to adopt a parametric, performance-based approach to supervising decentralised sewage management systems. This is particularly necessary when councils are asked to set standards for new development and to consider proposals for retrofitting or upgrading existing on-site sewage systems. Funding for OSM research projects will aim to provide scientifically valid information which will assist the OSM Program (and industry practitioners in general) to meet the challenge of achieving sustainable decentralised sewage management outcomes. Many advances have been made in the area of on-site sewage management and many myths exploded through ongoing research. The combination of striving for best practice and ongoing research has led to a thorough revision of current industry standards (in the Standards Australia publication, AS 1547) in less than 5 years!

5 Technical Advisory Panel and Discussion Group

To assist OSM program officers to assess applications for funds, an OSM Technical Advisory Panel (TAP) is being established for the life of the program, to provide integrated assessment of technical issues and advice to the Department of Local Government concerning the administration of the OSM Program. The TAP will meet four to six times each year. Both government agencies, non-government organisations and an independent chairperson will sit on the TAP.

One of the great boons of the 'Information Age' is accessibility to e-mail and through this, the wealth of information and experience which has been accumulated by those working in the area of on-site sewage management. Council officers and other interested participants have access to an informal e-mail Discussion Group (the OSMList) which encourages on-line discussion and information exchange between participants. The OSM List also allows easy distribution of reports and technical notes by Department of Local Government and provides council officers and consultants with an opportunity to seek 'back-up advice' when problems arise. Access to the OSM List is not automated at this stage. Intending subscribers should contact the Department of Local Government (e-mail <osmadmin@dlg.nsw.gov.au>). This forum complements the NOSSIG (National On-site Systems Interest Group) discussion group which operates through Australian Water and Wastewater Association Web page at a national level.

6 On-site Sewage Management Guidelines

The [DLG, 1998] Environmental and Health Protection Guidelines: On-site Sewage Management for Single Households ("the Guidelines" or colloquially "the silver bullet") were issued to assist councils to regulate the installation and use of on-site sewage management systems. The Guidelines address:

- the regulatory framework;
- the development of local sewage management strategies;
- administration and operational issues;
- site assessment principles; and
- principles for selection and operation of on-site sewage systems.

The Guidelines explain the prescribed environment and public protection standards for on-site sewage management facilities and provide advice on site assessment, system selection, and effluent application areas receiving up to 2000 litres of wastewater per day. The Guidelines recommend that sewage management issues should be addressed at the earliest stage of council land use planning. A range of appendices are included, and these will be supplemented in the near future with further Technical Sheets addressing those issues which have been highlighted by council officers as requiring further attention or clarification.

The Guidelines, as with any report based on interpretation of scientific research, contain some information which is still the subject of debate amongst industry professionals. Errata have been published to address errors, and when consensus is reached on other contentious issues, some parts of the document may be further revised. At this time the guidelines serve as the 'first base' direction for

council professionals to provide consistent advice, endorsed by NSW Government Agencies, based on the best information available at the time of publishing.

7 Regional Coordination

Regional co-ordination is an essential part of the implementation strategy for the sewage management reforms. The benefits of regional cooperation and coordination include:

- better catchment management outcomes;
- cost savings to individual councils through joint development of policies and procedures and coordinated administrative arrangements;
- professional peer support for council staff;
- a consistent message to householders and on-site sewage operators;
- a co-ordinated approach to liaison with industry, including developers, professional consultants, private certifiers, service agents and plumbers; and
- capacity to develop regional research projects, information and education strategies linked to other catchment management or administrative initiatives.

For example, councils in a region may establish a joint water policy committee under section 355 of the Local Government Act 1993 to undertake delegated tasks on behalf of some or all of the member councils. The committee structure provides a formal mechanism for provision of joint services while retaining individual council accountability. Tasks undertaken may be located with a particular council and funded on an agreed cash transfer, kind or good-will basis. Tasks may be contracted out or may be undertaken by nominated officers jointly. This mechanism can be used to coordinate joint work including development of policies and procedures, technical assessment of complex applications, coordination of environmental monitoring and State of the Environment reporting and a range of general administrative services. The maintenance of a joint council register of 'qualified' service agents for maintenance and servicing (eg. septic pump-out and de-sludging procedures and maintenance of mechanical devices and effluent application areas) is strongly recommended by the Department of Local Government. A regional joint register of private certifiers should also be considered.

Where regional organisations of councils (ROCs) or other local government coordination and peer support groups have been established they may be able to facilitate regional coordination processes.

8 Program Review

Towards the end of the two year implementation period for the OSM Program, an evaluation will be undertaken by Department of Local Government with input from council officers and other State Agencies. The OSM Program has been developed within the general framework of ISO14000 IEMS (Integrated Environmental Management Systems) to facilitate the review and documentation process. The Department of Local Government welcomes feedback throughout the program to assist evaluation. For example, requests from industry representatives and council officers has already led to the initiation of Technical Sheets to supplement the Guidelines.

The revised industry standard (AS1547 – due for publication in late 1999) will help to ensure that NSW design and construction requirements are in line with those endorsed at a national level and in New Zealand. Councils will be encouraged to adopt the proposed industry standard to the extent that the standard supports and complements the universal environment and health protection rules specified in local government regulations and is consistent with the sewage management objectives set out in the Guidelines.

9 Conclusion - the way ahead

The NSW sewage management reforms require landowners and operators of decentralised sewage management systems to take reasonable responsibility for the operation and maintenance of those systems, to eliminate risks to public health, and to minimise pollution and negative impacts on community amenity. The present 'state of play' for decentralised sewage management in NSW has

evolved over a long period of time and there is no expectation that it can be comprehensively addressed, let alone fully resolved, in the short term. Sewage management reform will require a consistent process of council management system development, officer training and community education, supported by ongoing industry research and development programs.

Councils are expected to develop and implement least cost strategies for sustainable on-site sewage management in consultation with communities and to keep those strategies under review. The Department of Local Government will continue to work with councils to ensure that administrative arrangements are efficient and appropriate for local circumstances. Some councils will find that intensive auditing programs and betterment strategies are required to ensure that immediate health and environmental risks are minimised. Funds from the OSM Program will help councils to identify and address these problem areas.

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