



Government of **Western Australia**
Department of **Health**

Consultation Summary

Consultation Paper – Managing public health risks from wastewater conveyance, treatment and disposal in Western Australia



Content

Content	i
List of figures	iii
List of tables	vi
Summary	10
Background	11
Objectives and principles	12
Methodology	12
Summary of responses	14
Chapter 1 Regulatory options investigated	15
Chapter 1 Summary and recommendations	19
Chapter 2 Proposed regulatory requirements	21
Proposal 2.6 Summary and recommendations	34
Chapter 3 Proposed regulations for reticulated sewerage schemes	35
Proposal 3.4 Summary and recommendations	48
Chapter 4 Proposed regulations for managing onsite wastewater systems	49
Proposal 4.1 Overarching governance of onsite wastewater systems	50
Proposal 4.2 Power to prescribe training standards	51
Proposal 4.2 Summary and recommendations	51
Proposal 4.3 General requirements for onsite wastewater systems	52
Proposal 4.3.3 Summary and recommendations	65
Proposal 4.4 Installation, modification and decommission requirements	67
Proposal 4.4.1 Approval to install	67
Proposal 4.4.2 Summary	73
Proposal 4.4.3 Temporary onsite wastewater systems	74
Proposal 4.4.4 Exemptions from registration	76
Proposal 4.4.5 Modifications to onsite wastewater systems	79
Proposal 4.4.6 Decommissioning an onsite wastewater system	81
Proposal 4.4.7 Wastewater products from systems which use alternative technologies	83
Proposal 4.5 Additional system design requirements	86
Proposal 4.5.1 Calculation of flow rates	87
Proposal 4.5.2 Calculation of design load rates (infiltration rates)	89
Proposal 4.5.3 Calculating size of land application systems	90
Proposal 4.5.4 Site and soil evaluations	91
Proposal 4.6 Ongoing requirements for secondary onsite wastewater systems	98
Proposal 4.6.1 Servicing: schedules, requirements and reporting	99
Proposal 4.6.2 Testing requirements	102

Proposal 4.6.3 Scheduled testing requirements	104
Proposal 4.7 Prescribe the appropriate enforcement agency	106
Proposal 4.8 Premises which contain more than a single dwelling	108
Proposal 4.9 Requirements for onsite wastewater system installers and service technicians.	109
Proposal 4.9.1 Require minimum qualifications and experience for installation of an onsite wastewater system	109
Proposal 4.9.2 Minimum requirements for onsite wastewater service technicians	112
Proposal 4.9.3 Training requirements for service technicians	115
Proposal 4.10 Referenced standards and guidance material	117
Proposal Implications	118
Sewerage scheme operators	121
Other areas of the wastewater industry and businesses	121
Recommendations	128
Appendix 1 – Stakeholder Engagement List	131
Appendix 2 – Consultation submission list for discussion papers	132
Appendix 3 – Collective Submission	134
Appendix 4 – Citizen space online survey questions	140
Appendix 5 – Proposed Definitions	151
Appendix 6 – Calculation Comparison	152
Appendix 7 – Recommendations	154

List of figures

Figure 1 Number of stakeholders by category who responded to the Discussion Paper	10
Figure 2 Number of responses for each Option received during the consultation period	15
Figure 3 Support for Option 1 (n=9, 13.2%) to retain the status quo	16
Figure 4 Support for Option 2 to deregulate the industry (n=2; 3%)	16
Figure 5 Support for Option 3 to develop new regulation (n=56; 82 %)	17
Figure 6 Respondent preferences to mandate use of Australian Standards	18
Figure 7 Percentage of respondents in support of the proposed definition of wastewater	21
Figure 8 Respondents who supported defining a wastewater product	22
Figure 9 Proposed definitions for new regulation	23
Figure 10 Responses to general declaration for managing wastewater	24
Figure 11 Responses to requirements to maintain a system in good working order	24
Figure 12 Support for requiring connection to reticulated sewerage	26
Figure 13 Respondents views on timeframes for connecting to reticulated sewerage	27
Figure 14 Respondent feedback on exemptions to connect to sewerage	28
Figure 15 Response to require an onsite wastewater system to be installed if no reticulated sewerage	29
Figure 16 Responses to mandatory reporting of overflow events	30
Figure 17 Feedback on calling up the wastewater overflow procedure in new regulation	31
Figure 18 Declarations for managing overflow events	32
Figure 19 Support for proposed mandatory reporting events	33
Figure 20 Responses for remediation and testing after an overflow event	34
Figure 21 Preferred options for managing wastewater schemes	36
Figure 22 Requirement to notify of changes to the registration of a scheme	37
Figure 23 Proposed auditing requirements for schemes	39
Figure 24 Feedback on time frames for internal audits	40
Figure 25 Feedback on timeframes for external audits	41
Figure 26 Feedback on timing for submission of external audits	41
Figure 27 Feedback on responsibility for engaging an auditor	42
Figure 28 Feedback on provision of guidance material for selecting an auditor	42
Figure 29 Feedback on whether an audit should follow the Australian Sewerage Quality Management Guidelines	43
Figure 30 Requirements for risk management plans from scheme operators	44
Figure 31 Requirement for risk management plans if Option 2 is the preferred regulatory option	44
Figure 32 Requirement to provide DoH with a risk management plan on request	45
Figure 33 Feedback on the framework to develop risk management plans	45
Figure 34 Feedback on the DoH developing guidance material or a code of practice to guide development of risk management plans	46
Figure 35 Feedback on including wastewater products as a part of registration of a scheme ...	47
Figure 36 Feedback on requirements for amending a registration	47
Figure 37 Feedback on the approach to be used for regulating recycled water products	48
Figure 38 Responses for the requirements for local government to have in place a system of governance	50
Figure 39 Feedback on the power to prescribe minimum training or skills for operating and maintaining an OWS	51
Figure 40 General proposals for managing OWS	52
Figure 41 Number of responses supporting some generalised minimum requirements for managing OWS	56
Figure 42 Responses to the proposal for new regulation to set minimum siting requirements for OWS	57

Figure 43 Responses to the proposal for new regulation to specify minimum siting requirements for land application systems.....	57
Figure 44 Support for a prescriptive or risk based approach to setting minimum siting distances for OWS.....	58
Figure 45 Responses for consideration of other literature to set minimum siting distances.....	58
Figure 46 Responses supporting the design of OWS in accordance with Australian Standards .	60
Figure 47 Certification requirements for onsite wastewater systems	60
Figure 48 Responses to JAS-ANZ certification and automatic approvals	61
Figure 49 Respondents views on the the types of onsite systems which should be approved for use	62
Figure 50 Respondents views on approval from the Chief Health Officer for alternative design of onsite wastewater systems	63
Figure 51 Information required for approval of alternative or new technologies in onsite wastewater treatment.....	63
Figure 52 Approval of land application systems by the CHO	65
Figure 53 Responses for the proposal for an 'approval to install' process	68
Figure 54 Evidence to be provided by applicants to demonstrate an onsite wastewater system is fit for purpose	69
Figure 55 Proposed details required for an application to install an onsite wastewater system .	69
Figure 56 Registration requirements for onsite wastewater systems.....	70
Figure 57 Proposed conditions that could be placed on the registration of an onsite wastewater system.....	71
Figure 58 Proposal for automatic registration of existing onsite wastewater systems.....	71
Figure 59 Requirements for amended registrations	72
Figure 60 Establishing local government as the prescribed authority for registering onsite wastewater systems.....	72
Figure 61 Proposal to enable authorised officers to inspect onsite systems to determine they are still fit for purpose.....	73
Figure 62 Number of responses for the approval process of temporary OWS.....	74
Figure 63 Number of responses for when a temporary OWS should be approved.	75
Figure 64 Proposed requirements of temporary onsite wastewater systems (holding tanks).....	75
Figure 65 Requirements for operating a temporary onsite wastewater system.....	76
Figure 66 Proposal for local government to grant exemptions from registration of an onsite wastewater system	77
Figure 67 Proposal to exempt onsite wastewater systems if they are licensed under the Environmental Protection Act.....	78
Figure 68 Proposal for regulation to state who can modify an onsite wastewater system	79
Figure 69 Proposal for notification of modification of an onsite wastewater system.....	80
Figure 70 Proposal for regulation to require a new registration in some circumstances	80
Figure 71 Proposal to require new regulation to set who can decommission an onsite wastewater system	81
Figure 72 Proposal to require new regulation to set conditions for decommissioning.....	82
Figure 73 Proposal for alternative technologies to be regulated the same as current onsite wastewater systems.....	83
Figure 74 Proposal for a code of practice to manage certain design requirements for onsite wastewater systems.....	86
Figure 75 Proposal for design flow rates for onsite wastewater systems to be based on Australian Standard AS/NZS1547:2012.....	87
Figure 76 Proposal for regulation to adopt a per person, per day flow rate.....	87
Figure 77 Respondents who supported lower flow rates for technologies that used less water	88
Figure 78 Responses supporting design loading rates from the Australian Standards	89
Figure 79 Preferences for determining the size of a land application system	90

Figure 80 Proposal for onsite wastewater systems to be provided in a code of practice	91
Figure 81 Proposal for site and soil evaluations for single dwellings	92
Figure 82 Requirements for a site and soil evaluation for single dwellings	93
Figure 83 Responses to the requirements for all lots other than a single dwelling to submit an SSE in the application to install.....	93
Figure 84 Proposal for exemptions of site and soil evaluation in some circumstances.....	94
Figure 85 Responses to developing guidance material for conducting an SSE.....	95
Figure 86 Managing the requirements for servicing of onsite wastewater systems	98
Figure 87 Responses to DoH setting the service schedule as part of the product approval.	99
Figure 88 Feedback on proposed servicing requirements for secondary treatment units.	99
Figure 89 Reporting requirements for service technicians	100
Figure 90 Requirements for notification of a service to local government of a secondary treatment unit.	101
Figure 91 Responses to the proposal for service technicians to submit a report if they have concerns about system performance.....	102
Figure 92 Responses to the proposal for regulation for authorised officers to request testing of an onsite wastewater system	103
Figure 93 Responses to the proposal to create regulation to require testing of an onsite wastewater system after installation.	104
Figure 94 Proposed regulation to require scheduled testing	104
Figure 95 Proposal to require scheduled testing as part of an onsite wastewater system registration	105
Figure 96 Identifying who should retain results from testing of onsite wastewater systems.....	105
Figure 97 Responses to the proposed roles of enforcement agencies	107
Figure 98 Feedback on exemptions from licensing.....	110
Figure 99 Feedback on having specialised tickets for licensed installers	110
Figure 100 Requirements for servicing an onsite wastewater system	112
Figure 101 Types of system that require qualifications to service.....	113
Figure 102 Responses for allowing exemptions to hold a licence to install an onsite wastewater system.....	113
Figure 103 Responses to Department of Health managing service technicians	114
Figure 104 Feedback on evidence required to be an authorised service technician.....	114
Figure 105 Response to service technician requiring training.....	115
Figure 106 Feedback on proposed training requirements for service technicians	116
Figure 107 Responses to the proposed reference and guidance material.....	117
Figure 108 Responses to the benefits of the proposed regulations on the community	118
Figure 109 Responses to the listed cost of the proposed regulations on the community.....	119
Figure 110 Responses to the proposed benefits to industry and business	122
Figure 111 Responses to the listed cost of the proposed regulations on the business and industry	123
Figure 112 Responses to referencing the Australian Standard in new regulation.....	123
Figure 113 Responses to the proposed benefits of new regulation on enforcement agencies	124
Figure 114 Responses to the listed cost of the proposed regulations on enforcement agencies	125
Figure 115 Responses to additional support for enforcement agencies.....	126

List of tables

Table 1 Total number of responses received during the consultation period categorised by stakeholder group (answered at least one question in chapter).....	14
Table 2 Support for Option 3 by sector, expressed as a percentage	17
Table 3 Feedback on how regulation should call up mandatory reporting events.....	30
Table 4 Proposed situations that would require mandatory reporting in the event of a wastewater discharge	33
Table 5 Registration of wastewater schemes.....	37
Table 6 Options for auditing and risk management plans for schemes.....	38
Table 7 Options for defining which wastewater schemes should be registered	38
Table 8 Audit types proposed for scheme operators.....	40
Table 9 Feedback on who should determine the framework for risk management plans.....	46
Table 10 Proposed regulatory requirements for the management of onsite sewerage systems	54
Table 11 Activities required to decommission an onsite wastewater system	82
Table 12 Proposal for the content of a site and soil evaluation.....	95
Table 13 Options for who can conduct a site and soil evaluation.....	95
Table 14 Proposed enforcement agencies and their role.....	107
Table 15 Options for managing multiple onsite wastewater systems on a single lot.....	108
Table 16 Options for the requirements to be an installer	109
Table 17 Options for who should manage a licensing system for installers	111
Table 18 Managing service technicians	113
Table 19 Training requirements for service technicians	116

Acknowledgement to country

The Department of Health acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal and Torres Strait Islander communities and their cultures, and to Elders past, present and emerging.

This document can be made available in alternative formats on request for a person with a disability.

© Department of Health 2022

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the Copyright Act 1968, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.

Acronyms

DoH	Department of Health
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning Lands and Heritage
DWER	Department of Water and Environment Rgulation
EHD	Environmental Health Directorate Department of Health
EHO	Environmental Health Officer
EPA	<i>Environmental Protection Act 1986</i>
ERA	Economic Regulation Authority
GSP	Government Sewage Policy
JAS-ANZ	Joint Accreditation System of Australia and New Zealnd
MEHMG	Metropolitan Environmental Health Managers Group
NCC	National Construction Codes
OWS	Onsite wastewater system
PH Act	<i>Public Health Act 2016</i>
SSE	Site and Soil Evaluation

Summary

This report summarises community, government and industry stakeholder responses to the Department of Health consultation paper entitled ‘*Managing public health risks from wastewater conveyance treatment and disposal in Western Australia – January 2021*’. This report includes information received by the Department and outlines the next steps to update the regulation of wastewater.

The DoH is reviewing current regulations under the *Health (Miscellaneous Provisions) Act 1911* (the Health (MP) Act) and the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974* (the Wastewater Regulations) as part of the implementation of Stage 5 of the *Public Health Act 2016* (the Public Health Act). The purpose of the consultation was to assess the effectiveness of the regulations and to determine if they are fit for purpose for current and future sewage management requirements.

A Wastewater Working Group (WWG) comprising 10 stakeholders from local government was formed to review the existing management of public health risks. The WWG addressed the following:

- discrepancies between the Government Sewerage Policy (2019) and current regulations
- limitations of the current regulations
- the direction of future regulation
- calculations for land disposal areas and leach drain lengths using the current regulations and the Australian Standard
- provided feedback on the draft wastewater consultation paper.

In February 2021, the DoH released the consultation paper and invited submissions before a closing date of 21 May 2021. Following several requests for extension, the consultation period was extended to 18 June 2021, providing stakeholders with eighteen (18) weeks to respond.

The consultation paper examined current regulations to address two key areas:

1. reticulated and non-reticulated sewerage schemes
2. onsite wastewater systems.

Community and stakeholder feedback over the eighteen (18) week consultation phase resulted in a total of sixty-eight (68) submissions being received with several late submissions accepted.

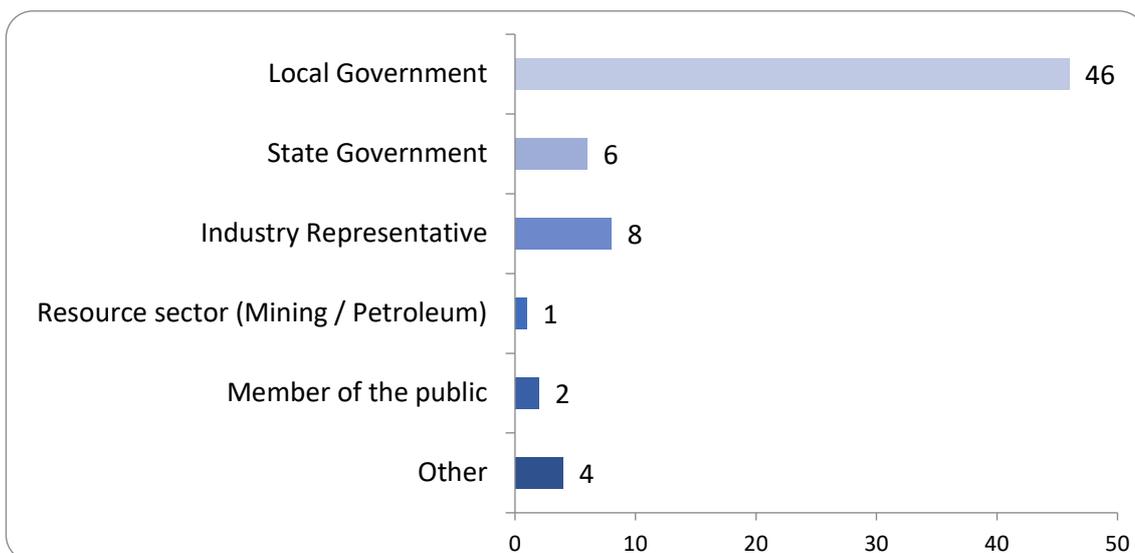


Figure 1 Number of stakeholders by category who responded to the discussion paper

Respondents were asked to consider three options:

1. retain the status quo
2. deregulate the wastewater industry and repeal the current legislation associated with wastewater management
- or
3. develop new public health regulations.

Overwhelmingly, respondents supported option 3 – to develop new public health regulations that include compliance with the Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units, Code of Practice for Product Approval of Onsite Wastewater Systems and the Wastewater Overflow Procedures.

The DoH would like to acknowledge the contribution of each respondent to the review and whilst it is not possible in a summary report to represent every viewpoint, this report details the main issues and themes raised in the stakeholder consultation, highlighting key points of contention and consensus. The comments reported in this document are the views of respondents to the discussion paper and are not to be taken as the views of the DoH.

The DoH recommendations are provided in text boxes.

Background

The key focus of this review is to obtain feedback on the most effective option for managing the potential public health risks associated with sewage management in WA.

With the introduction of the Public Health Act, the Wastewater Regulations under the Health (MP) Act must be reviewed and either repealed or replaced with new regulations in line with the new regulatory framework of the Public Health Act.

The consultation paper analysed the various options for managing the public health risks of sewage management systems in WA and identified potential advantages and disadvantages of each option to industry, consumers and government. Three options considered as part of this review are:

- Option A – retain the status quo
- Option B – deregulate and repeal the current legislation
- or
- Option C – develop new public health regulations for wastewater management.

Option C requires new regulations to align with the risk-based approach of the Public Health Act and provides an opportunity to remove outdated regulations. New regulations may also be written in a manner that allows for the introduction of emerging technologies for treatment of sewage and be sustainable and adaptive to changing climate conditions.

Full details of the consultation are detailed below.

Objectives and principles

The four objectives for managing the public health risks associated with sewage management are to:

1. protect public health in relation to how sewage is managed
2. create a consistent and clear statewide regulatory framework for the management of public health risks associated with sewage systems servicing WA buildings
3. align with Australian/New Zealand Standards and national guidelines associated with wastewater management
4. align with the legislation administered by other regulatory agencies to decrease the regulatory burden on industry and members of the public.

Note: Public health is defined in the Public Health Act to mean the health of individuals in the context of the health and wellbeing of the wider community.

New regulation would align with the five principles of the Public Health Act:

1. sustainability principle
2. precautionary principle
3. principle of proportionality
4. principle of intergenerational equity
5. principle relating to local government.

Part IV, Division 4 of the Health (MP) Act sets out the requirements for the provision of sanitary conveniences. There are four (4) regulations made under Health (MP Act) that detail the requirements for the provision of sanitary conveniences. These regulations are also being reviewed as part of the implementation of Stage 5 of the Public Health Act and are subject to separate discussion papers. As such, these regulations will not be considered any further in this paper.

Methodology

The discussion paper was circulated to a total of 137 local government authorities, fourteen (14) State Government authorities and approximately 390 industry stakeholders (including representative bodies and individuals). The consultation was advertised in the DoH's Environmental Health Directorate (EHD) newsletter which is distributed to ~ 1100 subscribers.

Industry consultation included installers, consultants and manufacturers identified through their participation in DoH training courses, DoH data for approved systems, the Economic Regulation Authority website and listings in the Yellow Pages™ – see [Appendix 1](#) for a full list of stakeholder groups invited to respond.

Stakeholders were invited to comment on the DoH's '*Managing public health risks from wastewater conveyance, treatment and disposal in Western Australia*' consultation paper ([available on the DoH website](#)) via:

1. the online [citizen space survey](#)
2. emailing publichealthact@health.wa.gov.au
or
3. mailing a hard copy submission to the EHD.

Workshops

During the development of the consultation paper the DoH conducted two meetings with a working group that comprised 10 Environmental Health Officers (EHOs). The first of two meetings allowed EHOs to raise issues they would like to see addressed in future regulation. The second meeting

addressed concerns raised on the Australian / New Zealand Standard for sizing land application systems (LAS). This included opportunities to work through example calculations.

Additional consultation

Additional consultation was initiated with an industry association after they raised concerns with the Minister for Health.

A meeting was held with a State Government agency to discuss the implications of the discussion paper for managing their assets.

Three representatives from the DoH attended an EHO group meeting to address questions from the group.

Summary of responses

The DoH received a total of sixty-eight (68) responses (refer to [Appendix 2](#) for a combined list of respondents). Not all respondents answered all questions. To assist in analysis, all percentages for proposals are calculated using sixty-eight (68) as the number of respondents.

Stakeholder	Response Chapter 1 Regulating wastewater conveyance, treatment and disposal	Response Chapter 2 Current legislation for wastewater management and public health	Response Chapter 3 Proposed regulatory requirements for reticulated systems	Response Chapter 4 Proposed regulations for onsite water systems general requirements	Response Chapter 5 Proposal Implications
Local Government Authority	45	45	33	45	46
State Government Authority	7	7	4	6	6
Industry	10	10	9	10	10
Members of the Public/Other/Resource Mining	5	5	5	5	5
Total	67	67	51	66	67

Table 1 Total number of responses received during the consultation period categorised by stakeholder group (answered at least one question in chapter)

Based on the number of targeted responses the overall response rate was 12.5%. Fifty (50) of these submissions were received online via the Citizen Space survey, with fifteen (15) submissions and supplementary comments received by email. Fifty-six (56) letters were returned because of an incorrect postal address. A follow up found that the majority of these were small businesses that no longer operated.

Most responses received were from local government (n=46). Forty-three (43) submissions were received from EHOs from local government authorities, two (2) submissions from a local government representative association (WA Local Government Association and a meeting of EHOs at the Metropolitan Environmental Health Management Group), and one (1) submission from a professional industry (Environmental Health Association, WA branch). The State Government response was 50% (n=7) of invited participants. The response rate from industry was smaller than expected with only ten (10) responses. This category included installers, manufacturers and service agencies.

Of the forty-six (46) local government submissions, twenty (20) responses were submitted using the same template and content. This template can be found at [Appendix 3](#). It is unclear if these submissions were endorsed by the respective local government councils.

While local government submissions that used the identical template were counted as individual submissions, the comments were treated as a single comment that represented the collective as a group. This should be considered by the reader when interpreting responses.

Chapter 1 Regulatory options investigated

Questions 5 to 7 invited respondents to nominate a preferred option for managing the conveyance, treatment and disposal of wastewater. Feedback was also sought on whether to mandate compliance with a suite of Australian/New Zealand Standards.

Respondents were asked to nominate their preferred option from the three options:

- Option 1 – retain the status quo
- Option 2 – deregulate
or
- Option 3 – develop new regulations.

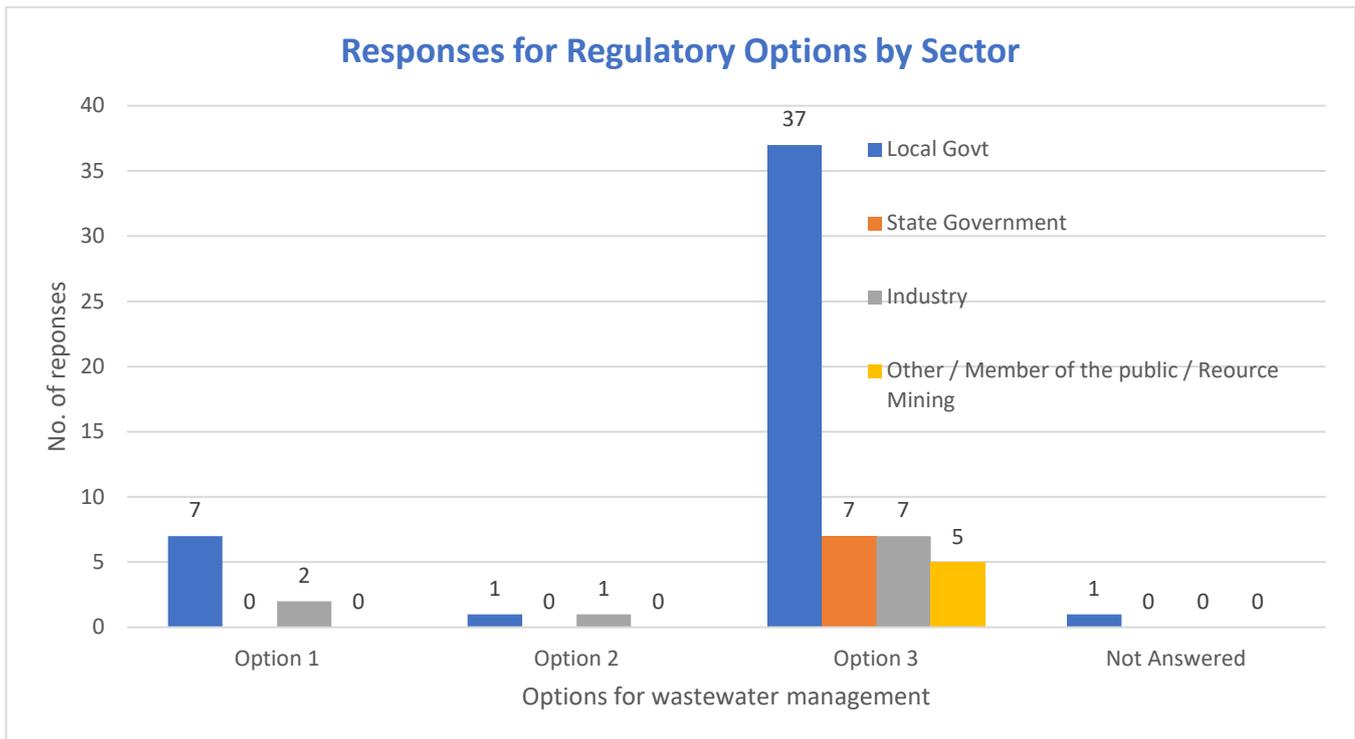


Figure 2 Number of responses for each option received during the consultation period

Notes: Option 1, 13% of total responses, Option 2, 3% of total responses, Option 3, 82% of total responses.

Option 1 – Retain the status quo

Nine (9) respondents (seven (7) from local government and two (2) from industry) supported maintaining the status quo by retaining the equivalent legislative provisions under the Public Health Act (Figure 3). The main reason cited for selecting this option was that the *'current regulations are adequate'*.

The benefit of adopting this option was *'less cost impact than other options'*.

These respondents supported reviewing the current regulation to remove duplication across other legislation.

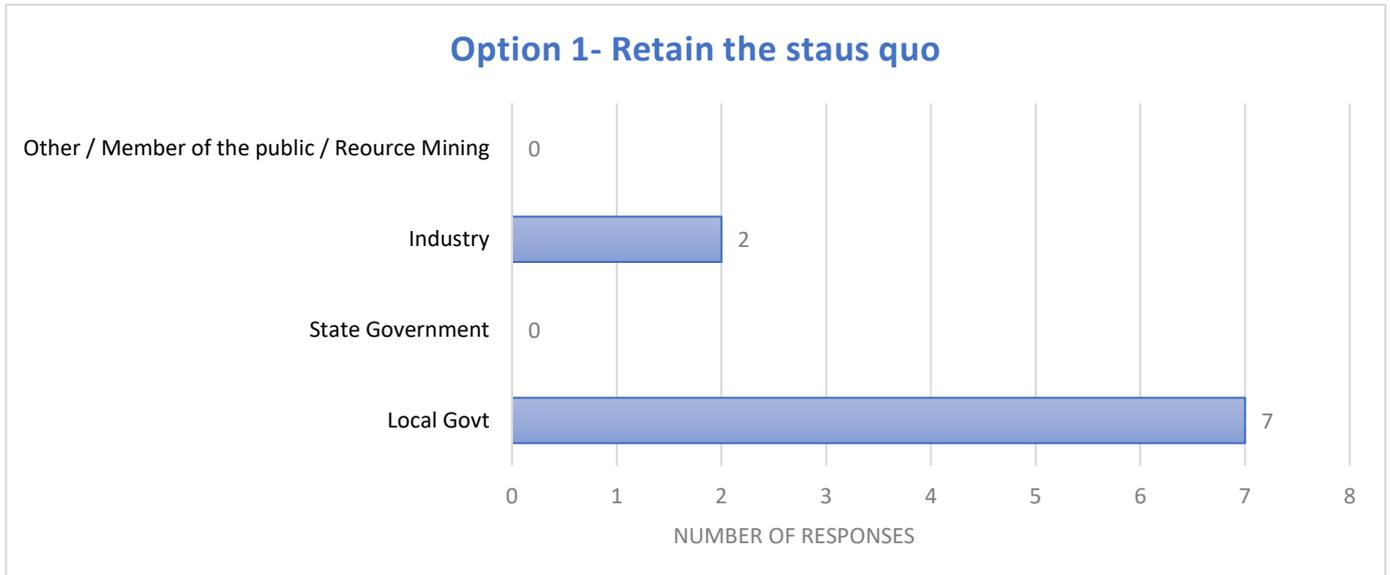


Figure 3 Support for Option 1 (n=9, 13.2%) to retain the status quo

Option 2 – Deregulate the wastewater industry and repeal the current legislation associated with wastewater management

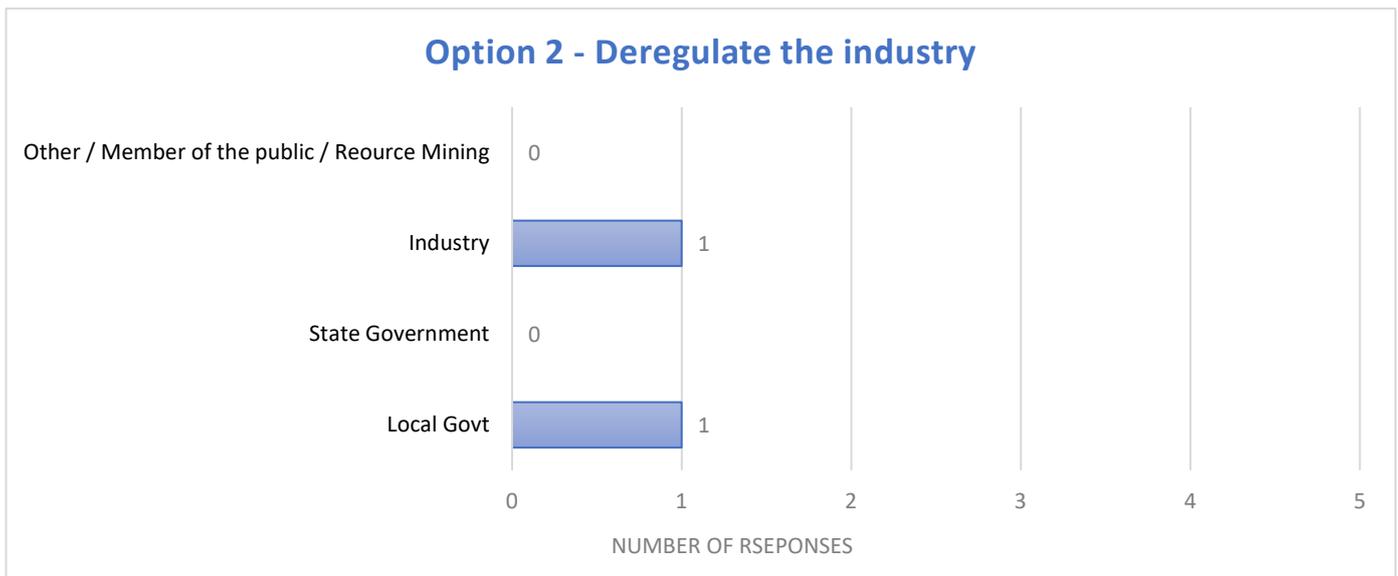


Figure 4 Support for Option 2 to deregulate the industry (n=2; 3%)

Two (2) respondents favoured Option 2 to deregulate the industry. One (1) respondent was from local government and one (1) respondent was an industry stakeholder.

The reason for adopting this option was that *'the process for installation needs to be simplified and streamlined and brought into line with other plumbing work'*.

In 2019, a review of the *Plumbers Licensing Act 1995* found the majority of members from the plumbing industry supported the installation and construction of onsite wastewater systems being regulated under the *Plumbing and Licensing Act 1995*. This position was supported by the DoH. In contrast, almost all local governments and system installers were opposed to making the installation and construction of onsite wastewater systems licensed plumbing work¹. The review recommended that regulation for plumbing drainage work not be extended to include the installation and construction of onsite wastewater systems.

Option 3 – Develop new regulations

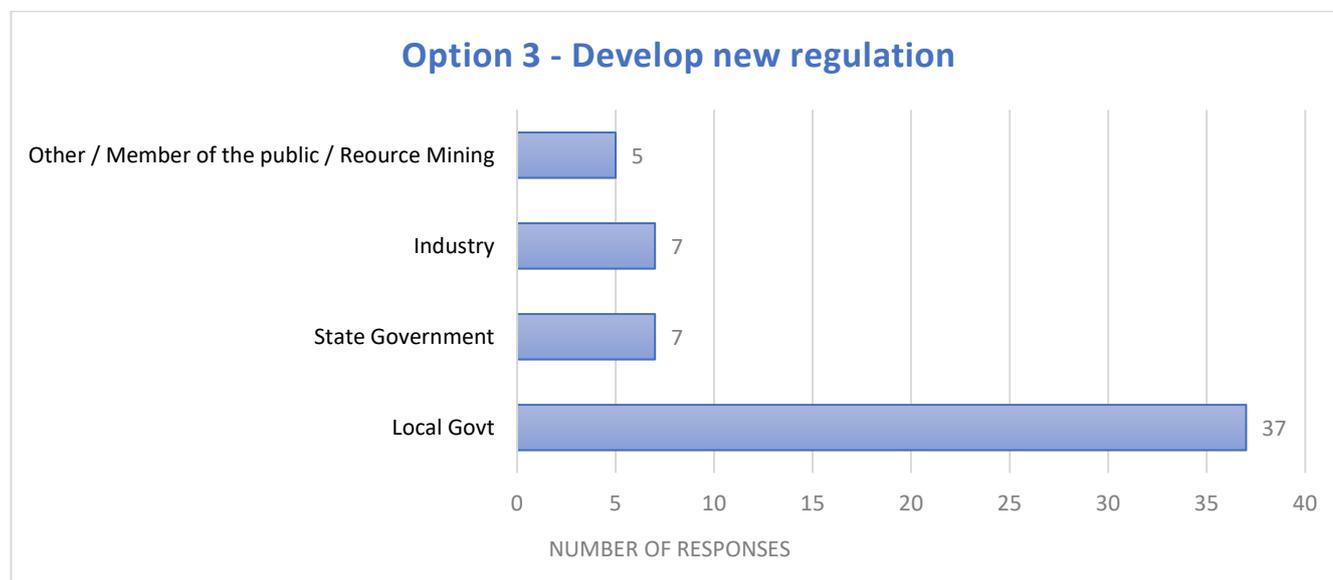


Figure 5 Support for Option 3 to develop new regulation (n=56; 82 %)

There was broad support for ongoing regulation under the Public Health Act. 82% (n=56) of total respondents supported Option 3. 100% (n=7) of State Government responses and 100% (n=5) of other/member of the public responses supported Option 3. 80% (n=66) of local government responses and 70% (n=13) of industry also supported developing new regulation.

Sector	No. of responses	Per cent of sector response	Per cent of total responses (N=68)
Local Government	37	80	66
Industry	7	70	13
State Government	7	100	13
Other / Member of the public	5	100	8

Table 2 Support for Option 3 by sector, expressed as a percentage

Respondents who supported Option 3 identified the key benefits as:

- *'current legislation is too prescriptive'*
- *'new regulation can evolve with emerging issues and industry improvements'*

¹ DMIRS 2019: Decision Regulatory Impact Statement: Reforms to Plumbing Regulation in Western Australia. Available [Decision Regulatory Impact Statement – Reforms to Plumbing Regulation in Western Australia \(commerce.wa.gov.au\)](https://commerce.wa.gov.au/Decision-Regulatory-Impact-Statement-Reforms-to-Plumbing-Regulation-in-Western-Australia)

- ‘address areas not currently captured under current regulations, for example the treatment of greywater and trade waste.’

Respondents identified the disadvantages of Option 3 as:

- ‘Whilst we support the objectives of the proposed regulations, they are narrow and focussed solely on protecting public health and aligning the regulatory framework, standards and agencies responsibilities. Beyond these objectives, the wastewater regulations should seek to facilitate best practice for water management, sustainability and affordability outcomes, by enabling industry to deliver innovative and fit for purpose design and delivery solutions, particularly as new technology and solutions are developed. The current regulations and supporting documentation at times can be confusing and hard to administer. New regulations would assist in making the management of wastewater easier and more transparent’.
- ‘The existing legislation is adequate to manage the public health risk of wastewater. . . keep existing provisions and add some minor improvements’.

Question 7. Should the new regulations mandate compliance with the relevant Australian Standards? Please expand on your reasoning.

Several Australian/New Zealand Standards detail requirements for the design, manufacturing, installation and maintenance of onsite wastewater systems. Chapter 4 provides greater detail on specific standards to be considered for new regulation. Question 7 sought feedback on the general premise of adopting Australian Standards.

There was mixed support for mandating compliance with Australian/New Zealand Standards, with 53% (n=33) of respondents in favour of the proposal and 47% (n=29) of respondents who answered the question against the adoption of the Australian/New Zealand Standards.

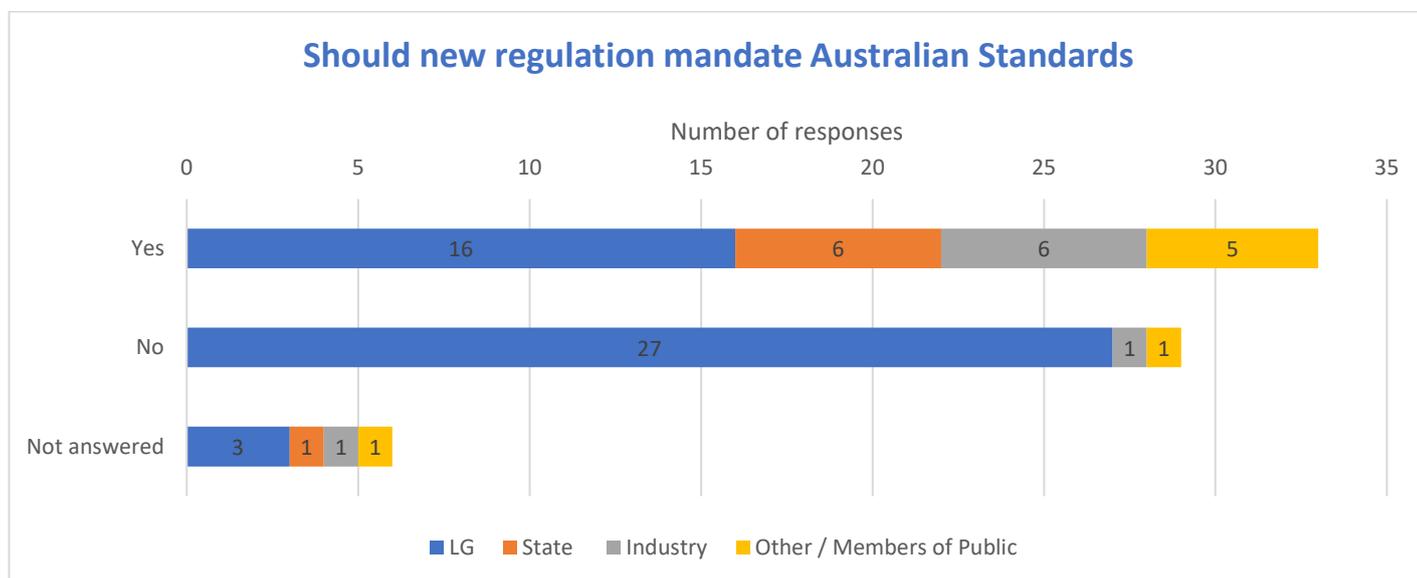


Figure 6 Respondent preferences to mandate use of Australian Standards

Comments in support of the adoption of the Australian/New Zealand Standards included:

- *'AS/NZS 1547:2012 has more flexibility than the DoH regulation'*
- *'AS provides a modern up to date set of explanations and working methods for the design and implementation of disposal systems'*
- *'the Standards can be updated regularly even though mandated, which means they will perform in accordance with National Best Practice Standards'*
- *'consistency with other state policies such as the Government Sewage Policy (GSP) and State Planning Policy 2.9'*
- *'saves plumbers and specifiers time and customers money'*
- *'makes SAT appeals straight forward.'*

Of the twenty-nine (29) respondents who did not support this proposal, it should be noted that 21 of these respondents also stated that they supported the adoption of Australian Standards for system design, and portions of AS/NZS 1547. When reviewing submissions, it was noted that twenty (20) respondents who opposed the adoption of Australian Standard AS/NZS1547:2012 submitted identical responses. These responses have been counted as twenty (20) separate submissions rather than one (1) individual response submitted twenty (20) times. When interpreting survey results, consideration needs to be given to how the cohort of repeated submissions may skew percentile representation.

The following issues were cited with the implementation of AS/NZS1547:

- *'complicate the legislative system that already operates effectively'*
- *'increase the size of footprints for onsite sewerage systems'*
- *'increase the complexity of onsite sewerage systems'*
- *'increase the complexity of the application process'*
- *'increase the complexity and frequency of maintenance'*
- *'increase the use of power and chemicals'*
- *'increase the costs at every stage including installation and ongoing maintenance.'*

Six (6) respondents did not answer this question.

Chapter 1 Summary and recommendations

Submissions were received from a range of stakeholder groups with the largest representation from local government. Most stakeholders supported the development of new regulation to manage sewage. Stakeholder opinion on the adoption of Australian/New Zealand Standards in new regulation was divided with a slight majority in support of the proposal. Twenty-seven (27) EHOs working in local government opposed the adoption of Australian/Standard AS/NZS1547:2012 based on concerns about the increased sizing requirements for land application areas.

79% (n=54) of respondents supported the adoption of the Australian/Standards that cover the design of onsite water systems.

The DoH holds the position that new regulations under the Public Health Act would be more effective in ensuring efficient ongoing management of the public health risks associated with sewage systems in WA. New regulation will ensure the DoH and local government can provide consistent advice, that aligns with other legislation to ensure effective control measures are in place.

New regulations will also ensure new technologies can be accessed as they emerge and will provide a consistent approach for the manufacturer and installation of onsite wastewater treatment systems. Therefore, the DoH recommends new regulation is developed for the management of sewage and the Australian/New Zealand Standards are adopted as the basis for the management of onsite wastewater systems. Options are discussed in [Chapter 4 Proposed regulations for managing onsite wastewater systems.](#)

Chapter 1 Recommendations

1. The DoH recommends the development of new regulation for the management of sewage.
2. The DoH recommends future regulation adopt the Australian Standards for the management of sewage where appropriate.

Chapter 2 Proposed regulatory requirements

Chapter 2 assessed six (6) regulatory proposals for managing sewage. The proposals were:

- definitions and their application
- require sewage to be dealt with in a safe and effective manner
- require premises to connect to reticulated sewerage when a scheme is available
- require premises to install an appropriate onsite wastewater system where a reticulated sewerage scheme is unavailable
- require notification and response to wastewater overflow events
- remediation and testing after an overflow event.

The following sections outline the responses to the questions raised for each proposal. A summary and DoH recommendations are provided at the end of each proposal section.

Proposal 2.1 Definitions and their application

Under the current Health (MP) Act and the associated regulations, liquids generated through industrial or commercial practices are not defined and are being managed as sewage. The public health risks for trade wastes are different to sewage.

New regulation provides the opportunity to manage each of these streams appropriately. To future proof the regulations, an overarching term for a treated sewage product was also proposed. Defining a sewage product sets the foundation for new regulation on the reuse of treated sewage.

Questions 8 to 11 asked for feedback on definitions for sewage, trade waste, wastewater, recycled water and explored how the beneficial use of wastewater should be defined.

Question 8: Do you support defining wastewater to include both trade waste and sewage?

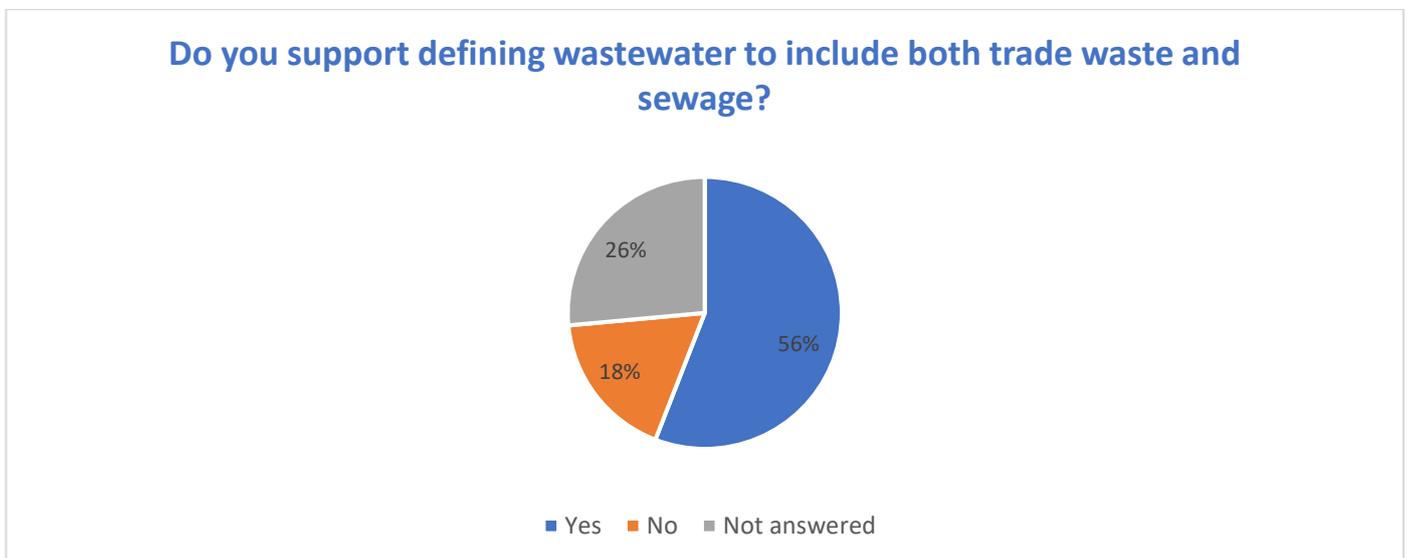


Figure 7 Percentage of respondents in support of the proposed definition of wastewater

The majority of respondents (56% n=38) supported the inclusion of definitions for both trade waste and sewage.

18% (n=12) of respondents did not favour any changes to the definitions.

26% (n=18) of respondents did not respond.

The Department of Water and Environmental Regulation (DWER) identified the importance of distinguishing between:

- trade waste that is discharged to a reticulated sewerage network
- trade waste that is permitted to be disposed of via an onsite wastewater system
- trade waste that is regulated as an emission or discharge from prescribed premises under Part V of the *Environmental Protection Act 1986* (the Environmental Protection Act).

The DWER submission expressed concern that current health regulation duplicates and at times contradicts conditions of prescribed premises regulated under the Environmental Protection Act, resulting in the delay of development approvals.

This concern was also expressed by the Department of Planning, Lands and Heritage (DPLH). Department of Primary Industries and Regional Development (DPIRD) indicated clarification was required for low risk trade waste generated by farm or agribusiness.

The definitions in Figure 9 were developed in consultation with key stakeholders to address regulatory overlap with the *Environmental Protection Regulations 1987* (the Environmental Protection Regulations).

Question 9: If no, how should trade waste be managed?

Seven (7) respondents stated trade waste should be managed separately, six (6) respondents stated that large volumes of trade waste should be managed by DWER and five (5) respondents indicated trade waste should be managed on a case by case basis. Two (2) respondents indicated a preference for the definitions provided in AS/NZS1546.3.

Question 10. Do you support the creation and definition of the new term 'wastewater product'?

60% (n=40) respondents supported the creation of a new term to define a wastewater product.

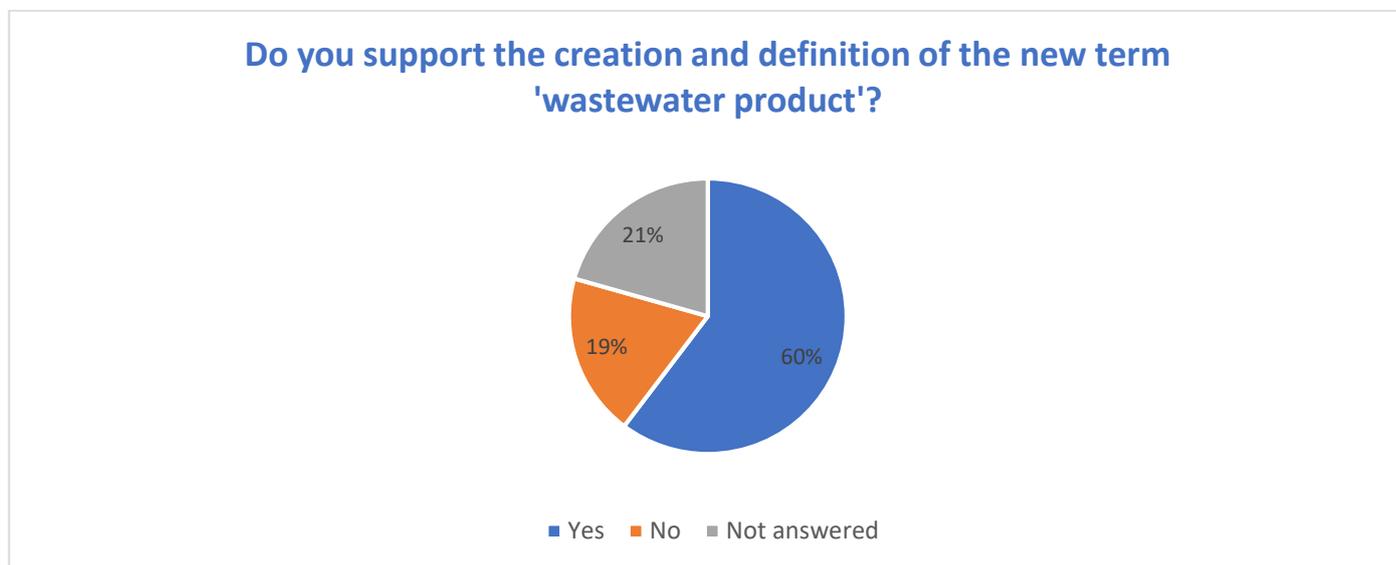


Figure 8 Respondents who supported defining a wastewater product

Question 11: If not, how should the beneficial reuse of wastewater be defined?

56% (n=38) of respondents did not answer this question. 3% (n=2) of respondents proposed the beneficial use of wastewater should be defined as 'Reuse of wastewater for irrigation of lawns and gardens, excluding edible crops' and 12% (n=8) of respondents indicated there was insufficient information to make a decision.

There was support for common terms, but respondents stated these should be consistent with other terminology. Other comments included:

- *‘terminology is consistent with other WA legislation’*
- *‘dependent on the reusable water and purpose. The industry already has too much terminology used’*
- *‘should also include septage, biomass and any by-products such as struvites, calcium hypoxyappetite or similar products’.*

Proposal 2.1 Summary and recommendations

New definitions were proposed to differentiate between water generated within the home or office and water generated through industrial or commercial processing, and to lay the groundwork for new regulation for reuse of treated sewage. Defining trade waste and providing a definition for wastewater products:

- provides a means for managing trade wastewater
- allows alignment with other WA legislation
- sets the scope of new regulation for reuse of treated wastewater.

There was general support for inclusion of a definition for trade waste. The most frequent comments suggested that definitions should be consistent with the GSP and DWER regulation.

Definitions for beneficial reuse, and wastewater product will be further refined in a future consultation process on recycled water.

Based on this feedback the definitions were amended and are outlined in Figure 9. The DoH recommends these definitions are adopted in new regulation.

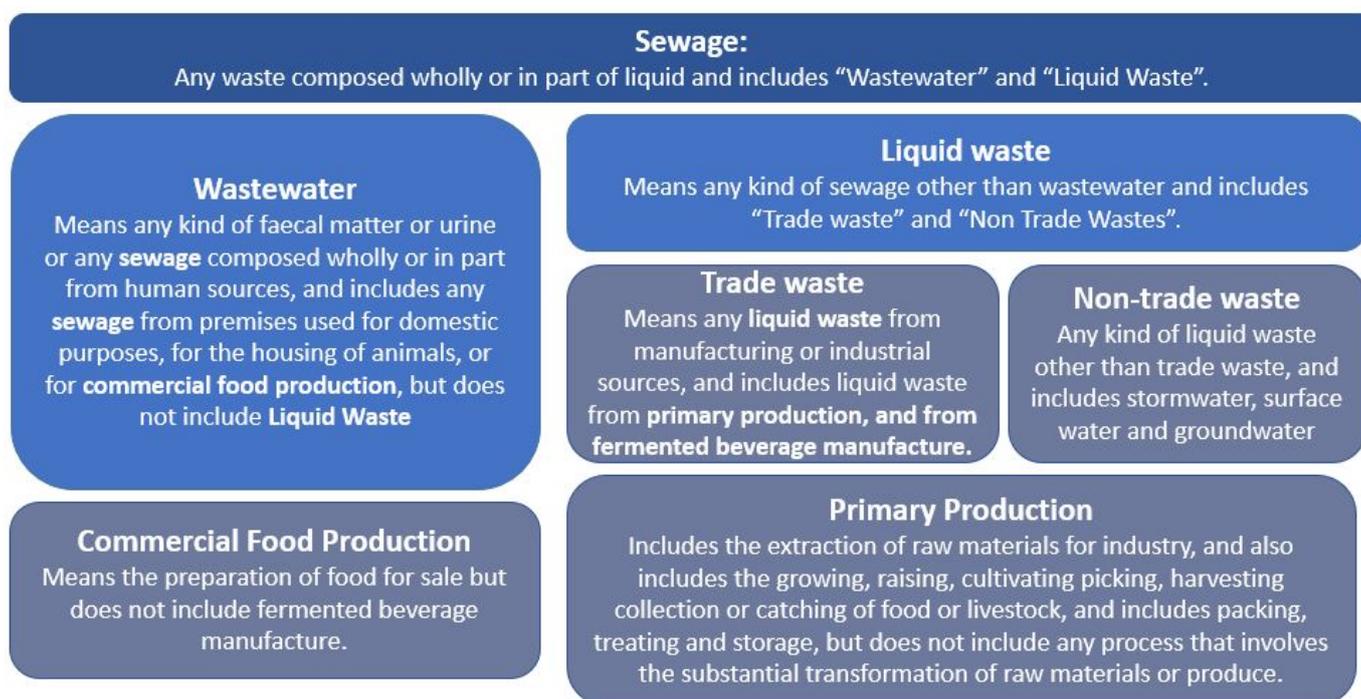


Figure 9 Proposed definitions for new regulation

Proposal 2.2 Require all wastewater to be dealt with in a safe and effective manner

Feedback was sought on two declarations for managing wastewater in a safe and effective manner. Respondents provided their feedback to questions 12 to 13 as illustrated below.

Question 12. Do you agree that the new regulations should declare the conveyance, treatment, disposal or reuse of wastewater must be conducted in a safe and effective manner?



Figure 10 Responses to general declaration for managing wastewater

87% (n=59) of respondents supported this proposal.

Question 13: Do you agree that the new regulations should declare anyone who undertakes the conveyance, treatment, disposal or reuse of wastewater must maintain the system in good working order?

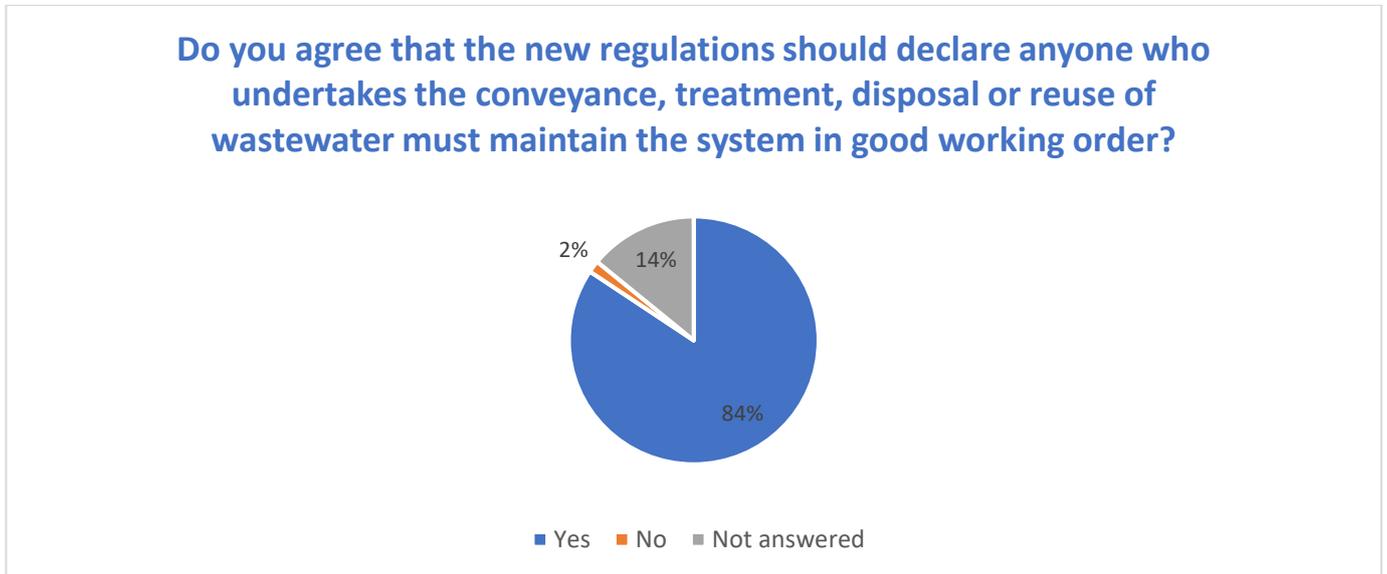


Figure 11 Responses to requirements to maintain a system in good working order

84% of respondents supported this proposal. One respondent did not agree with this proposal because they were concerned with the use of the term ‘anyone’ and considered that the owner should be responsible for ensuring the system is properly maintained and the plumber and installer should be responsible for correct installation.

Question 14: Are there any other declarations you believe should be included?

Twenty-seven (27) respondents provided comments. The majority of responses raised concerns that were addressed further in the discussion paper including:

- minimum qualifications and experience for installing an onsite wastewater system
- owning and maintaining an onsite wastewater system
- responsibility for management of onsite systems to lie with landowners.

From the remaining comments, respondents said:

- *'don't allow for retrospective approvals'*
- *'prohibit discharge of materials which may adversely impact functioning of apparatus.'*

The DoH supports the view that materials that may adversely affect the operation of an apparatus should not be discharged into the apparatus. However, it is considered that the second declaration (pertaining to maintenance) addresses this matter, and a separate regulation is not required for this purpose.

Proposal 2.2 Summary and recommendations

Over 80% of respondents were supportive of the inclusion of general declarations in new regulation that sewage must be conducted in a safe and effective manner, and that all systems including reticulated schemes, community schemes or onsite wastewater systems must be maintained in good working order. The DoH recommends these declarations are included in new regulation.

Proposal 2.3 The requirement for premises to connect to a reticulated sewerage scheme when available.

The objective of this proposal was to ensure that sewage is managed safely. Connection to a reticulated sewage scheme is preferred by the DoH because it:

- reduces public health risks by minimising the risk of exposure to wastewater
- places less burden on homeowners
- allows for higher population density
- reduces the potential for environmental contamination impacts.

Questions 15 to 18 sought feedback on the requirement for a premise to connect to a sewerage scheme where available.

Question 15: Do you agree that all premises should be required to dispose of wastewater by connection to a reticulated sewerage scheme if one is available?

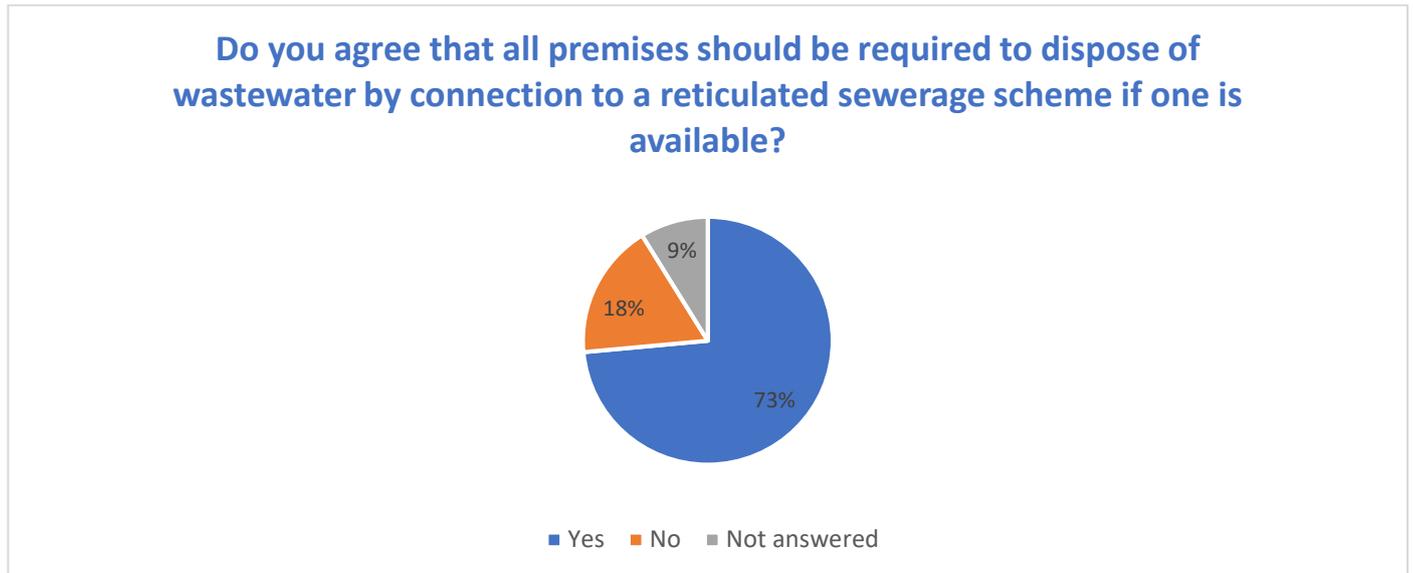


Figure 12 Support for requiring connection to reticulated sewerage

73% (n=50) supported this proposal. Four (4) comments were provided for this proposal. These included:

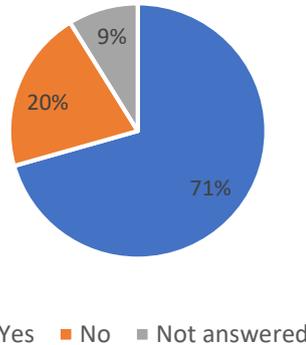
- *‘this is consistent with the GSP (DPLH)’*
- *‘strongly support (DWER)’*
- *‘in principle support, however, need to be cognisant of cost for affected parties (Department of Education).’*

DPIRD also provided a comment citing the public health benefits of mandatory sewer connection, but also stating that exemptions should be made for water recycling and onsite disposal where scheme capacity would not permit connection:

- *‘there may be circumstances where the owner of the wastewater would want to use this valuable resource for their business or primary industry uses rather than dispose to the centralised system’*
- *‘the volume of trade waste produced may exceed the capacity of the reticulated sewerage scheme, making it difficult to connect to the scheme.’*

Question 16: Do you agree that if a premise is located within a ‘reasonable distance’ of a sewer and the operator of that sewerage network indicates that the network has the capacity to accept that additional wastewater, then the appropriate enforcement agency can require the premise to connect to the sewer?

Do you agree that if a premise is located within a "reasonable distance" of a sewer and the operator of that sewerage network indicates that the network has the capacity to accept that additional wastewater, then the appropriate enforcement agency can req



71% (n=48) of respondents supported this proposal. Feedback from respondents who supported this proposal indicated that 'reasonable distance' should be defined in new regulation. Of those who did not support this proposal (20%; n=14), the main concern was about providing a choice for homeowners to allow for reuse of treated wastewater. Six (6) respondents indicated they would prefer a prescriptive measurement.

Question 17: Do you agree that where a reticulated sewerage scheme is provided after a premise has been constructed, and the reticulated sewerage scheme operator deems that it is viable, then the premise must connect to the scheme within 6 months of the scheme being provided?

Do you agree that a premise must connect to the scheme within 6 months of the scheme being provided

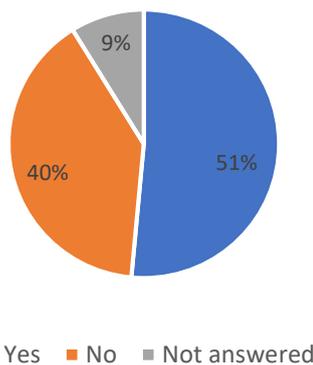


Figure 13 Respondents views on timeframes for connecting to reticulated sewerage

The main comments indicated that many respondents did not feel six (6) months was an appropriate timeframe. Nineteen (19) respondents proposed a twelve (12) month time frame, two (2) respondents indicated a time frame greater than twelve (12) months and seven (7) respondents indicated that it should be assessed on a case-by-case basis.

Respondents indicated that the requirement should not be based on distance and availability only. Additional comments included:

- 'If existing effluent disposal system be deemed not fit for purpose, then the premise must connect to the scheme.'
- 'I prefer that the homeowner has an option to install an STS with an overflow to a reticulated sewerage scheme, just in case of pump failure.'

Question 18: Should anyone be exempt from these requirements?

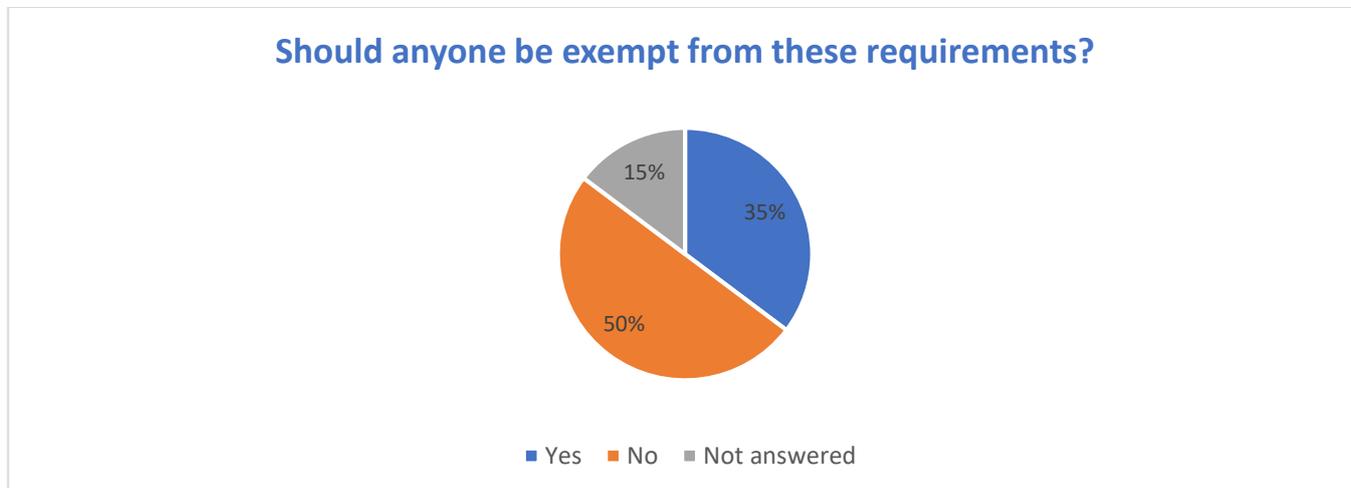


Figure 14 Respondent feedback on exemptions to connect to sewerage

35% (n=24) of respondents indicated there should be some exemptions from the requirement to connect to reticulated sewerage. This included thirteen (13) local governments and five (5) industry representatives. The reasons provided for having exemptions included:

- financial hardship
- if a dwelling has a new system or functioning system, they should not be required to connect
- an owner should have a choice, particularly if they wish to reuse treated effluent.

Proposal 2.3 Summary and recommendations

Connecting to reticulated sewerage provides the lowest risk to public health associated with the management of sewerage². The DoH strongly supports that premises should be connected to reticulated sewerage if it is possible to do so. This position was also strongly supported by the majority of respondents (n=50).

Part 5 Section 98 under the *Water Services Act 2012* (the Water Services Act) has provisions that require an owner of land to connect to sewerage works of a licensee at the owner's expense if it is reasonably capable of doing so and if it is in the public interest to do so³. Powers are also provided to enable a water service provider power of entry to carry out connection works if required.

In some instances, reticulated sewerage may become available to premises that already have an onsite wastewater system. The requirement to connect to a reticulated sewerage scheme may place an unfair burden on a homeowner if they have recently installed an onsite wastewater system as a preferred option.

The DoH intends new regulations will provide that local governments can direct an owner of premises to connect to a sewer when available, thus providing local governments the option of exercising some discretion. Currently, section 72 of the Health (MP) Act provides that 'local

² State Government of Western Australia 2019, Government Sewerage Policy

³ Section 98 of the *Water Services Act 2012*, s(98)

government may require the owner of any house or land that is located within 91 metres of a sewer to connect to that sewer.’ The DoH will not stipulate a distance as there are many factors that can affect whether premises can or cannot connect.

A new regulation will be needed to address situations where a water service is not provided (Proposal 2.4).

Proposal 2.4 Require premises to install an appropriate onsite wastewater system where a reticulated sewerage scheme is unavailable.

Question 19: Do you agree that if a reticulated sewerage scheme is not available, an appropriate onsite wastewater system must be installed?

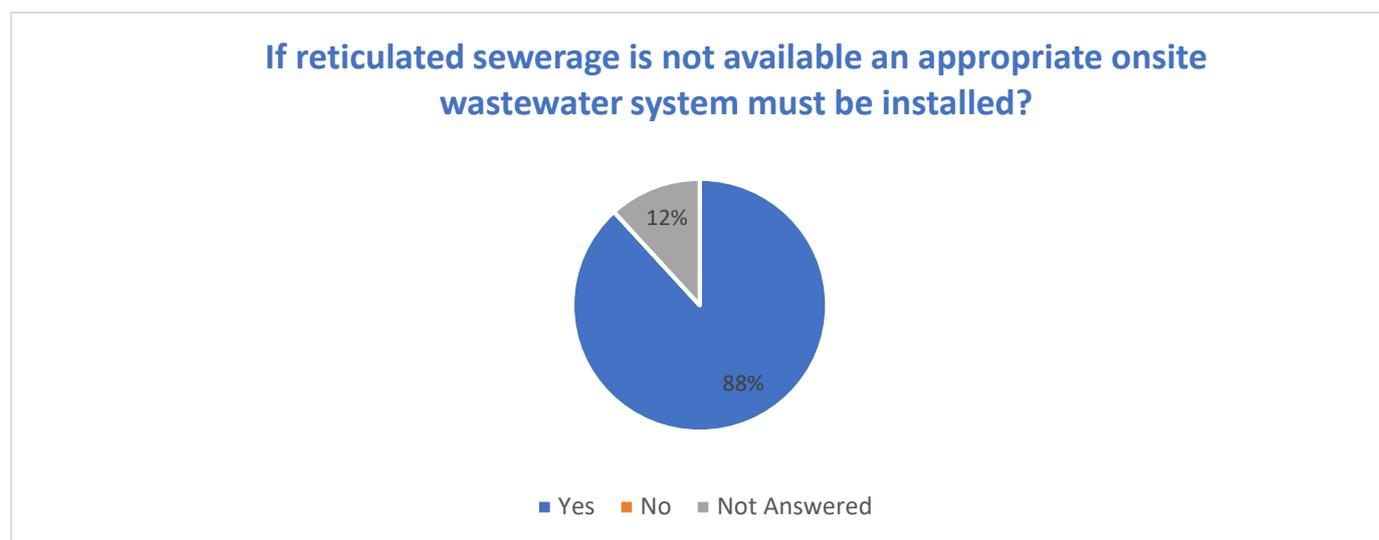


Figure 15 Response to require an onsite wastewater system to be installed if no reticulated sewerage

All respondents who answered this question (n=60) agreed with the proposal for new regulation to provide that an onsite wastewater system must be installed if a reticulated sewerage scheme is not available.

Proposal 2.4 Summary and recommendations

Division 4 of the Health (MP) Act requires houses to have sanitary conveniences. The Health (MP) Act provides that a house cannot be occupied unless there are adequate sanitary provisions. This is duplicated in Part 6 of the *Licensing and Plumbing Standards Regulations 2000* which calls up the sanitary provisions of the National Construction Codes (NCC). Volume 3 of the NCC has a requirement for buildings to be provided with sanitary fixtures, sanitary appliances and an adequate disposal system⁴.

The building codes related to onsite wastewater systems are not adopted in WA. Accordingly, new regulation should ensure that a premise has some means of effectively collecting and treating and/or disposing of sewerage.

The DoH recommends that new regulation includes a provision that premises must have a functioning onsite sewage treatment system installed prior to habitation where a reticulated sewerage scheme is unavailable.

⁴ Australian Building Codes Board 2020, National Construction Code, Volume 3, Plumbing Code of Australia 2019 Amendment 1.PART C1, CF1

Proposal 2.5 Require notification and response to wastewater overflow events

To ensure the DoH is aware of and can manage the public health risks associated with uncontrolled releases of wastewater, the following two (2) proposals were included in the consultation paper:

- a requirement to notify and respond to a wastewater overflow event
- requirements for remediation and testing after an overflow event

Questions 20 to 25 considered whether new regulation should include a requirement for scheme operators to report certain sewage overflow events and sought feedback on the types of events that should be reported.

Questions 20: Should there be a mandatory requirement to report overflow events?

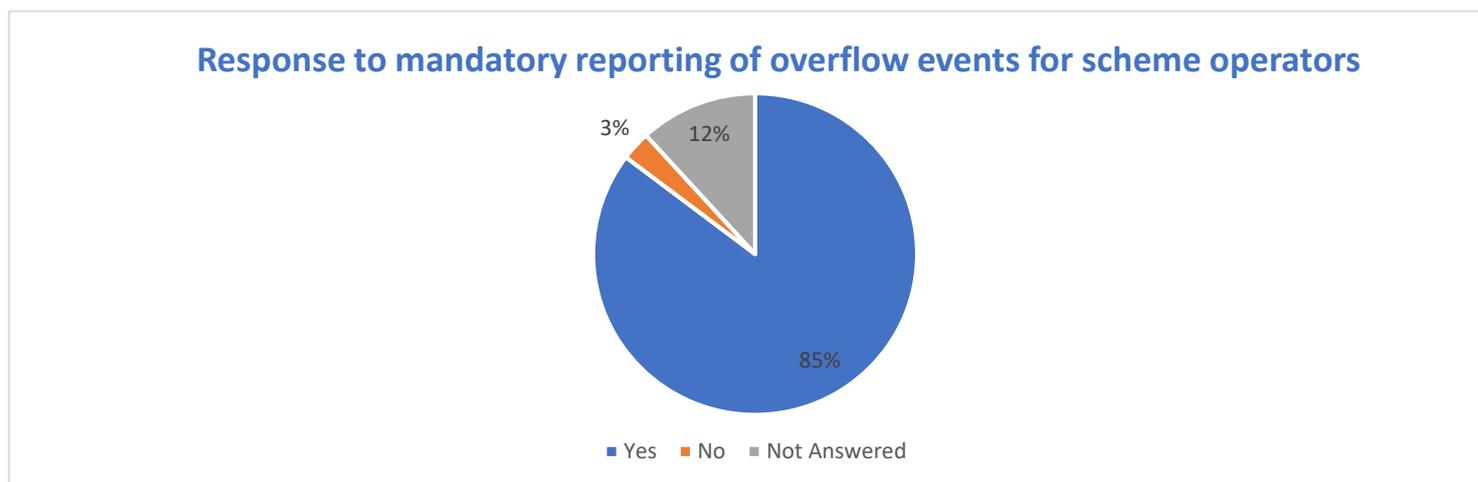


Figure 16 Responses to mandatory reporting of overflow events

85% (n=58) of respondents supported regulation to include mandatory reporting of overflow events.

Questions 21: Do you agree that requirements for reportable events should be in regulation or a code of practice?

Table 3 Feedback on how regulation should call up mandatory reporting events

Option	Total	Per cent
Provided in a schedule in new regulation	43	63
Listed in a code of practice	16	24
Not Answered	9	13

63% (n=43) of respondents stated the overflow events to be reported should be provided in a schedule in new regulation. There was less support (24%; n=16) for reportable events to be listed in a code of practice.

Under Section 72 of the Environmental Protection Act an accidental (unauthorised) discharge that has caused or is likely to cause pollution is required to be reported to DWER, this may include wastewater. The DoH notes that not all wastewater overflow events will be pollution events.

The Department of Health [Wastewater Overflow Notification and Response Procedures 2021](#) outlines the process for notification of certain overflow events and identifies the lead agency for certain events. The Health (MP) Act provides local governments with general powers to:

- assess and inspect drains

- enter land and examine drains
- inspect and direct owners to repair, and clean drains
- serve an order or notice to clean up ponding water
- declare a house unfit for habitation
- direct an owner to clean or repair a house in a specified time.

Question 22: Do you agree the Wastewater Overflow Procedures should be called up in new regulation as a code of practice?



Figure 17 Feedback on calling up the Wastewater Overflow Procedure in new regulation

84% (n=57) of respondents supported the Wastewater Overflow Procedures being called up as a code of practice. The procedures have been in operation since 2005 and was updated in 2021. The procedures were developed by the DoH in collaboration with relevant state and local government agencies and outline:

- the roles and responsibilities of the different government agencies
- the response and notification process
- a process for assessing the level of public risk
- sampling procedures
- management procedures.
- remediation requirements.

The Wastewater Overflow Procedures are currently used as a guidance document by the relevant response agencies and scheme operators.

Question 23: Do you agree that the regulations should require that the owner of a system which overflowed respond, notify and assist?

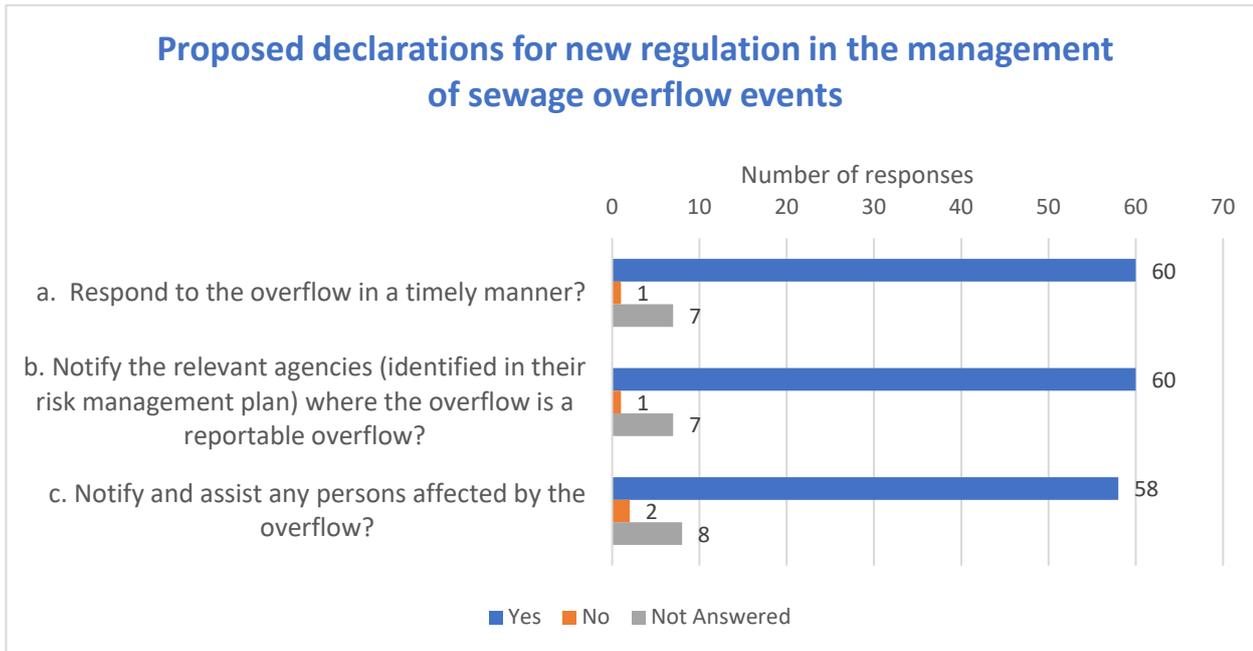


Figure 18 Declarations for managing overflow events

There was positive support for all options proposed for managing overflow events. There was some confusion amongst respondents that indicated they thought the scope of the proposal included onsite wastewater systems. The scope of new regulation would be to manage overflow events arising from wastewater schemes.

While the Wastewater Overflow Procedures only apply to schemes but may be used as guidance in other situations.

Question 24: What reporting time frames would be appropriate?

85% (n=58) of people responded to this question. Time frames varied, with the most common response (n=17) stating the current time frames in the DoH Wastewater Overflow Procedures were appropriate. Eleven (11) respondents stated the timeframe should be proportional to the risk, ten (10) respondents stated with twenty-four (24) hours and eight (8) respondents stated ‘as soon as possible.’

Question 25: Do you agree with the events listed in the Table?

Table 4 Proposed situations that would require mandatory reporting in the event of a wastewater discharge

Wastewater Overflow (WVO) Specific Discharge into:
<ul style="list-style-type: none"> Residential/Commercial/Public Building Swimming pools
<ul style="list-style-type: none"> Ground (road verge, public open space, front/backyard etc.)*
<ul style="list-style-type: none"> Unlined basin with no outlet Piped drainage system (contained in pipe and retrievable by tanker)
<ul style="list-style-type: none"> Watercourse i.e. river, creek, tributary, ocean (discharge is flowing or ponding) Lake (natural and ornamental), wetland, marsh, swamp Basin with outlet and wastewater cannot be retrieved (may have flowed downstream) Dry watercourse, open drain or natural creek*



Figure 19 Support for proposed mandatory reporting events

Question 25 was broadly supported with nearly 84% (n=57) of respondents agreeing with the events listed to be included for mandatory reporting in new regulation.

Under the Environmental Protection Act, certain events are required to be reported to DWER with DWER retaining responsibility for being the lead agency. Feedback from DWER indicated while they agree with mandatory reporting, the Environmental Protection Act mandated reporting of discharges to the environment if it caused or was likely to cause pollution. DWER noted that not all loss of control events resulted in a pollution event and as such would not require reporting to them. While the discussion paper indicated mandatory reporting based on the environment location, consideration needs to be given to the level of public risk that arises from the discharge regardless of the environment.

Proposal 2.5 Summary and recommendations

In summary, mandatory reporting of overflow events for scheme operators was supported along with the current Wastewater Overflow Procedure becoming a code of practice that is called up in new regulation. While feedback supported listing specific overflow events in a schedule in new regulation, the DoH considers there are some limitations with this approach. These are:

- reporting of overflow events that are not a public health risk.
- not capturing an event in the list that may cause a public health risk
- duplicating other legislation such as the Environmental Protection Act.

The DoH recommends new regulation that requires reporting of a wastewater overflow event. The regulation will apply to any sewage service provider who:

- holds a licence under the Water Services Act
or
- holds a registration under the Public Health Act for conducting the public health risk activity of operating a sewerage scheme.

A reportable overflow event is the accidental or deliberate release of sewage into an uncontrolled or unauthorised environment. The Wastewater Overflow Procedures will provide the process for reporting an overflow event.

Proposal 2.6 Remediation and testing after an overflow event

Question 26: Do you agree that the regulations should require that the owner of an onsite wastewater system that has overflowed do the following:

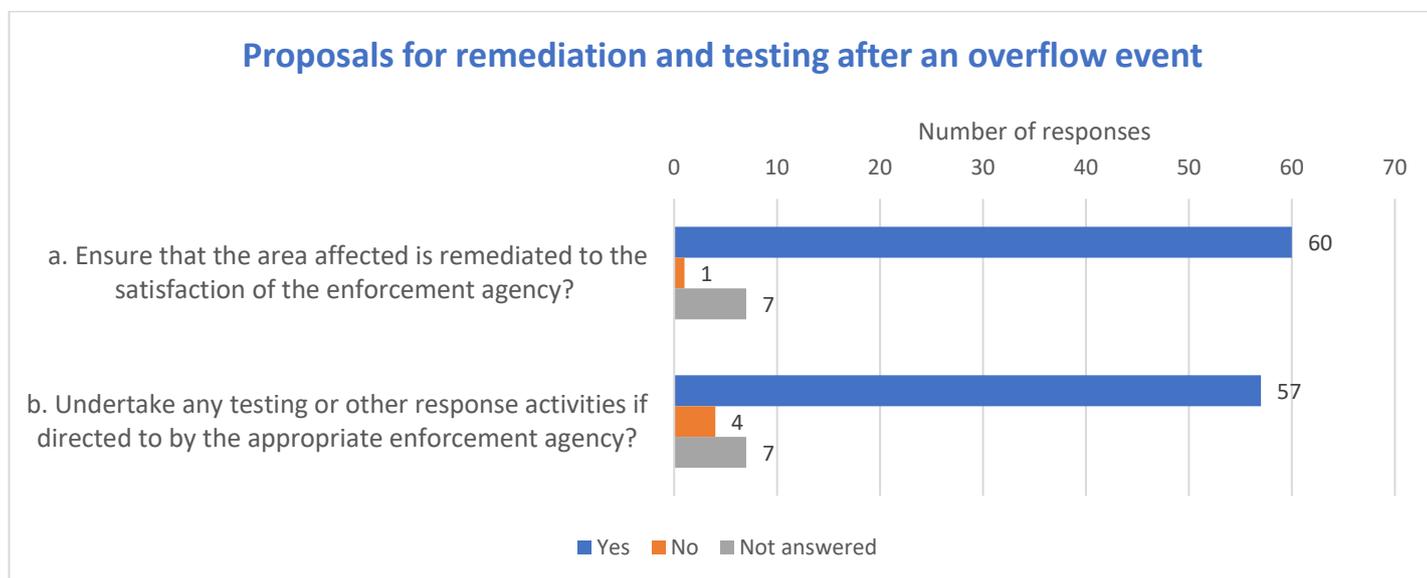


Figure 20 Responses for remediation and testing after an overflow event

The majority of respondents support remediation and validation testing.

Question 27: If no, how should wastewater overflows be managed?

Of those who provided feedback the main themes were:

- rather than specific events, consider the severity and the public health risk
- align with DWER processes for reportable events
- provide clear guidance on who is responsible for clean up
- any regulation or guideline should provide clear indicators of what volume of sewage would be considered an overflow event.

Proposal 2.6 Summary and recommendations

To minimise ongoing public health risks from an overflow event, the DoH proposed new regulation to require those responsible for an overflow event to remediate to the satisfaction of the enforcement agency. This was supported by the majority of respondents.

The DoH recommends the new regulation provide powers to authorised officers to:

- require responsible entities to undertake remediation

- set the scope of remediation
- require the person responsible for an overflow event to undertake validation testing.

Chapter 2 Recommendations

3. The DoH recommends that new regulation adopt the definitions in [Appendix 5](#)
4. The DoH recommends that new regulation include two general declarations:
 - a. Sewage must be conducted in a safe and effective manner
 - b. Sewerage systems must be maintained in good working order.
5. The DoH recommends that new regulations enable local governments to direct an owner of premises to connect to a sewer when available.
6. The DoH recommends that new regulation declare that premises must have an approved onsite sewage treatment system installed prior to habitation where a reticulated sewage scheme is unavailable.
7. The DoH recommends a regulation is required to provide for mandatory reporting of a wastewater overflow event.
8. The DoH recommends that new regulation enable authorised officers (enforcement agency) to direct those responsible for an overflow event to remediate the area.
9. The DoH recommends that new regulation enable the enforcement agency to set the scope of remediation.
10. The DoH recommends that new regulation enable the enforcement agency to direct those responsible for an overflow event to undertake testing and provide validation of remediation.

Chapter 3 Proposed regulations for reticulated sewerage schemes

The following section considers the management of reticulated sewerage schemes. A reticulated sewerage scheme is a network of sewers and associated sewage treatment managed by a water service provider. Sewerage scheme providers are required to be licensed under the Water Services Act. Under licensing requirements, the service providers are subject to a range of conditions to ensure the service is appropriately managed. The Economic Regulation Authority (ERA) consults with the DoH to identify health risks associated with each of the licensed schemes and any concerns are addressed with licence conditions.

The Water Services Act empowers the Minister to grant exemptions to holding a licence. Exemptions may be granted to local government water service providers (sewerage services) with less than 1000 customer connections. The following factors are considered when an exemption is granted:

- the public health and environmental aspects of these water services are regulated under the Health (MP) Act and the Environmental Protection Act respectively
- the exemptions reduce the regulatory and compliance costs associated with water services licensing, including administrative costs such as licence fees, reporting costs, operational audits and asset management.

Additional wastewater schemes operated by independent operators have been granted exemptions.

A review by the DoH in 2016 found several issues related to some wastewater schemes. The issues included ad hoc arrangements (e.g. connection of residential premises to a mining firm's scheme), confusion over ownership (schemes being handed over to local governments without formal transfer arrangements) and connections being added to local government schemes that have not gone through any approval process. The review highlighted concerns from the ERA about asset management, financial capabilities and sustainability of schemes managed by some local governments.

New regulations need to consider how to address the public health risks for schemes that will have no other oversight once provisions in the Health (MP) Act are repealed.

Proposal 3.1 Managing the public health risks from sewerage schemes

The DoH considered the following options for managing the public health risks for those schemes that have been granted an exemption from the operation of the Water Services Act:

Option 1. Declare the operation of a sewage scheme as a prescribed public health risk activity and require sewerage schemes to hold a registration.

Option 2. Declare the operation of a sewage scheme as a prescribed public health risk activity and not require a registration and include regulations in respect to specific items such as those proposed in Sections 3.2 and 3.3.

Option 3. Do **NOT** declare the operation of a sewerage scheme a public health risk activity, require scheme operators to notify the DoH that they operate a sewerage scheme and use the general public health duty to manage the public health risks.

Questions 28 to 32 sought feedback on these options.

Question 28: Please select your preferred option for managing wastewater schemes.

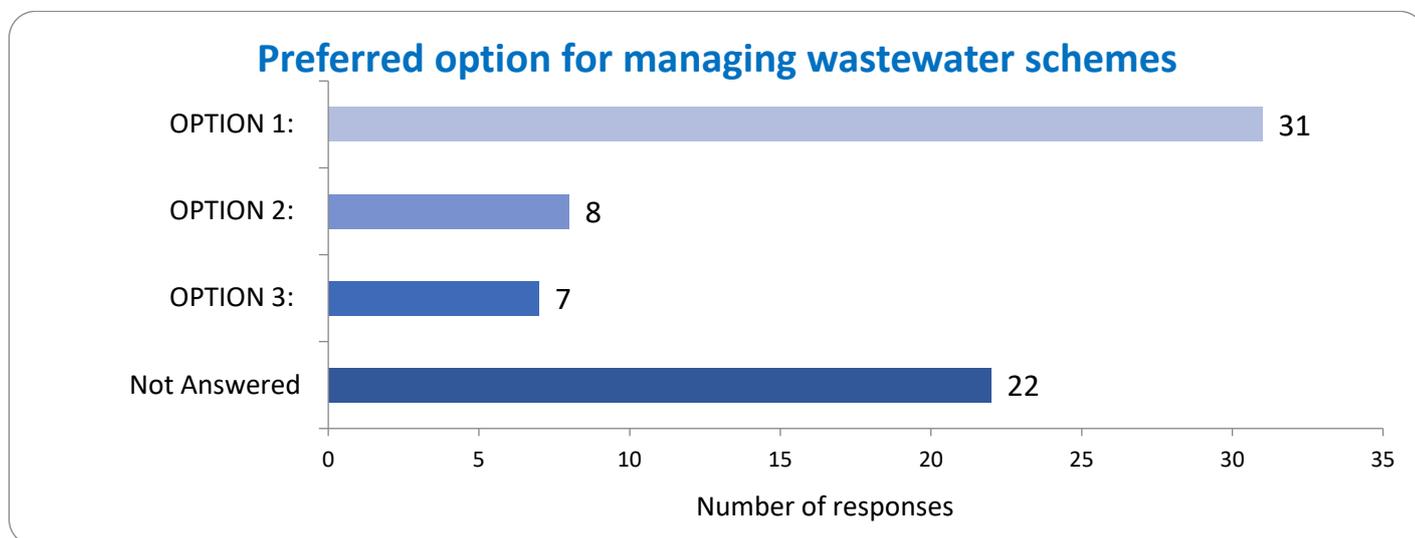


Figure 21 Preferred options for managing wastewater schemes

There was majority support for Option 1 (n=31) to declare the operation of a sewerage scheme a public health risk activity and require sewerage schemes to hold a registration.

Five (5) respondents, all of whom operated schemes, indicated they did not agree with any of the proposed options and two of the existing schemes did not want an increase in current reporting requirements.

Question 29: If registration is the preferred option, which wastewater schemes should be registered? Please explain why.

Table 5 Registration of wastewater schemes

Option	Total	Per cent % (n=68)
All wastewater schemes	27	40
Only schemes which have received an exemption to be licensed under the <i>Water Services Act 2012</i>	12	18
Other, please explain	3	4
Not Answered	26	38

Of those who preferred that all wastewater schemes were registered, comments included:

- *‘Allows for a centralised database of wastewater schemes’*
- *‘To ensure they can be adequately managed and have full accountability’*
- *‘Allows LGA’s to understand where mining and construction camp sewage systems are.’*

Comments from respondents who supported registering select wastewater schemes or who preferred an alternate approach included:

- *‘Avoids doubling handling for registered schemes’*
- *‘Schemes under the Water Services Act already have effective governance structures.’*

Question 30: If registration is the preferred option, should the regulations state that an amendment to a registration is required in the following circumstances:

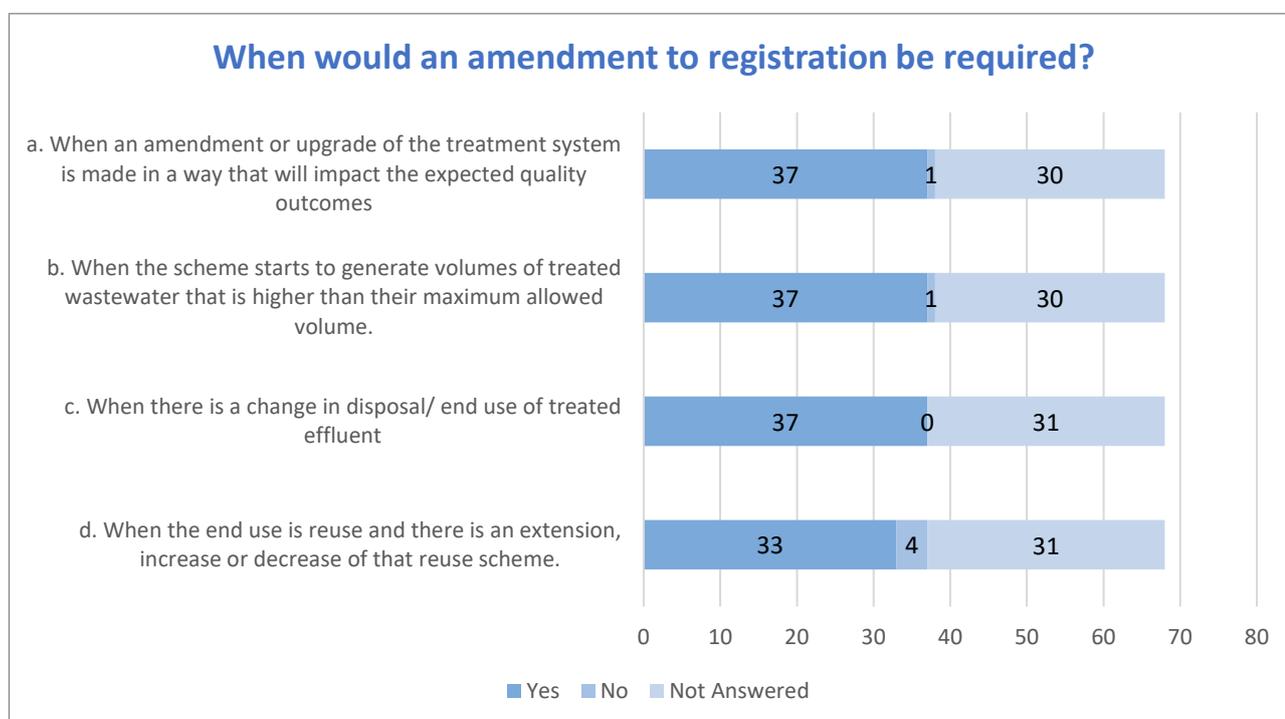


Figure 22 Requirement to notify of changes to the registration of a scheme

Question 31: If Option 2 is the preferred option, should the regulations include the following requirements for wastewater schemes:

Table 6 Options for auditing and risk management plans for schemes

Option	Total	Per cent % (n=68)
Preparation, implementation RMPs?	17	25
A requirement to be audited?	16	24
Other, please describe.	5	7
Not answered	30	44

Seventeen (17) respondents indicated if wastewater schemes were not registered a scheme should prepare and implement a risk management plan (RMP) and be subject to audits. Individual comments included:

- *‘the audit should be required if scheme has minimum flow’*
- *‘the audit should be undertaken by independent parties’*
- *‘it should allow for continuity of management.’*

One (1) comment was received from a respondent who selected the category ‘other’: This respondent preferred ‘no change from current controls’.

The main theme identified by respondents was any measures introduced should be commensurate with the level of public health risks associated with the wastewater scheme.

Question 32: If Option 2 is the preferred option, should the regulations define a wastewater scheme so that it captures:

Table 7 Options for defining which wastewater schemes should be registered

Option	Total	Per cent % (n=68)
All sewerage schemes	14	21
Only those schemes that are not licensed under another Act	8	12
Other, please describe.	3	4
Not Answered	43	63

Proposal 3.1 Summary

In summary, the majority of respondents supported registration of all wastewater schemes. The DoH recognises that the majority of wastewater schemes are already captured under existing legislation. The DoH also acknowledges that small schemes operated by local governments provide a source of income and provide a safe method of effluent disposal for their communities and any regulatory requirements should not be burdensome.

Schemes licensed under the Water Services Act are required to have a Memorandum of Understanding in place with the DoH. This is a requirement of ERA licensing conditions and provides for the DoH to set conditions to minimise public health risks. Exempted scheme operators do not have this requirement. However, they are still required to undertake annual reporting of asset management and maintenance including financial status, faults and complaints and submit water sampling to the DoH.

The DoH recommends declaring the operation of a sewerage scheme a public health risk activity and that the regulation allow for exemption of registration. For example, a class exemption for operators who hold a licence under the Water Services Act.

The DoH recommends that new regulation require registration to be amended in certain circumstances. Proposed conditions for amending a registration include:

- change to the number of connections
- increase in the volume of wastewater to be treated
- change in treatment methodologies
- change in how treated effluent is disposed.

The DoH proposes that registration would be a nominal fee (cost recovery of approximately \$250) with little oversight other than reporting of changes to activities included in the registration.

Proposal 3.2 Sewerage schemes are audited

Questions 33 to 40 consider auditing requirements for sewerage schemes. The requirements would be influenced by registration requirements addressed in the previous set of questions. Schemes required to hold a licence under the Water Services Act are subject to internal and external audits. The DoH does not intend to impose additional requirements on these schemes.

Question 33: Do you agree that new regulation for audits should capture only those wastewater sewerage schemes who hold an exemption under the Water Services Act?

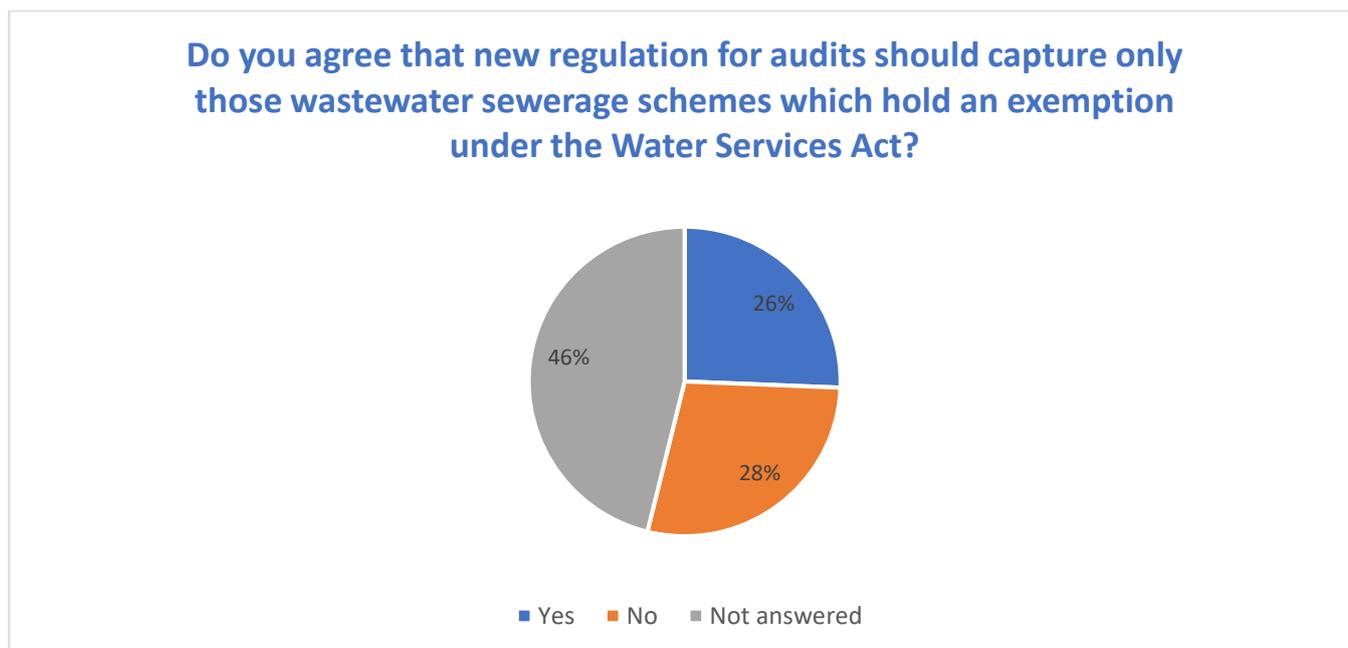


Figure 23 Proposed auditing requirements for schemes

There was mixed support for this proposal with 26% (n=18) supporting audits for schemes not licensed under ERA and 28% (n=19) disagreeing. A large portion of respondents did not answer.

Two comments stated:

- ‘concern about the ability of scheme operators in rural areas to engage a suitably qualified auditor’
- ‘concern about increasing the regulatory burden for small scheme operators.’

Question 34: If the preferred management option requires an audit of a wastewater scheme, should schemes be required to conduct:

Table 8 Audit types proposed for scheme operators

Option	Total	Per cent % (n=68)
Internal Audits	19	28
External Audits	21	31
Not answered	28	41

There was mixed response to requirements for auditing of wastewater schemes. 28% (n=19) supported internal audits and 31% (n=21) supported external audits.

Question 35: If you agree internal audits are required, do you agree that internal audits should be undertaken every 2 years?

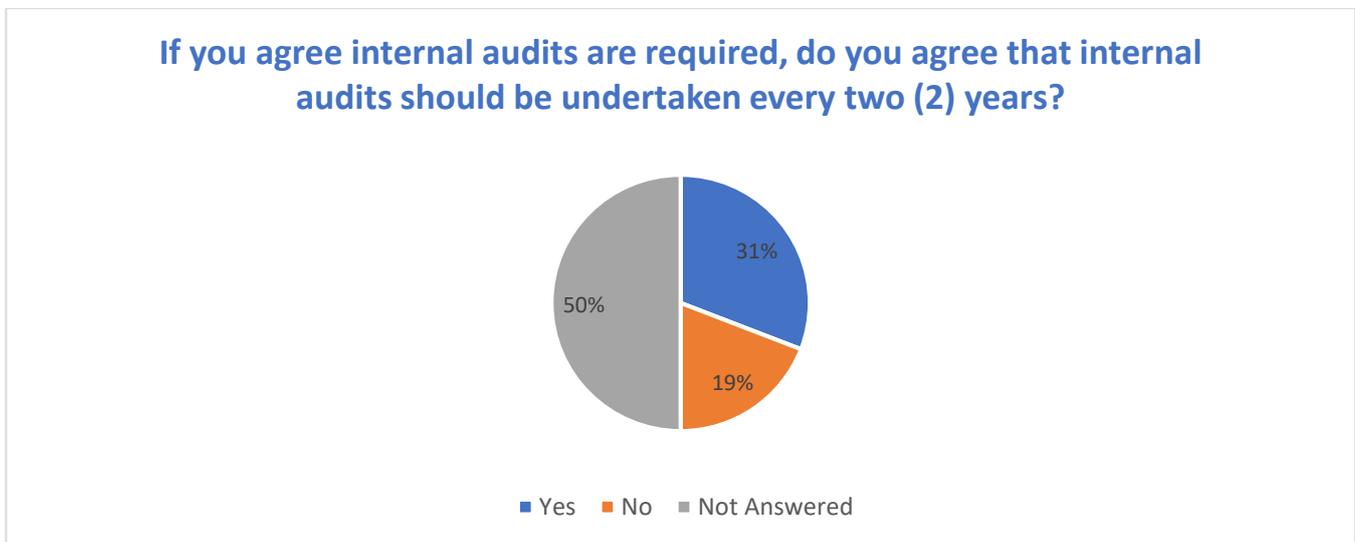


Figure 24 Feedback on time frames for internal audits

31% (n=21) of respondents supported schemes undertaking an internal audit every two (2) years. 50% (n=34) of respondents did not answer this question.

Question 36: If you agree external audits are required, do you agree that external audits should be undertaken every 5 years?

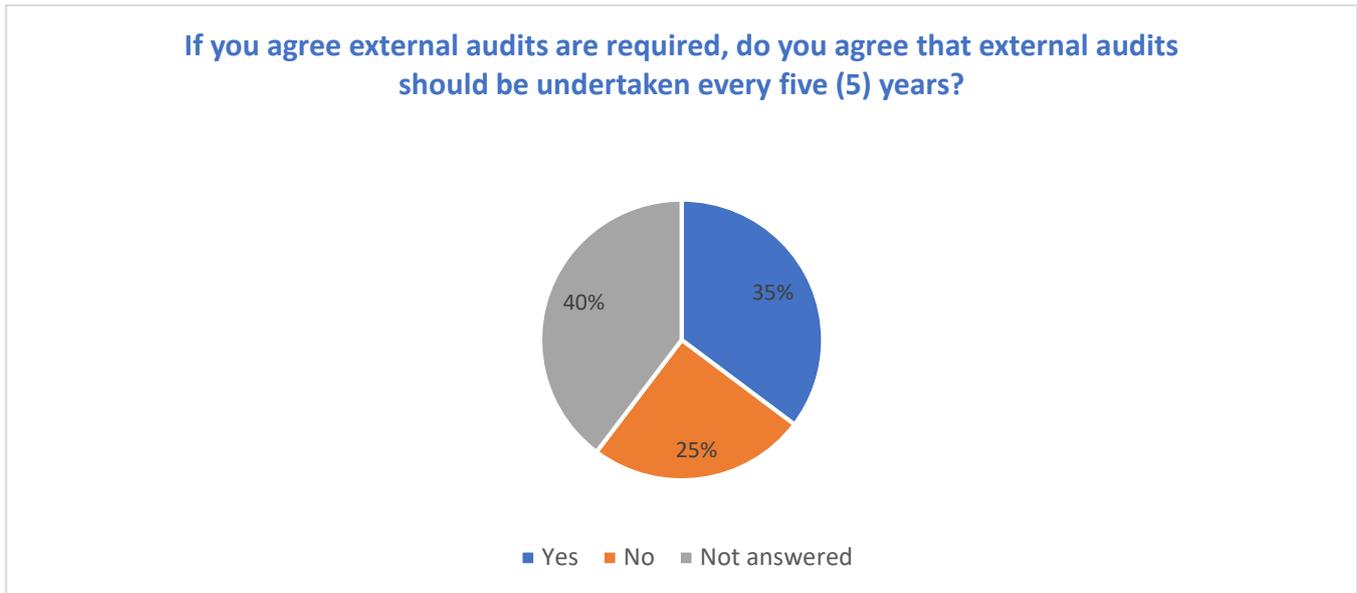


Figure 25 Feedback on timeframes for external audits

35% (n=24) of those that responded supported schemes undertaking an external audit every five (5) years.

Question 37: Should the regulations require submission of an external audit report to the DoH within 3 months of it being conducted?

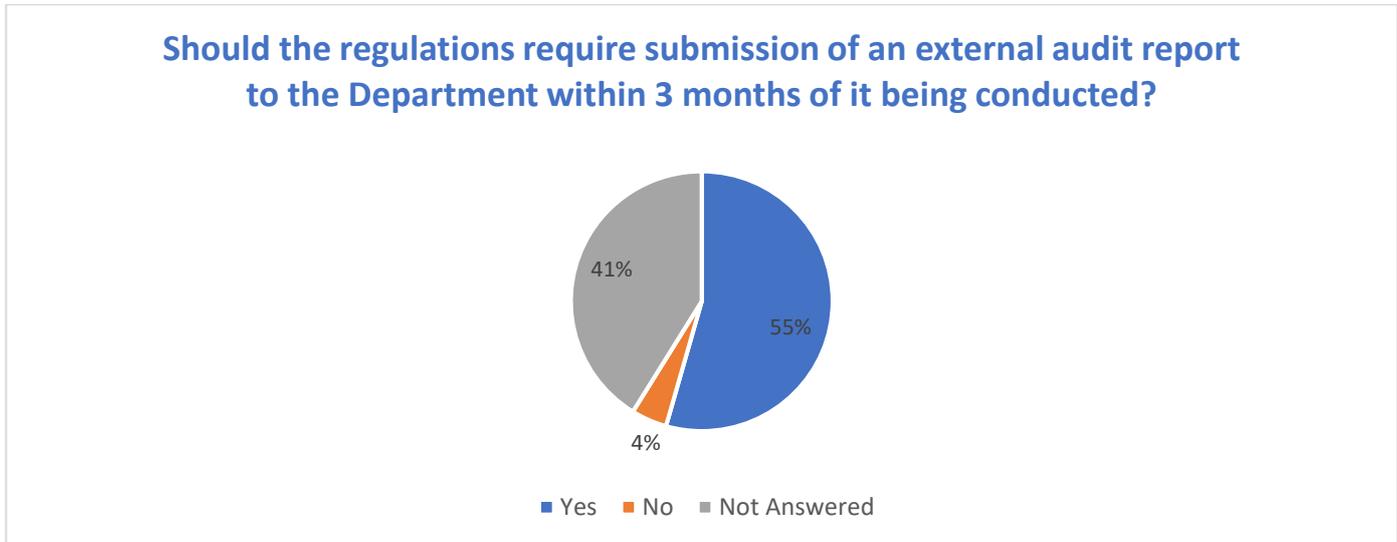


Figure 26 Feedback on timing for submission of external audits

55% (n=37) of respondents considered that an external audit report should be submitted within 3 months of it being conducted. 4% (n=3) of respondents disagreed with this proposal.

Question 38: If an audit of a wastewater scheme were a requirement of new regulation, do you agree the wastewater scheme operator should appoint the auditor? Please explain your answer.

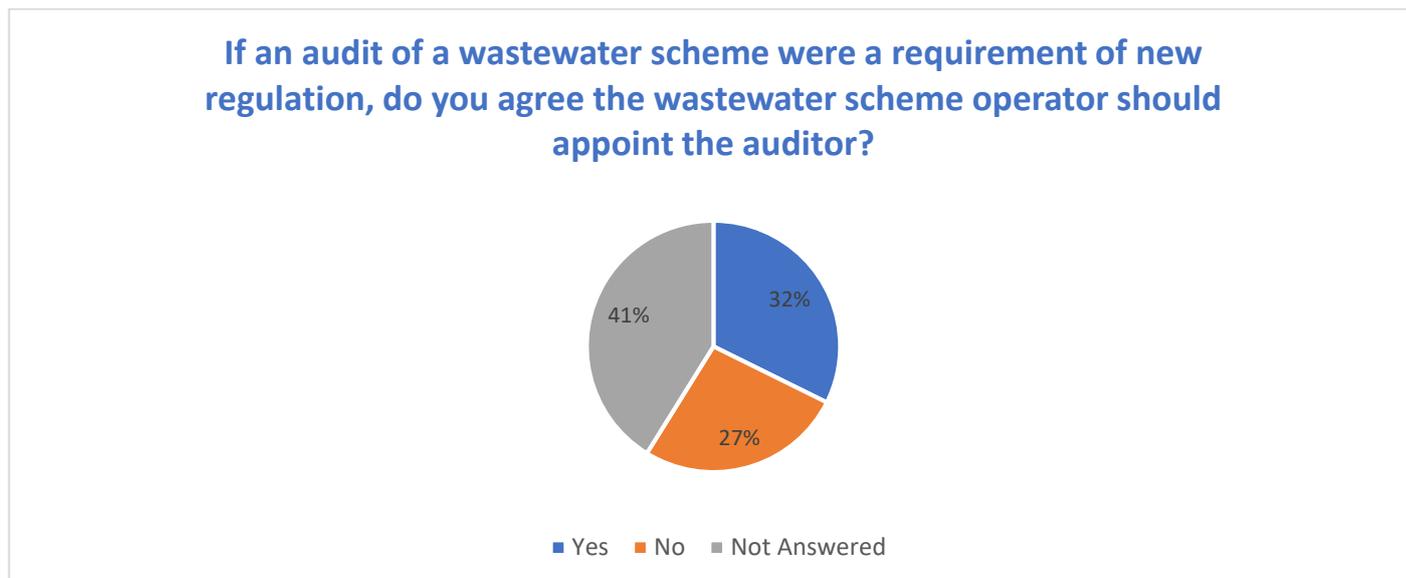


Figure 27 Feedback on responsibility for engaging an auditor

32% (n=22) agreed that the wastewater scheme operator should appoint an auditor. 27% (n=18) disagreed.

Six (6) respondents commented to state a preference for the auditor to be appointed by the DoH. Seven (7) responses stated the scheme operators should be able to select their own auditors with the DoH publishing a list of suitable candidates.

Question 39: Do you agree that the DoH provide guidance material to assist a wastewater scheme operator to select an appropriate auditor?

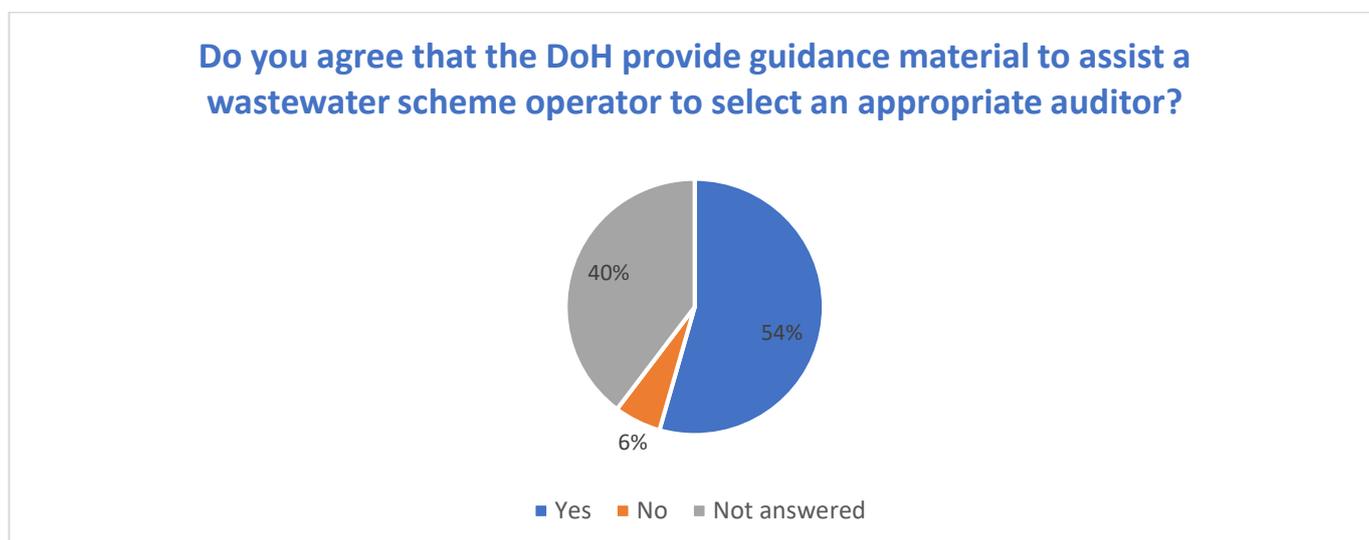


Figure 28 Feedback on provision of guidance material for selecting an auditor

There was strong support for this proposal, with 54% (n=37) of respondents in support, and 6% (n=4) opposed.

Question 40: Do you agree the scope of an audit should follow the Australian Sewerage Quality Management Guidelines?



Figure 29 Feedback on whether an audit should follow the Australian Sewerage Quality Management Guidelines

There was strong support for the scope of an audit to follow the Australian Sewerage Quality Management Guidelines. Seven comments were received. Themes included:

- Consistency of audit requirements
- Scale of audit to be appropriate for different size schemes
- Too costly for local governments.

Proposal 3.2 Summary

Respondents favoured auditing all sewerage scheme providers with support for both internal and external audits with internal audits every two years and external audits every five years. The responses to the query to whom should appoint an auditor were divided, with a small majority indicating a wastewater scheme operator should be able to choose the auditor. However, most respondents indicated the DoH should provide guidance material to support scheme operators select an appropriate auditor and the scope of an audit should follow the Australian Sewage Quality Management Guidelines.

WA Local Government Association (WALGA), who responded on behalf of a number of local governments, indicated that finding appropriately qualified professionals to undertake audits can be challenging and costly. This was also noted in other feedback.

Scheme operators who are licensed under the Water Services Act are required to be audited by an auditor appointed by the ERA. For licensed schemes the ERA consults with the DoH to ensure public health risks are managed. Class exemptions granted to local governments who have less than 1000 connections are for 5 years and are required to submit an annual report to the ERA. Annual reporting includes effective asset management and service provision. Exemptions are reviewed at the end of the 5-year period to ensure it is in the public interest to extend the exemption and it may be revoked at any time if the scheme is not being managed adequately. Since 2016, annual workshops have been held by the ERA to network and exchange information and ideas with other local governments and State departments including the DoH and the Water Corporation.

To minimise duplication of processes across different agencies the DoH recommends only scheme operators who do not hold a licence under the ERA licensing provisions are registered and registration is for a five-year period consistent with an ERA review.

The DoH recommends that the requirement for an internal or external audit is not a part of regulation but may be part of a registration condition if the DoH considers it necessary to manage the public health risks associated with the scheme.

Proposal 3.3 Risk management requirements for registerable schemes

Questions 41 to 45 sought feedback on the requirements for wastewater schemes to produce and implement risk management plans. The regulatory approach for risk management plans will differ depending on the future requirements for schemes to register.

Question 41: If Option 1 is the proposed management option: Do you agree that the regulations state sewerage scheme operators must develop and implement a risk management plan as part of their registration?

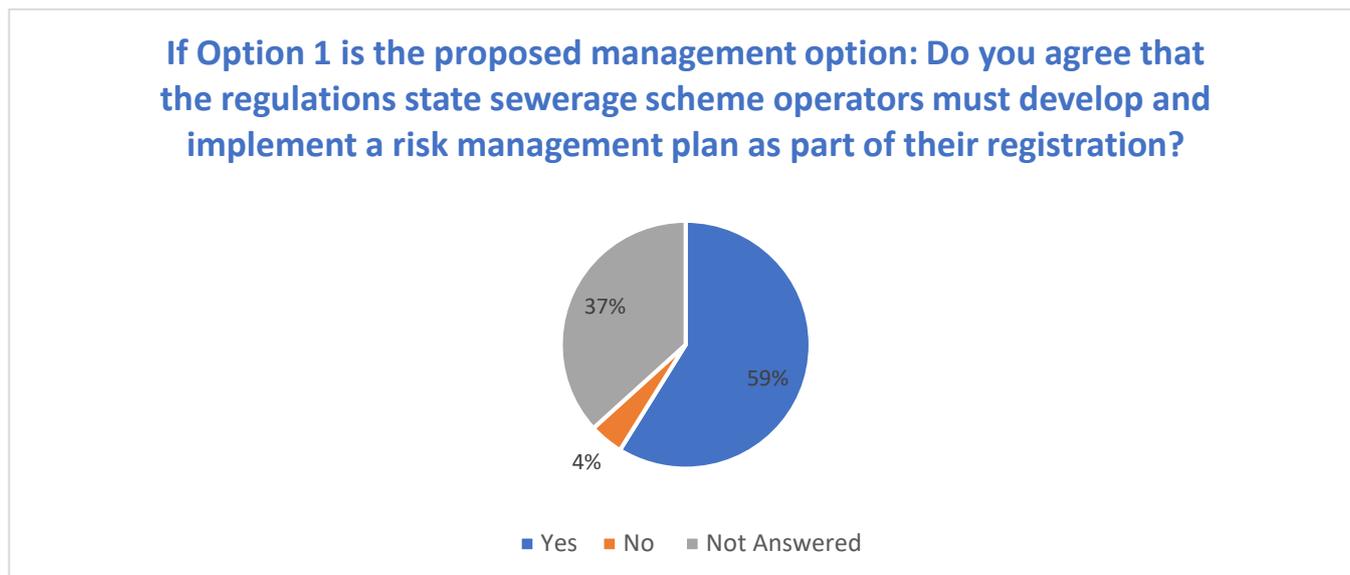


Figure 30 Requirements for risk management plans from scheme operators

59% (n=40) of respondents supported new regulation to require a risk management plan as part of a registration. 4% (n=3) were opposed to this proposal.

Question 42: If Option 2 is the proposed management option: Do you agree that the regulations state sewerage scheme operators must develop and implement a risk management plan?

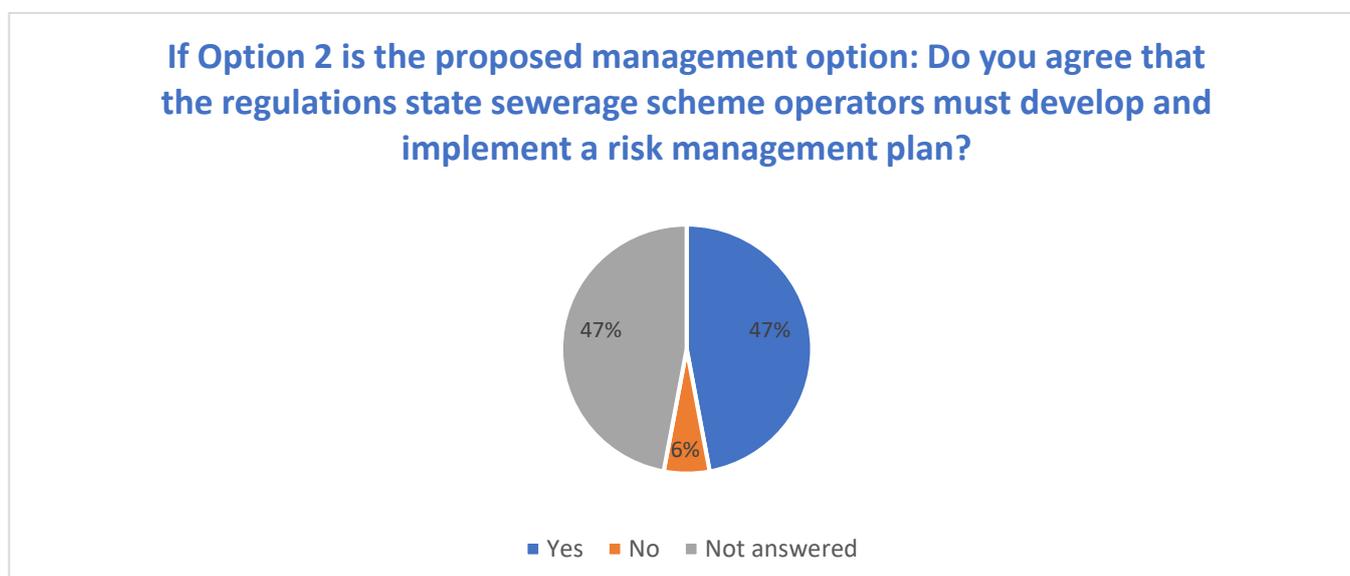


Figure 31 Requirement for risk management plans if Option 2 is the preferred regulatory option

47% (n=32) of respondents supported new regulation to include a requirement for risk management plans for scheme operators if the scheme was not subject to a registration or licence. 6% (n=4) were opposed to this proposal.

Question 43: Do you agree that a risk management plan must be provided to the DoH by the responsible person if they are requested to do so?

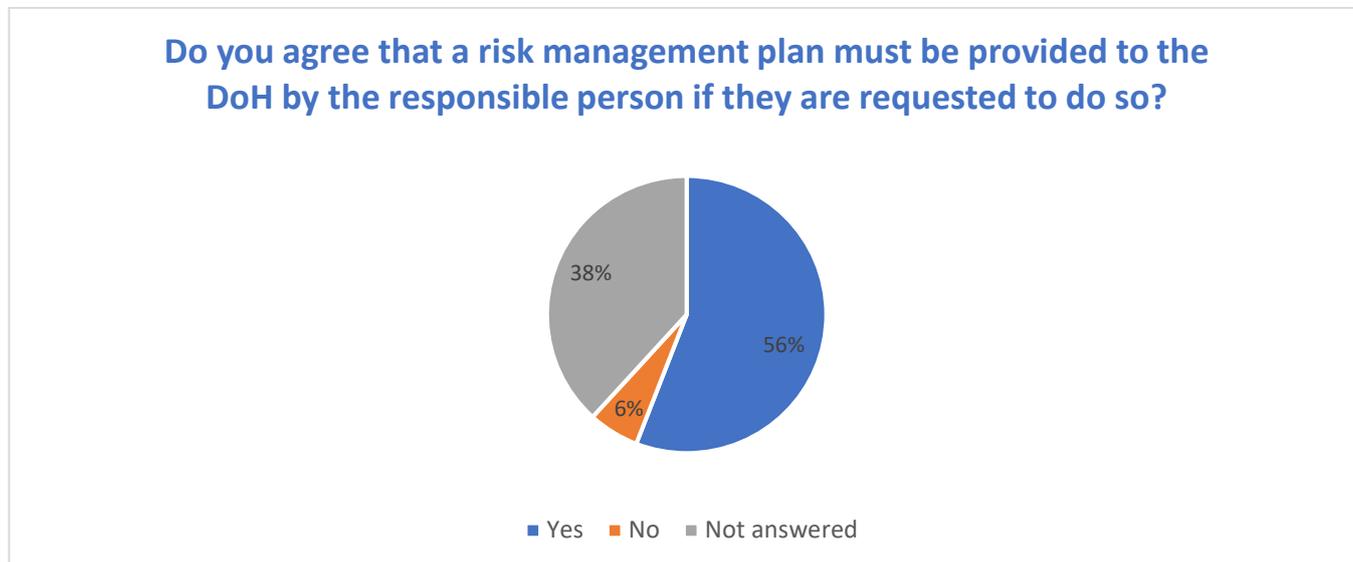


Figure 32 Requirement to provide DoH with a risk management plan on request

56% (n=38) of respondents supported new regulation to enable the DoH to require scheme operators to provide a risk management plan if requested to do so. 6% (n=4) were opposed to this proposal.

Question 44: Do you support the proposal that the wastewater scheme operator can determine the framework used to develop a risk management plan? Please explain.

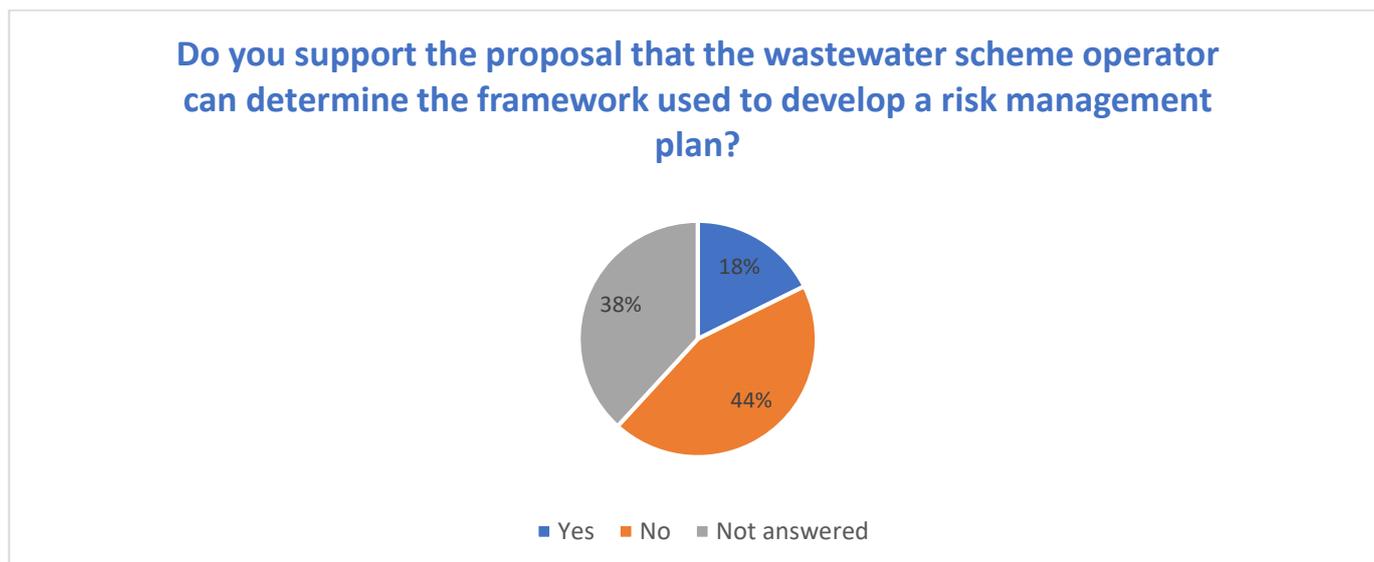


Figure 33 Feedback on the framework to develop risk management plans

The majority of respondents who answered this question disagreed with this proposal. Of the respondents who disagree, nine (9) respondents felt that the DoH should set the risk management framework, ten (10) respondents felt an existing framework should be used, two (2) respondents citing ISO31000 as the preferred risk framework, and two (2) respondents preferred the

framework be determined by an external auditor. Four (4) respondents indicated the DoH should provide guidance and templates.

Table 9 Feedback on who should determine the framework for risk management plans

Proposed framework for Risk Management	No of responses
DoH set the risk management framework	9
Existing risk management framework	10
Framework to be determined by an external auditor	2
DoH should provide guidance and templates	4

Question 45: If you do not support the above, should the DoH develop a template that would be provided as guidance material or a code of practice?

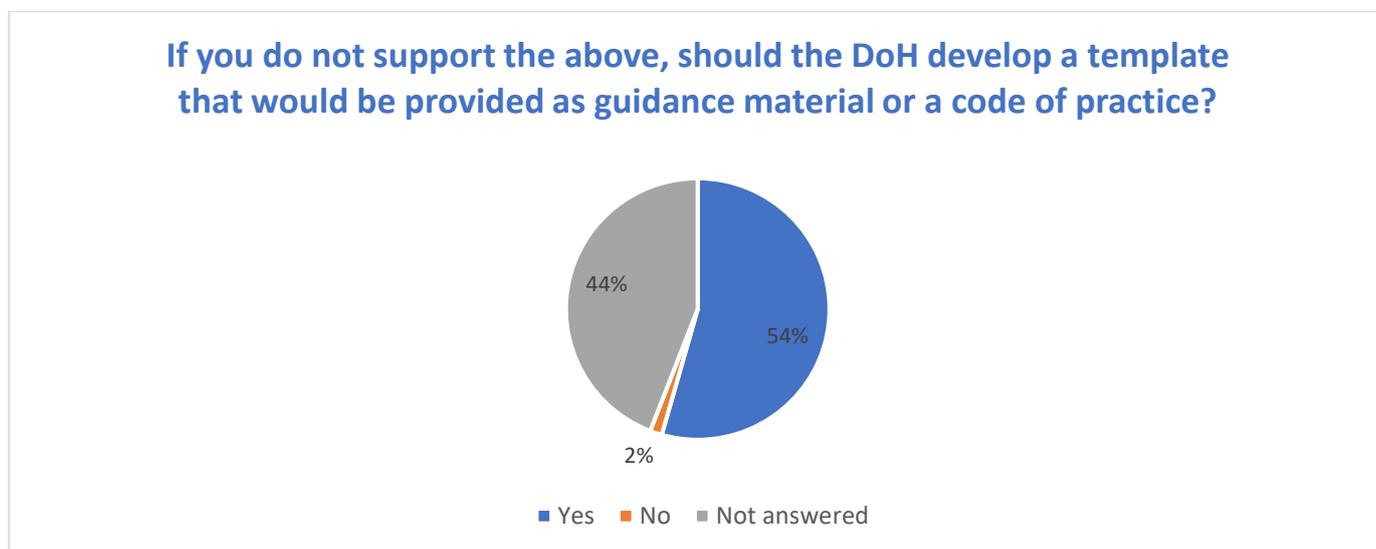


Figure 34 Feedback on the DoH developing guidance material or a code of practice to guide development of risk management plans

Proposal 3.3 Summary

The majority of respondents agreed RMPs should be developed regardless of whether a registration was required. Most respondents felt the scheme operator should not determine the framework used for a RMP – rather the existing framework be carried forward or the DoH set a framework. There was overwhelming support for the DoH to develop a template for RMP as guidance or a code of practice.

The DoH is cognisant of the importance of locally operated sewerage schemes and does not wish to place any constraints on them without commensurate public health benefit. The DoH intends that new regulation will not require an RMP for registered schemes. However, as part of an assessment on registration if the DoH considers that if it is warranted due to the risks associated with the scheme, a requirement for an RMP may be included as a condition of registration.

Proposal 3.4 Use of wastewater products

Recycling and reuse of wastewater products are to be covered in a separate discussion paper. While questions 46 and 47 sought feedback on wastewater products, this was in relation to previous questions on registration of schemes.

Question 46: Do you agree that how wastewater products are to be used should be part of a registration under the Public Health Act?

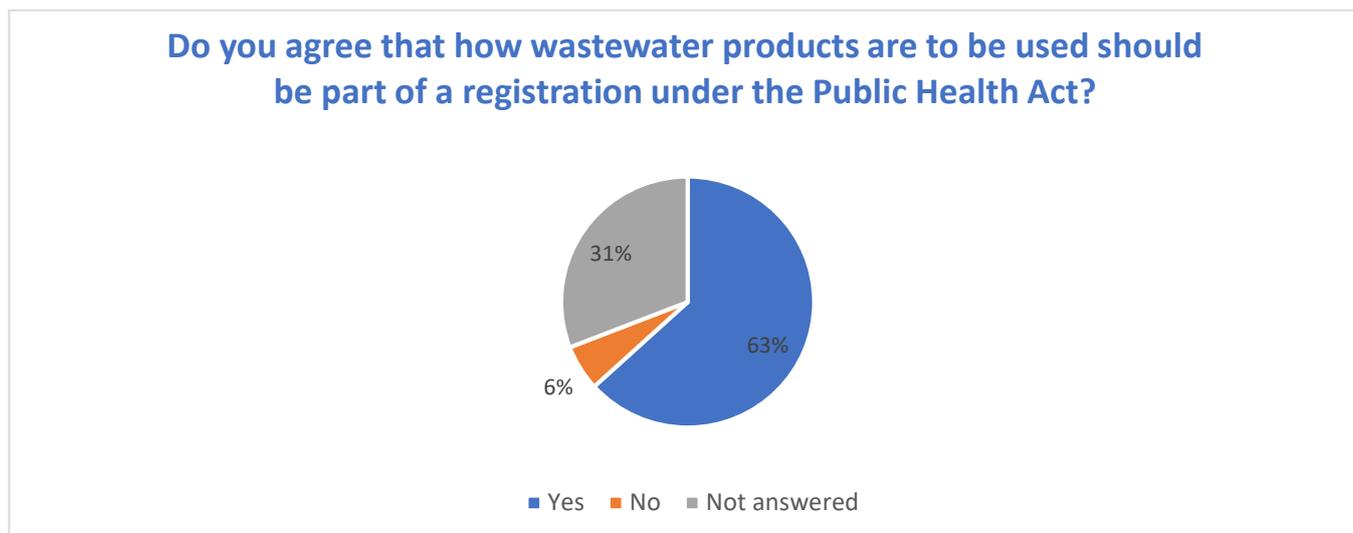


Figure 35 Feedback on including wastewater products as a part of registration of a scheme

63% (n=43) of respondents supported this proposal.

Question 47: Do you agree with the following statement? 'Should a sewerage scheme operator wish to change how a wastewater product is used they will be required to apply to have their registration amended.'

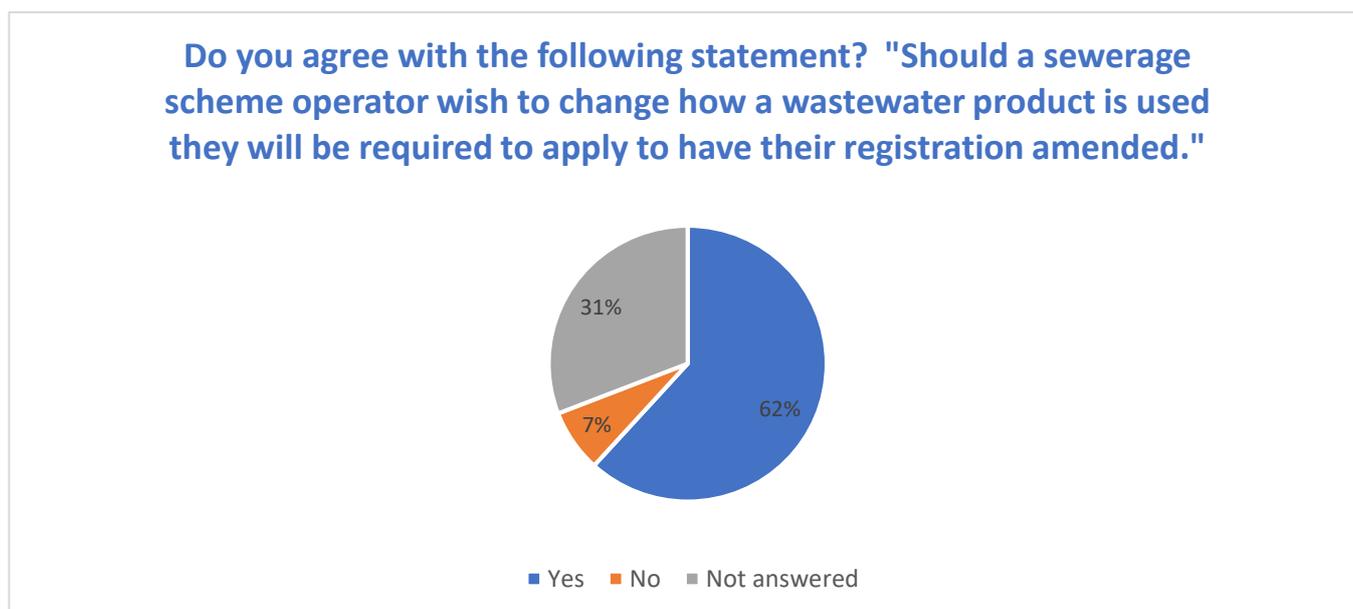


Figure 36 Feedback on requirements for amending a registration

62% (n=42) of respondents supported this proposal.

Question 48: Do you think how a wastewater product is used should be determined using a risk based approach or a prescriptive approach such as a predetermined set of water criteria?

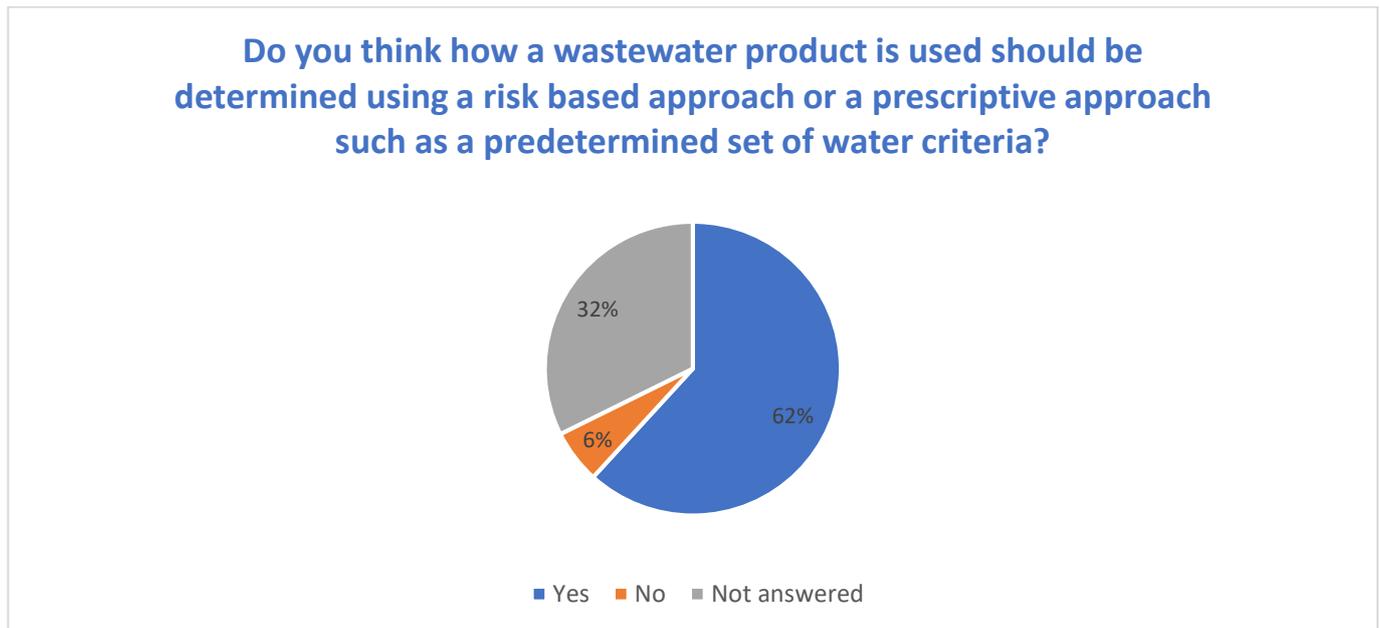


Figure 37 Feedback on the approach to be used for regulating recycled water products

62% (n=42) of respondents supported this proposal. Two free field comments were received on the approach for managing wastewater products, one comment supported a prescriptive approach, and the other supported a risk-based approach with the onus on the generator of the waste to provide a product that has a low public health risk.

Proposal 3.4 Summary and recommendations

The DoH proposes that if the end use of a wastewater product is changed from that stated in registration, the registration will need to be amended.

The DoH recommends that new regulation require schemes that reuse wastewater to have a recycled water quality management plan in place.

Chapter 3 Recommendations

11. The DoH recommends that new regulation declare the operation of a sewerage scheme as a public health risk activity that is registerable.
12. The DoH recommends that new regulation allow for exemptions from registration for certain classes of schemes. An exemption class would be for schemes that are licensed under the Water Services Act.
13. The DoH recommends that new regulation declare that a registered scheme owner must apply to amend registration if there is:
 - an increase in the volume of wastewater to be treated
 - a change in treatment methodologies
 - a change in how treated effluent is disposed.
14. The DoH recommends new regulation to set the fees for registration at cost recovery.
15. The DoH recommends that new regulation require schemes that reuse wastewater to have a recycled water quality management plan in place.

Chapter 4 Proposed regulations for managing onsite wastewater systems

The objectives of the proposals related to onsite wastewater systems were to enable development of regulation that:

- is less prescriptive and based on the level of risk to public health
- is flexible and provides options for the types of systems that can be installed
- is progressive and can encompass new technologies as they emerge
- is future proofed to address changing climate conditions and land availability
- aligns with other policies to reduce water usage and maximise reuse of treated wastewater
- creates a regulatory process where there is accountability for owners and/or installers of onsite wastewater systems if a system were to fail.

When installing an onsite wastewater system, the size and type of the system, siting, service and maintenance requirements all need to be considered. The most common causes of onsite wastewater system failure are due to:

- undersized or incorrect installation of systems
- insufficient area on a property for appropriate disposal of wastewater
- increases in wastewater loading due to a change in occupancy
- inappropriate location of absorption trenches due to insufficient information on site characteristics
- poor knowledge of operation and maintenance procedures by homeowners/occupiers⁵.

Each section in Chapter 4 discusses the options for the design, installation and maintenance of onsite wastewater systems proposed in the discussion paper. The application of Australian Standards was a major theme through the questions.

Proposal 4.1 to 4.3 discusses the general requirements for onsite systems including:

- a governance system for local government
- minimum siting requirements
- design requirements for onsite wastewater systems and land application systems
- the powers for regulation to set minimum training standards.

Each is addressed in greater detail in the following sections.

To ensure the correct installation of an onsite wastewater system it is important to make sure the system works as expected, treats wastewater to the required quality and is at low risk of failure. Currently local government approve the installation of commercial onsite wastewater systems that receive less than 540L/day and issue a permit to use after installation. Proposal 4.4 sought feedback on the requirements for installation, modification and decommissioning of wastewater systems.

Proposal 4.5 asked respondents to comment on additional system design requirements, including methods for the calculation of flow rates, calculation of design load rates, and methods for determining the appropriate size of land application systems. Feedback was sought on site and soil evaluations (SSE) for a premise with a single dwelling, premises with more than one dwelling, the content of a SSE, and who can conduct a SSE.

Proposal 4.6 sought comment on the requirements for ongoing servicing and maintenance of onsite wastewater systems and the potential for testing of treated wastewater from installed onsite wastewater systems. The ongoing quality of the wastewater product is determined by how well

⁵ Gunady M., Shishkina N., Tan H., Rodriguez C., 2015. A review of Onsite Wastewater Treatment Systems in Western Australia from 1997 to 2011. *Journal of Environmental and Public Health*.
<https://doi.org/10.1155/2015/716957>

the system is maintained and serviced. A poorly functioning system may increase the level of contaminants in a wastewater product increasing public health risks.

The final sections, 4.7 to 4.9 sought clarification on the roles of each of the enforcement agencies, and the qualifications and training of individuals who install and service onsite wastewater systems. The DoH also asked for feedback on how the public health risks should be managed when there is more than a single dwelling on the premises.

Proposal 4.1 Overarching governance of onsite wastewater systems

Question 49 *If regulation is the preferred option, do you agree the regulations should require local government to have in place “a system of governance” for the management of onsite wastewater systems?*

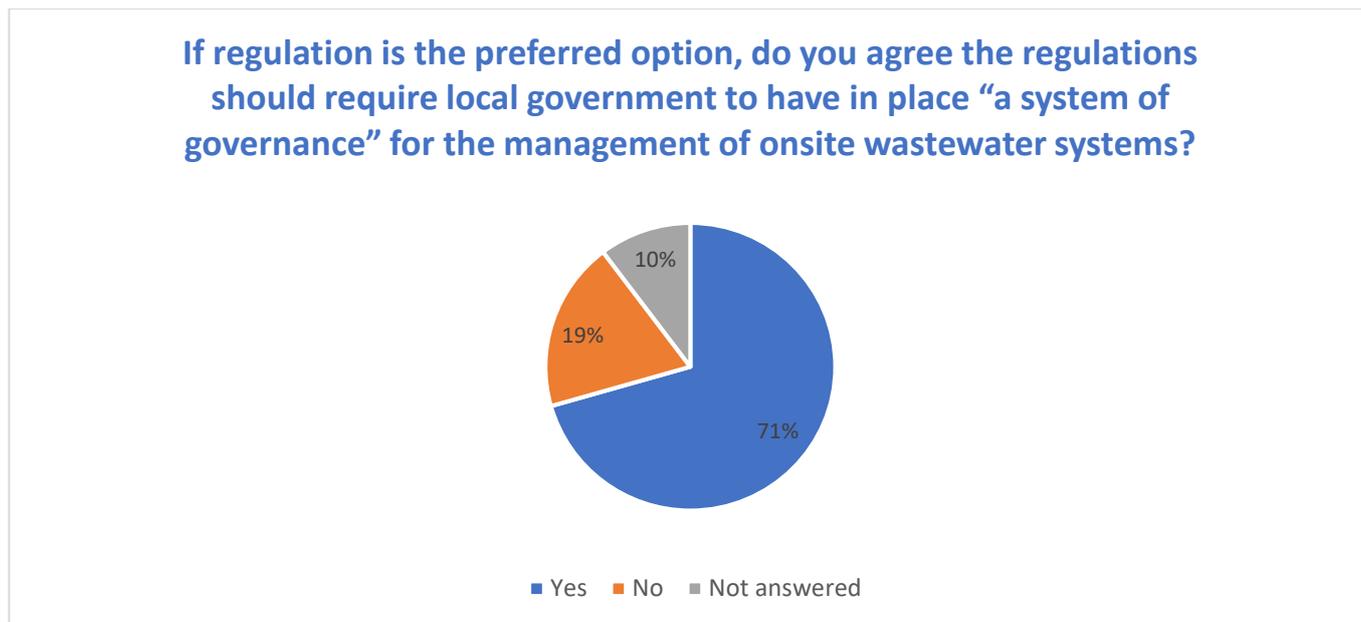


Figure 38 Responses for the requirements for local government to have in place a system of governance

There was majority support for this proposal, with 71% (n=48) favouring the proposal. One comment from local government stated:

‘A consistent system of governance is required across all local governments. A standardized record keeping system is required for ATU (Aerobic Treatment Unit) service reports that captures the process from service agent to owner and local government. Ideally this system should be an electronic system where data is automatically able to upload and only problem systems are marked with a red flag for the local government to follow up. This is a significant project that needs to be centrally coordinated by the DoH (much like that of the central mobile food vendor register being developed by the DoH). This would greatly speed up the time taken between the service being undertaken to local government receiving the record, greatly reduce the administrative burden of managing the sheer number of service reports being received, enable local government to easily focus on “problem” ATU’s and also enable the DoH online access to service reports data for statistical and reporting purposes.’

Comments from State Government agencies included:

- *‘As long as local government has the capacity and capability to effectively undertake this responsibility.’*
- *‘It is suggested that templates/guidance material is provided to local governments to assist in the development of policies and procedures.’*

Proposal 4.1 Summary

There was support for a consistent system of governance. However, it was noted that this could have a big impact on some local governments. If an activity is registerable under the Public Health Act, an enforcement agency must prepare and maintain a register listing the registered activities and the premises in respect to those activities.

Local government will need to have some form of governance to manage activities that are public health risk activities under new regulations. However, the DoH does not consider that this should be a part of new regulation.

Proposal 4.2 Power to prescribe training standards

50 If regulation is the preferred option, do you agree the regulations give the Chief Health Officer the power to prescribe minimum training and skills requirements for operating and maintaining onsite wastewater systems?

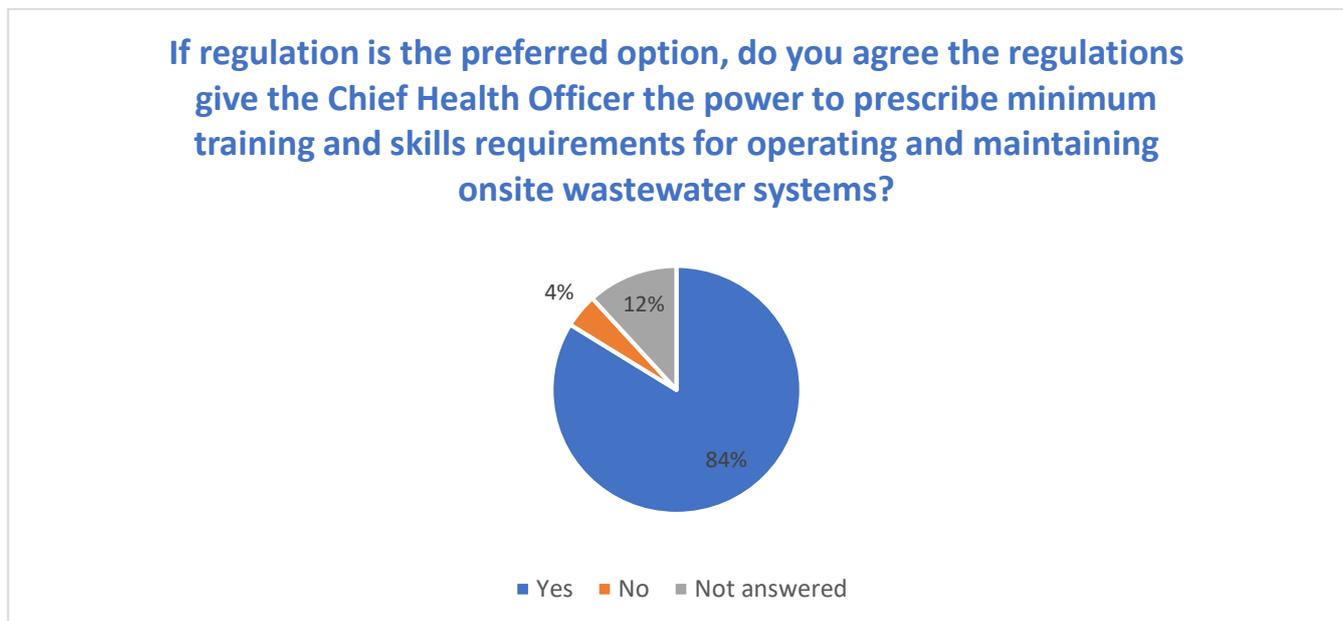


Figure 39 Feedback on the power to prescribe minimum training or skills for operating and maintaining an onsite wastewater system

84% (n=57) of respondents supported new regulation to give the Chief Health Officer (CHO) the power to prescribe minimum training standards for operating and maintaining onsite wastewater systems.

Proposal 4.2 Summary and recommendations

The DoH recommends that new regulation enables the CHO to prescribe minimum training or skill requirements. This will be applicable to installers and service technicians and is discussed further in Section 4.9. Specific qualifications and training requirements will be provided by the DoH in guidance material.

Proposal 4.2 Recommendations

16. The DoH recommends that new regulation enables the CHO to prescribe minimum training or skill requirements.

Proposal 4.3 General requirements for onsite wastewater systems

Proposal 4.3 sought feedback on the general requirements for onsite wastewater system, as well as specific questions relating to:

- minimum siting requirements (Q53 to 56)
- the approval process for the design of wastewater systems (Q57 to 62)
- the approval process for land application areas (Q63 to 64).

Questions 51 and 52 proposed the general requirements for onsite wastewater systems and garnered a strong response rate to these questions.

Question 51 *If regulation is the preferred option, do you agree they should require:*

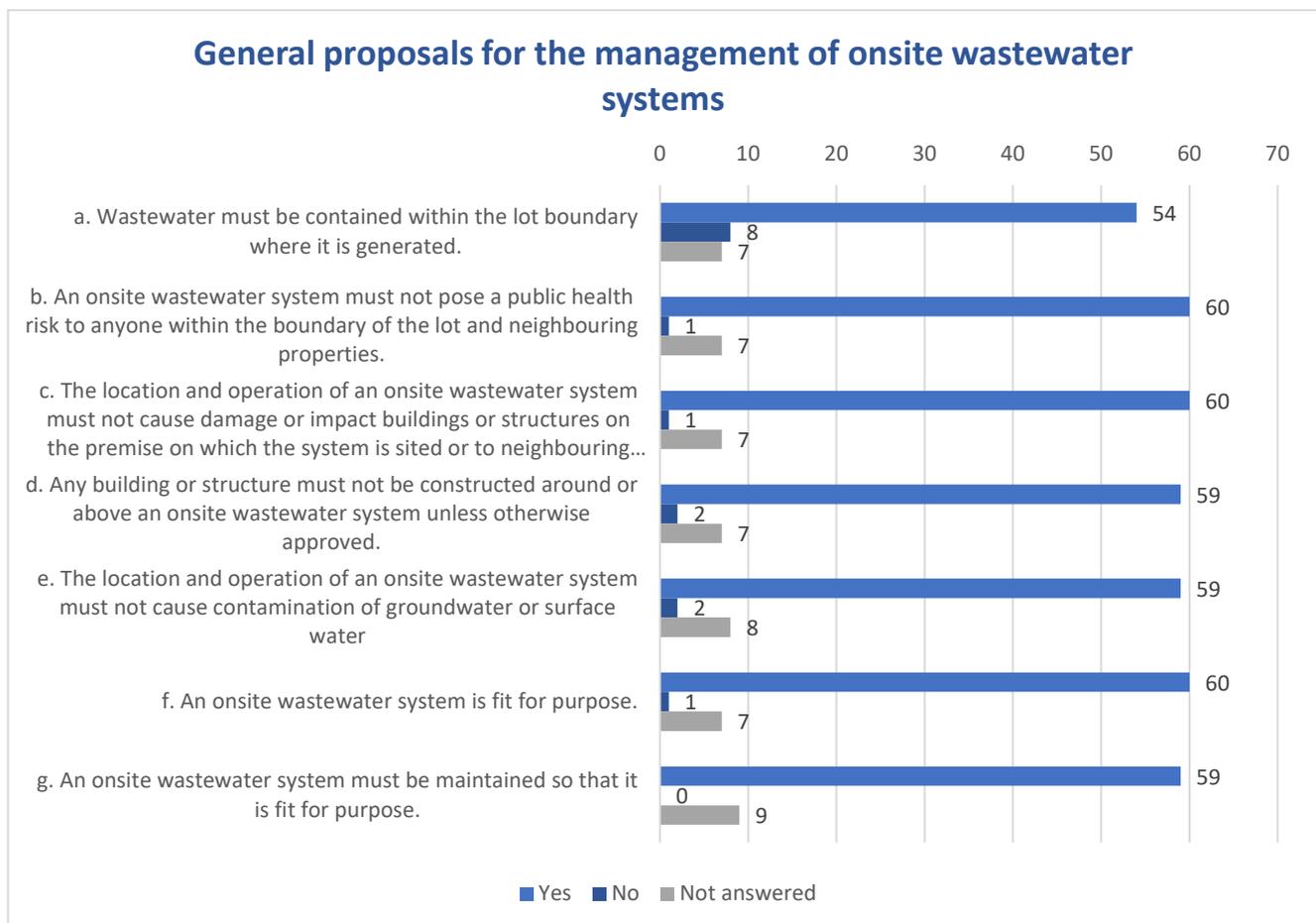


Figure 40 General proposals for managing onsite wastewater systems

One respondent agreed with the requirements in general but indicated they could be revised to reduce duplication and simplify requirements.

Comments received included:

- *‘agrees with this risk-based approach and generally agrees with the suggested general requirements for management of health risks. However, it is suggested that this list (51. a-g) be revised to reduce duplication and consolidate and simplify requirements’*
- *‘CHO exempt in some exceptional circumstances such as on reserves under the single control of one agency’*
- *‘It is impractical to require that the contamination will be restricted to a particular land parcel, as the dissolved chemical constituents will move offsite with groundwater flow. It would be better to require a proponent to undertake a preliminary risk assessment to*

determine whether there are any nearby receptors that could be adversely affected by CCoPC in groundwater'

(DoH note: It is assumed CCoPC refers to concentration of potential contaminants)

- (In relation to e. the location of an onsite wastewater system must not cause contamination of groundwater or surface water) *'This limitation is not practicable, considering that only systems discharging less than 540 litres of sewage per day are exempted under the provisions of Contaminated Sites Regulation 5(c). Seepage from various types of onsite wastewater treatment and disposal systems may cause groundwater contamination from a range of dissolved salts, nitrogen compounds, and some sewage-derived CCoPC that are likely to be present in dissolved form in the seepage to groundwater (State government).'*

The following table summarises the DoH recommendations of each of the proposed statements.

Table 10 Proposed regulatory requirements for the management of onsite sewerage systems

Statement	Recommendation
<p>a. Wastewater must be contained within the lot boundary where it is generated.</p>	<p>The DoH recommends this requirement is not included in new regulation. Comments indicated it is not practical to prevent migration of effluent offsite after dispersal through the land application area.</p> <p>The objective of this statement was to contain sewerage on a single premise. This statement may be redundant if statements (f) and (g) are adopted. If a system is not fit for purpose and is releasing untreated wastewater then a lot may be considered a contaminated site under the <i>Contaminated Sites Regulations 2006</i> which would trigger a required response.</p>
<p>b. An onsite wastewater system must not pose a public health risk to anyone within the boundary of the lot on which it is located or neighbouring properties.</p>	<p>The DoH recommends this requirement be included in new regulation. This statement was supported by respondents for inclusion in new regulation.</p>
<p>c. The location and operation of an onsite wastewater system must not cause damage or impact buildings or structures on the premise on which the system is sited or to neighbouring properties.</p>	<p>The DoH recommends inclusion in the new regulation. This statement was supported by respondents for inclusion in new regulation.</p>
<p>d. Any building or structure must not be constructed around or above an onsite wastewater system unless otherwise approved.</p>	<p>The DoH recommends inclusion in the new regulation. The DoH recommends the current wording in the Health (MP) Act is retained. It reads as follows:</p> <p>18A. Structures not to be erected above apparatus</p> <ol style="list-style-type: none"> 1) A person shall not cause or permit any structure to be erected above any septic tank, aerobic treatment unit, greywater system or drainage line if that structure: <ol style="list-style-type: none"> a) obstructs free access to the apparatus or b) has walls on more than 3 sides. 2) A person shall not, without the permission of the relevant local government, cause or permit a receptacle for drainage: <ol style="list-style-type: none"> a) to have any structure erected above it b) to be subject to vehicular traffic or be located less than 1.2 m from an area that is subject to vehicular traffic; or c) to be paved or covered with a surface treatment. 3) Where, as permitted by a local government under subregulation (2), a receptacle for drainage is covered by paving or a surface treatment, the owner shall ensure that access points are provided:

Statement	Recommendation
	<ul style="list-style-type: none"> a) that are suitable for the inspection or service of the receptacle for drainage b) that do not require the removal of the paving or surface treatment.
<p>e. The location and operation of an onsite wastewater system must not cause contamination of groundwater or surface water</p>	<p>Not required:</p> <p>Captured by <i>Contaminated Sites Regulations 2006</i>, reg. 5</p>
<p>f. An onsite wastewater system is fit for purpose.</p>	<p>The DoH recommends inclusion in the new regulation. It replaces regulations 15, 16, 17 and 19 in the <i>Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974</i>, specifically:</p> <p>15. Wastes from business or industry A person shall not cause or permit any wastes from any business or industry to discharge into an apparatus except with the written permission of the relevant local government.</p> <p>16. Matter interfering with efficient operation of apparatus A person shall not cause or permit the discharge into an apparatus of any matter which may interfere with the efficient operation of the apparatus.</p> <p>16A. Use to comply with adopted Codes The owner and the occupier of a premises on which there is installed an apparatus to which an adopted Code applies, must ensure that it is operated in compliance with that Code.</p> <p>17. Certain matter not to be discharged into apparatus Without limiting regulation 16, a person shall not cause or permit the discharge into any apparatus or receptacle for drainage used for the reception of effluent or liquid wastes:</p> <ul style="list-style-type: none"> a) any surface or subsoil drainage, rainwater from any pavement or roof, or overflow water from rainwater tanks or flushing systems, or other relatively clean water b) any inflammable or explosive materials that are not readily soluble in water, or any materials which when mixed with sewage or water are liable to form explosive compounds or to interfere with the treatment process c) any insoluble matter or articles, dead animals, or rubbish whatsoever d) any liquids or solids that are bactericidal in effect in such quantity as to affect the proper functioning of the septic tank. <p>19. Use of damaged or defective apparatus prohibited</p> <ul style="list-style-type: none"> 1) A person shall not use an apparatus that becomes damaged or defective. 2) The owner of any premises shall not permit or suffer any person to use on such premises any apparatus which is damaged or defective.
<p>g. An onsite wastewater system must be maintained so that it is fit for purpose.</p>	<p>The DoH recommends inclusion in the new regulation.</p>

Question 52 Are there any other minimum requirements the DoH should consider?

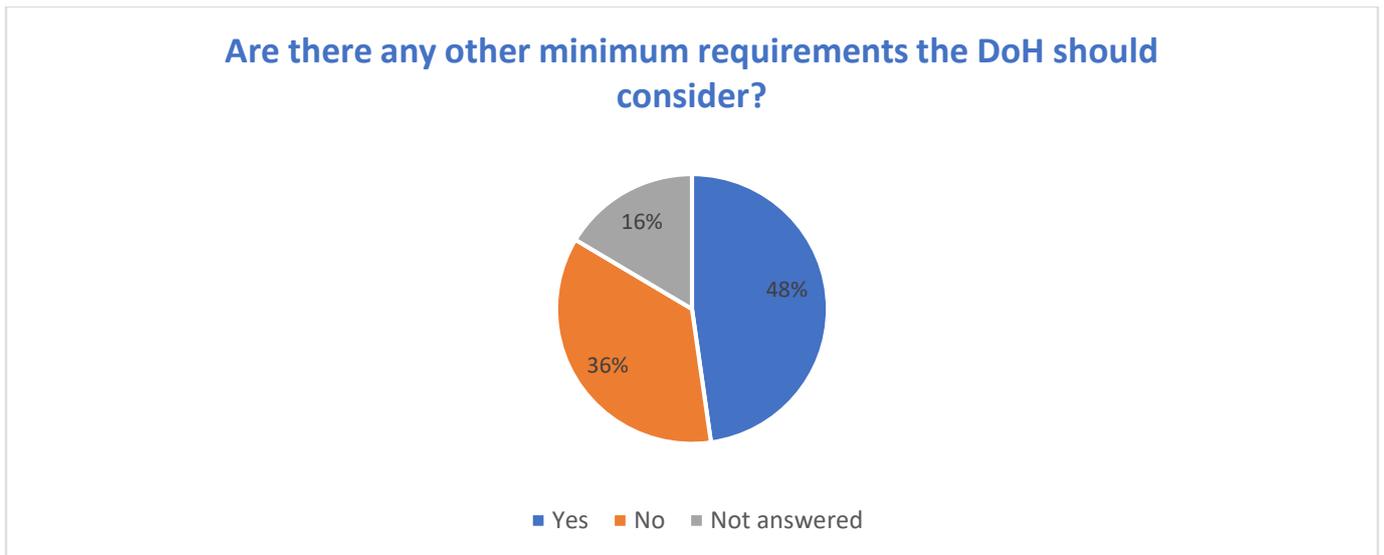


Figure 41 Number of responses supporting some generalised minimum requirements for managing onsite wastewater systems

48% (n=33) of respondents felt additional minimum requirements should be considered. Thirty-eight (38) respondents provided additional comment.

The main themes from the comments were:

- *‘Retain the existing requirements from the current regulations and incorporate site constraints from the historic Government Sewerage Policy (2016).’*
- *‘Clause ‘d’ from question 51 should include paving, driveways and be easily accessible.’*

Proposal 4.3.1 Minimum siting requirements

The following questions addressed the minimum siting requirements for onsite wastewater systems. Minimum siting requirements include:

- requirements for minimum vertical separation to groundwater, bedrock and impervious soils
- requirements for a minimum absorptive zone
- requirements for minimum horizontal setbacks to buildings, structures, neighbouring properties and drinking water sources
- requirements that land application areas should be located away from water resources and groundwater
- minimum lot size
- areas flooded at greater than 10% annual exceedance probability.

Question 53 Do you agree minimum siting requirements should be required for the location of onsite wastewater systems?

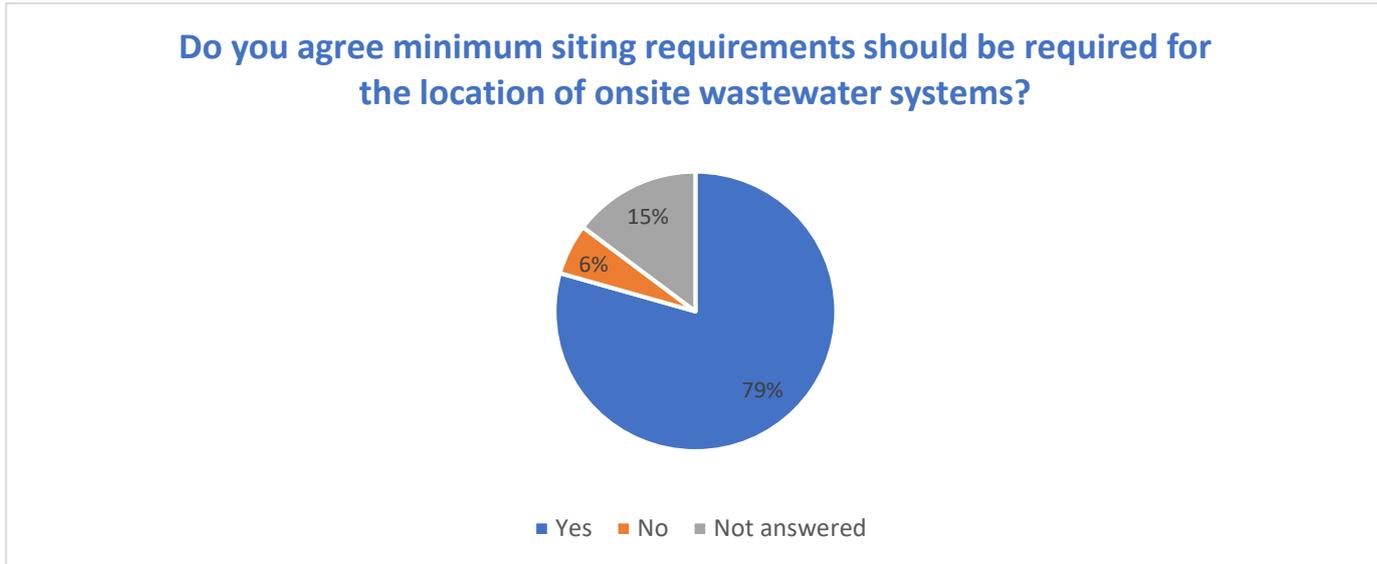


Figure 42 Responses to the proposal for new regulation to set minimum siting requirements for onsite wastewater systems

There was majority support for this proposal with 79% (n=54) of respondents agreeing there should be minimum siting requirements for onsite wastewater systems.

Question 54 Do you agree minimum siting requirements should be required for the location of land application systems?

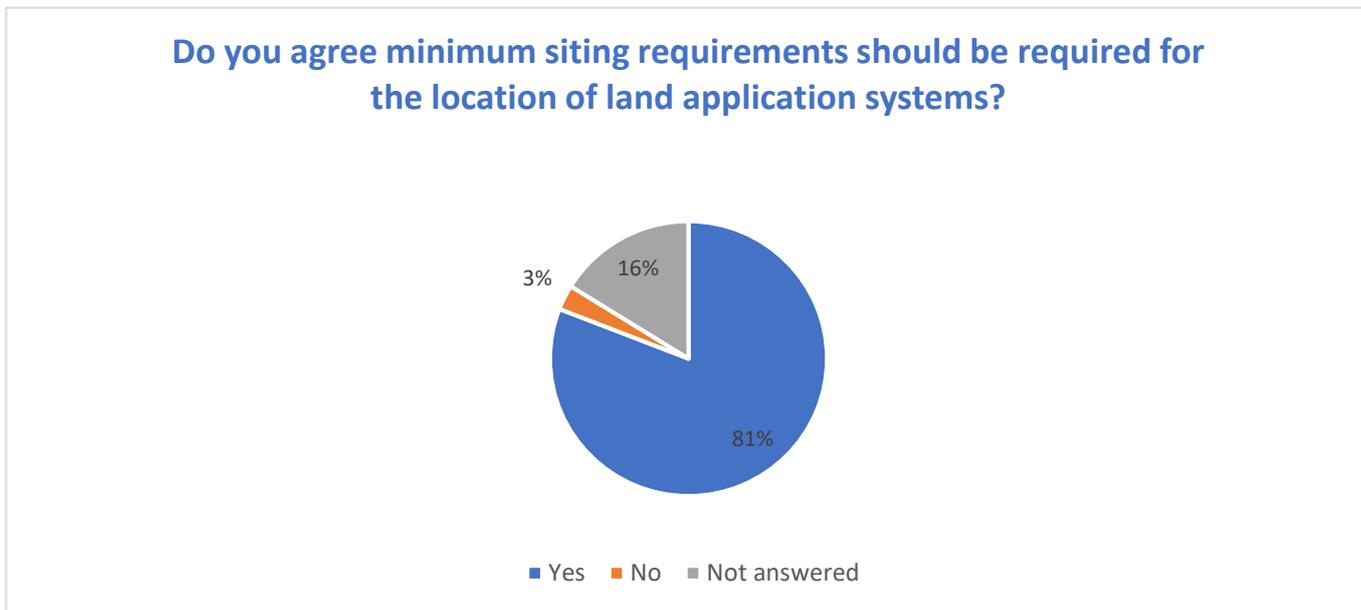


Figure 43 Responses to the proposal for new regulation to specify minimum siting requirements for land application systems

There was majority support for this proposal with 81% (n=55) of respondents agreeing there should be minimum siting requirements for land application systems.

Question 55: Should the DoH set prescriptive minimum siting distances in the regulation or a code of practice or should minimum siting requirements follow the risk-based approach provided in AS1547?

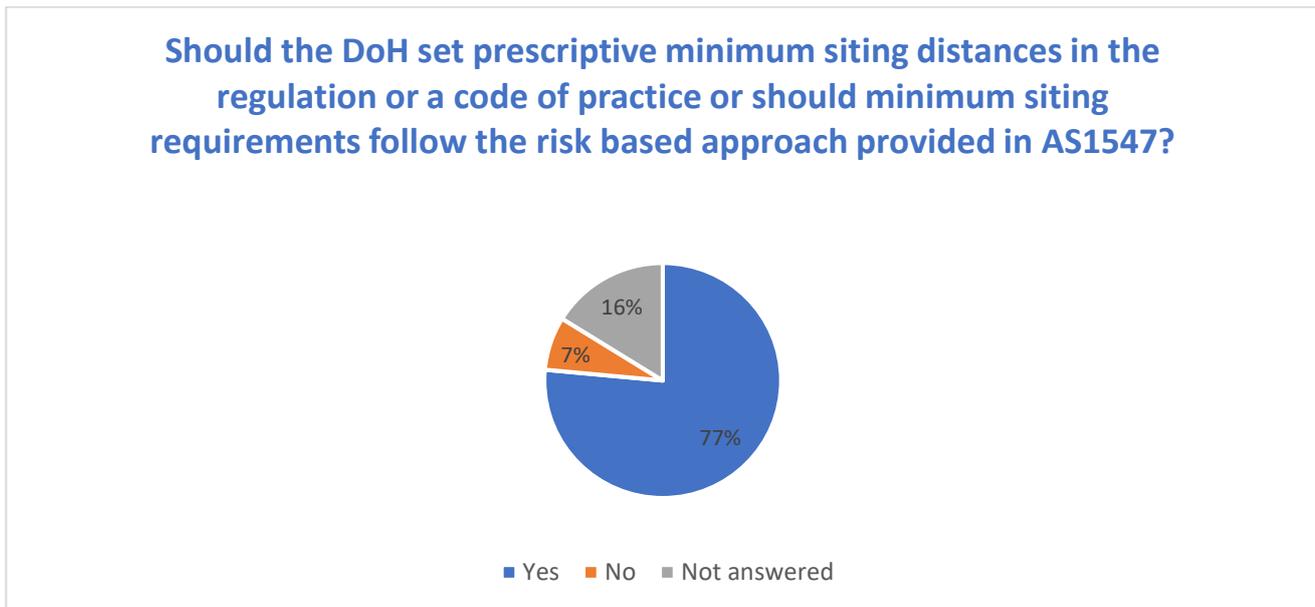


Figure 44 Support for a prescriptive or risk based approach to setting minimum siting distances for onsite wastewater system

While question 55 posed an either / or question, the response form required a ‘yes’ or ‘no’ answer and provided a free field for further comment. The responses are interpreted that 77% (n=52) of respondents supported minimum siting distances generally. In free field commentary respondents indicated a strong preference for prescriptive regulation rather than the risk base approach provide by AS/NZS 1547:2012. Twenty-seven (27) respondents stated minimum siting distances should be provided in regulation or a code of practice, while seven (7) respondents stated a preference for a risk base approach such as Australian Standard AS/NZS1547:2012.

Question 56: Should the DoH consider other literature for setting minimum siting distances?

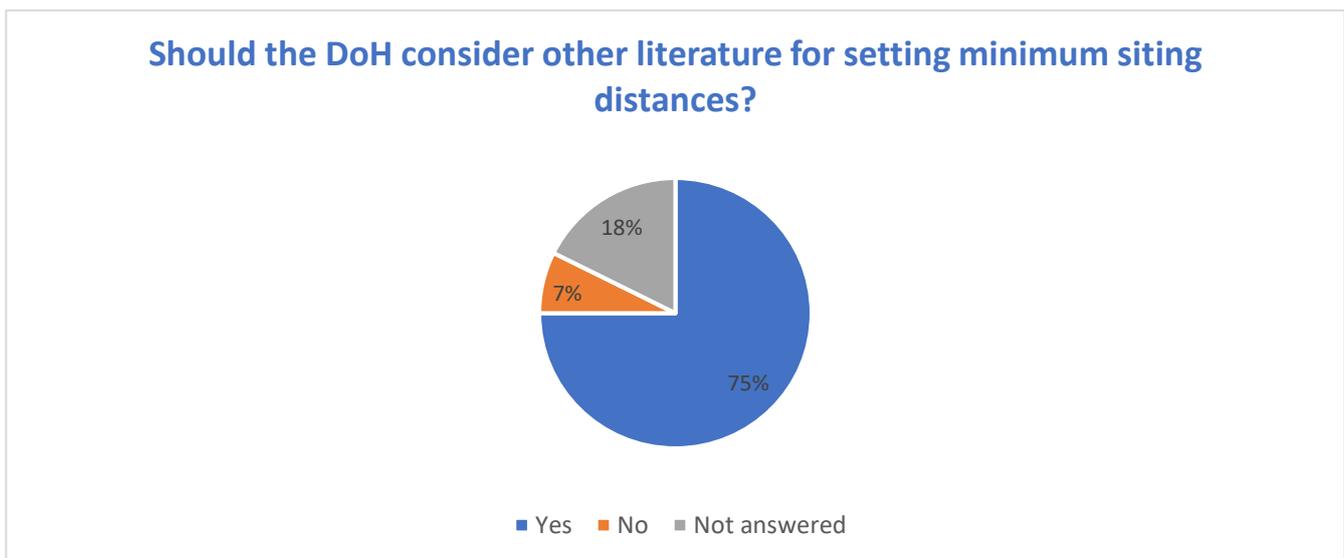


Figure 45 Responses for consideration of other literature to set minimum siting distances

75% (n=51) of respondents suggested the DoH should consider other literature in setting minimum siting distances. The following suggestions were provided for consideration:

- ‘DWER Odour emission for minimum siting distance’

- *‘support adopting the minimum siting requirements from the Australian Standards to safeguard health. ...the setback distances in the GSP are designed to protect water bodies (including groundwater) and ecological communities... it needs to be very clear in DoH documentation that the criteria discussed relate to protecting human health and not the environment’*
- *‘The Caldwell Connell Engineers Report for the Water Authority of WA On-Site wastewater disposal system final report dated December 1986’*
- *‘Minimum siting requirements should be based on a risk-based approach and should allow the use of engineered approaches to mitigate risk.’*

Proposal 4.3.1 Summary

The DoH reviewed the sources proposed by respondents for setting minimum siting distances and concluded the following:

- The DWER odour emissions guidelines⁶ are not suitable for individual onsite wastewater systems. The DWER guidance provides distances for industries that are a known source of odour. Industry is able to measure and model emissions and can put in place mitigation measures to reduce the impact of the odour.
- The Caldwell report⁷ is not an appropriate reference for setting minimum siting distances. The report does not propose or discuss setback distances other than to state that ‘larger building lots would be required to install larger systems and a typical block size of 850m² in the Perth region would not readily permit their construction unless other outdoor features such as swimming pools, patios and garden sheds are excluded’⁷.
- Current regulation distances are prescriptive and do not provide flexibility to consider site specific conditions.

The Australian/New Zealand Standards have been developed using processes of consultation and input from technical experts and allows flexibility when siting land application systems by considering specific site conditions. Furthermore, to ensure they keep pace with new technologies, the Standards are regularly reviewed by Standards Australia technical committees⁸. The DoH recommends developing a code of practice for sizing land application areas and setting minimum siting requirements. The code of practice will be based on Australian/New Zealand Standards. This provides consistency with other areas of wastewater management such as system design that will also be based on the Australian/New Zealand Standards.

⁶ DWER 2019, Odour Emissions, available at [Odour Guideline \(der.wa.gov.au\)](https://www.der.wa.gov.au/odour-guideline)

⁷ Caldwell Connor Engineers Pty Ltd, 1986. Onsite wastewater Disposal Systems: Final Report, pg v

⁸ Standards Australia, What is a Standard, available at [What is a Standard | Standards Australia](https://www.standardsaustralia.org.au/what-is-a-standard)

Proposal 4.3.2 Onsite wastewater systems design approvals

Questions 57 to 62 sought feedback on appropriate designs for onsite wastewater systems and the approval process.

Question 57 Do you agree that onsite wastewater system designs should be in line with Australian Standards?

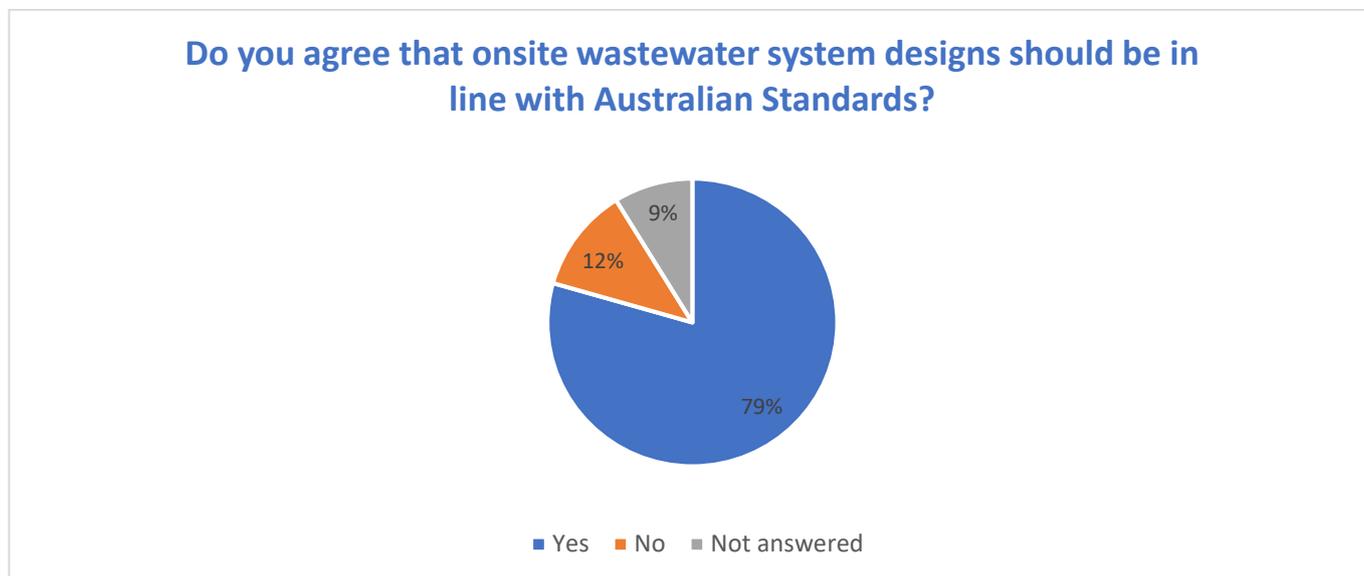


Figure 46 Responses supporting the design of onsite wastewater systems in accordance with Australian Standards

This proposal was supported by 79% (n=54) of respondents.

One respondent commented, *'this ensures that the design of the unit is appropriate and fit for purpose. AS1546 would be updated as required and would ensure that the Regulation does not also need to be amended to any great extent over time. Furthermore, it would provide manufacturers some surety that their product can be used across various state jurisdictions.'*

Question 58 Do you agree that all onsite wastewater system products should be certified by a certified body/company that is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ)?

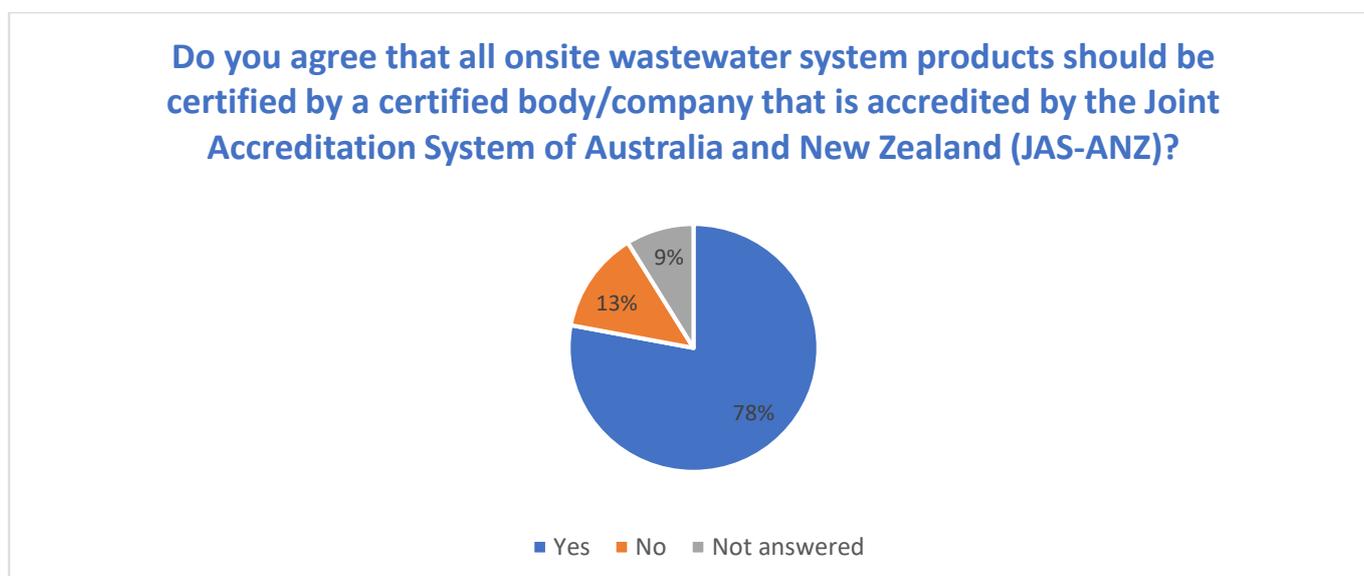


Figure 47 Certification requirements for onsite wastewater systems

78% (n=53) of respondents agreed with the proposal for products to be certified by an accreditation body.

One comment provided in response to this proposal stated: *'it is understood that there is currently no AS1546 certification capacity in WA and therefore WA based manufacturers may face increased costs in having to transport their products to the eastern states. This may in turn have the potential to stifle WA based start-up companies.'*

The Australian/New Zealand Standards for the design of onsite wastewater system are already adopted in the existing *Code of Practice for Product Approvals 2013*. Standards referenced include:

- AS/NZS 1546:1 On-site domestic wastewater treatment units: Septic Tanks
- AS/NZS 1546.2 On-site domestic wastewater treatment units: Waterless Composting Toilets
- AS/NZS 1546.3 On-site domestic wastewater treatment units: Aerated Wastewater Treatment systems
- ATS 5200: 460, Technical Specification for plumbing and drainage products – Greywater Diversion Device (GWDD).

The existing *Code of Practice for Product Approvals 2013* allows for approval of bespoke and non-certified systems. The DoH recommends that the existing *Code of Practice for Product Approvals 2013* is adopted by new regulations.

Question 59: Do you agree that a product that has a certification by a JAS-ANZ certified body should be automatically added to the DoH's list of approved systems?

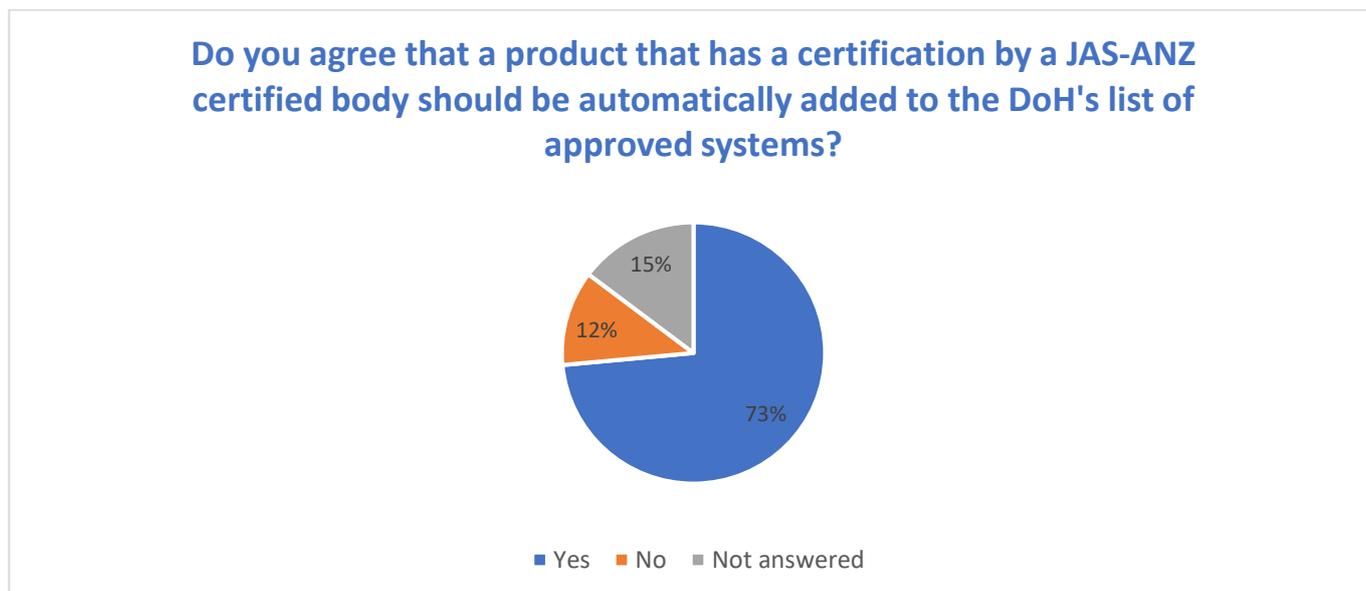


Figure 48 Responses to JAS-ANZ certification and automatic approvals

73% of respondents (n=50) agreed with the proposal for onsite wastewater system products that are certified by an accredited JAS-ANZ body should be automatically approved for use in WA. One (1) submission from local government commented, *'it is essential conditions and installation criteria are included in each product approval document. Product approvals must be readily accessible by local government. DoH to provide a list of approved systems with clear model and product details. For clarity each product should have an original name.'*

Question 60: Which types of onsite wastewater systems should be approved for use in Western Australia?

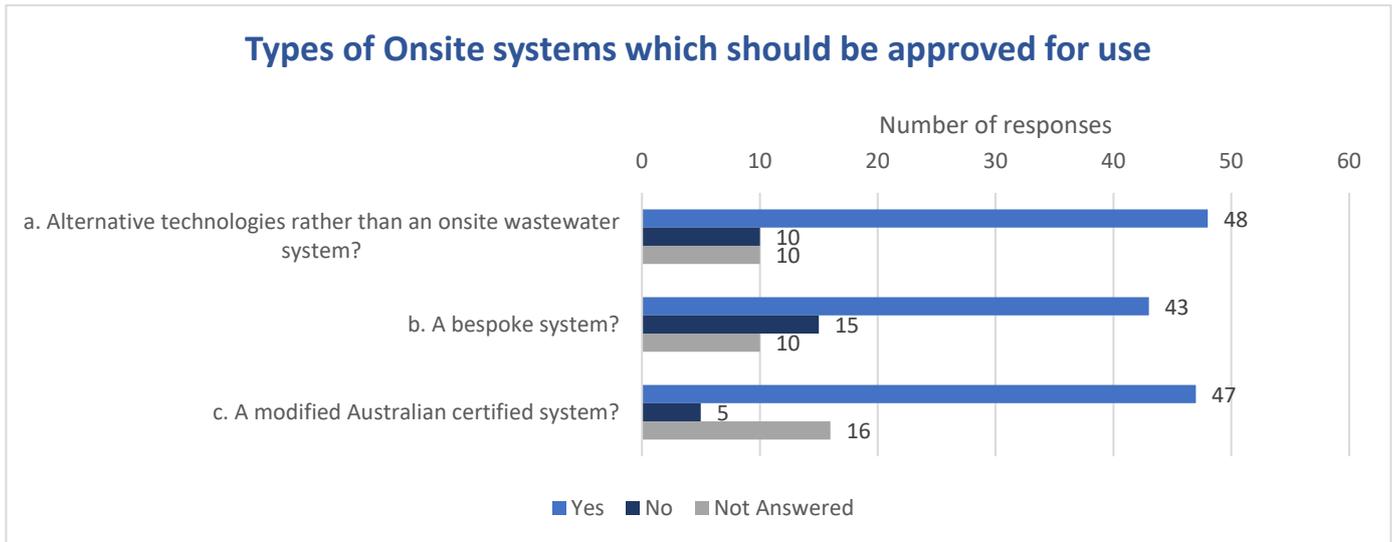


Figure 49 Respondents views on the the types of onsite systems which should be approved for use

There was majority support for the approval of all listed systems. Comments on this proposal included:

- *‘..flexibility in this sense is encouraged in the context of onsite wastewater treatment. However, processes need to be in place (Q61&62) to ensure systems can operate without endangering public health or the environment and is compliant with the general requirements suggested.’*
- *‘Department of Health should have the ability to be able to assess and approve alternative technologies and bespoke systems.’*
- *‘B & C should only happen where full certified documentation can be supplied from an independent body, not from the manufacturer.’*
- *‘There is no quality assurance or standards. Concerns that no minimum criteria leads to DIY wheelie bin toilets and composting toilet firms that seem to have crashed several times with no backup for their clients.’*
- *‘Current systems work fine with minimal costs for landowners.’*
- *‘Testing against the standard must be mandatory or manufacturers with tested and approved systems will complain as they have invested to test and comply to the new AS1546.3:2017 standard. A level commercial playing field must be provided to all manufacturers.’*

Question 61: Do you agree that all alternative designs or new technologies will need to apply to the CHO to get their design approved?

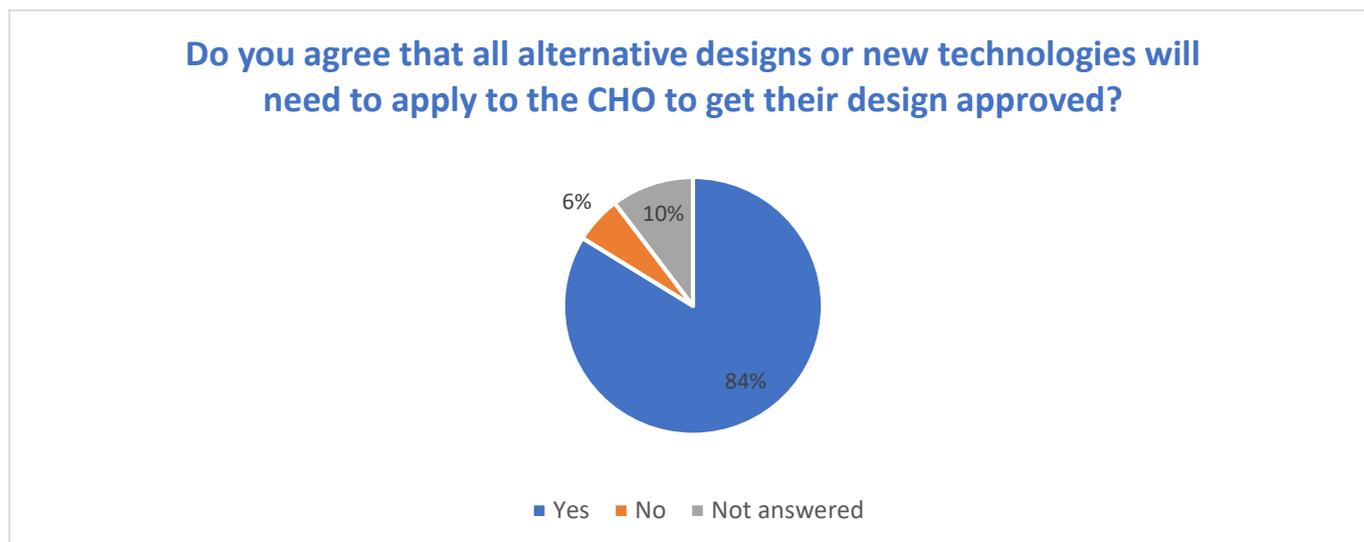


Figure 50 Respondents views on approval from the Chief Health Officer for alternative design of onsite wastewater systems

84% (n=57) of respondents supported this proposal. Certification against the Australian/New Zealand Standard ensures products can meet expected performance requirements and provides confidence that the product will perform in accordance with its specification. The DoH considers that the best way to minimise public health risk associated with the design aspect of onsite systems is to have products certified against the Australian Standards.

Question 62: Do you agree that alternative designs or new technologies should provide evidence that the system will meet treatment requirements for the proposed end use and may be subject to additional conditions to ensure the system is fit for purpose once installed?

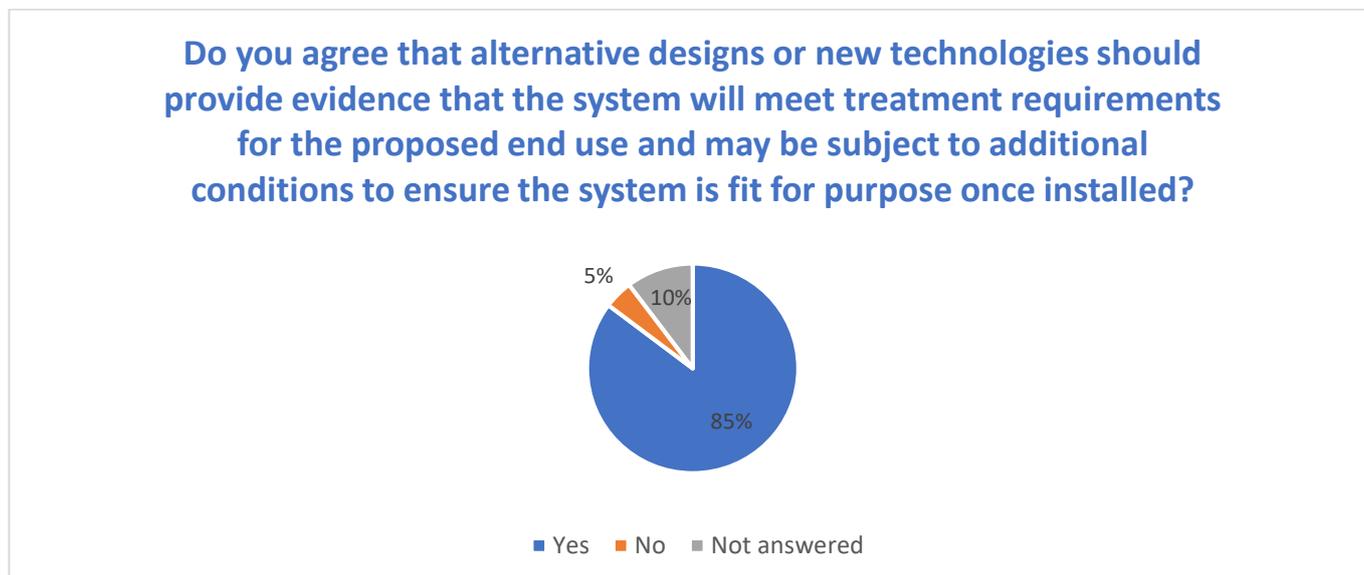


Figure 51 Information required for approval of alternative or new technologies in onsite wastewater treatment

85% (n=58) of respondents supported this proposal. An additional comment from an industry stakeholder was 'AS1546.3:2017 already makes provision for new technology as a "Black Box" theory was adopted in the drafting. ALL products must be tested or be classed as a Primary System under AS1547. New Technology can and must be tested and proven to verify they are "Fit for Purpose".'

Proposal 4.3.2 Summary

Current guidance material requires products to be compliant with Australian/New Zealand Standards. However, bespoke and non-certified systems have been considered for approval on a case-by-case basis. Compliant systems are published on the DoH website.

The cost of certification can be expensive but is outweighed by the assurance that the system will work as it is supposed to. The cost of certification against Australian/New Zealand Standards ranges from approximately \$4,000 to \$9,000 depending on the certification being sought, with an annual licence fee of approximately \$4,000.

In addition, structural engineering reports and external testing costs are required. For aerobic treatment systems these costs may range from approximately \$65,000 to \$150,000⁹. Regardless of certification, testing costs would be incurred by manufacturers of systems in any application for approval to ensure the acceptable performance of a product.

The DoH recommends that CHO product approval is required for all onsite wastewater system products.

As per the current process the existing *Code of Practice for Product Approval of Onsite Wastewater Systems 2013 (COP)* would be updated and adopted in new regulation. This will ensure that system designs are certified to the most up-to-date version of applicable Australian/New Zealand Standards by an accredited JAS-ANZ body. The code of practice will identify systems that may be exempt from certification. At this stage the only exemption would be for concrete septic tanks and grey water systems. There is no capacity in Australia to certify a grey water system and there is no certification of concrete tanks in WA making the requirement for AS/NZS certification impractical for these system types.

There is also scope for new technologies to be certified against the Australian Standards as they are developed.

Existing systems that have received an approval from the DoH would retain that approval.

⁹ Personal communication (SAI Global dated 9 September 2021 –E-AA-21-596514)

Proposal 4.3.3 Approval of land application systems

Questions 63 and 64 considered the approvals required for land applications systems.

Question 63: Do you agree with the proposal that the design of a land application system is approved by the CHO?

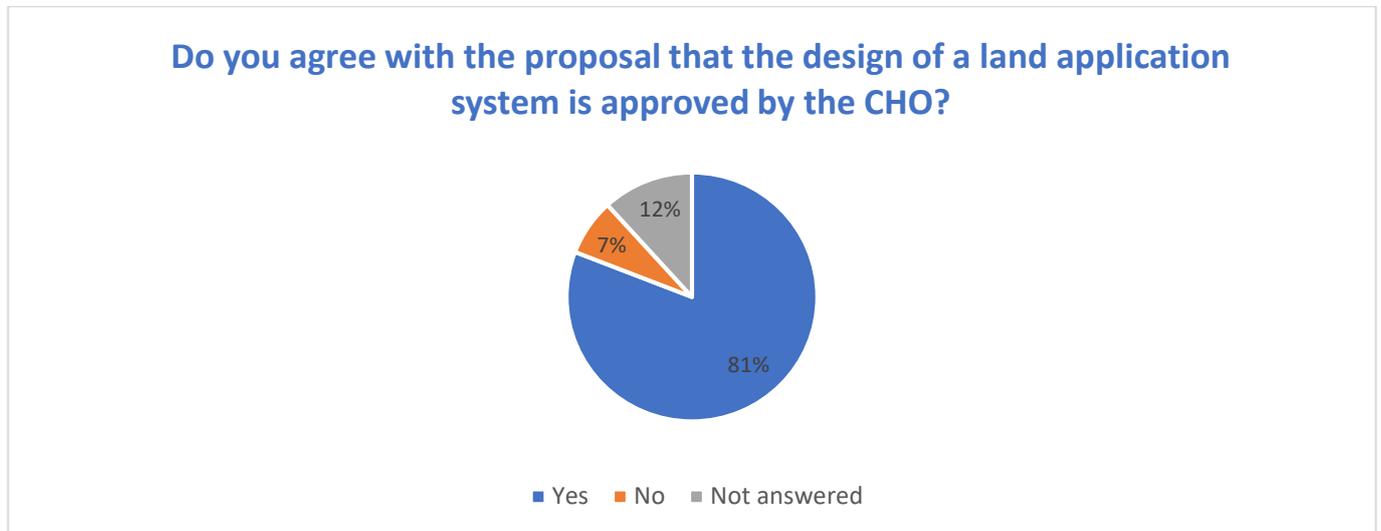


Figure 52 Approval of land application systems by the CHO

81% (n=55) of respondents agreed with the proposal that the CHO should approve the design of land application systems.

Question 64: If not, how should land application systems be managed?

Comments were received from industry stakeholders and local government. Comments included:

- *'The installer should be able to design LAS' provided they are as per AS1547 and they have completed the appropriate design course, for LAS' they install and warrant. Or a SSE. The LAS design should be based on systems tested and complying to AS1546.3:2017 or AS1547 (Primary Systems).'*
- *'An engineer should certify the land application system. Again, AS1547 or CoP may not be appropriate for a site and an experienced and chartered environmental engineer can assess the case from the basics and design and certify the system.'*
- *'...there should be a less arduous way of doing it with a quicker expected turnaround time also.'*
- *'Through amendment of existing controlling legislation not through creation of new less prescriptive controls.'*
- *'Needs to be consultation and consistency with DWER requirements such that industry knows exactly what is required of them. This includes the licensing requirements through DWER and overcoming the gap between smaller industry that is currently not licensed yet is contributing to environmental issues.'*

Proposal 4.3.3 Summary and recommendations

Some local governments have expressed concerns about the adoption of AS/NZS 1547:2012. The main concern raised by local governments is that AS/NZS1547 results in larger land application areas in comparison to the existing regulation and this increase in size effects the development of lots and increases costs of installation due to the larger size or by requiring owners to install a secondary treatment unit.

The current regulations have significant shortfalls. The study¹⁰ used to develop the regulations focussed on soils that drained readily such as those on the Swan coastal plains. Historically this

¹⁰ Caldwell Connor Engineers Pty Ltd, 1986. Onsite wastewater Disposal Systems: Final Report.

did not matter as this is where most development was occurring. The application of the current regulations in areas other than the Swan coastal plains has resulted in land application areas that fail, leading to increased public health risks and costs to local government to fix the issues¹¹. The existing regulations have no requirement to report if a system has failed and has undergone repairs. It is highly likely that homeowners are fixing failing systems at their own expense without local government being notified. The Australian/New Zealand standard can be applied across all soil types providing the flexibility required. In some cases, this results in larger application areas, however, this should be considered in the context of the decreased public health risks.

AS/NZS1547:2012 also provides flexibility as it provides options for a broader range of land application systems than the current regulations. As part of the integration of new regulation, the DoH will provide education and resources to upskill EHOs. Historically the DoH has provided workshops and training at no cost to local government. The DoH will continue with this practice to ensure EHOs have the relevant skills and knowledge for understanding and implementing the new regulation.

There may be some impost on the DoH for staff to continue to develop and deliver training on the regulations.

The sizing requirements for onsite systems will be provided in a code of practice that is called up in new regulation. The code of practice will adopt the principles of AS/NZS1547 for the sizing of land application systems. Examples of sizing comparisons between the current regulations and a AS/NZS1547 based methodology are provided in [Appendix 6](#).

¹¹ Standing Committee on Environment and Public Affairs, 2009. Inquiry into Deep Sewerage in the Cockburn Area, Report 18. p. 34, 52 Published [Microsoft Word - ev.dsc.091214.rpf.018.xx.DOC \(parliament.wa.gov.au\)](#)

Proposal 4.3 Recommendations

17. The DoH recommends that new regulation declare:
 - An onsite wastewater system must not pose a public health risk to anyone within the boundary of the lot on which it is located or neighbouring properties.
 - The location and operation of an onsite wastewater system must not cause damage or impact buildings or structures on the premise on which the system is sited or to neighbouring properties.
 - Any building or structure must not be constructed around or above an onsite wastewater system so that access to the system, and system function are compromised.
 - An onsite wastewater system must be installed and maintained so that it is fit for purpose.

18. The DoH recommends minimum siting distances are outlined in a code of practice that is based on Australian Standard AS/NZS1547:2012.

19. The DoH recommends new regulation declare that CHO product approval is required for all onsite wastewater systems.

20. The DoH recommends retaining and updating the existing Code of Practice for Product Approval of Onsite Wastewater Systems 2013.

21. The DoH recommends that Land Application Systems are designed in accordance with a code of practice based on Australian Standard AS/NZS1547:2012.

Proposal 4.4 Installation, modification and decommission requirements

Section 4.4 outlines a range of proposals for the installation, modification and decommissioning of onsite wastewater systems. The objectives of these proposals are to ensure systems work as expected and do not pose a public health risk if no longer in use. Respondents provided feedback on 27 questions.

Proposal 4.4.1 Approval to install

The approval process should consider the intended use of a system, the site conditions appropriate for the system, and ensure a system has been installed correctly.

This requires knowledge from the approving agency about system design and site conditions. Currently local government approve systems for single residential properties or when the system is designed to treat up to 540L of wastewater a day.

Local government receive the application with relevant information, make an assessment and then issue an approval to install. EHO's may attend site to test soil conditions in accordance with Schedule 8 of the Wastewater Regulations.

Once installed the local government confirm the installation has been completed correctly and issue a permit to use.

The DoH believes that the onus for proper installation should be on those who design and install systems and those who assess the site conditions.

Questions 65 to 74 consider the procedural elements for installing an onsite wastewater system.

Question 65: Do you support the proposal that an approval to install is required prior to the installation of the onsite wastewater system?

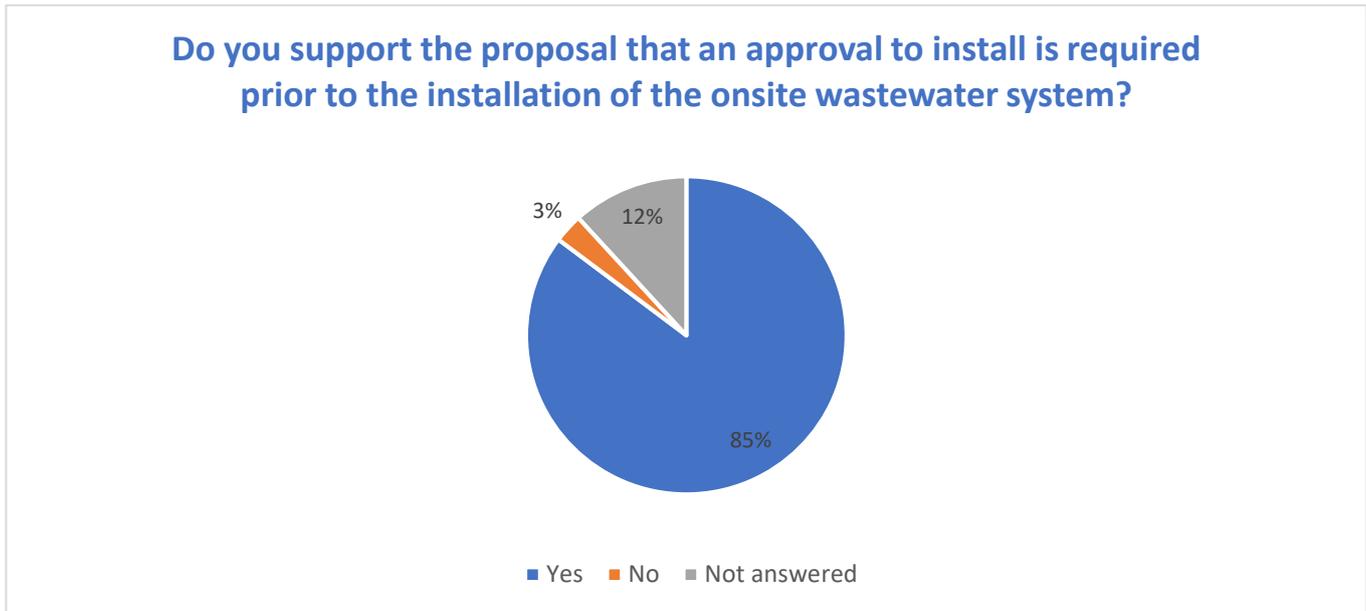


Figure 53 Responses for the proposal for an 'approval to install' process

85% (n=58) of respondents supported the proposal to retain the 'approval to install' application process. Comments submitted with this proposal included:

- *'Yes for whole house wastewater systems. However, local government should be able to assess applications up to 6,000 L which is domestic right through to small commercial (currently they are limited to 540 L/day which is inadequate). This may also be unnecessary for the installation of greywater systems which can be self-regulated.'*
- *'Should be no different to any other plumbing work. Council is notified of the intention to install a wastewater system and it then has the right to inspect at any stage to ensure compliance. This assumes the industry has received the appropriate recognition of its skill set.'*
- *'The application must be for a Department of Health approved system. The application to include a copy of the product approval. The product approval would clarify under which circumstances the system can be used. This should then match the intended use set out in the application.'*
- *Minesite wastewater treatment systems are already regulated under the Environmental Protection Act 1986, under which systems are required to be assessed and approved under the Part V licensing regime prior to installation and should be exempt from approval by the Department of Health (avoid regulatory duplication/burden). For systems not captured under the Environmental Protection Act 1986, CME support the requirement for the system to be approved by the regulator prior to installation.'*

Question 66: Do you agree that applicants should have to provide evidence that a system is fit for purpose as summarised above?

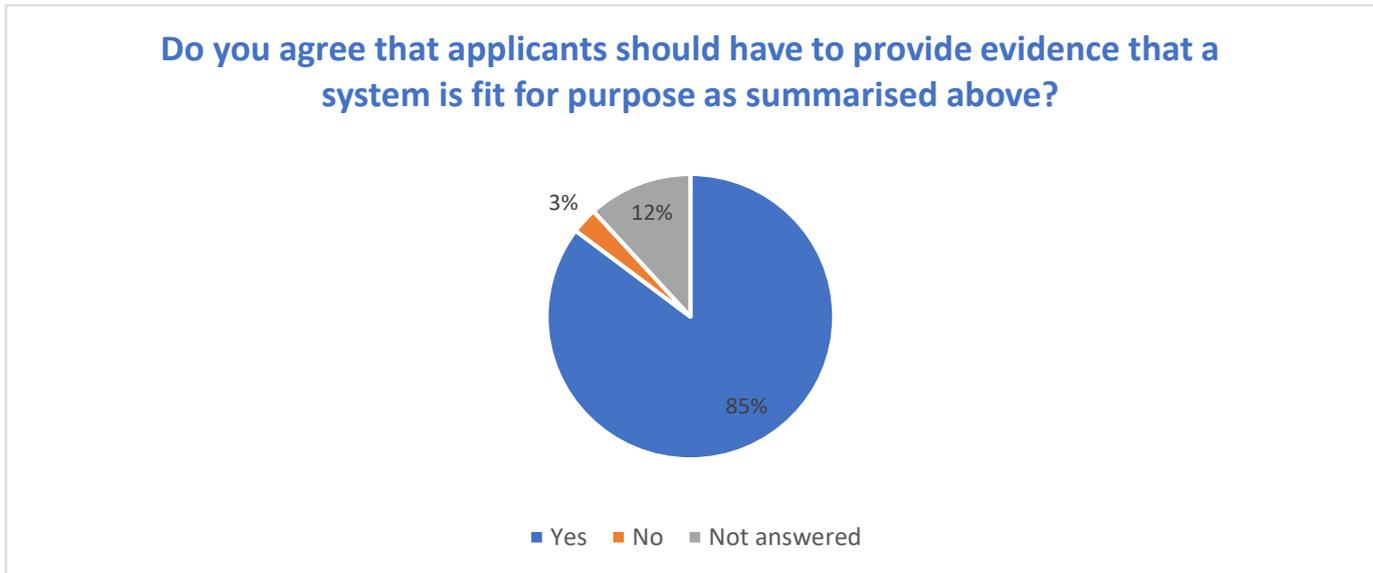


Figure 54 Evidence to be provided by applicants to demonstrate an onsite wastewater system is fit for purpose

85% (n=58) of respondents supported the proposal for applicants to provide evidence that an onsite wastewater system is fit for purpose.

Question 67: In addition to the information described above, should an application to install include requirements for inclusion on an application to install an onsite wastewater system?

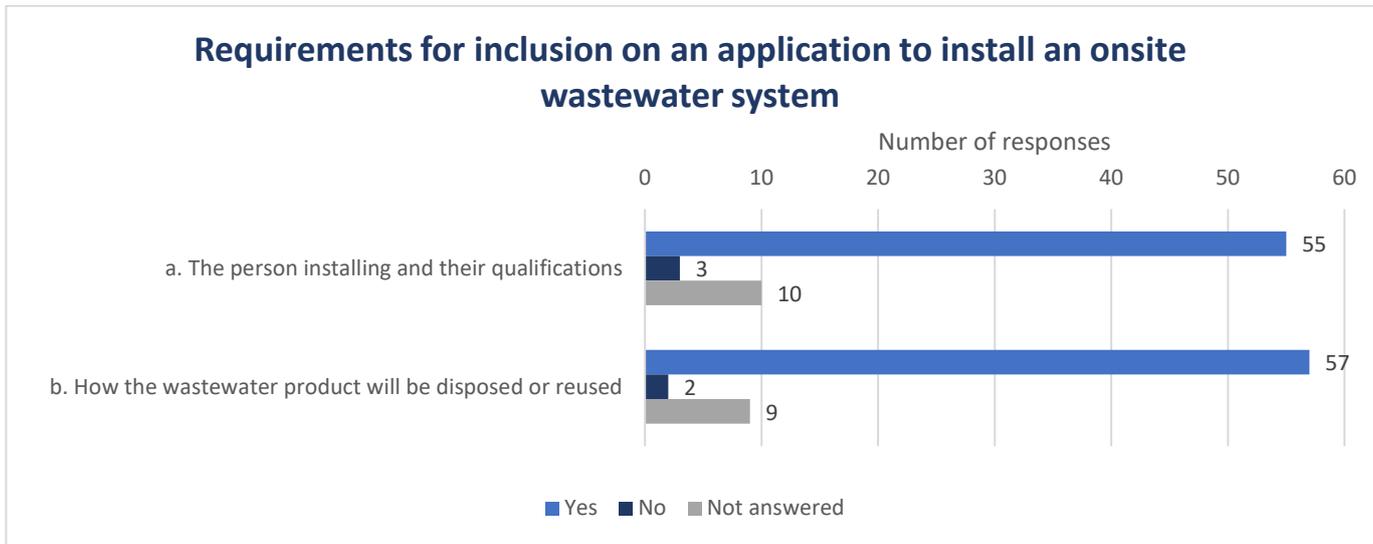


Figure 55 Proposed details required for an application to install an onsite wastewater system

Respondents supported the requirement for details on both the person installing a system and how a wastewater product should be disposed of to be included as part of an application to install.

Question 68: Are there any additional details that should be required?

Comments included:

- *'All site-specific details should be included in the application including details on stormwater, soils, bores, drinking water supply. Essentially all the same information as required now.'*
- *'The evidence provided will be used to determine whether a system meets the general requirements for an onsite wastewater system and that wastewater will not adversely impact public health and the surrounding environment.'*

Proposal 4.4.1 Summary

There was broad support to continue with the current process of local government assessing applications to install an onsite wastewater systems. The consultation paper proposed that local governments would be the agency for approving the installation of any onsite wastewater systems that have already received design approval from the CHO. This would remove the 540L a day limit from systems approved by local government. Based on the number of systems that are currently approved by the DoH, it is estimated this will result in an additional 150 applications spread across local governments each year. The DoH will be the approving agency for the installation of all other wastewater disposal systems.

The DoH recommends that an application to install will require an SSE to be developed in accordance with the DoH document entitled 'Guidance on site and soil evaluation for onsite wastewater management'. SSEs are discussed further in Section 4.5.

The DoH recommends that new regulation require the installation of an onsite wastewater system to be declared a public health risk activity. This declaration activates the licensing and registration provisions of the Public Health Act and provides enforcement agencies with powers to ensure installers adhere to licence and approval conditions.

The DoH recommends that an onsite wastewater system must be installed by a person licensed under Part 8 of the Public Health Act.

The DoH recommends that an onsite wastewater system must be installed in accordance with any applicable code of practice. A new Code of Practice for Onsite Wastewater Disposal will be developed and adopted in new regulation.

Proposal 4.4.2 Approval to use an onsite wastewater system

Question 69: Should separate registrations be required for separate systems located at the same site?

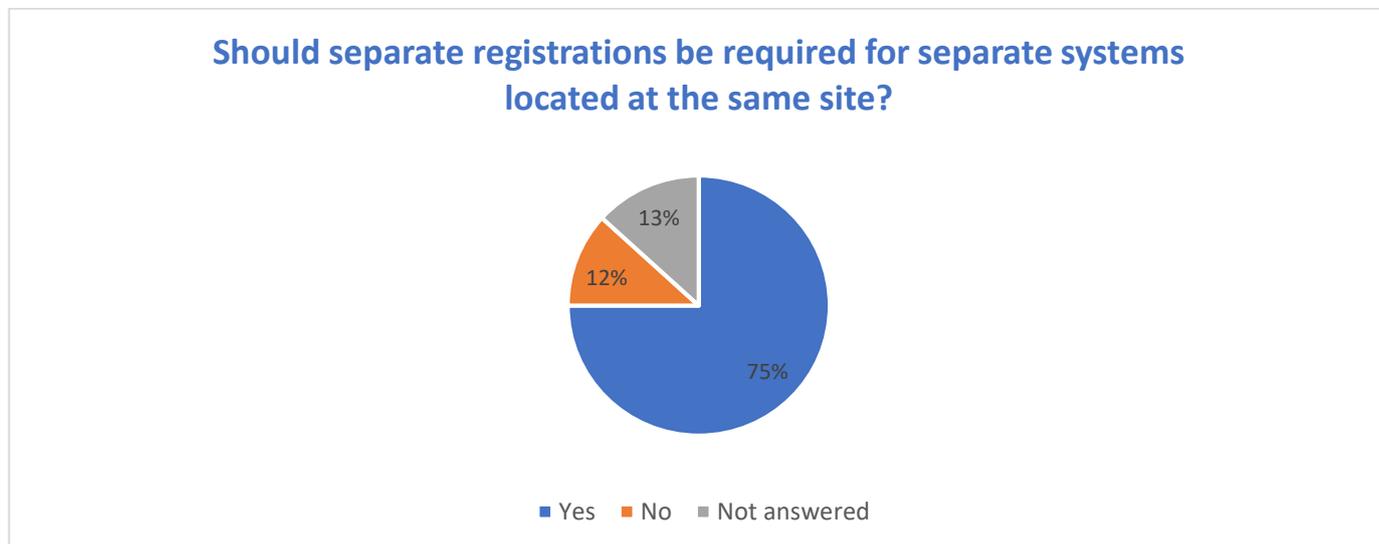


Figure 56 Registration requirements for onsite wastewater systems

The overriding comment from individuals who supported separate registrations for each system was that 'every system should be approved on its own merits and in reference to its own situation. Each system should be assessed separately for compliance with relevant requirements.'

Additional comments from respondents who supported a single registration for multiple systems on the same lot included:

- 'A single registration can significantly reduce proponent and government administrative, compliance and reporting burden.'

- *‘Discretion should be used. If the development is staged, each stage requires a separate registration. Septic systems and industrial wastewater systems should require separate application.’*

Question 70: What conditions should be included as part of a registration?

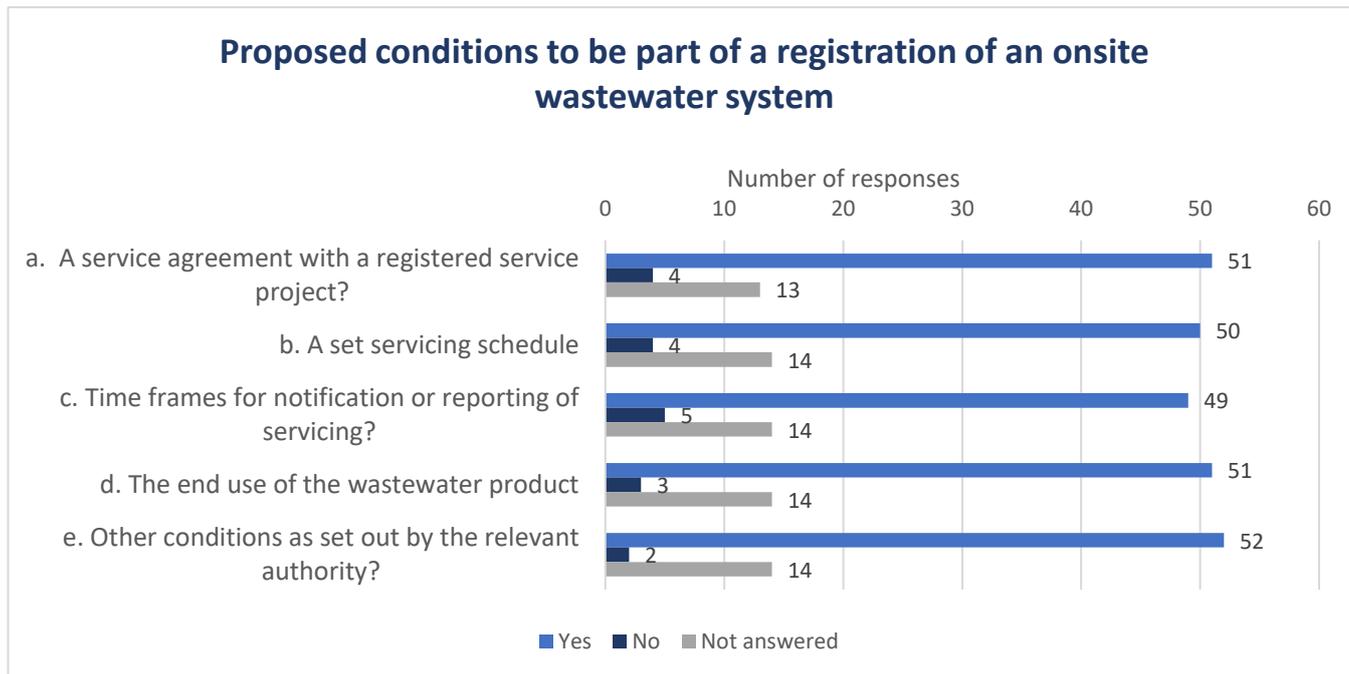


Figure 57 Proposed conditions that could be placed on the registration of an onsite wastewater system

The conditions proposed for registration were supported by over 70% of respondents.

Question 71: Do you agree with the following proposal: Any existing onsite wastewater system with a permit to use issued under the Wastewater Regulations be automatically eligible to be registered under the new regulations?

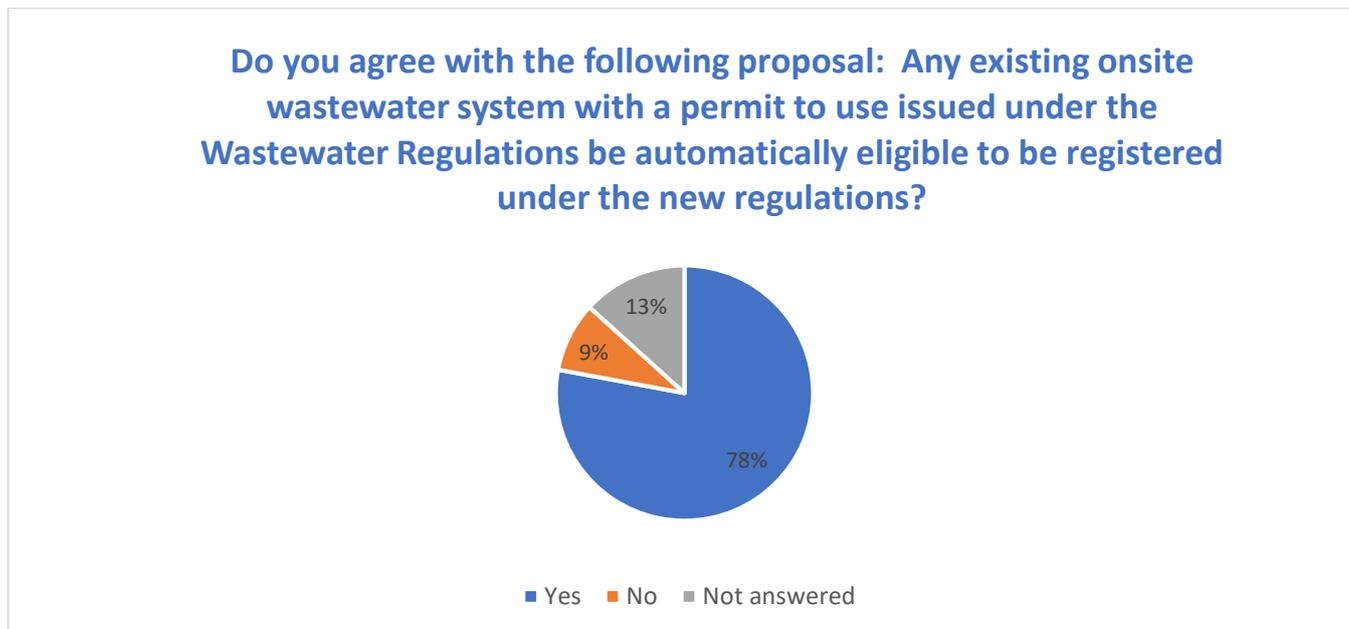


Figure 58 Proposal for automatic registration of existing onsite wastewater systems

The proposal to automatically register existing onsite wastewater systems was supported by 78% (n=53) of respondents.

Question 72: Do you agree that if the owner of the system proposes to change the end use of the wastewater product then they will have to apply to have their registration amended?



Figure 59 Requirements for amended registrations

This question is relevant if registration of onsite wastewater systems is adopted.

82% (n=56) of respondents supported a registration being amended if the end use of the treated wastewater changed.

Question 73: Do you agree that the local government authority should be the prescribed enforcement agency for registration of this public health activity?

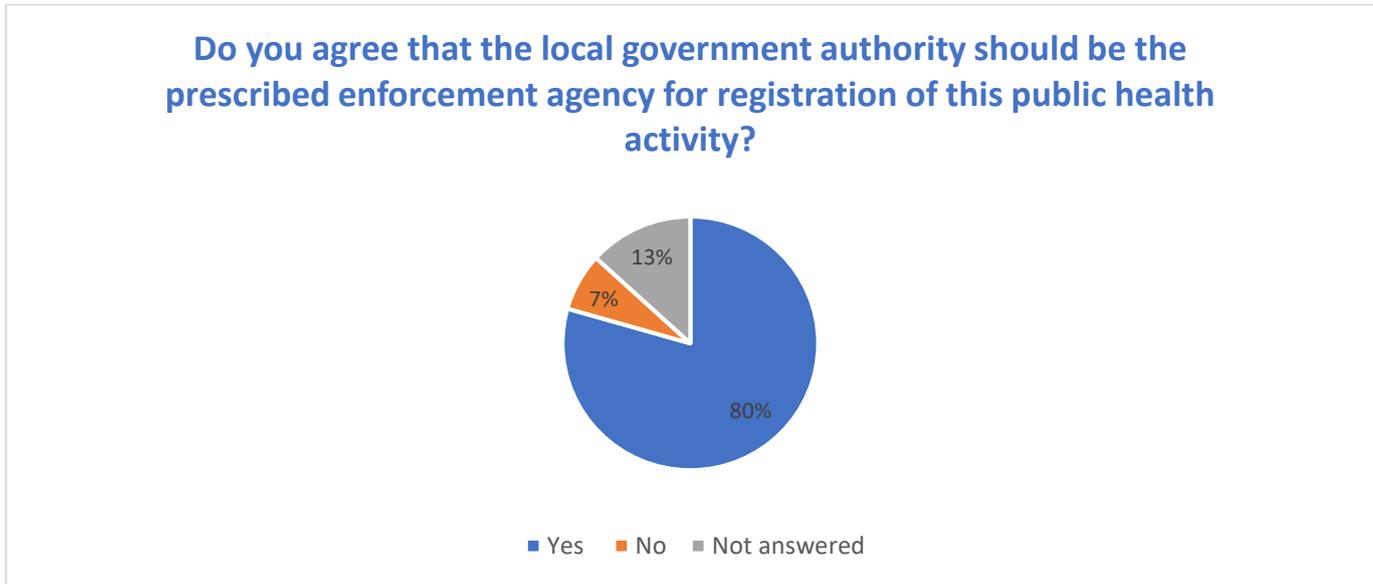


Figure 60 Establishing local government as the prescribed authority for registering onsite wastewater systems

80% (n=54) of respondents supported local government being the prescribed enforcement agency for registration.

There was strong support for local government to be the prescribed enforcement agency, availability of resources was commented on by both local government and industry representatives.

Free field comments included:

- *It is questioned why it is proposed to move away from the Permit to Use to a registration process. The new legislation should acknowledge the validity of wastewater systems that*

hold an existing Permit to Use and no new certificates should need to be issued for existing systems with a valid Permit to Use.'

- 'We have operations in different locations. We would prefer to deal with the DoH. This would result in a consistent approach to registration.'
- 'Except where local government does not have clear jurisdiction; such as in Aboriginal Communities on Crown Reserves etc. The prescribed enforcement agency for these situations should be the Department of Health.'
- 'For large bespoke systems the DoH should approve.'
- 'Except where there is use of wastewater product if this becomes a reuse scheme.'
- 'For small flow and residential type systems, it is acceptable for the local government authority to be the enforcement authority. However, for large flow or trade waste/industrial effluent, it should be either DWER or both DoH and DWER.'

Question 74: Should local government be authorised to inspect systems to determine that a system is still fit for purpose after registration?

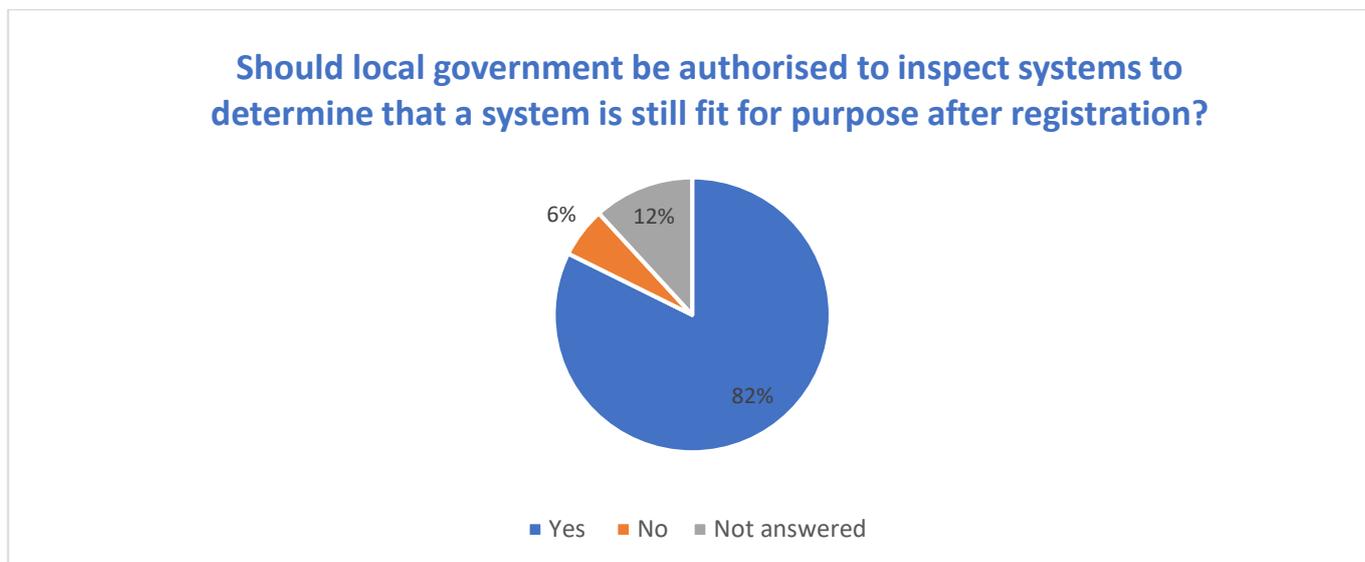


Figure 61 Proposal to enable authorised officers to inspect onsite systems to determine they are still fit for purpose

82% (n=56) of respondents supported local government being authorised to inspect systems to determine that it was fit for purpose after it had been registered.

Currently local government officers have power of entry under section 108 of the Health (MP) Act. Additional comments from local government indicated that new regulation should include the ability for a local government officer an option to require a plumber of service agent to attend.

Proposal 4.4.2 Summary

Under the current regulations, after an onsite wastewater system has been installed it requires inspection by an Environmental Health Officer prior to the issue a permit to use. As onsite wastewater systems are regularly installed belowground, system inspections may need to be conducted at various stages of the build, requiring significant time resources from approving officers. Concern was raised by some local governments that this inspectoral process also placed responsibility for correct installation upon the inspecting authority. As discussed in Section 4.9 the DoH is proposing that an installer will certify their installation and a certificate of compliance will be submitted to local government, who will then approve the onsite wastewater system for use. The DoH will recommend that the form of approval for use is registration under Part 8 of the Public Health Act.

It is proposed that the installer will provide local government with a signed certificate of compliance, along with evidence to demonstrate the installation was installed as per the approval to install. A certificate of compliance would include:

- the installer’s name
- the approval number / reference
- the address of the property where the installation was complete
- the day the installation was complete
- the type of onsite system installed
- any other information required by the local government
- a statement that certifies the system was installed as per the ‘approval to install’, the regulations, and the onsite wastewater system manufacturers requirements.

The advantage of registration over the current permit to use is that registration activates a range of additional powers under the Public Health Act for authorities to manage registered activities. A registration can be transferred if a property changes ownership. This provides local government an opportunity to inform new owners of the maintenance and servicing requirements of onsite wastewater systems. A registration is subject to conditions stipulated by the enforcement agency and can be suspended or cancelled if the holder of the registration fails to comply with a code of practice or condition of registration.

Registration conditions will not be provided in regulation but provided in guidance material for EHOs.

The DoH is supportive of the proposal that a system may service more than one dwelling if the dwellings are on the same lot and the application to install has demonstrated that the system and the site can handle the total volume of wastewater produced. This is consistent with current approval processes.

Proposal 4.4.3 Temporary onsite wastewater systems

The following questions 75 to 79 relate to the approval and management of temporary storage systems.

Question 75: Should temporary onsite wastewater systems go through the same approval process as other onsite wastewater systems?

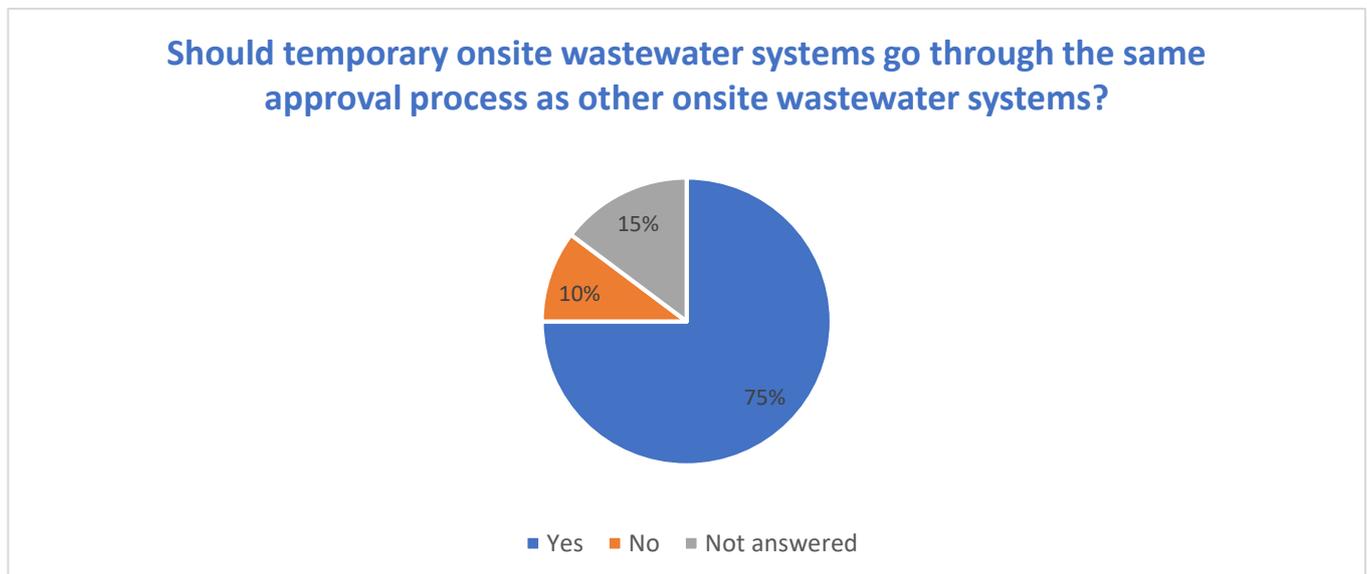


Figure 62 Number of responses for the approval process of temporary OWS.

75% (n=51) of respondents supported the proposal for a temporary onsite wastewater system to follow the same approval process as other onsite wastewater systems.

Question 76: When should a temporary onsite wastewater system be approved?

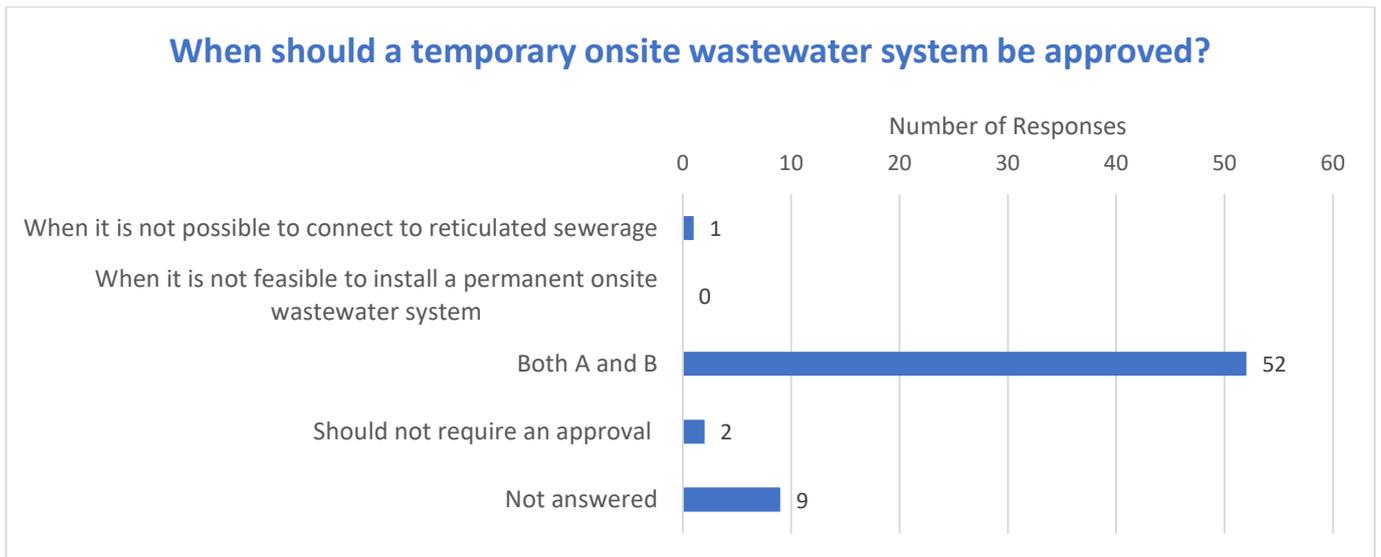


Figure 63 Number of responses for when a temporary OWS should be approved.

There was strong support for a temporary onsite wastewater system to be approved when it was not possible to connect to reticulated sewerage and when it was not feasible to install a permanent onsite wastewater system.

Question 77: What do you consider an appropriate timeframe for operating a temporary onsite system?

The majority of responses (n=31) indicated twelve (12) months was an appropriate timeframe for a temporary system. Five (5) respondents consider two (2) years was appropriate and another five (5) respondents indicated it should be on a case-by-case basis.

Question 78: Do you agree with the following proposals put forward by the DoH:

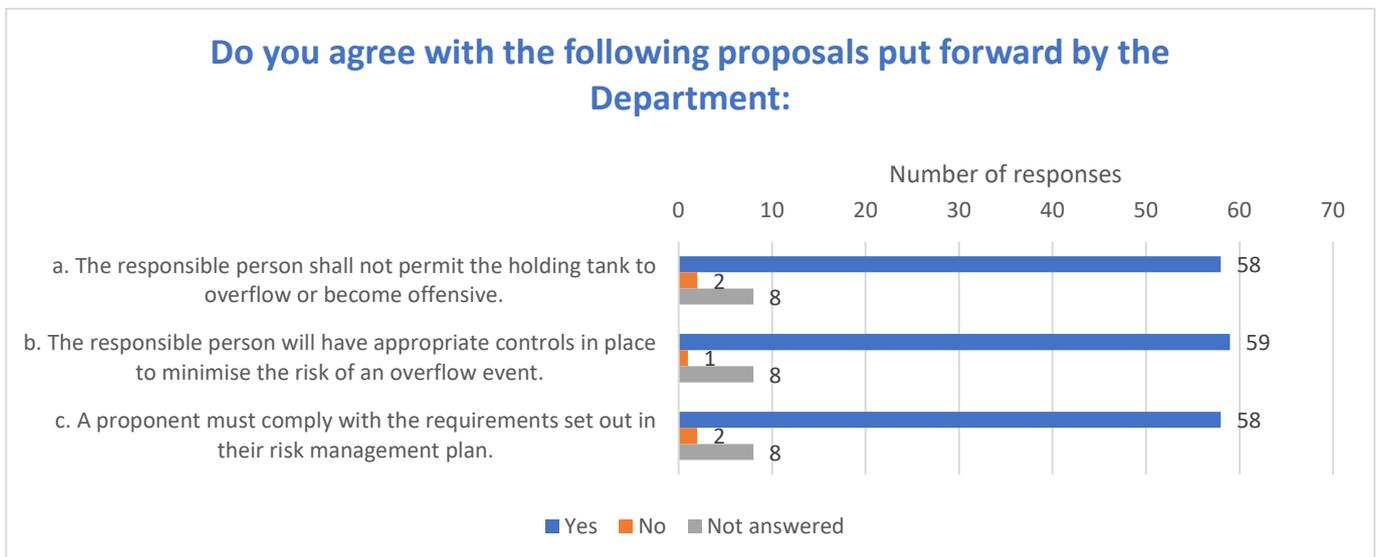


Figure 64 Proposed requirements of temporary onsite wastewater systems (holding tanks)

All proposals cited in this question were strongly supported by respondents, with over 85% expressing support for each statement.

Question 79: Should the regulations provide prescriptive requirements for operating a temporary onsite wastewater system?

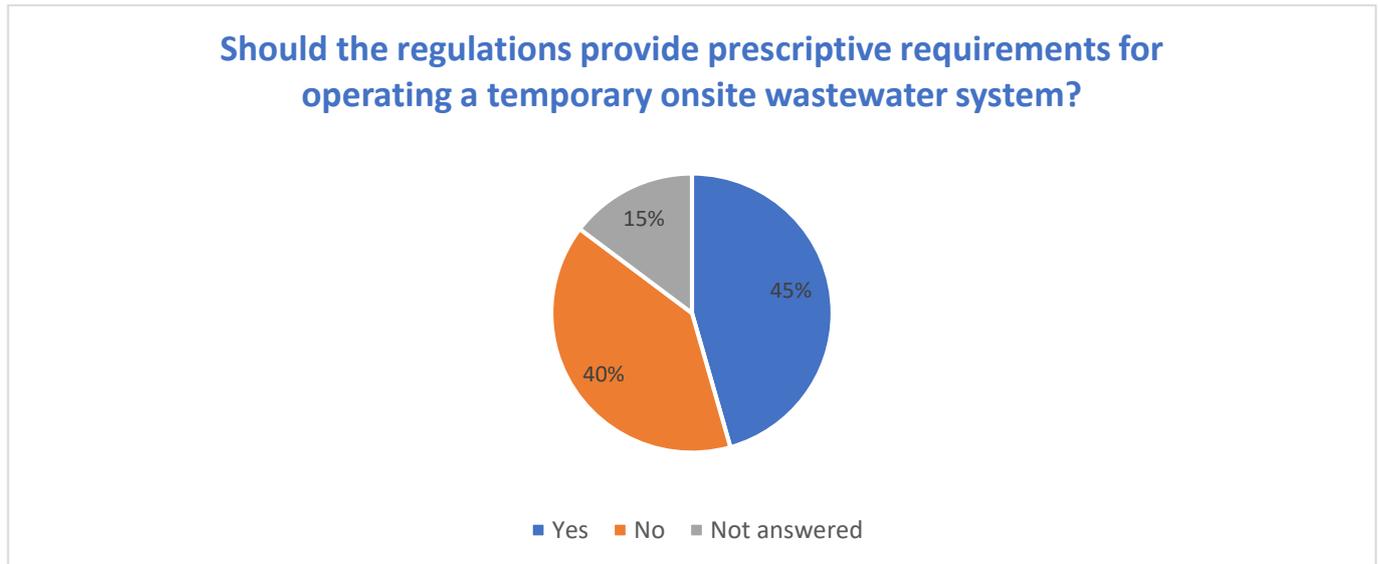


Figure 65 Requirements for operating a temporary onsite wastewater system

The proposal for prescriptive requirements for operating a temporary onsite system was supported by 45% (n=30) of respondents. Free field comments received included:

- *‘It depends on whether a temporary system is a holding tank or a reduced sized septic tank and leach drain arrangement. If holding tanks are used, they should have a minimum of several days storage capacity and an alarm system.’*
- *‘Can be met in a Code of practice as each situation is likely to be a bit different. Would allow more flexibility.’*
- *‘A RMP could address the following risks associated temporary onsite waste system:’*
 - *Capacity vs usage*
 - *Service agreements*
 - *Service contingency plans*
 - *Pumping schedules*
 - *Venting and odour control*
 - *Alarm or overflow warning systems*
 - *Bunding or other measures to prevent spillage to ground.’*
- *‘No, this should be included in product approval.’*
- *‘Approved systems only with conditions for the disposal or pump out of the treated effluent.’*
- *‘The prescriptive requirements (conditions) should be set in the approval/licence/permit.’*

Proposal 4.4.3 Summary and recommendations

The DoH recommends the approval for temporary onsite wastewater systems follows the same process as a permanent onsite wastewater system. Operational and maintenance details will be provided through a code of practice. This provides the flexibility required for the varying situations where a temporary onsite system is required.

Proposal 4.4.4 Exemptions from registration

Questions 80 and 81 consider whether there should be an ability to grant an exemption for registering or permitting to use an onsite wastewater system.

Question 80. Do you agree that the local government should be able to exempt any person from the requirement to hold a registration for their onsite wastewater treatment system?



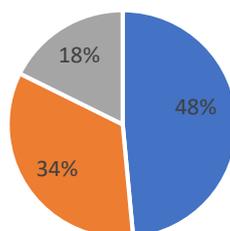
Figure 66 Proposal for local government to grant exemptions from registration of an onsite wastewater system

Provision for local government to provide an exemption from registering (or providing a permit to use) was supported by approximately half of respondents who answered this question. Additional comments included:

- *‘Department of Health to provide exemption not local government.’*
- *‘If the person currently holds a licence under the Environmental Protection Act.’*
- *‘Scope for exploitation of exemption which undermines purpose and intent of regulatory framework.’*
- *‘All systems should be registered regardless of who approves the system and the size of the system being approved.’*
- *‘Yes, but only for temporary systems where the main system is being rectified, repaired or amended.’*

Question 81. Do you agree with the proposal to exempt onsite trade waste systems within prescribed premises that are licensed under the Environmental Protection Act from the regulatory requirements detailed in Chapter 6 and for any public health risks to be managed using the general public health duty provisions of the Public Health Act?

Do you agree with the proposal to exempt onsite trade waste systems within prescribed premises that are licensed under the EP Act from the regulatory requirements detailed in Chapter 6 and for any public health risks to be managed using the general public



■ Yes ■ No ■ Not answered

Figure 67 Proposal to exempt onsite wastewater systems if they are licensed under the Environmental Protection Act

There was marginal support for exemptions (48% of respondents) for onsite wastewater systems on properties that are licensed under the Environmental Protection Act. Additional comments included:

- *‘Trade waste is a specialised area that should be handled by EPA as it would tie in with the EPA licence issued for the premises by the EPA.’*
- *‘LG should be notified of the details of all licences approved under the Environmental Protection Act 1986. A record of what has been approved and the capacities of these systems are required by LGs.’*
- *‘Provided that it is addressed in their licence conditions and there is regular reporting to DWER.’*
- *‘The Licences/Work Approvals issued under the Environmental Protection Act 1986 does include conditions to address public health risks.’*
- *‘DOH’s Proposal 4.4.4 Exemptions from Registration[^] sets out that any onsite wastewater system within premises that holds a current licence issued under Category 61 of the Environmental Protection Act 1986 (EPA) and is solely used to treat and dispose of trade waste (not reuse) would be exempt from the proposed regulatory requirements for waste water.’*
- *DPIRD is keen to support minimum regulatory burden for low-risk sewage treatment and disposal systems in some rural settings. Trade waste may be produced by agricultural businesses which are not regulated under the EPA but are assessed through the local government planning and development approvals process.*
- *Examples include dairy effluent and trade waste from small scale intensive livestock operations, packing sheds and small-scale wineries and breweries. Specific guidance on the level of assessment or any exemptions that might apply to the treatment and disposal of trade waste, as opposed to sewerage, on rural land need to be further examined. There could be consideration exemption of some classes of activities or class of wastewater systems owners from the proposed regulations due to the relatively low risks associated with sewage treatment and disposal and the viability of reticulated sewage at some rural land use densities. The exemptions could be consistent with the current Government Sewage Policy 2019 that does not apply to:*

- owners of wastewater systems in particular single rural land use dwellings, or
- land uses that are rural in nature that generate trade waste.’
- ‘It is acknowledged that some lower risk activities may need to be considered for potential public health risk, for example activities in sewerage sensitive areas or public drinking water sources.’

Proposal 4.4.4 Summary

This proposal considered the management of residual public health risks associated with onsite wastewater system that are used solely to treat and dispose of trade waste and are licensed as a prescribed premise under the Environmental Protection Act.

A general requirement is proposed that all sewage, including trade waste, is to be dealt with in a safe and effective manner. However, the approval and registration requirements for onsite systems are proposed to apply specifically to wastewater (and not to trade waste). This will mean that many of the types of premises licenced or registered under the Environmental Protection Act, including wineries and intensive livestock, will not require local government or DoH approval for associated onsite systems receiving ‘trade waste’. The DoH will issue guidelines on the safe and effective disposal of ‘trade waste’.

Proposal 4.4.5 Modifications to onsite wastewater systems

Questions 82 to 84 consider how new regulation may be used to manage modifications of installed onsite wastewater system.

Question 82: Do you agree that all modifications to systems should only be done by an authorised service technician?

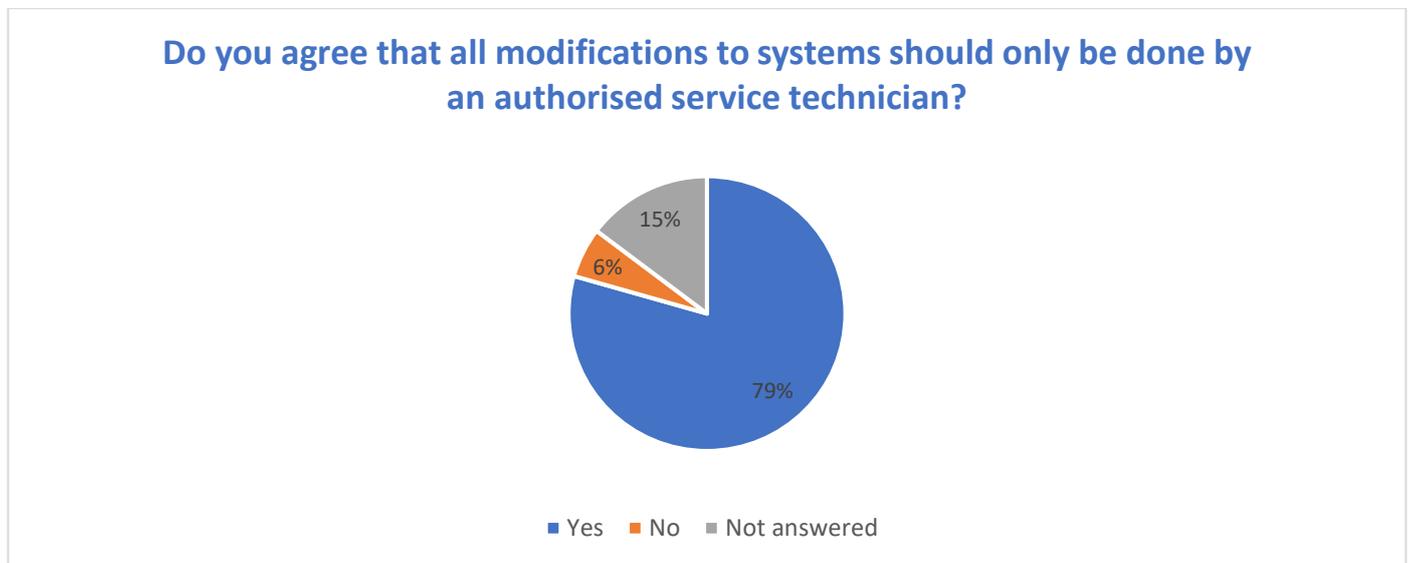


Figure 68 Proposal for regulation to state who can modify an onsite wastewater system

The proposal that onsite wastewater system modifications are required to be undertaken by an authorised service technician was supported by 79% (n=54) of respondents.

Question 83: Do you agree that the appropriate enforcement agency needs to be notified of the proposed modifications?

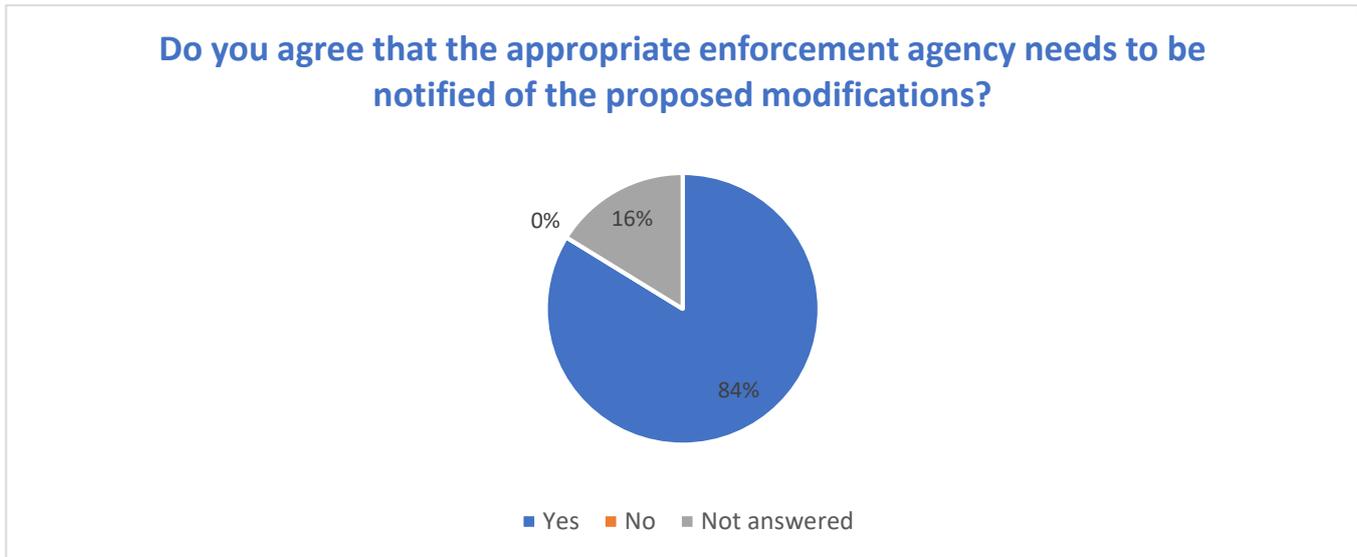


Figure 69 Proposal for notification of modification of an onsite wastewater system

This proposal was supported by 84% (n=57) of respondents.

Question 84: Do you agree that in situations where the modification is significant then a new approval to install and/ or registration is required?

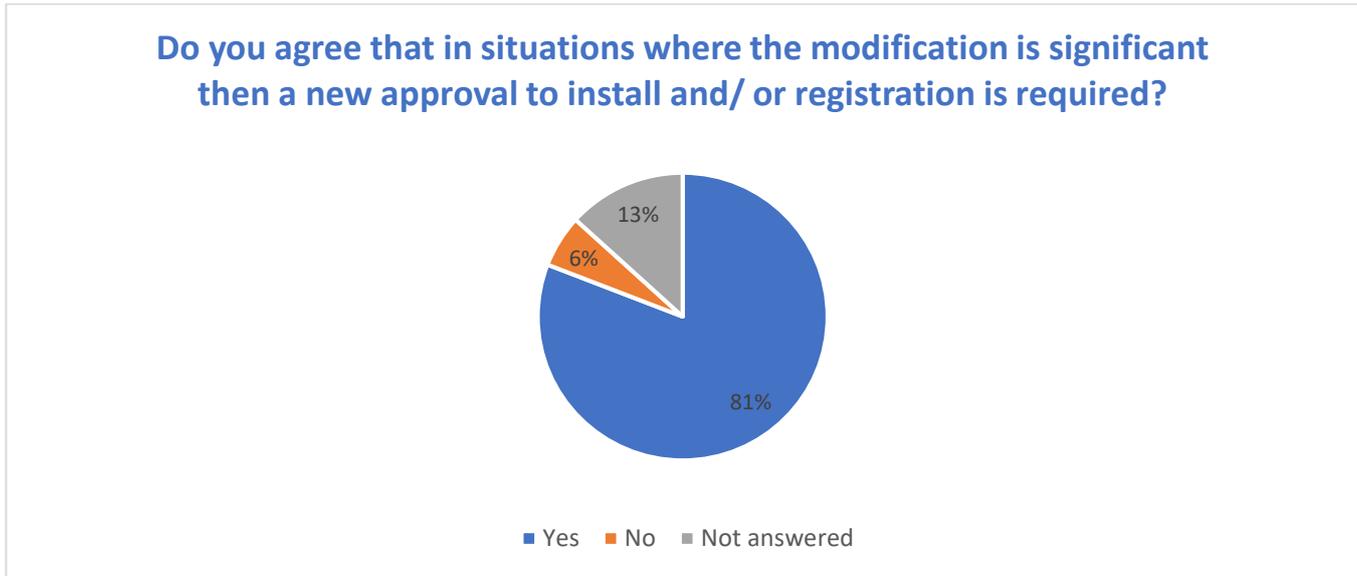


Figure 70 Proposal for regulation to require a new registration in some circumstances

This proposal was supported by 81% (n=55) of respondents.

Proposal 4.4.5 Summary

The objective of this proposal was to ensure that any changes to an onsite wastewater system do not impact the functionality of the system. To this effect, system modification and maintenance will need to be undertaken by licenced persons, and any significant changes to the operation of on onsite wastewater system will require the oversight and approval of the appropriate enforcement agency.

This proposal is consistent with regulation 18(1) and 18(2) of the Wastewater Regulations, which require that a person cannot alter or change the mode of operating an apparatus without first obtaining written permission of the approving authority.

There was support from respondents to require a new approval and/or a new permit to use/registration for significant modifications to onsite wastewater systems. However, one comment from a local government respondent indicated that they would prefer the requirement to issue a new permit/registration to be at officer discretion.

The DoH recommends new regulation require written approval from the approving agency to undertake any modifications to an onsite wastewater system that significantly alters the system. A significant modification includes:

- a) the mode of operation of the system is modified, including an increase in the volume of wastewater beyond the design loading volume stated in the approval to install,
- b) the size or the location of a land application area is altered from the plans submitted in the approval to install, or
- c) the method of disposal changes from the approval to install.

The DoH recommends that any modifications must be undertaken by a person licensed under Part 8 of the Public Health Act. Qualifications for licencing of installers will be set out in new regulation.

Proposal 4.4.6 Decommissioning an onsite wastewater system

Questions 85 to 88 consider the requirements for decommissioning an onsite wastewater system.

Question 85: Do you agree that a system can be decommissioned by either a licensed installer or a licensed plumber?

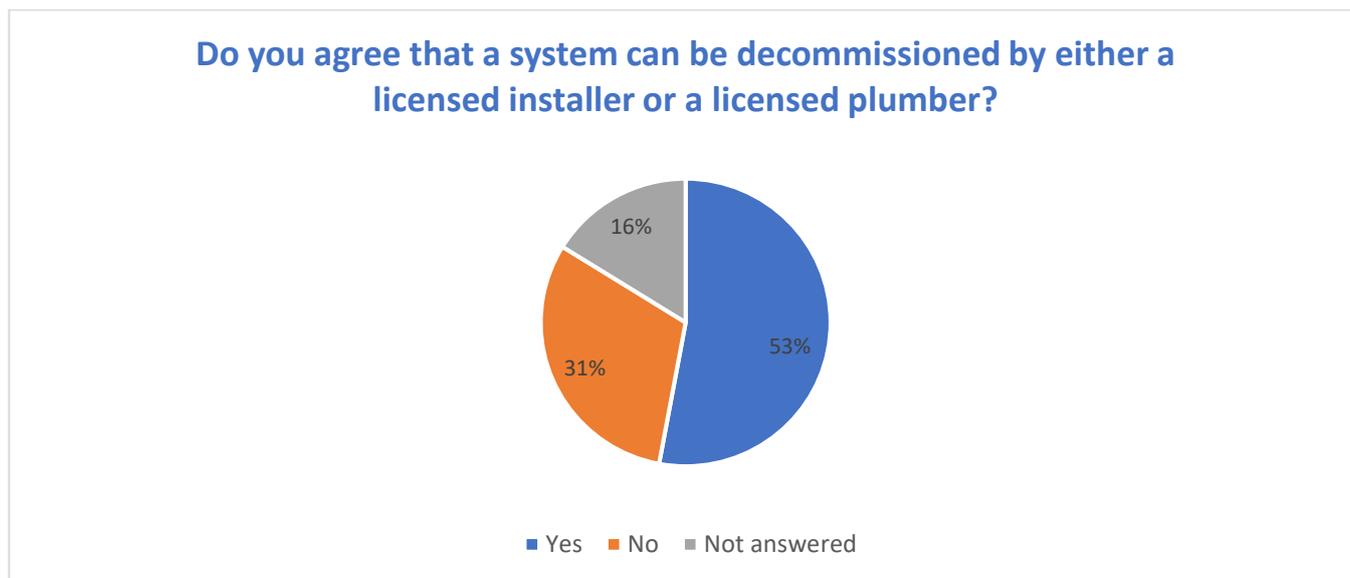


Figure 71 Proposal to require new regulation to set who can decommission an onsite wastewater system

53% (n=36) of respondents supported decommissioning of an onsite wastewater system to be conducted by a licensed installer or a licensed plumber.

Question 86: Do you agree that decommissioning of a system should take place in the following situations?

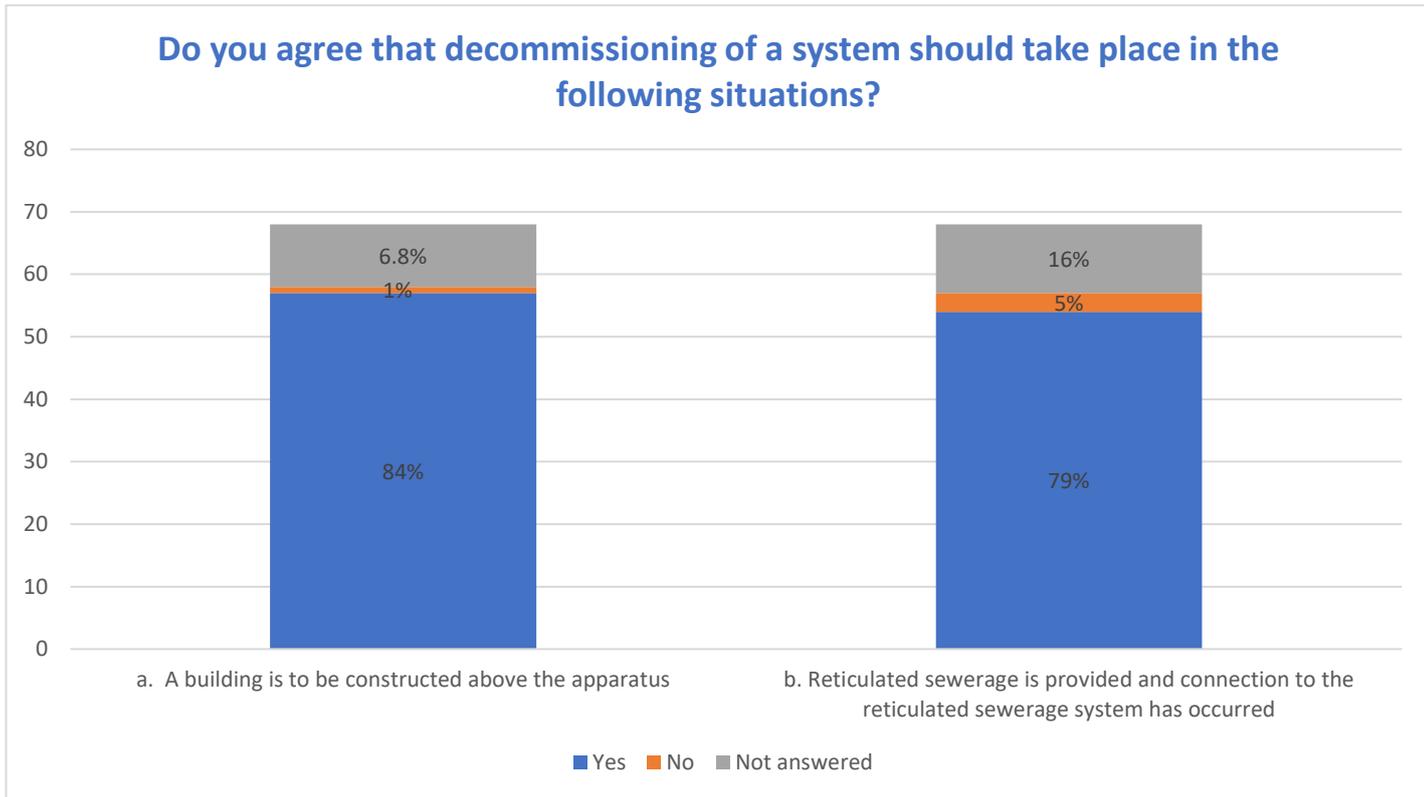


Figure 72 Proposal to require new regulation to set conditions for decommissioning

84% (n=57) of respondents supported decommissioning of a system if a building was to be constructed above it. 79% (n=54) of respondents supported decommissioning of a system if the lot were to become connected to a reticulated sewerage service.

Question 87: Are there any other situations where decommissioning should occur?

Respondents provided the following comments to this question:

- ‘Where there are amalgamation and subdivision of land where infill housing takes place.’
- ‘When the existing system has failed.’
- ‘Replacement or upgrade of old systems.’
- ‘Decommissioning may occur when septic systems are replaced by a STS or used in conjunction with the STS as part of the treatment system.’
- ‘Unapproved apparatus to be decommissioned where approval for the apparatus cannot be granted or if all of the facilities that it services are removed/demolished.’
- ‘When a building/structure is built within the setback requirements.’
- ‘As a condition of subdivision.’

Question 88: What activities should be required as part of decommissioning?

Table 11 Activities required to decommission an onsite wastewater system

	Yes	No	Not answered
a. Empty the onsite wastewater system	55	0	13
b. Removal of the onsite wastewater system	49	4	15
c. Backfill the area with clean fill	54	1	13
d. Other, please describe	25	9	29

Some local governments proposed that if a system cannot be removed, then it should be permissible to break the base of a system and back fill the hole. In contrast, other local

governments indicated this practice would leave legacy issues on the site. Industry stakeholders were also supportive of leaving in place if removal was not practicable.

Proposal 4.4.6 Summary

There was mixed support for decommissioning an onsite wastewater system being conducted by a plumber or a licensed installer. Most suggestions pertaining to the circumstances under which decommissioning should occur aligned those listed in the discussion paper. There was also strong support for the proposed requirements for decommissioning a system. The DoH considers that the most important factor is that decommissioning should be done to make a system safe, and that regulation should not be prescriptive about how a system should be decommissioned.

Therefore, the DoH recommends that new regulation reflect the current practice for decommissioning, with decommissioning occurring:

- a) if a building was to be constructed above it
- b) if the lot/ premise/dwelling connects to a reticulated sewerage service
- c) if foundations for a building on the premises are to be built closer than 2m to the onsite wastewater system or a building is to be constructed above the apparatus, before work commences on building the foundations or before the building is constructed above the onsite wastewater system
- d) if an apparatus has not gone through the approval process and the system cannot meet the regulatory requirements for an onsite wastewater system
- e) if the facilities that it services are removed/demolished.

The DoH further proposes that regulation require that a decommissioned system must be made safe. A guideline document will be provided to demonstrate how a decommissioned system can be made safe.

Proposal 4.4.7 Wastewater products from systems which use alternative technologies

Questions 89 and 90 sought feedback on the future management of wastewater products from alternate technologies.

Question 89: If regulation is the preferred option do you agree with the proposal that the wastewater products from toilets using alternative technologies are regulated the same as other primary treatment systems?

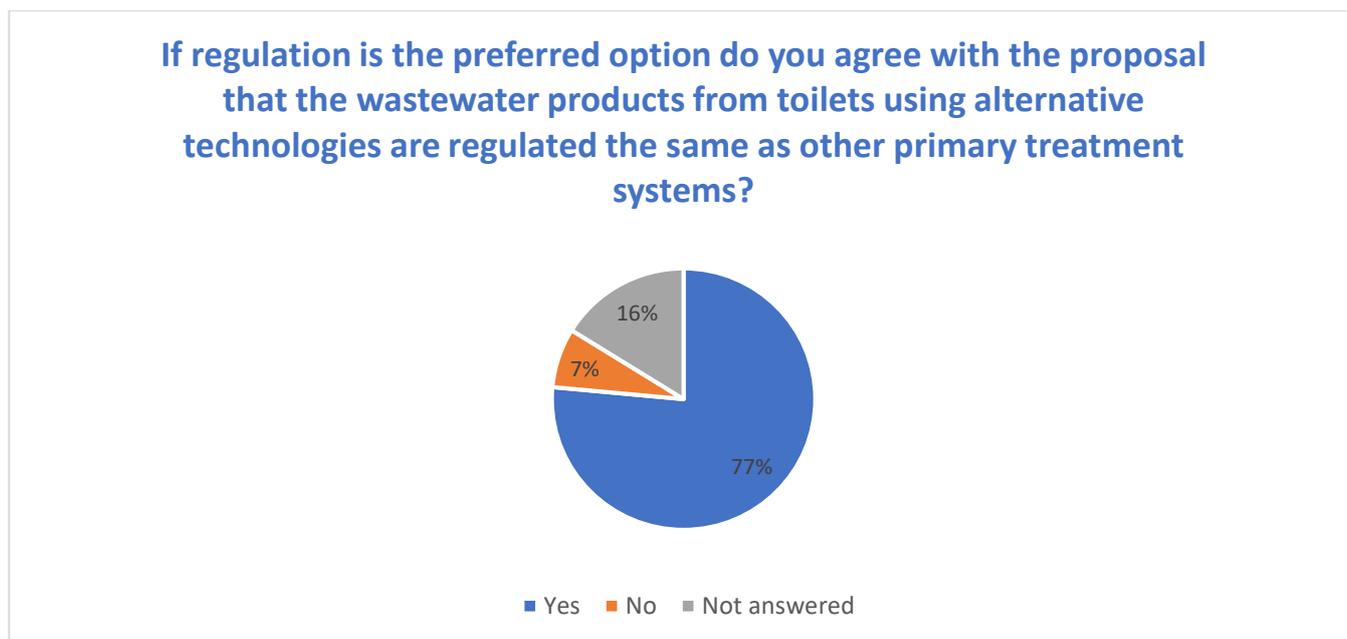


Figure 73 Proposal for alternative technologies to be regulated the same as current onsite wastewater systems

77% of respondents supported the proposal for wastewater products from toilets using alternative technologies to be regulated the same as other primary treatment systems.

Question 90: If you disagree, how should the wastewater products from a toilet using alternative technology be regulated? Please explain.

Responses included

- *‘ . . . products from alternative technologies may need additional regulation. . . could be done as a condition of approval (already in place on some composting toilet approvals).’*
- *‘Attention of where alternative products are permitted for approval is also required. Consideration could be made in providing alternative systems as reuse options in sewered areas. Also, dual systems as alternatives within rural and perhaps rural residential areas.’*
- *‘Depends on the technology, if it has utilised more than just a traditionally primary treatment, it may be regulated in accordance to secondary treatment systems, or a type of biosolids approved treatment etc.’*
- *‘The requirement of engineer certifications, periodical (monthly or quarterly service) etc have to be undertaken. Approval process such as application to DoH/LGA should be carried out.’*

Responses indicate there is support for new regulation to allow the use of new technologies as they develop, and additional regulation may be needed to manage the public health risks from new technology as they emerge.

Proposal 4.4.7 Summary

The DoH is supportive of new technologies as they are designed to decrease water usage and/or lessen their environmental footprint compared to traditional systems. To encourage uptake of these technologies, the DoH recommends new technologies are included in the same approval process as existing systems where designs are submitted to the DoH for product approval and then listed on the DoH website. Local government can then grant an approval to install.

Proposal 4.4 Recommendations

22. The DoH recommends that new regulation require an application to install for all onsite wastewater systems. The regulation will stipulate that applications for onsite systems that have product approval from CHO are to be assessed by local government. All other applications to install are to be assessed by the DoH. The approval process will apply to temporary onsite wastewater systems.
23. The DoH recommends that new regulations declare site and soil evaluations will be required for all applications for onsite wastewater systems. However, the requirement for site and soil evaluation for single residential will be at enforcement agency discretion. Site and soil evaluation is to be developed in accordance with the DoH's 'Guidance on Site-and-Soil Evaluation for On-site Wastewater Management'.
24. The DoH recommends that new regulation will declare that the installation of an onsite wastewater system is declared a public health risk activity that is licensable under Part 8 of the Public Health Act.
25. The DoH recommends a new code of practice for onsite wastewater disposal is developed for adoption in the new regulations.
26. The DoH recommends that new regulation require a system to be installed in accordance with the conditions of the approval to install and any applicable code of practice.

27. The DoH recommends that new regulation state that the use of a system is a public health risk activity that is registerable activity under Part 8 of the Public Health Act.
28. The DoH recommend that new regulation will specify that a system must be registered before a property can be occupied.
29. The DoH recommends a regulation is required to provide that the person who installed a system must provide a certificate of compliance with the application for registration. The certificate of compliance to include:
 - the installers name
 - the address of the property where the installation was complete
 - the day the installation was complete
 - the type of onsite system installed
 - any other information required by the local government, and
 - a statement that certifies the system was installed as per the 'approval to install', the regulations and the onsite wastewater system manufacturers requirements.
30. The DoH recommends new regulation require written approval from the approving agency to undertake any significant modifications to an onsite wastewater system. A significant modification includes
 - The mode of operation of the system is modified, including an increase in the volume of wastewater beyond the design loading volume stated in the approval to install
 - The size or the location of a land application area is altered from the plans submitted in the approval to install
 - The method of disposal changes from the approval to install.
31. The DoH recommends any significant modifications to an onsite wastewater system are be undertaken by a person licensed under Part 8 of the Public Health Act, for that purpose.
32. The DoH recommends that new regulation declare that decommissioning of an onsite wastewater system must occur in the following circumstances:
 - If a building is to be constructed above it
 - If the lot/premise/dwelling connects to a reticulated sewerage service
 - If foundations for a building on the premises are to be built closer than 2m to the onsite wastewater system, or a building is to be constructed above the apparatus, before work commences on building the foundations or before the building is constructed above the onsite wastewater system.
 - If an apparatus has not gone through the approval process and the system cannot meet the regulatory requirements for an onsite wastewater system.
 - If the facilities that it services are removed/demolished.
33. The DoH recommends that new regulation require that a decommissioned system must be made safe.
34. The DoH recommends new technologies are included in the same approval procedures as existing systems, designs are submitted to DoH for approval and will be listed on the DoH website as an approved product. Local government can then grant an approval to install.

Proposal 4.5 Additional system design requirements

In addition to details regarding the system design, additional information is required to ensure a system is fit for purpose. Considerations include:

- the volume of wastewater generated
- the design loading rate or infiltration rate of the soil
- the size of the land application system required to handle the volume of wastewater
- the site features, and
- the soil properties which will determine how the treated effluent will move through the soil.

The following sections sought feedback on managing these design factors. The application of the Australian/New Zealand Standard was a major focal point of questions.

91: Do you agree that additional system design requirements are outlined in a Code of Practice which is called up in new regulation?

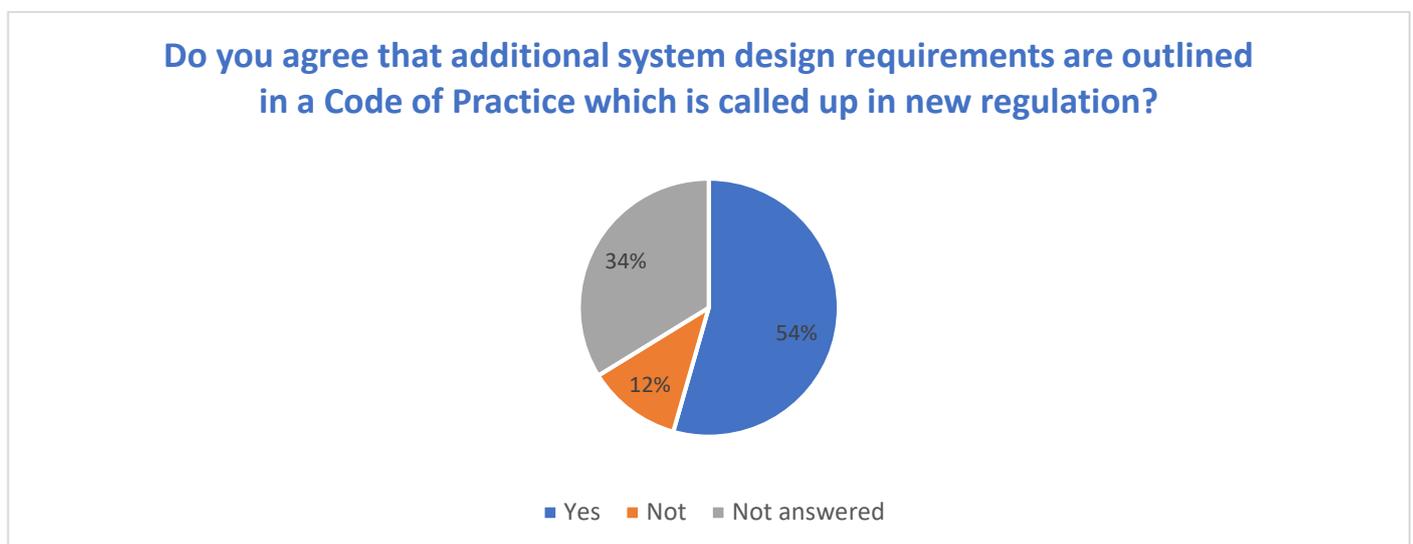


Figure 74 Proposal for a code of practice to manage certain design requirements for onsite wastewater systems

54% (n=37) of respondents supported the proposal for the additional system requirements to be provided in a code of practice. 12% (n=8) did not agree with this proposal. 34% (n=23) of respondents elected not to answer this question.

Proposal 4.5.1 Calculation of flow rates

92: Do you agree the regulations should reference the design flow rates from AS/NZS 1547?

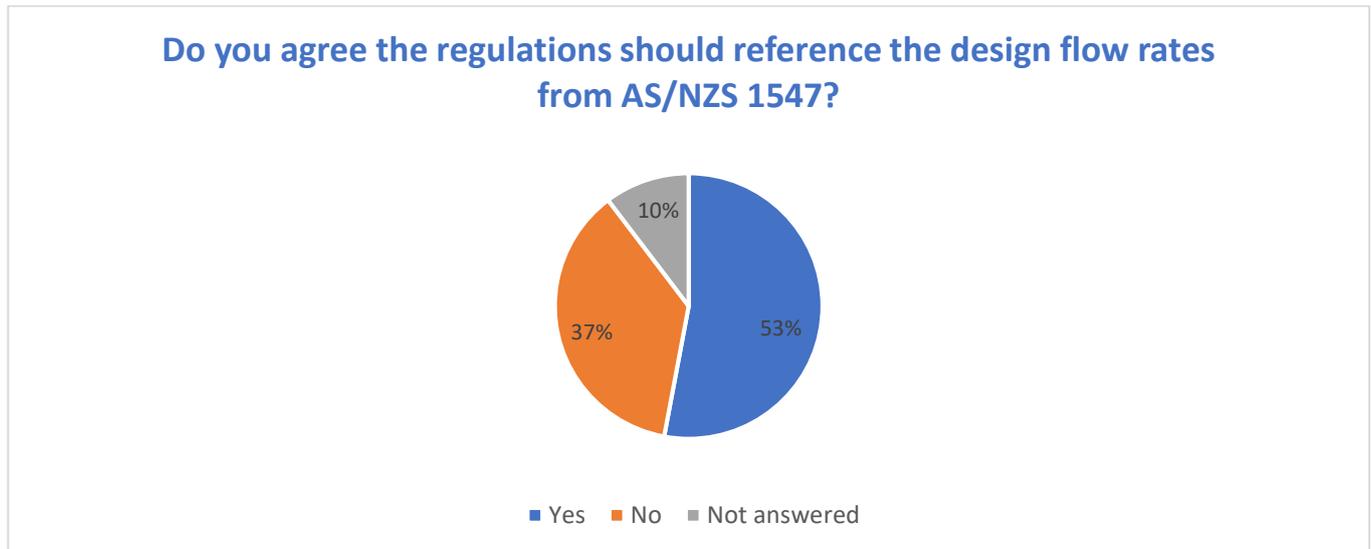


Figure 75 Proposal for design flow rates for onsite wastewater systems to be based on Australian Standard AS/NZS1547:2012

53% (n=36) of respondents supported new regulation referencing the design flow rates from AS/NZS1547. Most stakeholder sections fully supported the adoption of the design flow rates from AS/NZS1547, whereas the local government sector was divided in their opinion, with 20 respondents supporting adopting the flow rates from AS/NZS1547 and 24 against.

93: Do you agree with the proposal that a per person, per day flow rate is used?

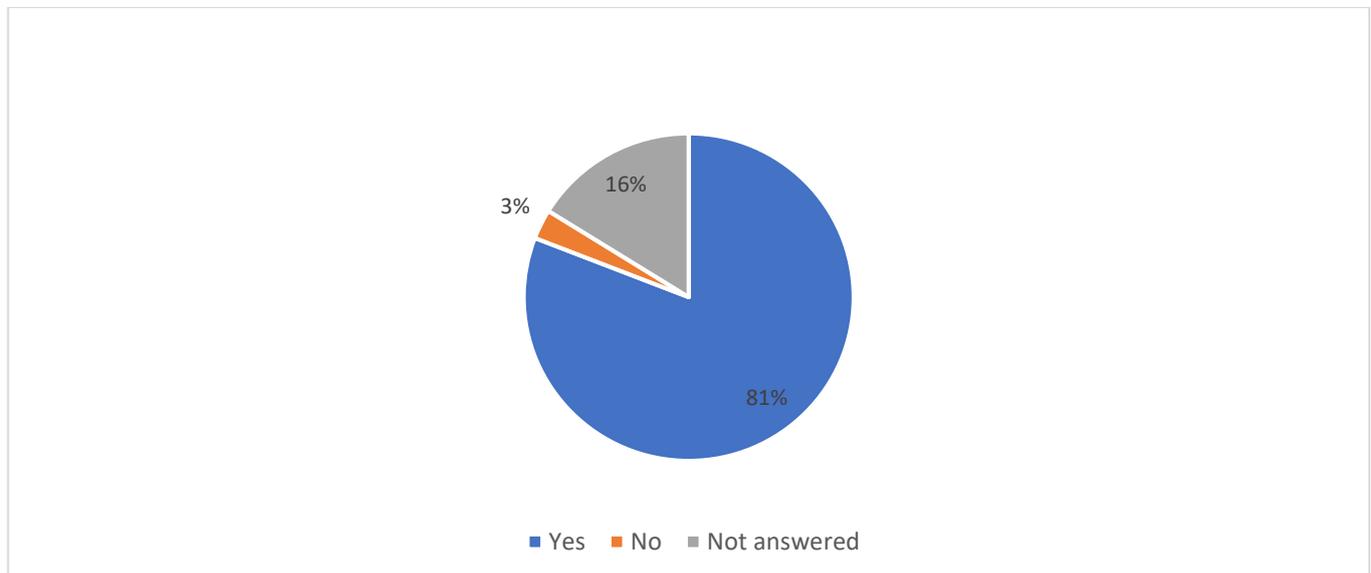


Figure 76 Proposal for regulation to adopt a per person, per day flow rate

81% (n=55) of respondents supported using a "per person, per day flow rate" when designing onsite wastewater systems.

94: If not, how should the design flow rates should be estimated? Please provide evidence for your suggestion.

There was considerable variation in opinion on how design flow rates should be estimated across different industries, no evidence was provided to support comments. Comments included:

- “Non-residential - e.g. tourism accommodation should be designed to a per person” (Local govt).
- Tourism /FIFO per person difficult to calculate - use dwellings (Local government).
- “Flow rate should be detailed in Regs using supplement to R29” (Local government).
- “If the applicant is able to demonstrate to the approving agency an alternative volume this can be considered” (Local government).
- “Support but include other flow rates not specified in AS1547” (Industry stakeholder)
- “Remote Indigenous communities, per person per day numbers can grow dramatically through funerals, lore and cultural events that can quickly overload systems”. (Other stakeholder).
- “AS 1547 does not have an extensive list. needs to be expanded or DoH WA will still need a supplementary list. It is also of concern that lower number are used for different water supplies. People who do not live in such premises may not modify their behaviour (reduce water use) when visiting residences or using commercial and public facilities. If it is presumed water use will be lower when rainwater is used and higher when reticulated supplies are drawn on, how will system sizes be increased if premises are later connected to the reticulated supply?” (State government).
- “Subject to DoH or AS1547 providing advice on how to calculate the expected number of people to base the per person, per day calculation on” (State government).
- “Secondary and Tertiary systems should not be restricted by flow rate” (Industry Stakeholder).
- “Possibly a calculation on the highest number of per person per day is the measure” (Industry Stakeholder.)
- “150 litres per person per day and 1.5 persons per bedroom, based on 150 litres per person per day” (Industry Stakeholder).

95: Do you agree that in situations where a system which uses alternative technologies or does not include sewage, the flow rates sizing of an onsite wastewater system can be based on a lower flow rate? Please explain your answer

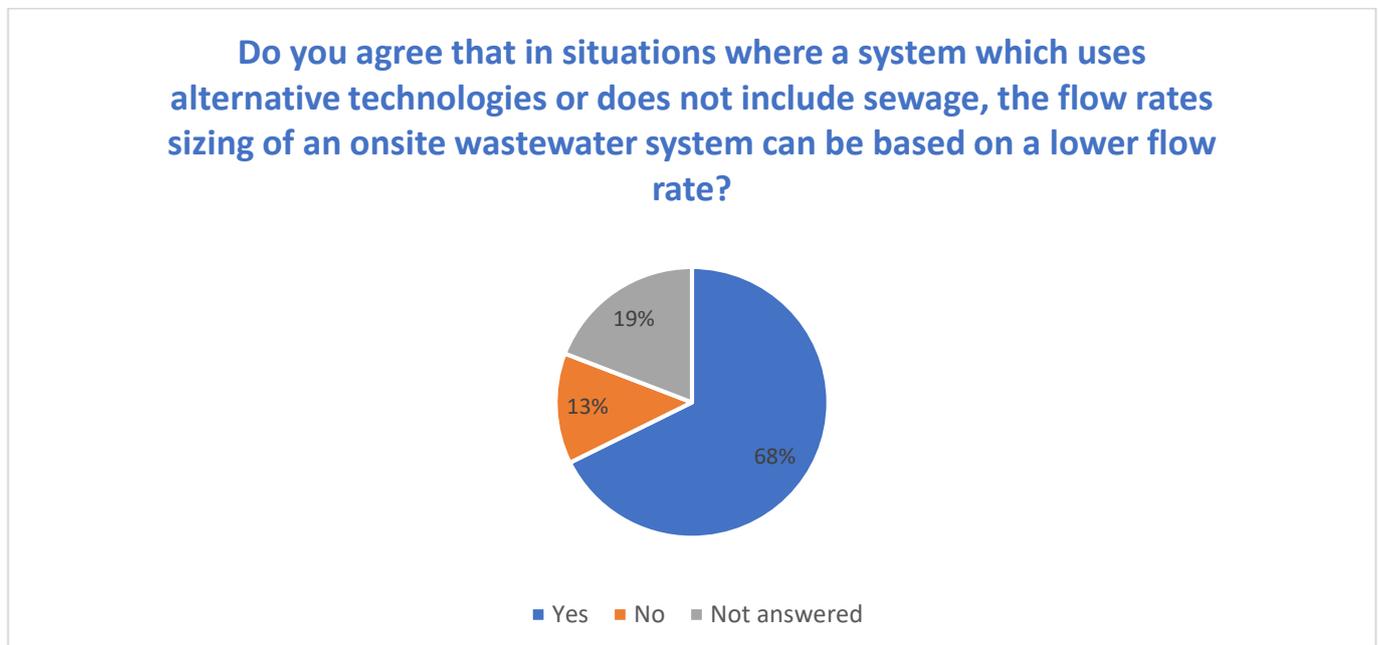


Figure 77 Respondents who supported lower flow rates for technologies that used less water

68% (n=46) of respondents supported the proposal for lower flow rates to be applied where the technology reduced water usage. 13% (n=9) did not support this proposal. Respondents raised concerns about change of ownership and one respondent stated that alternative technologies do not reduce the amount of system inflow. Those who supported lower flow rates supported flexibility but indicated the manufacturer must demonstrate why a lower flow rate could be applied.

Proposal 4.5.2 Calculation of design load rates (infiltration rates)

96: Do you agree that the regulations should refer to the design loading rate (infiltration rate) for various soil types using Table L of AS/NZS 1547?

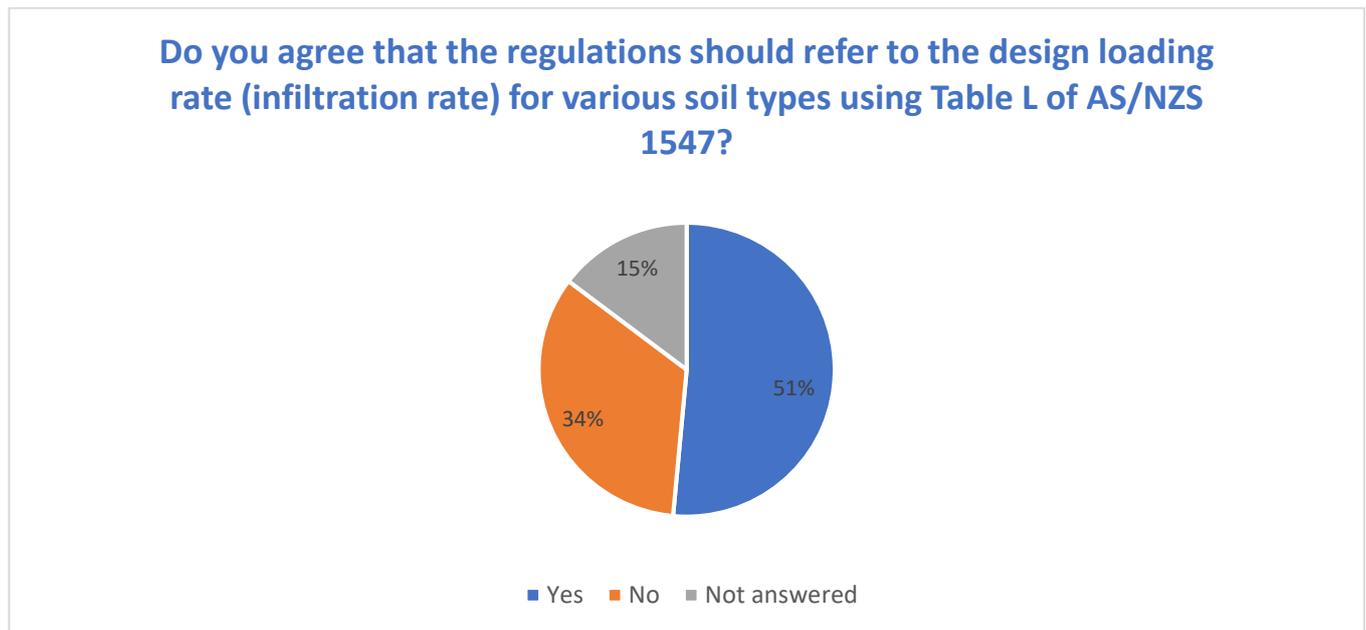


Figure 78 Responses supporting design loading rates from the Australian Standards

51% (n=35) of respondents supported the design loading rates from the AS/NZS1547. 34% (n=23) opposed the use of the Australian Standards for this purpose.

97: If not, what design loading rates should the DoH reference? Please provide the evidence for your answer.

Thirty-four (34) respondents answered this question. Twenty-one (21) respondents indicated that AS/NZS1547 was too conservative as it did not consider infiltration through the side walls resulting in larger land application areas. The collective group proposed “Supplementary Regulation 29” should be retained however the volumes should be reviewed. Four (4) respondents proposed the loading rates should be determined using the site and soil evaluation or provide higher rates for sandy soils. One respondent proposed adoption of the United States Environmental Protection Agency Land Treatment of Municipal Wastewater¹² effluent guideline.

¹² US Environmental Protection Agency 1984. Process Design Manual for Land Treatment of Municipal Wastewater, available at [Document Display | NEPIS | US EPA](#)

Proposal 4.5.3 Calculating size of land application systems

98: Do you agree with the proposal to reference the formula from AS1547 to determine the size of the land application system?

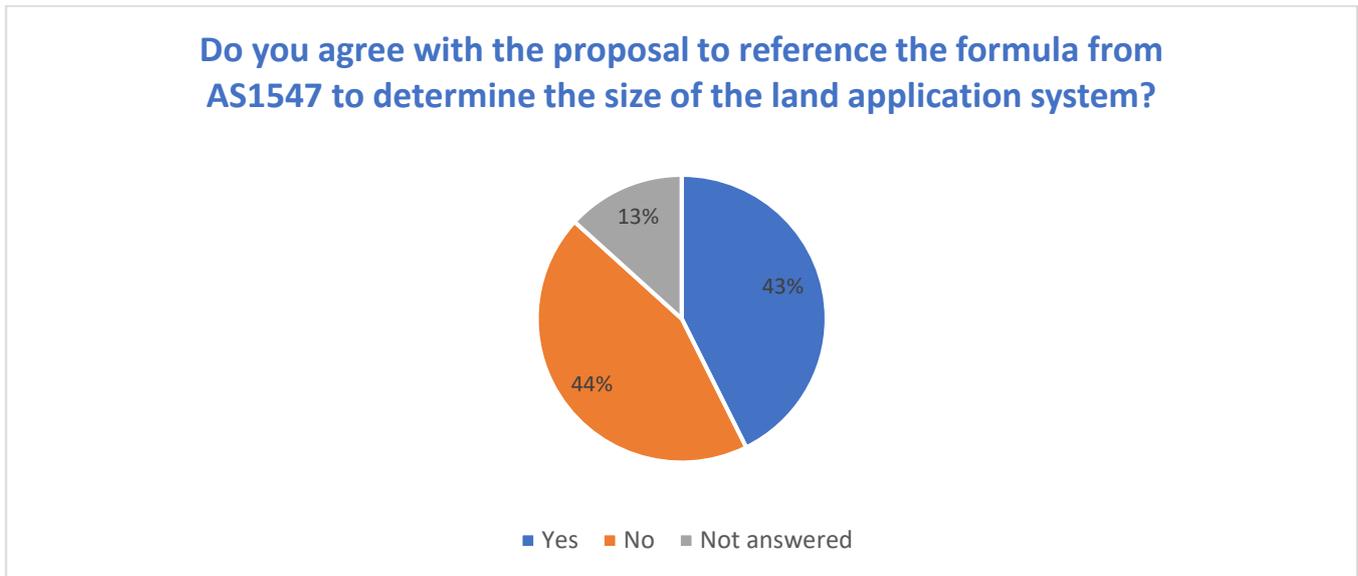


Figure 79 Preferences for determining the size of a land application system

44% (n=30) of respondents were opposed to the use of AS/NZS1547 formula for determining the size of land application systems. It should be noted that of the thirty (30) respondents who did not support the application, twenty (20) were identical template responses. Each of the twenty-nine (29) responses in support of the proposal were independent singular submissions.

99: If you do not agree with this calculation what calculation should be referenced? Please provide evidence for your suggestion.

Twenty-five (25) respondents indicated the current method for calculating the size of land application systems was appropriate. This group of respondents also stated that using the Australian/New Zealand Standard resulted in larger sized systems and there was no evidence of failures using the current system. The group cited the Caldwell Report ¹³ as evidence that the current regulations were appropriate. This group consisted of those who were part of the collective response.

Seven (7) respondents did not propose an alternate option to the Australian / New Zealand Standard but disagreed with its introduction. Two (2) respondents indicated the size of a land application area should be based on the site and soil evaluation, and two industry stakeholders stated that the land application rates should not apply to secondary and tertiary systems which produce a higher quality of treated effluent.

¹³ Caldwell Connell Engineers Pty Ltd 1986, Onsite Wastewater Disposal Systems, Final Report

Proposal 4.5.4 Site and soil evaluations

100: Do you agree that the requirements for a site and soil evaluation are provided in a code of practice which is called up in regulation?

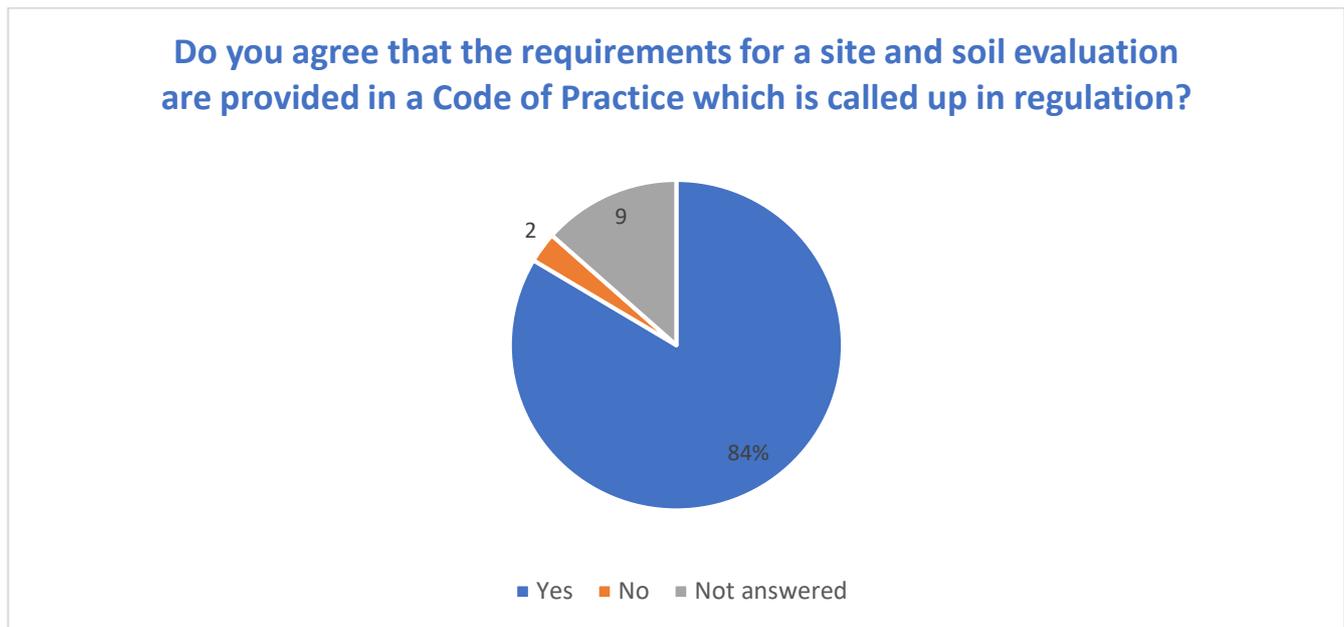


Figure 80 Proposal for onsite wastewater systems to be provided in a code of practice

84% (n=57) of respondents supported the requirements of site and soil evaluations to be provided in a code of practice.

Additional comments received included:

- *“providing the code of practice requires identification of adjacent water bodies, including downstream receiving water bodies such as estuaries, depth to groundwater and flood areas”* (State government).
- *“So long as this requirement is placed on the applicant to submit an SSE with their application”* (Local government).
- *“Development controls forming part of the Shire of Merredin Local Planning Scheme No.6 mirror current requirements applicable to permissible wastewater volumes that can be generated per lot size on unsewered properties”* (Local government).
- *“SSEs may still be required for single dwellings, particularly in Sewage Sensitive Areas as documented in the Government Sewerage Policy. There may be other situations where SSEs are required for single dwellings in line with Local Planning Policies (Local government)”* (Local Government Association).

Proposal 4.5.4.1 Site and soil evaluations for a lot with a single dwelling

101: Do you support the proposal that a SSE is not required as part of an Application to Install for a premise with a single dwelling, unless the approving agency requests one? If not, how do you think it should be managed?

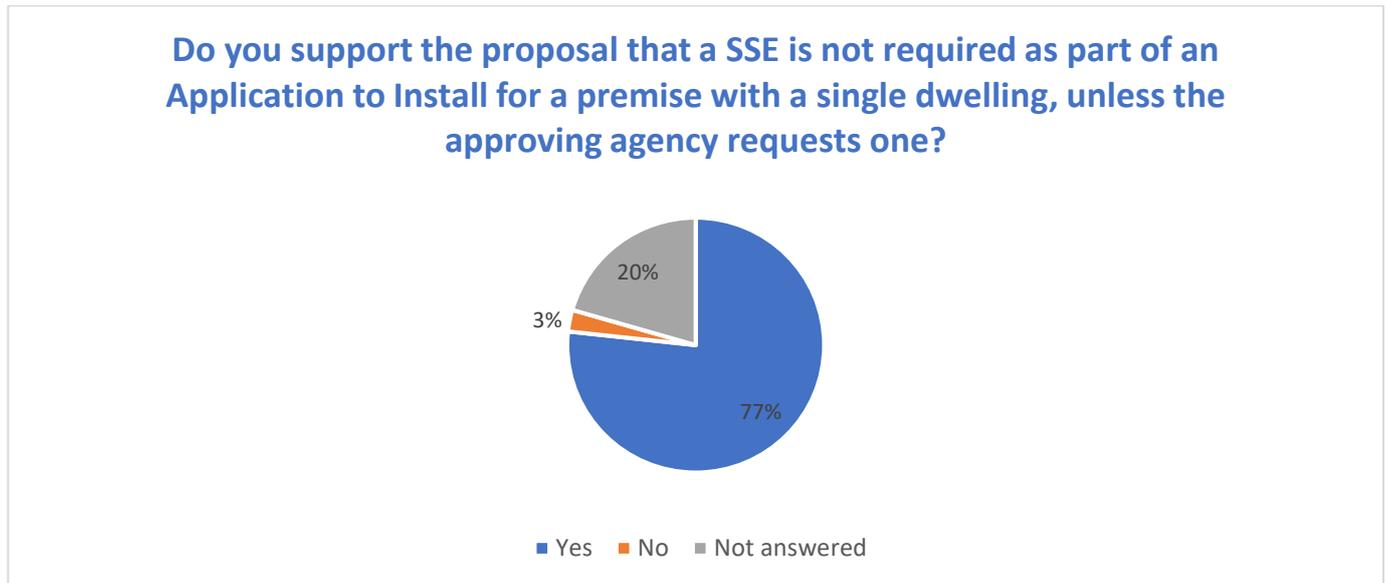


Figure 81 Proposal for site and soil evaluations for single dwellings

77% (n=52) of respondents supported a premise with a single dwelling not requiring an SSE as part of an application to install unless requested by the approving agency. 20% (n=14) of respondents did not answer this question.

Additional comments included:

- *“Not using SSE is appropriate if consistent sandy soils however not for other sites.”*
- *“The current system is not that good. Currently applicants (plumbers, builders, designers) often never been on site and assume what the soil/site will be. When they provide a soil report it is the one that was created for a building application purpose.” (Local government.)*
- *“For those areas of WA with extremely consistent soil types such as the deep sands found on the Swan Coastal Plains there is merit in not seeking a SSE. However, for those areas where the soil types can be highly variable, then the need for a SSE becomes all the more important” (Local government).*
- *The content and level of detail required for SSE’s at structure planning and subdivision stage is different to installation stage. Consequently if a SSE has been prepared in the earlier stages it may not adequately address risks. Support some flexibility for SSE requirements for single dwellings” (State government).*

In general, comments supported regulation being flexible in the requirements for conducting a SSE.

Proposal 4.5.4.2 Site and soil evaluations for a lot other than a single dwelling

102: If adopted, should the regulations state a single dwelling will not be required to submit a SSE with an Application to Install unless requested by the approving agency?

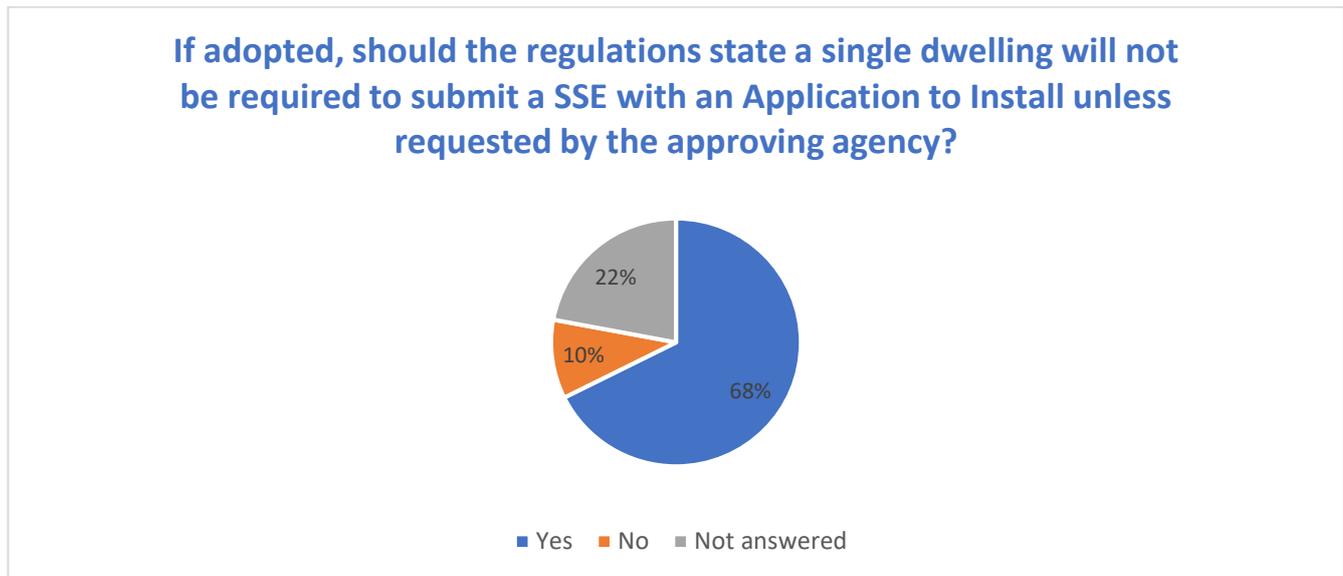


Figure 82 Requirements for a site and soil evaluation for single dwellings

68% (n=46) of respondents supported the proposal that regulation would not require a SSE for a single dwelling unless requested by the approving agency.

Additional comments included:

- “SSEs consistent with AS/NZS 1547 have not been prepared for the majority of unsewered lots. This is because they were created prior to the implementation of the GSP” (State government).
- “Guideline by LGA setting out expectations” (Local government).

103: If adopted, should the regulations state a SSE will be required for all lots other than those with a single dwelling, unless the approving agency considers it has enough information to assess the application to install?

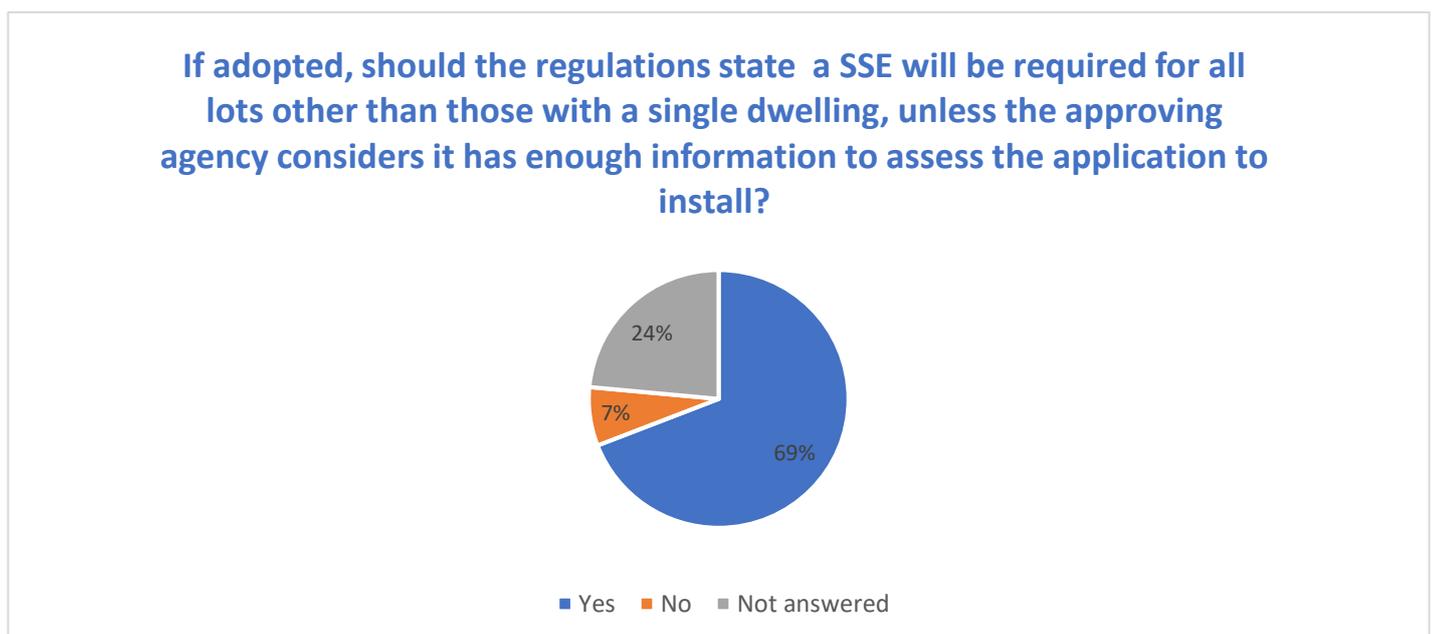


Figure 83 Responses to the requirements for all lots other than a single dwelling to submit an SSE in the application to install.

69% (n=47) of respondents supported regulation requiring a SSE for all other lots other than a single dwelling unless the approving agency considers it has enough information to make the assessment.

- *“DPLH supports this position provided the Department of Health collaborates with the Department of Water and Environmental Regulation, WALGA and local governments to refine what constitutes ‘enough information to assess the application’. This will be critical to ensure that the regulations provide enough flexibility, while effectively managing risks”* (State government).
- *“...the onus should be on the applicant to provide relevant information to the Authorised Officer...”* (Local government).

104: If adopted, should an owner be able to request an exemption where there is enough information already available for the site and soil conditions on site to assesses in an Application to Install?

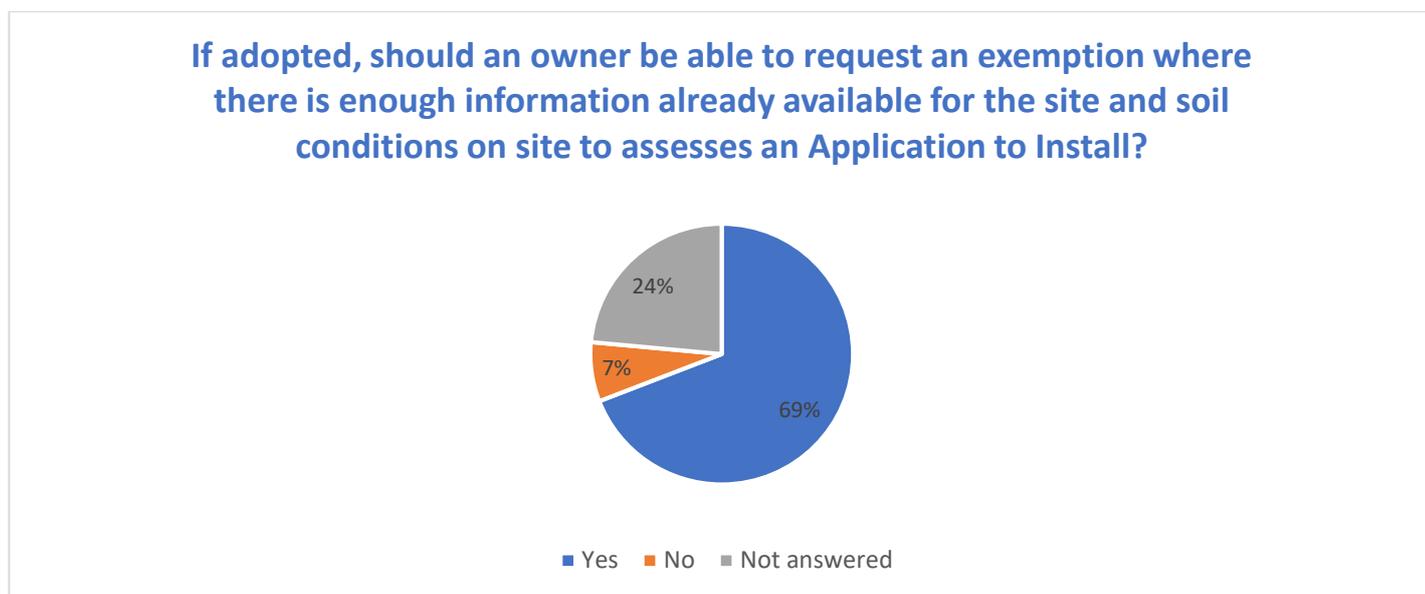


Figure 84 Proposal for exemptions of site and soil evaluation in some circumstances

69% (n=47) of respondents supported the proposal to allow an owner of a site to request an exemption if there was sufficient site and soil information to assess an application to install.

Additional comments included:

- *“..this should be at the discretion of the Local Government Authorised Officer to provide an exemption rather than providing the ability for an applicant/owner to request an exemption and if the request is not granted they may argue or appeal the decision”* (Local government).
- *“DPLH supports this position provided that the Department of Health collaborates with the DPLH, Department of Water and Environmental Regulation, WALGA and local governments to refine what constitutes ‘enough information’”* (State government).

Proposal 4.5.4.3 Content of a site and soil evaluation

105: Should the DoH maintain the status quo and provide guidance material for conducting an SSE?

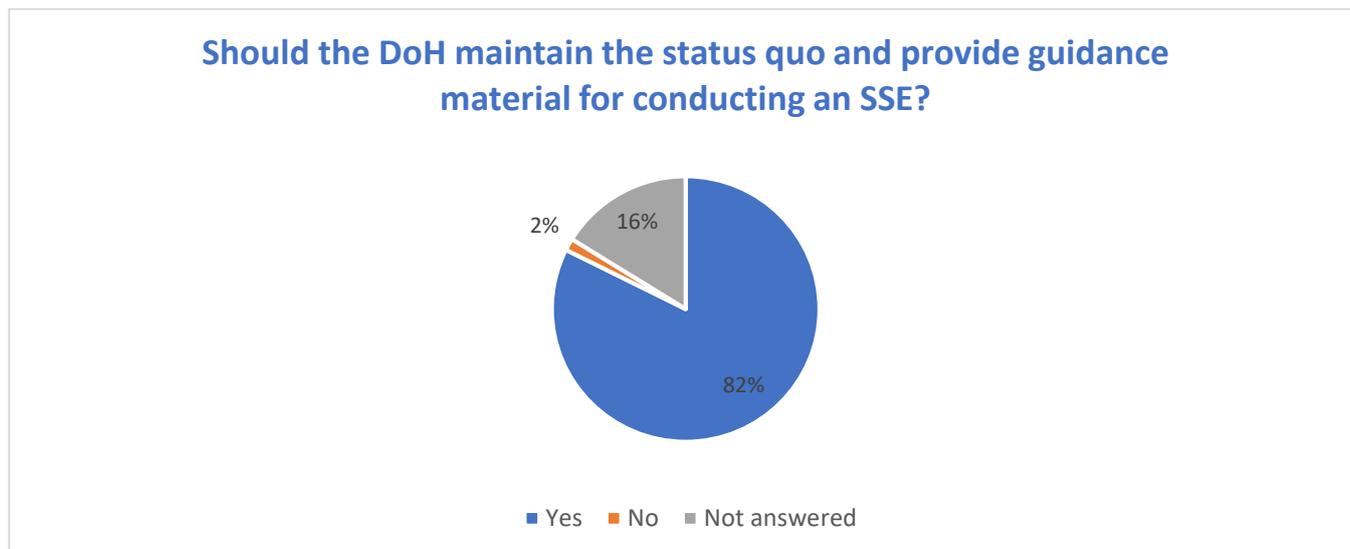


Figure 85 Responses to developing guidance material for conducting an SSE

82% (n=56) of respondents supported the proposal for DoH to provide guidance material on how to conduct an SSE.

106: Which of the following options do you agree with:

Table 12 Proposal for the content of a site and soil evaluation.

Which of the following options do you agree with:	
A SSE should be conducted in accordance with AS/NZS 1547 or	25
The scale and intensity of a SSE should be determined by the agency approving the application to install.	36
Other	3

Twenty-five (25) respondents supported a SSE be conducted in accordance with the Australian Standard. Thirty-six (36) respondents supported the scale and intensity of an SSE should be determined by the approving agency. Three (3) respondents proposed that other options should be available. Four (4) respondents selected more than one response.

Proposal 4.5.4.4 Persons undertaking site and soil evaluation

107: Who should be able to conduct a SSE for an Application to Install?

Table 13 Options for who can conduct a site and soil evaluation.

Option	
Environmental engineer / soil scientist / land capability assessor	54
Other	13

Fifty-four (54) respondents indicated a SSE should be undertaken by an environmental engineer, soil scientist or land capability assessor. All respondents supported minimum qualifications; one state government agency preferred the requirement should reflect the Australian Standards. The standards state that a SSE shall be undertaken by a "suitably qualified and experienced person".

It was recognised there are no certifying schemes in WA and further guidance and training will be required to conduct and assess an SSE in accordance with AS/NZS1547. Representatives of local government have stated they would like evaluators to go through an accreditation and registration process, with DoH responsible for registration.

108: If other, what qualifications and/ or experience should a suitably qualified person hold?

Comments received included:

- *“Plumbers should be approved (with training) for SSE. LG Officers require the training to properly assess the SSE's but should not be required to complete an SSE. LGs are the approving body not the applicant for all system approvals. Where LGs are completing their own construction, a certified SSE by an independent assessor should be required”* (Local government).
- *“Degree in appropriate field”* (Local government).
- *“Geotech engineer, Hydrologists, Civil Engineer, all engineers need to be chartered or registered/certified by Engineers Australia or Engineering Council”* (Industry stakeholder).
- *“... a person with considerable knowledge and experience or who has undertaken some relevant training”* (Industry stakeholder).

Proposal 4.5 Summary

Section 4.5 considered the requirements for designing a land application system. The consultation considered the calculation of flow rates, design load rates, sizing a land application area and the components of a SSE.

There was support for requirements to be called up in a code of practice. For each of these design factors there was a mixed response to the adoption of the Australian/New Zealand Standards.

Those opposed to the adoption of the Australian/New Zealand Standards preferred to retain the requirements in the existing regulations. The majority of responses opposed to the Australian Standards were identical responses from a collective submission. This group cited the Caldwell Report as evidence that the current regulations were science based and appropriate.

A detailed review of the Caldwell report found the application of its findings are limited and cannot provide the breadth of scientific information to support the premise that the current regulations are based on a scientific approach. The report states that most soil absorptions systems in the Perth region are too small to be suitable for long term use¹⁴ and in particular, heavier soils require much larger systems. The study summarised by stating that an average household would need a 25m long leach drain in sandy soils based upon household of four (4) with discharge of 15 l/c.d. It proposed that smaller leach drains (9m) could be achieved through the use of alternating leach drains and much of the study revolved around testing this approach. While the research indicated the effectiveness of alternating drains, there was significant caveats attached to their use, including a requirement for ongoing maintenance and the importance of alternating drains on a regular basis for the system to continue to function properly. The report did not address many of the requirements for designing land application systems.

In considering alteration of the existing methodology for sizing onsite wastewater systems, the DoH has also considered the Legislative Council of Western Australia *Report 18 Enquiry into Deep Sewerage in the Cockburn Area*. This inquiry found that *‘serious health and environmental risks still exist with existing septic systems’*, and several submissions made to this inquiry cited examples of systems failing in heavy soils.

The Australian New Zealand Standard is flexible in its approach and states that the following factors should be considered when establishing the design flows for a system:

¹⁴ Caldwell Connor Engineers Pty Ltd, 1986. *Onsite wastewater Disposal Systems: Final Report* – p. iv.

- the number of bedrooms,
- average and peak occupancy
- average and peak per capita wastewater volume
- type of water supply and nature of wastewater supply restrictions
- type of water fixtures in the dwelling
- type of wastewater treatment system and land application system and the resilience of each to variable hydraulic loads
- treated effluent quality as discharged to the land application area.

In contrast, the current regulations have a fixed value for 3 different soil types. The limited categorisation for soils does not allow for any flexibility and does not take into consideration the unique conditions of the subject site. The Australian/New Zealand Standard is adaptive and provides variable rates for 14 different soil types, provides alternate methodologies for land application systems as well as enabling the use of new technologies that demonstrate lower flow rates.

The main concern raised about the application of the Australian New Zealand Standard was that it was too conservative and resulted in larger land application areas than the current regulations as the standard did not consider infiltration through the side walls of a leach drain.

Sizing land application areas to the Australian/New Zealand Standard can result in larger systems; this is not due to the standard not factoring in infiltration through the side walls¹⁵ as stated by some respondents. It is due to the current regulations being developed on a study that focussed on freely drained soils¹⁶. Sizing systems using the methodology in the Australian/New Zealand Standard results in larger systems in some circumstances, but this is appropriate in heavier soils that don't drain as easily. In these circumstances larger systems will reduce the likelihood of failure. The Australian/New Zealand Standard also provides for a large number of land application system types, which ultimately provide more options and variable sizing requirements for property owners.

The DoH recommends that the design elements of onsite wastewater systems and land application systems are detailed in a code of practice that is based on the Australian/New Zealand Standard.

[Appendix 6](#) shows a comparison of land application system sizing using the current regulations and an AS/NZS 1547:2012 based methodology.

The DoH sought feedback on when a site and soil evaluation should be required. 77% of respondents agreed that the requirement for a site and soil evaluation for a system serving a single residential property, should be subject to enforcement agency discretion. There was also strong support for the scale and intensity of a SSE to be determined by the approving agency. The Australian/New Zealand Standard allows for a staged approach and the scale and intensity of the SSE is dependent on the risks of the site.

The DoH considers that the requirements for a SSE should follow the process in the Australian/New Zealand Standard as it is based on robust science and undergoes a regular review process. This is not a significant move from current requirements as the guidance material provided by the DoH for a SSE is already based on the Australian/New Zealand Standard.

The DoH considers that all applications for onsite systems serving commercial and industrial premises will require a SSE. The requirement for a SSE for systems serving single residential properties will be subject to enforcement agency discretion. The Australian/New Zealand

¹⁵ AS/NZS1547:2012 Onsite Domestic Wastewater Management. CL4.1, p143.

¹⁶ Caldwell Connor Engineers Pty Ltd, 1986. Onsite wastewater Disposal Systems: Final Report

Standard allows flexibility on the scope of a SSE, with SSE requirements increasing with the complexity of the site.

The DoH will update guidance material setting out expectations for an SSE, provide templates for reporting and checklists for assessing an SSE report.

A SSE should be undertaken by a suitably qualified person. Guidance material will identify the competencies required to be a suitably qualified person. These requirements will align with the Australian Standard. The DoH note availability of courses are limited in WA. To improve the standard of reports that are currently being received, the DoH will offer training courses to conduct an SSE and how to interpret an SSE.

Proposal 4.5 Recommendations

35. The DoH recommends that the additional design requirements for an onsite wastewater system are not included in new regulation but are outlined in a code of practice that is adopted by the regulations and is based on Australian Standard AS/NZS1547:2012. The additional design requirements include:

- flow rates
- design loading rates
- sizing of land application systems

36. The DoH recommends that a SSE be undertaken by a suitably qualified person.

Proposal 4.6 Ongoing requirements for secondary onsite wastewater systems

Proposal 4.6 surveyed stakeholders on the requirements for servicing and testing of secondary onsite wastewater systems. Fourteen (14) questions were presented for feedback.

109: Do you agree the ongoing requirements for managing onsite wastewater systems should be provided in a code of practice that is called up in regulation?

Do you agree the ongoing requirements for managing onsite wastewater systems should be provided in a Code of Practice that is called up in regulation?

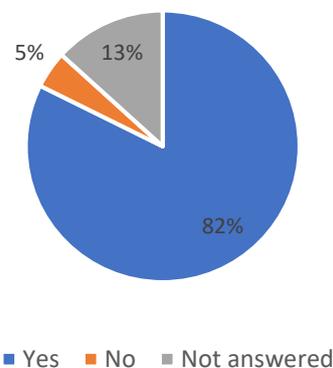


Figure 86 Managing the requirements for servicing of onsite wastewater systems

82% (n=56) of respondents supported servicing and testing requirements be provided in a code of practice that is called up in regulation. 5% (n=5) did not agree with this proposal. It is unclear

whether respondents disagreed with the ongoing requirements or about the requirements being provided in a code of practice.

Proposal 4.6.1 Servicing: schedules, requirements and reporting

Questions 110 to 116 considered servicing schedules, and requirements for service reports.

110: Do you agree with the proposal that as part of the product approval the DoH will set the servicing schedule?

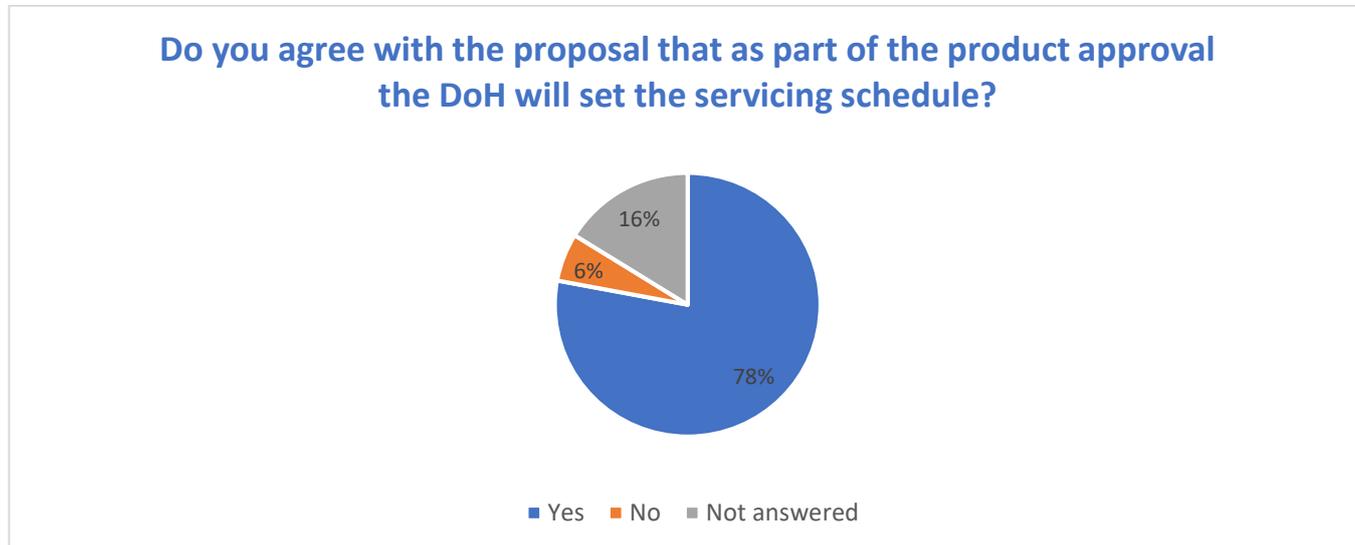


Figure 87 Responses to DoH setting the service schedule as part of the product approval.

78% (n=53) of respondents supported the proposal for the DoH to set the service schedule as part of the product approval.

111: How do you think the servicing requirements should be assigned?

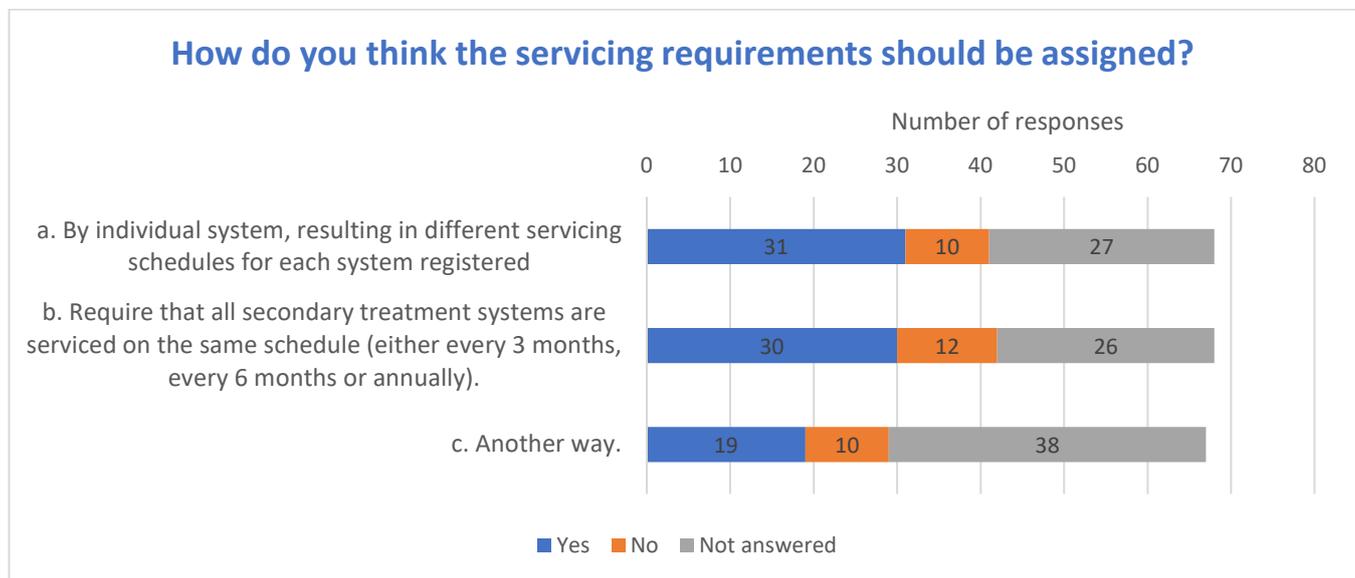


Figure 88 Feedback on proposed servicing requirements for secondary treatment units.

Thirty-one (31) respondents stated servicing schedules should be determined by the product, thirty (30) respondents indicated they supported DoH synchronising servicing schedules and nineteen (19) stated the schedule should be set another way.

Twenty (20) respondents provided more than one response.

112: Do you agree that a service technician should have to immediately report their concerns to the appropriate local government in the following situations?

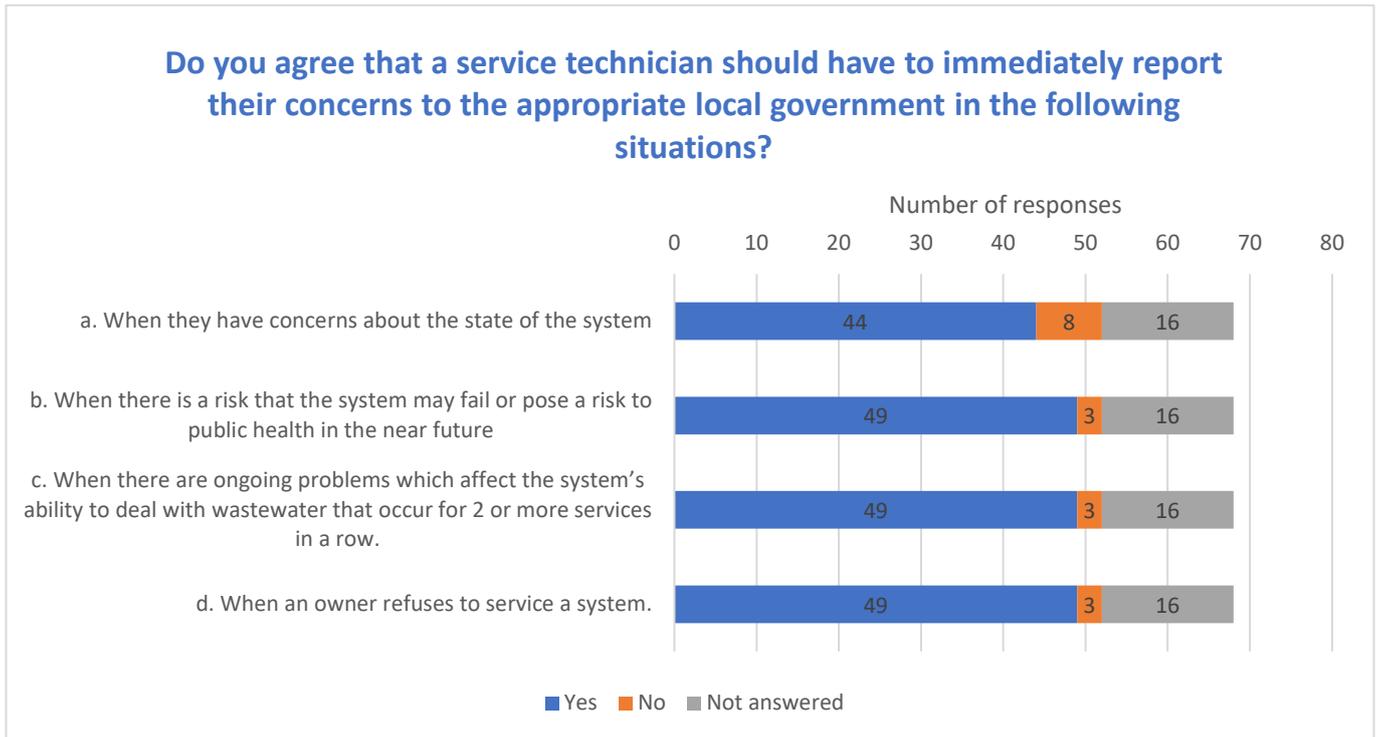


Figure 89 Reporting requirements for service technicians

To reduce the amount of service reports received by local government, the DoH considered setting certain conditions for when a service report is submitted to local government. There was support for all scenarios proposed.

113: Are there any additional situations where immediate reporting should be required?

Comments provided by respondents included:

- *“When Land application area is failing, when effluent is leaving the property”* (Industry Stakeholder).
- *“Issue cannot be rectified immediately”* (Local government).
- *“Development on site results in impacted setbacks and non-compliance”*. (Local government).
- *“If the system has been modified”* (Local government).
- *“When there is a risk that the system may fail or pose a risk to environmental health in the near future”* (State government).
- *“This is an overly administrative and risk-averse approach. How can the DoH expect to effectively resource this proactive monitoring of all registered systems across the State Regulatory approvals compliance audits (proactive) and loss of containment events (reactive) should be reportable? Service reports can be made available to DoH upon request”* (Industry stakeholder).

Comments from respondents highlighted that the current process is overly administrative but acknowledge there still needs to be some requirements for reporting to ensure systems are maintained.

114: Do you agree with the proposal that after every service the service technician notifies the appropriate local government of the system’s registration number and the date/time that the service occurred?

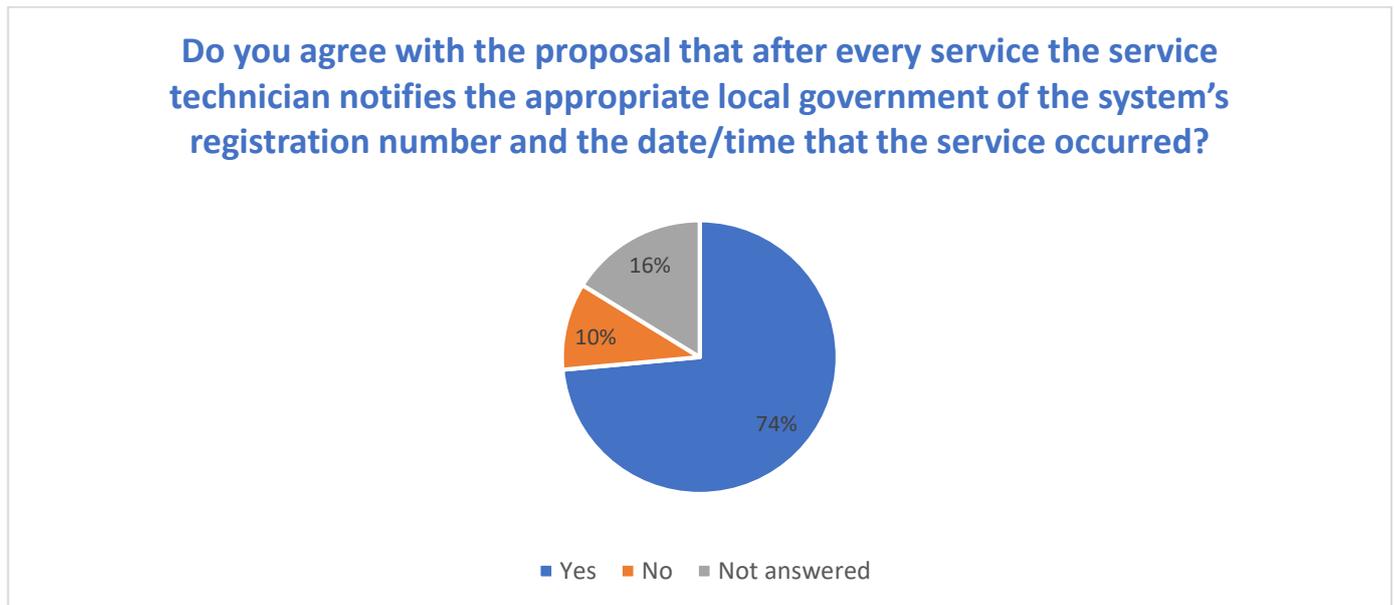


Figure 90 Requirements for notification of a service to local government of a secondary treatment unit.

74% (n=50) of respondents supported the proposal that a service technician notify the local government of the systems registration number and the date and time of service.

115: If not, what information should be provided to local governments after every service?

Relevant comments included:

- *“a notice of service completed should be submitted to the relevant body stating location of system and type. Where possible identification numbers must be included”* (Industry stakeholder).
- *“Copy of the full service report”* (Local government).
- *“Service sheet”* (State government).
- *“The QLD Form 11 or similar reports should be adopted and provided within 10 days of completing every service”* (Industry stakeholder).
- *“an annual report”* (Local government).
- *“Inclusion of date and time stamped photos to verify inspection was undertaken”* (Local government).
- *“Any defects at all or observations noted by the relevant person servicing the units or system”* (Local government).
- *“DoH shouldn’t need to keep track of servicing status and outcomes for all registered systems - this does not represent risk-based, outcome-focused regulation”* (Industry stakeholder).

One local government proposed that in place of the submission of servicing reports an audit system was utilised. This would have regulation require that owners must service their secondary onsite wastewater system as per the registration / permit to use and retain the service records. Local government could then undertake an audit of systems to check servicing compliance.

116: Do you agree that a service technician submit a service report if they have concerns about the performance of a system?

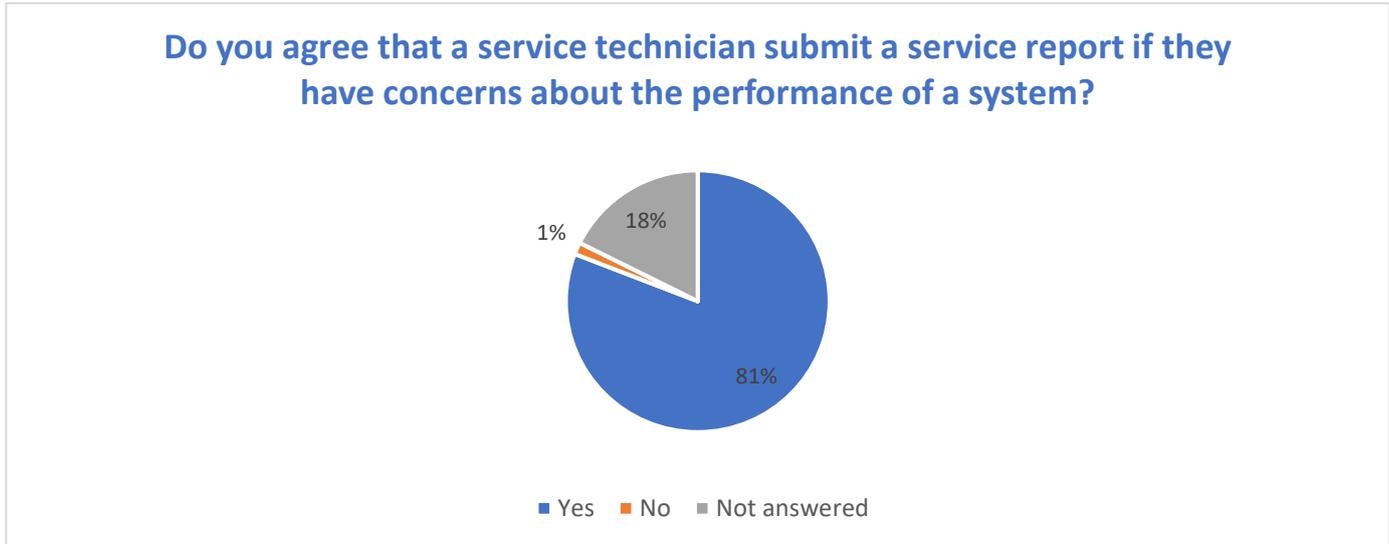


Figure 91 Responses to the proposal for service technicians to submit a report if they have concerns about system performance.

81% (n=55) of respondents supported a requirement for a service technician to report to local government if they had concerns about the performance of a secondary onsite system.

4.6.1 Summary

Local governments received an estimated 3,625 maintenance reports from owners of secondary treatment systems in the 2019/2020 financial year, an estimated 10,881 were expected to be submitted based on the number of approvals for secondary treatment systems¹⁷. The number and variety of servicing schedules makes it difficult for local government to enforce compliance. The objective of section 4.6 was to consider how to reduce the amount of reports local governments are receiving while maintaining the standard of secondary treatment units. Current regulation requires:

- an owner of an onsite system to have arrangements in place for maintenance,
- maintenance to be carried out by a licensed person and
- units to be maintained in accordance with the Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units¹⁸.

The Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units requires a maintenance report to be prepared in duplicate, with one copy retained by the service personnel and one sent to local government. If the installation of the onsite wastewater system was approved by the CHO then a copy must also be sent to the DoH. Comments from respondents noted that while this process is overly administrative, oversight of maintenance requirements was still necessary.

Proposal 4.6.2 Testing requirements

Questions 117 to 119 explored introducing wastewater testing of onsite wastewater systems. This is not a current requirement of regulation. Testing was considered to demonstrate that a system was fit for purpose.

¹⁷ Radomiljac A & Alach Z, 2021, Environmental Health Indicators for Local Government, (Unpublished)
¹⁸ DOH, ND. Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units (ATU's)

117: Should the regulations allow for an authorised officer to require testing of the treated water quality from an onsite water system at a NATA accredited laboratory? If no, please provide your rationale.

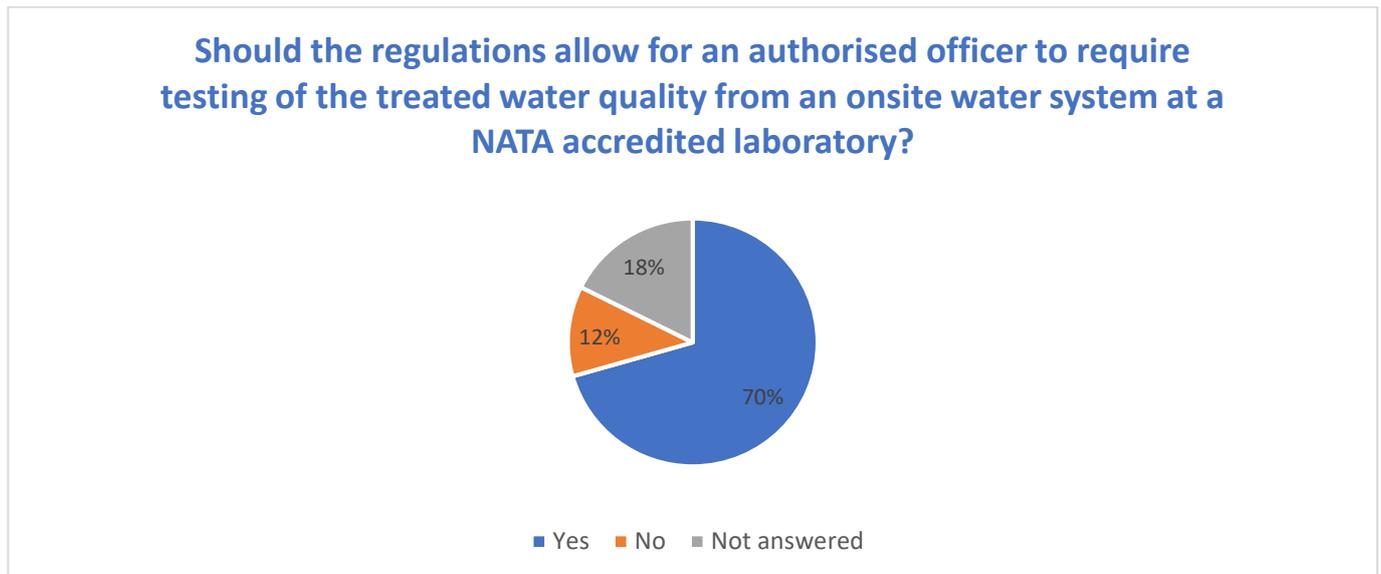


Figure 92 Responses to the proposal for regulation for authorised officers to request testing of an onsite wastewater system

70% (n=48) of respondents supported this proposal for authorised officers to request testing of a wastewater system.

Additional comments include:

- *“Any improvement in controls legislatively should be made through existing legislation but will not work without heavy fines and an easy process to prove noncompliance. Less prescriptive risk based legislation will not work as local authorities will be unwilling to initiate prosecution unless it is an easy process that guarantees a positive result”* (Local government).
- *“If a system is failing or has not been maintained”* (Local government, State government and Other stakeholder group).
- *“Based on information provided by the service technician, based on information/evidence gathered during an inspection of the system by an authorised officer”* (Local government).
- *“Consistent with current requirements under Environmental Protection Act Part V - effluent sampling to be undertaken by NATA accredited laboratory. Authorised officer should not have a need to request sampling. Sampling results can be made available to authorised officer upon request”* (Industry stakeholder).

The cost of testing was considered by stakeholders. It was suggested that it was appropriate for householders to bear the cost of testing in circumstances where an officer had reason to suspect a system was not working correctly. A state government agency stated that if the testing was undertaken as part of a routine local government auditing process, then the cost should not be borne by the homeowner.

118: Should the regulations allow for an authorised officer to require testing of the treated water quality from an onsite water system after installation?

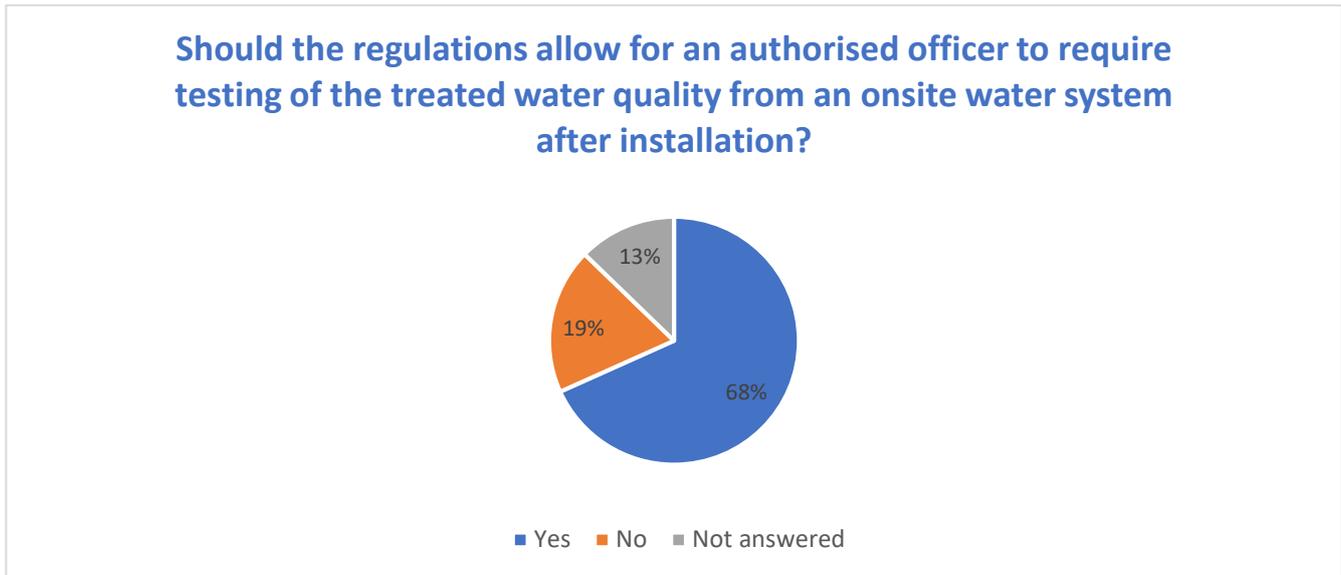


Figure 93 Responses to the proposal to create regulation to require testing of an onsite wastewater system after installation.

68% (n=46) of respondents supported this proposal with 19% (n=13) disagreeing with the concept.

119: Who should bear the cost of sampling, please provide your rationale?

Many respondents (n=44) stated the owner should bear responsibility for testing costs (if required) as it is their responsibility to ensure the system is working correctly.

Other respondents felt that the DoH or local government (n=4) should be responsible if testing was to be a regulatory requirement. Two (2) comments indicated that testing should not be regulatory requirement. A further two (2) comments suggesting that if the unit was not functioning correctly due to a manufacturing issue then the cost of testing should be borne by the manufacturer.

Proposal 4.6.3 Scheduled testing requirements

120: Should the regulations require scheduled testing of treated wastewater from onsite wastewater systems?

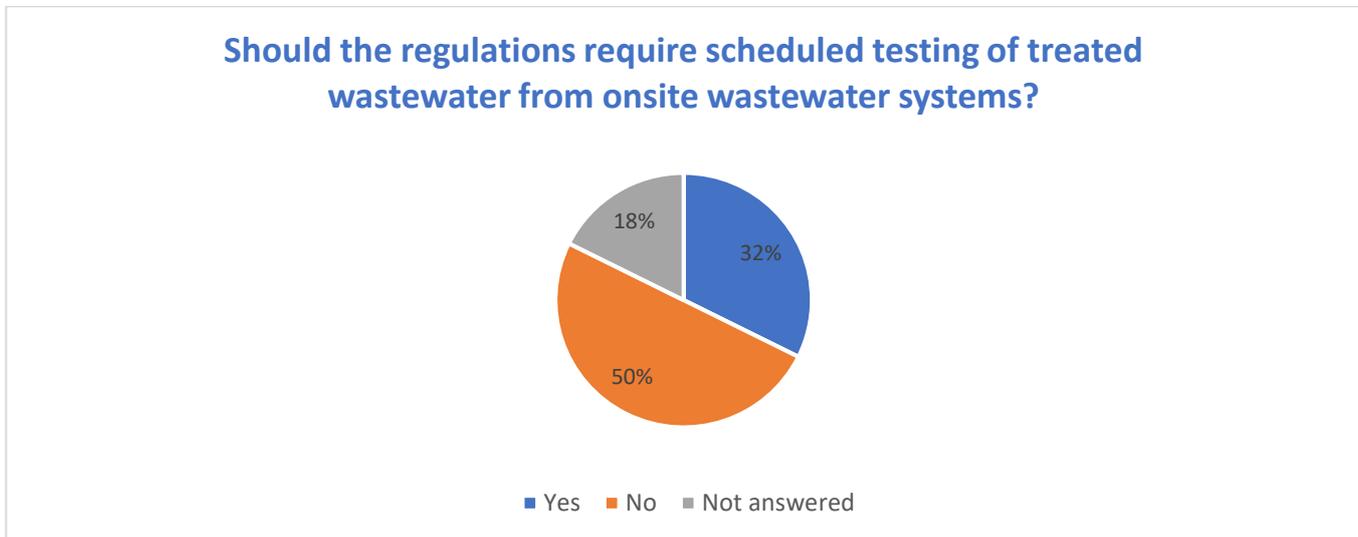


Figure 94 Proposed regulation to require scheduled testing

There was little support for regulation to require scheduled or routine testing of onsite wastewater systems with 32% (n=22) of respondents supporting the proposal and 50% (n=34) opposed.

121: Should this be a requirement of registration?



Figure 95 Proposal to require scheduled testing as part of an onsite wastewater system registration

There was little support for scheduled testing to be a requirement of registration. A local government proposed that a one-off wastewater sample could be required within a certain time frame (e.g. 6 months) after receiving a permit to use/registration to demonstrate that a system was operating correctly.

122: Should the testing results be submitted to the approving authority or retained by the owner of the system? Please explain why?

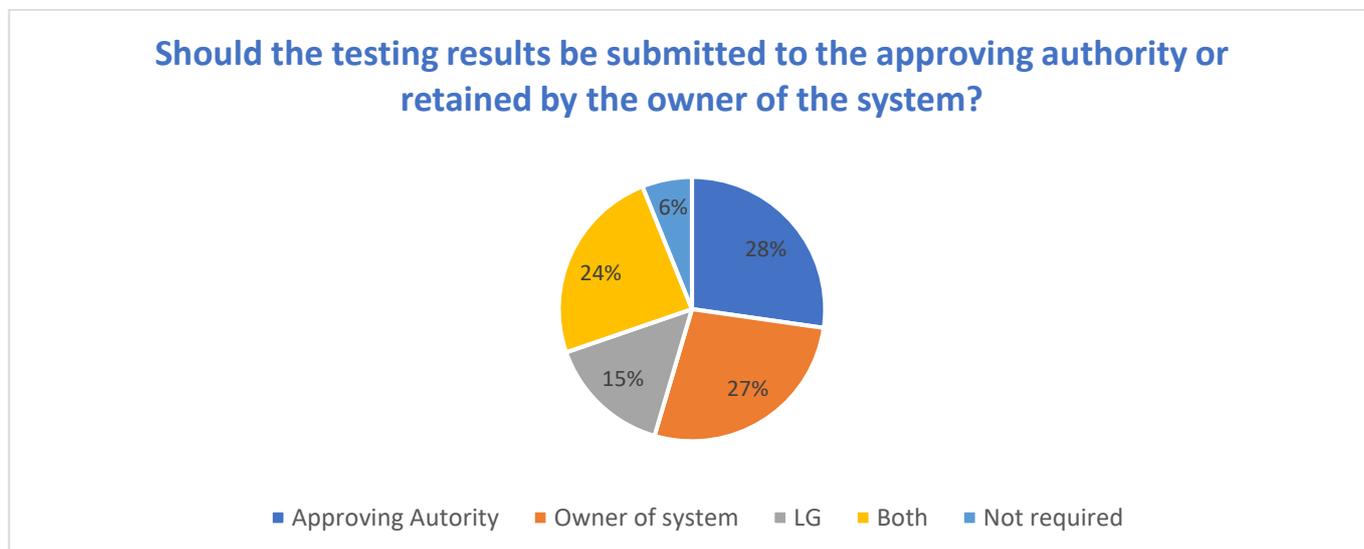


Figure 96 Identifying who should retain results from testing of onsite wastewater systems

Responses were evenly distributed between the owner of the property and the approving authority, with the similar stating that both should retain copies. A common comment was that owners should retain and provide to the authority on request.

Proposal 4.6 Summary

Wastewater testing of onsite systems is not currently a regulatory requirement. The objective of these questions was to determine whether regulation should provide powers to local government to test the performance of a system. There was general support for the concept, but responses indicated that there should be more clarity about when it should be used, with responses

indicating if a system appeared to be failing, testing may be used to confirm this. Testing of systems can be requested under the Public Health Act. The Public Health Act, Part 16, section 240 (1)(f) allows an authorised officer to take samples of anything that the authorised officer reasonably suspects may relate to a public health risk. In conjunction with the approvals process for installing an onsite wastewater system, the DoH considers these powers under the Public Health Act are sufficient to manage any public health risks. Therefore, the DoH recommends no specific regulation is required for scheduled testing or performance monitoring.

Proposal 4.6 Recommendations

37. The DoH recommends that new regulation declare:

- a secondary treatment system must be serviced by person licensed under Part 8 of the Public Health Act
- an owner of a premise must service a secondary treatment system in accordance with CHO product approval,
- an owner must retain any service reports with a copy to be retained by the service technician
- a service technician must notify the date of service and the registration number to local government.
- a service report must be in a prescribed format.

38. The DoH recommends that new regulation require mandatory reporting of certain conditions after servicing if:

- the land application system is failing
- the system has been modified
- there is a risk that the system may fail or pose a risk to environmental health in the near future.
- an owner refuses to service a system
- an owner terminates a service agreement.

39. The DoH recommends mandatory wastewater testing is not a requirement of future regulation.

Proposal 4.7 Prescribe the appropriate enforcement agency

Two (2) questions were posed to review the roles of the enforcement agencies relating on onsite wastewater disposal.¹⁹

Table 14 outlines the proposed roles of each enforcement agency.

¹⁹ DOH, 2021. Managing public health risks from wastewater conveyance, treatment and disposal in Western Australia

Table 14 Proposed enforcement agencies and their role

Local Government	Chief Health Officer / Department of Health
<ul style="list-style-type: none"> • Approve and issue an 'approval to install' for systems certified to Australian Standards or on the list of approved systems on the DoH website (residential and commercial) • Issue registration and set registration conditions for all onsite wastewater systems (former 'permit to use') • Checking compliance with 'approval to install' requirements issued by the DoH • Checking compliance with registration conditions, such as servicing and maintenance requirements • Take enforcement action to resolve non-compliance issues 	<ul style="list-style-type: none"> • DoH will consider applications for 'Bespoke' systems* • DoH will provide design approval for AS/NZS certified and non-certified systems and maintain the list of approved systems on the website

123: Do you agree with the roles of each of the enforcement agencies described in the Table?

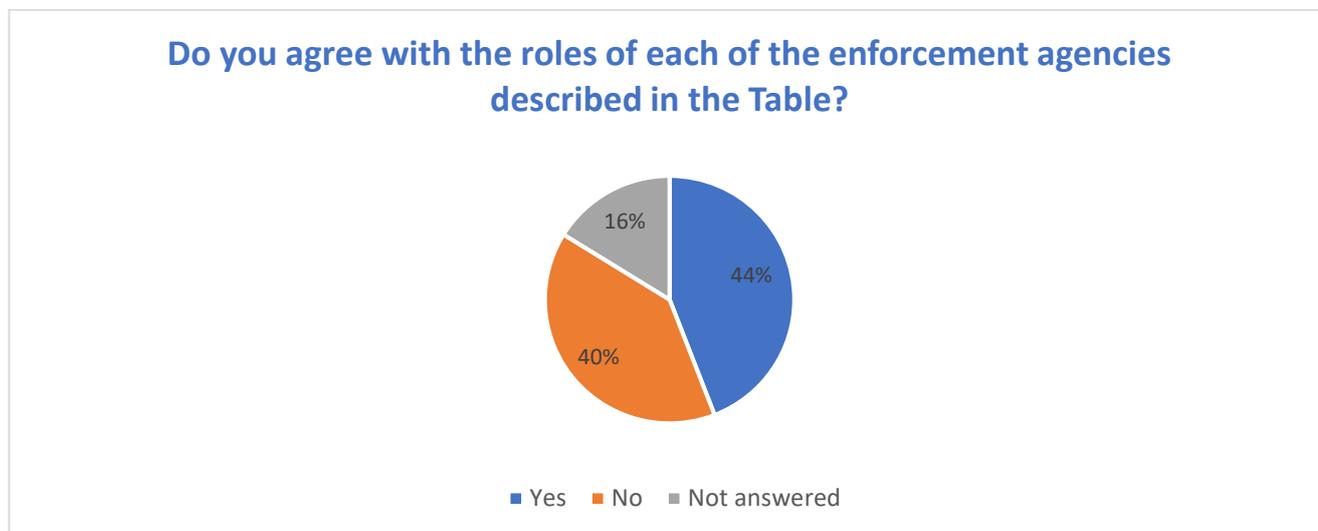


Figure 97 Responses to the proposed roles of enforcement agencies

44% of respondents agreed with the roles set out in Table 5. 40% did not agree with the roles of each of the agencies.

124: If not, please provide details on who should be the appropriate enforcement agency.

In addition to the items listed in Table 5, the following roles were proposed

- *“DoH maintains registration details of site and soil evaluators, onsite wastewater installers and technicians.”* (Local government)
- *“DoH provide guidance material and training to support local governments in their role.”* (Local government)
- *“DoH approves large commercial systems or systems over 5000LPD”* (industry Stakeholder)

- “Up to 20 or 30 ep system - the local govt, up to 100 ep – DoH, beyond that DoH and DWER. Any sensitive area, DWER should be included or DoH should get an engineer’s certification externally. In addition, it was proposed product approvals should be accessible on a portal accessible by local government.” (Industry stakeholder)
- “One overarching entity should do it for all schemes - for streamlining processes and consistency i.e. state government rather than local government.” (Industry stakeholder)

Proposal 4.7 Summary

The main concerns raised from respondents related to the size of the systems that could be approved by local government. Several submissions suggested the Department of Health would need to provide significant guidance and assistance in the approval of large-scale commercial systems.

A recommendation will be made to remove the volume limit on the systems that local government can approve. Local government approvals will be restricted to systems that have design approval by the CHO. The Department of Health will provide guidance material and a new code of practice to assist local government in the approval of large commercial systems.

Proposal 4.8 Premises which contain more than a single dwelling

Some premises have multiple buildings that are a combination of dwellings and/or commercial/industrial buildings. This section sought feedback on how the public health risks could be managed when there was more than a single dwelling on a lot.

125: How should wastewater from multiple dwellings on the same lot be managed? Please provide reasoning for your answer.

Table 15 Options for managing multiple onsite wastewater systems on a single lot

How should wastewater from multiple dwellings on the same lot be managed?	Total (n)	Per cent %
Through separate onsite wastewater systems for each building?	5	7
Require a separate onsite wastewater system for each wastewater stream?	3	4
With one system, the design is fit for that purpose?	7	10
At the discretion of the local government?	34	50
No specific regulation?	6	9
Not Answered	13	19

50% (n=34) of respondents considered it appropriate for local government to determine whether a singular collective onsite system, or multiple individual onsite systems, should be required where there is more than one premises on a lot. 7% (n=5) considered separate systems should be required for each building on the lot and 10% (n=7) considered one collective system was sufficient if it was fit for purpose.

Additional comments mainly reiterated the above approaches. Reasoning provided by respondents included

- “System design is the responsibility of the operator, taking into consideration install, operation and maintenance requirements and costs, site layout etc.” (industry stakeholder)
- “The intent should be to minimise the number of systems on the lot unless there are cogent reasons to have separate systems.” (Local government)
- “Systems should be fit for purpose regardless of number of buildings” (Industry Stakeholder)
- “Minimise number of systems on a lot” (Local government)

- “Consistent with other regulation” (State government)
- “Trade and sewerage should have separate systems” (Local government)

Proposal 4.8 Summary

A system will be approved based on several factors, including the volume of effluent a site can effectively accept. If the system is designed to accommodate the total expected volume and the site has the capacity for disposal of the treated wastewater in accordance with AS/NZS1547 then a single system may be approved for multiple premises on the same lot. The DoH does not consider this needs to be regulated but will be outlined for local government in guidance documents.

Proposal 4.9 Requirements for onsite wastewater system installers and service technicians.

The following proposals consider how new regulation can improve the quality of installation and address the requirements for ongoing servicing of onsite wastewater system.

Incorrect installation was identified as an issue from consultation with local government in the development of the discussion paper. Installers work across a range of local government areas which makes it challenging to track individuals who are consistently installing systems incorrectly. There are no requirements in the current legislation for persons installing onsite wastewater system to have any experience, or minimum level of competency. Fifteen (15) questions were asked considering a range of management options. Current legislation requires aerobic treatment units to be serviced by an authorised person and the authorised person must be approved by the CHO.

Proposal 4.9.1 Require minimum qualifications and experience for installation of an onsite wastewater system

The objective of this proposal was to identify a process to improve installation standards. Licensing, authorisation or minimum training requirements were all options considered.

126: If regulation is the preferred option, should the regulations require that a person installing an onsite wastewater system be (please provide your reasoning):

Table 16 Options for the requirements to be an installer

If regulation is the preferred option, should the regulations require that a person installing an onsite wastewater system be?	Total	Per cent
Licensed	25	37
An Authorised person	18	26
No specialised training or experience required	0	0
Other	16	24
Not Answered	9	13

Respondents indicated a preference for an installer to be licensed. All respondents indicated there should be some form of specialised training or experience required.

Additional comments received from those who supported licensing of installers included:

- “We are more likely to see compliant installations and less failing systems, less burden on everybody”. (Local government)
- “This will provide planning decision makers with a higher level of assurance that risks associated with onsite wastewater disposal will be managed effectively (State government)
- “Plumber or installer to certify work” (Local government).
- “Self-regulation and consistency. This LG fully supports self-certification by licensed personnel installing approved systems” (Local government).

- *“Endorsed or approved by the manufacturer of the STS”* (Industry stakeholder).

Additional comments received from those who supported “other” included:

- *“Demonstrate skills on application”* (Local government).
- *“Preferred if qualified but an owner should be able to install low risk systems. This is why systems are inspected to make sure they comply”* (Local government).
- *“System should only be installed by plumbers, people authorised by the manufacturer or other people that have the demonstrated skills and knowledge in installing systems. DoH should issue some sort of recognition of who is authorised to install.”* (Local government)
- *“Flexibility, some exemptions for remote LG areas, EHW programs”* (Local government).

127: Should a person /entity be able to obtain an exemption from holding a licence?

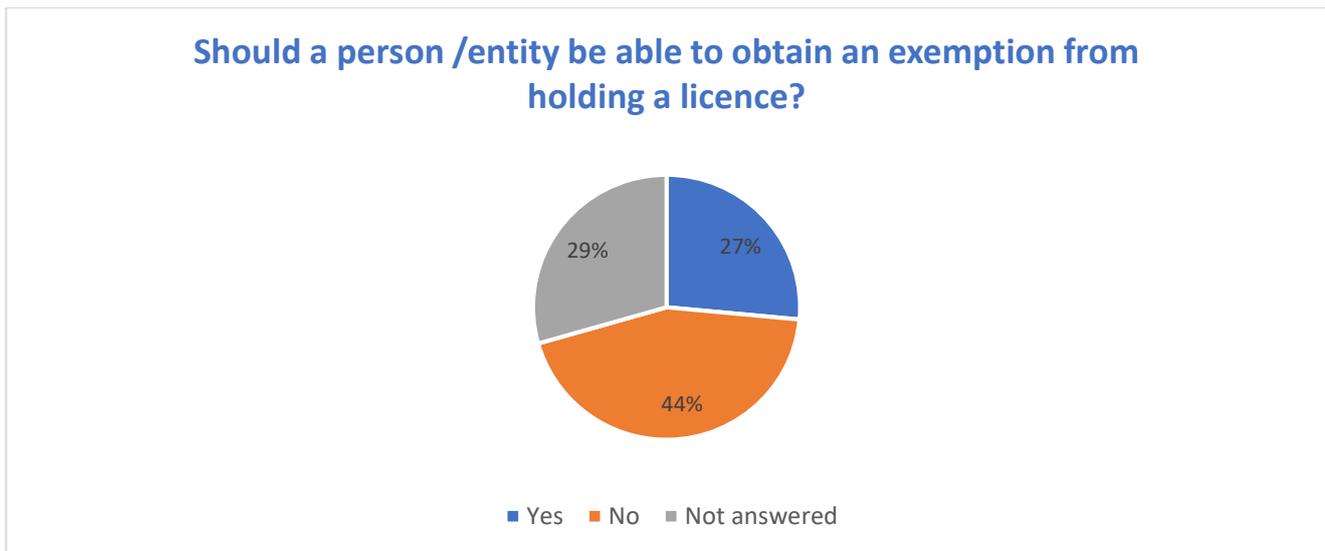


Figure 98 Feedback on exemptions from licensing

44% (n=30) of respondents were against new regulation allowing an exemption from licensing if this was the adopted approach.

128: Should there be different qualifications and experience for installing the different onsite wastewater systems (“specialised tickets”)?

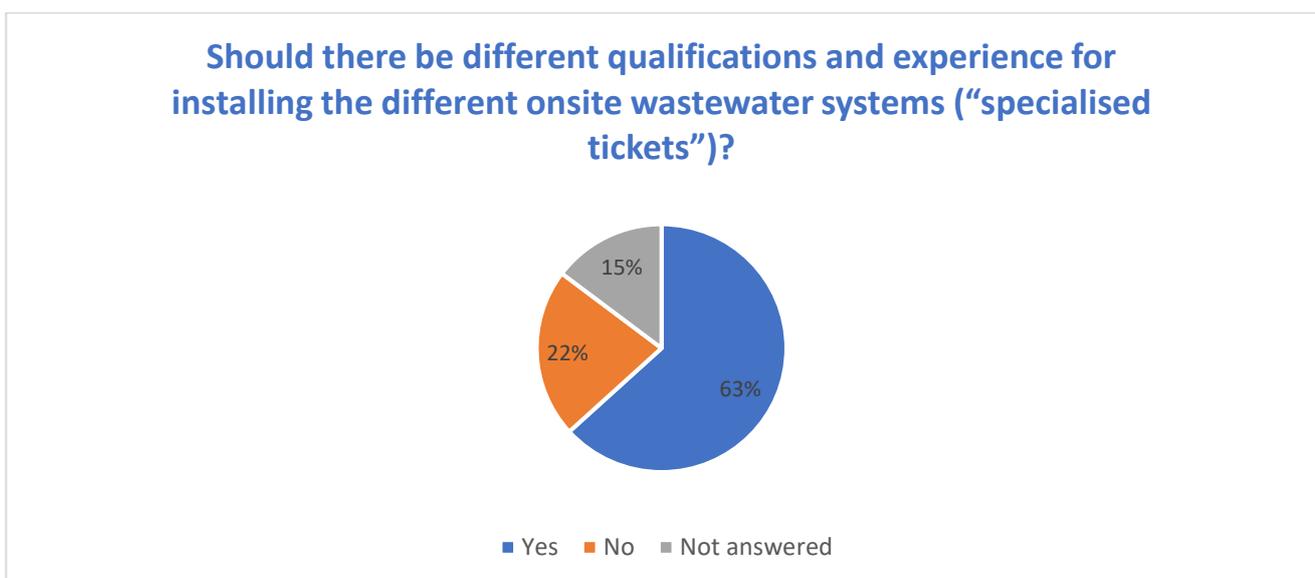


Figure 99 Feedback on having specialised tickets for licensed installers

63% (n=43) of respondents supported the proposal that different qualification should be required for the installation of different types of onsite wastewater systems.

129: What tickets would you propose?

Respondent suggestions for tickets included:

- specialisation for each ATU types and bespoke systems
- standard septic and leach drains and other more complex systems
- all systems require a separate ticket as each system is different
- domestic, industrial, volume based
- no tickets suit all systems should be based on industry experience with wastewater endorsement of competency assessment.
- one training course that covered septics, secondary treatment systems, greywater, commercial and domestic systems.

130: Who do you consider would be the appropriate authority to issue a licence?

Table 17 Options for who should manage a licensing system for installers

Who do you consider would be the appropriate authority to issue a licence?	Total
DoH	49
Authorised Training authority	3
Master Plumbers Association	3
DoH / local government with appropriate approval	5
Not answered	12

There was strong support for the DoH to be the regulating agency if licensing were to become a regulatory requirement. Note that the totals exceed the total number of respondents (n=68), this is because respondents could (and did) select more than one option.

131: What evidence and training requirements should a licensed or authorised installer be required to undertake and provide to the appropriate authority?

Forty-eight (48) people provided a response to this question. The following minimum requirements for installers were proposed by respondents:

- installer should be licensed or hold a registration and be issued an authority card.
- installers should be required to complete specific units of competency.
- there should be different training for different system types
- installers should demonstrate they have certain qualifications and skills (not specified)
- training requirements should be in line with plumbing board requirements

In addition to the above, the following comments were submitted:

- *“the DoH should consider the training and experience of installers and provide a list of endorsed installers.”*
- *“industry should set and deliver the training”*
- *“there should be no requirements”*
- *“a system certified after installation rather than accreditation of an installer”.*

Proposal 4.9.1 Summary and recommendations

Many of the respondents felt that an onsite wastewater system should be installed by a licensed plumber and regulated by the plumbing industry. In 2019 Department of Mines, Industry Regulation and Safety (DMIRS) reviewed their regulations. The review¹⁷ recommended that *“new regulation would not expand the scope of drainage plumbing work to include the installation / construction of onsite wastewater management systems (Part F1 of Australian Plumbing Codes of Australia PCA 2016) as regulated plumbing work.”* Therefore, if installers are to be regulated it

will need to be under the management of the DoH. It should be noted that in all other states installation of an onsite wastewater system must be completed by a licensed plumber.

Installing an onsite wastewater system involves a range of skills and requires co-operation between an array of industries including plumbers, excavators, irrigation and soil specialists²⁰. Specialist skills are required for the installation of each type of onsite wastewater system.

The DoH included a proposal for regulation of installers in the discussion paper because of conversation with EHOs who flagged poor installation as an issue. The DoH proposes that the regulations will declare the installation of on onsite wastewater system to be a public health risk activity that is licensable. It is estimated that this proposal would affect approximately 165 installers. The licencing provisions of the Public Health Act will be used to require installers to apply in writing to the CHO to be a licensed person. The Public Health Act also prescribes conditions by which the DoH can revoke or amend the licence. These include (but are not limited to) situations where the licensed person has:

- Been convicted of an offence under the Public Health Act or corresponding health law
- The holder of the licence has failed to comply with a code of practice prescribed by the regulations in respect of a licensable activity.
- Any condition to which the licence is subject has not been complied with

For the purpose of licensing feedback from consultation strongly supported having some form of specialised or recognised training. Training is discussed in the section 4.9.3.

Proposal 4.9.2 Minimum requirements for onsite wastewater service technicians

Questions 132-137 considered the requirements for onsite wastewater technicians.

132: Do you agree that certain types of onsite wastewater treatment systems should only be serviced by a qualified service person?

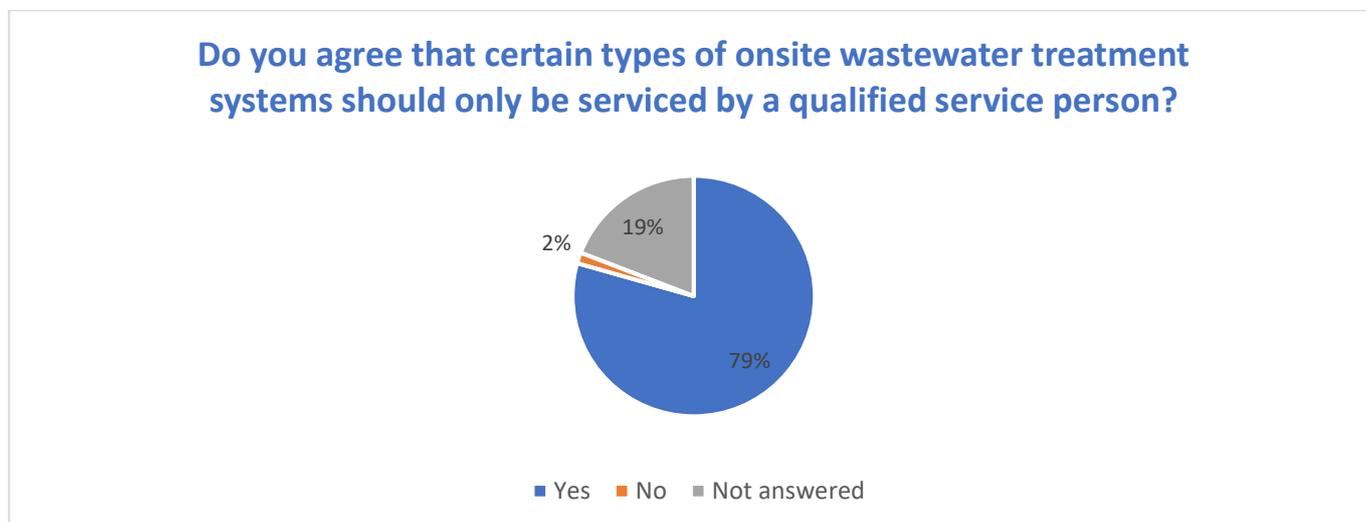


Figure 100 Requirements for servicing an onsite wastewater system

79% (n=54) of respondents supported the proposal for onsite wastewater system to be serviced by a qualified service person. 19% (n=13) of respondents did not answer this question.

133: If yes, do you agree with the system types listed below? Are there other types of systems that should be considered?

- Secondary treatment units
- Domestic greywater treatment systems
- Any other type / class of advanced treatment system deemed necessary by the CHO.

²⁰ DMIRS 2019: Decision Regulatory Impact Statement: Reforms to Plumbing Regulation in Western Australia

If yes, do you agree with the system types listed above?

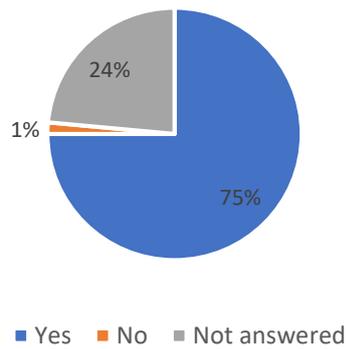


Figure 101 Types of system that require qualifications to service

75% (n=51) of respondents supported the proposal for secondary treatment systems, greywater systems and any other advanced treatment system to be serviced by a qualified service technician. This is an expansion on the existing regulations to incorporate greywater systems.

134: Should a service technician hold a licence, be an authorised person or other?:

Table 18 Managing service technicians

Option	Total
Hold a licence	31
Be an authorised person	22
Other	2
Not answered	13

There was support for technicians to either hold a licence or be an authorised person (Table 18). The DoH intends that new regulations will declare that maintaining and servicing onsite wastewater systems will be a licensable activity under Part 8 of the Public Health Act.

135: Should a person /entity be able to obtain an exemption from holding a licence? If yes, please provide examples and why?

Should a person /entity be able to obtain an exemption from holding a licence?

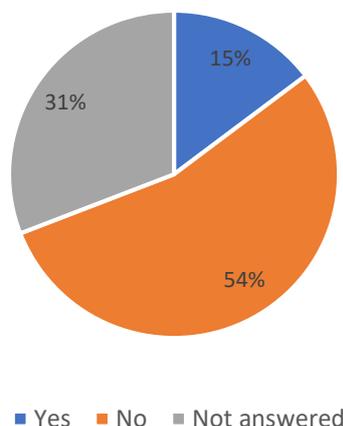


Figure 102 Responses for allowing exemptions to hold a licence to install an onsite wastewater system

54% (n=37) of respondents indicated a preference that service technicians should not be able to apply for an exemption if licensing were to be adopted in regulation. 15% (n=10) supported the proposal for potential exemptions from licensing requirements for service and maintenance personnel. A free field comment proposed that exemptions could be obtained for a particular class of person for example a plumber who may already have skills, training and experience.

136: Do you agree that the DoH should be the appropriate agency to manage service technicians? If no, who?

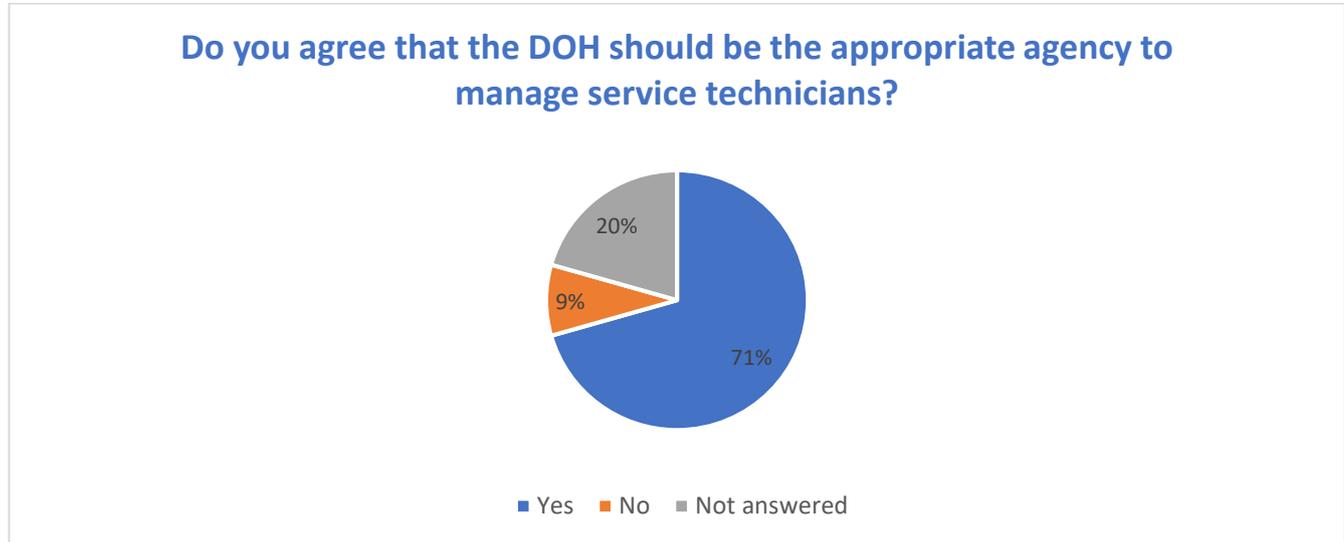


Figure 103 Responses to Department of Health managing service technicians

71% (n=48) of respondents agreed that the DoH would be the appropriate agency to manage service technicians. The Plumbers Licensing Board was proposed by five (5) respondents as the appropriate agency.

137: Do you agree with the evidence that a technician will need to provide to the DOH as part of their application?

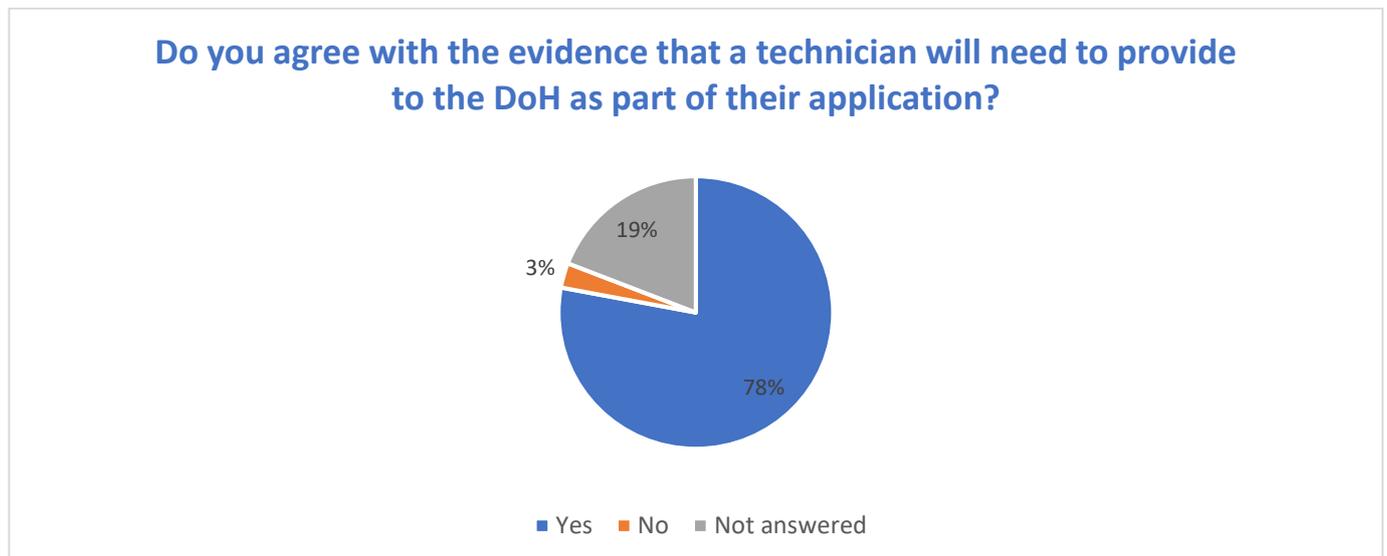


Figure 104 Feedback on evidence required to be an authorised service technician

Under the current regulations, an authorised service/maintenance person is required to demonstrate:

- evidence of number of years' experience (minimum one year) which may include:
 - years accredited, or
 - years under the employment of a manufacturer/distributor, or

- years under the supervision of a licensed technician; or other such equivalent experience in servicing, and
- supporting documentation about work undertaken

The proposal sought feedback on maintaining these requirements in new regulation. 78% (n=53) of respondents agreed with this approach. Two local government, two greywater industry stakeholders and two members of the public did not support this proposal, these respondents were those who advocated for service technicians to be managed by the Plumbers Licensing Board.

Proposal 4.9.2 Summary and recommendations

Secondary treatment units can be approved with a range of land application methods for treated effluent including; trenches, beds, sub surface irrigation, substrata irrigation, and surface irrigation. Servicing is an integral part of the ongoing performance of secondary treatment systems to ensure the system continues to work as designed and achieve wastewater parameters associated with secondary treated effluent.

The DoH recommends that the servicing of secondary treatment systems will be a licensable activity under Part 8 of the Public Health Act. The training requirements for obtaining a licence are set out in the section 4.9.3. The Public Health Act prescribes criteria for when a licence can be varied, suspended or cancelled.

Proposal 4.9.3 Training requirements for service technicians

138: Do you agree that service technicians should be required to undertake training?

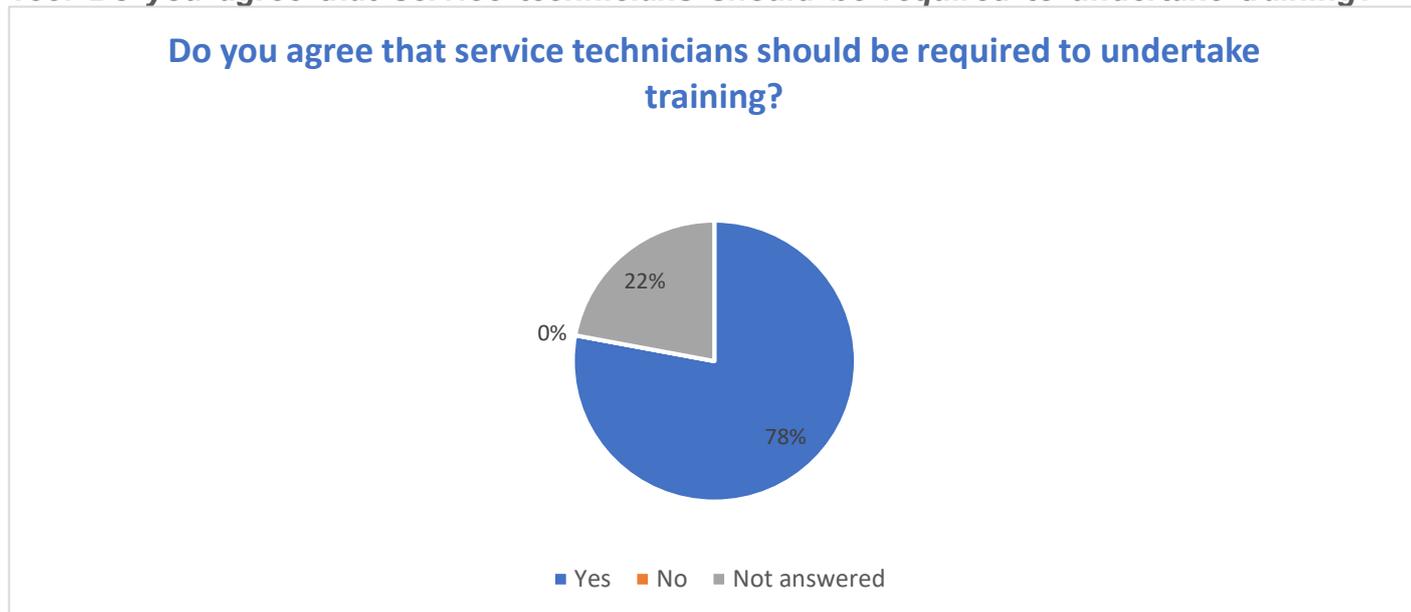


Figure 105 Response to service technician requiring training

All respondents who answered this question (n=53) supported the proposal for new regulation to require service technicians to undertake training.

139: Do you agree with the proposed training requirements outlined in the discussion paper?

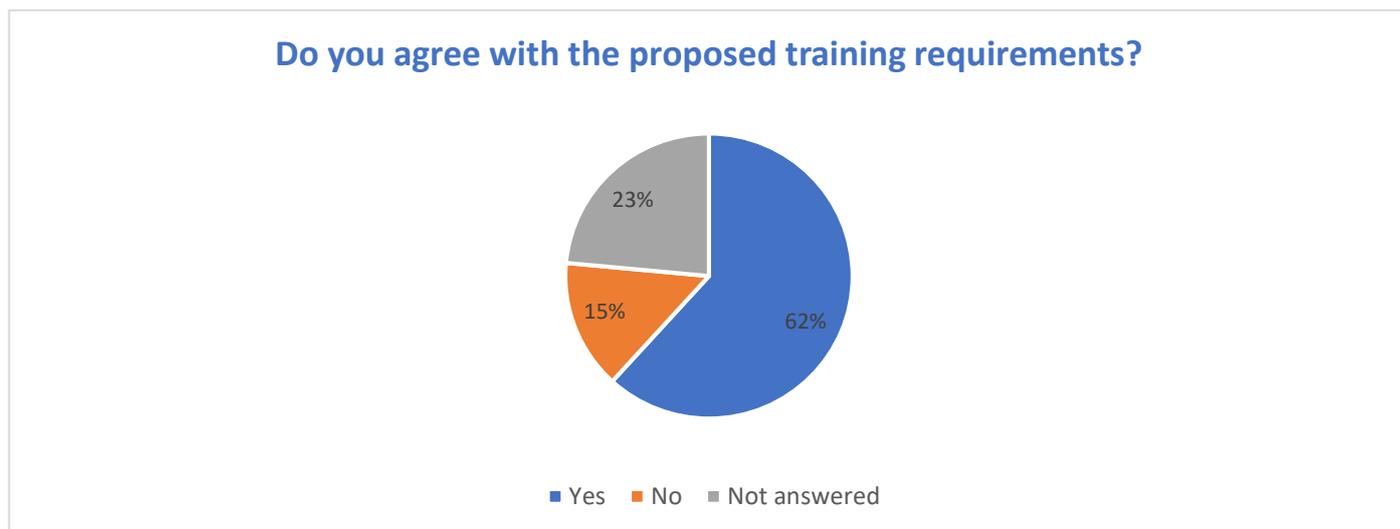


Figure 106 Feedback on proposed training requirements for service technicians

62% (n=42) of respondents supported the proposed training requirements for service technicians.

140: If not, what training (if any) should a licensed service technician be required to undertake?

Four (4) respondents indicated that manufacturers would be the most appropriate agency for providing training for service technicians, as each system has different requirements (Table 9). Eleven (11) respondents proposed the DoH should determine training requirements with industry.

Table 19 Training requirements for service technicians

If not, what training (if any) should a licensed service technician be required to undertake?	Total
DoH to determine with industry	11
Manufacturer training	4
Training on state legislation and unit types	1
Dependent on system	1

Proposal 4.9.3 Summary

There was strong support for service technicians to undertake training and for DoH to set the training requirements with industry. The DoH has existing guidance on the [required skills and training](#) for service technicians. These include demonstrating experience working with a manufacturer or authorised technician and qualifications such as a recognised Australian Onsite WWTS training course or equivalent units. The DoH recommends retaining the current training requirements.

Proposal 4.9 Recommendations

40. The DoH recommends that new regulation enable the CHO to set the minimum requirements and experience required to be a licensed person for installation of onsite wastewater systems. The training, qualifications, units of competency, skills and/or experience to be provided in guidance material.
41. The DoH recommends new regulation require that a system must be serviced by a person licensed under Part 8 of the Public Health Act.
42. For the purpose of licencing service personnel, the DoH recommends retaining the current training requirements for technicians authorised to service onsite wastewater systems.

Proposal 4.10 Referenced standards and guidance material

141: Do you agree with providing key requirements for onsite wastewater systems in codes of practice and then providing additional guidance material on how to meet and interpret those requirements?

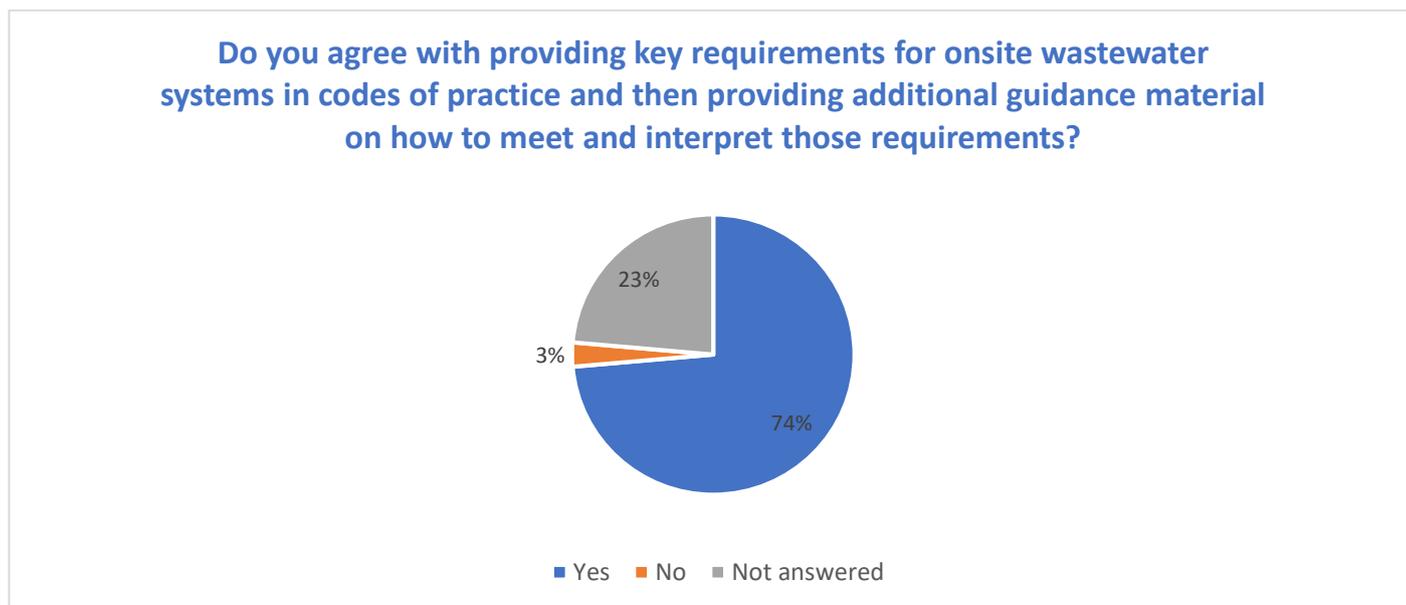


Figure 107 Responses to the proposed reference and guidance material

74% (n=50) of respondents supported the development of a code of practice for onsite wastewater disposal. 3% (n=2) of respondents disagreed with this proposal. The only free field comment received stated that *“any Codes of Practice or guidance material utilised must be referenced in the accompanying Regulations. For example, the latest version of the xxx Code of Practice rather than specifying a specific year which could be superseded.”*

The current regulations (r6A) adopt the following code of practice:

- *Code of Practice for the Design, Manufacture, Installation and Operation of Treatment Units (ATU’s) serving single dwellings*

The DoH recommends updating this code of practice to cover both primary and secondary treatment systems, and to expand the codes application beyond single dwellings.

In addition, the DoH recommends adopting the *Code of Practice for Product Approval of Onsite Wastewater Systems in Western Australia* in new regulation. Other guidance material will also be reviewed including:

- *Guidance on Site and Soil Evaluation for Onsite Sewage Management*
- *Wastewater Overflow Notification and Response Protocol*

Proposal 4.10 Recommendations

43. The DoH recommends the following Codes of Practice and guidance material are adopted in new regulation:

- *Code of Practice for Product Approval of Onsite Wastewater Systems in Western Australia (Based on Australian Standards)*

Proposal Implications

The following section sought feedback on the benefits and impacts to the different sectors including the community, sewerage scheme operators, other areas of the wastewater industry and business, and the enforcement agencies.

142: Do you agree with the listed benefits of the proposed regulatory framework to the community? Please provide any further comments that you have, including any other benefits that were not listed.

- Improvement in the management of public health risks associated with the conveyance, treatment, disposal of wastewater. The new regulatory framework is based on a risk management framework and aligns with national standards and best practice.
- A robust approval framework for onsite wastewater system products that ensures that the products meet national standards and carry the necessary certification.
- Streamlining of the approvals process for onsite wastewater system installations which will result in faster processing times.
- Introduction of a more comprehensive site and soil assessment criteria that will minimise the risk of onsite wastewater system failures.

Do you agree with the listed benefits of the proposed regulatory framework to the community?

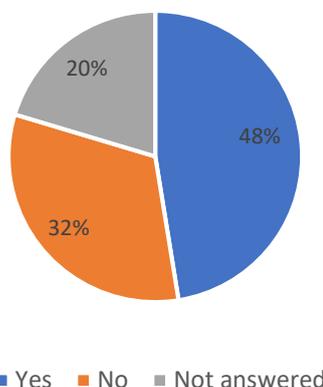


Figure 108 Responses to the benefits of the proposed regulations on the community

48% (n=33) of respondents agreed with the listed benefits, while 32% (n=22) disagreed.

Additional comments included:

- *“The document was clear on what it saw as problems with prescriptive frameworks, but did not address issues, vulnerabilities with risk-based process. There is potential for a substantial work and cost burden to be borne by local government and the State.”* (State government)
- *“The listed benefits may come to fruition however this will only be seen in time.”* (Local government)
- *“Yes, improved outcomes for the environment and health due to newly tested systems under the strictest testing standard now in the world. Regulators should adopt these key improvements from the industry.”* (Industry stakeholder)
- *“The preventive testing system might be more onerous to owners in regional areas as technicians might not be as many so traveling cost could be a hidden cost.”* (Local government)

143: Do you agree with the listed costs of the proposed regulatory framework to the community? Please provide any further comments that you have, including any other costs that were not listed.

- There is the potential for an increase in the initial purchase cost of onsite wastewater systems should the manufacturer choose to pass on any increase in product manufacturing and/or certification costs. However, the increase in the initial purchase cost of the product will be offset by having a more reliable product that is more cost effective in the long term. The majority of states already require onsite systems to be certified to Australian Standard and certification is valid across states. Therefore, it is considered that the impact of this proposal is minimal.
- The costs associated with SSEs are likely to be minimal or non-existent for owners of premises with a single dwelling, however the impacts maybe greater for those premises with more than a single dwelling. The DoH considers that a SSE is a necessity for understanding the public health risks for complex lots and the potential cost impost is outweighed by the mitigation of risks.

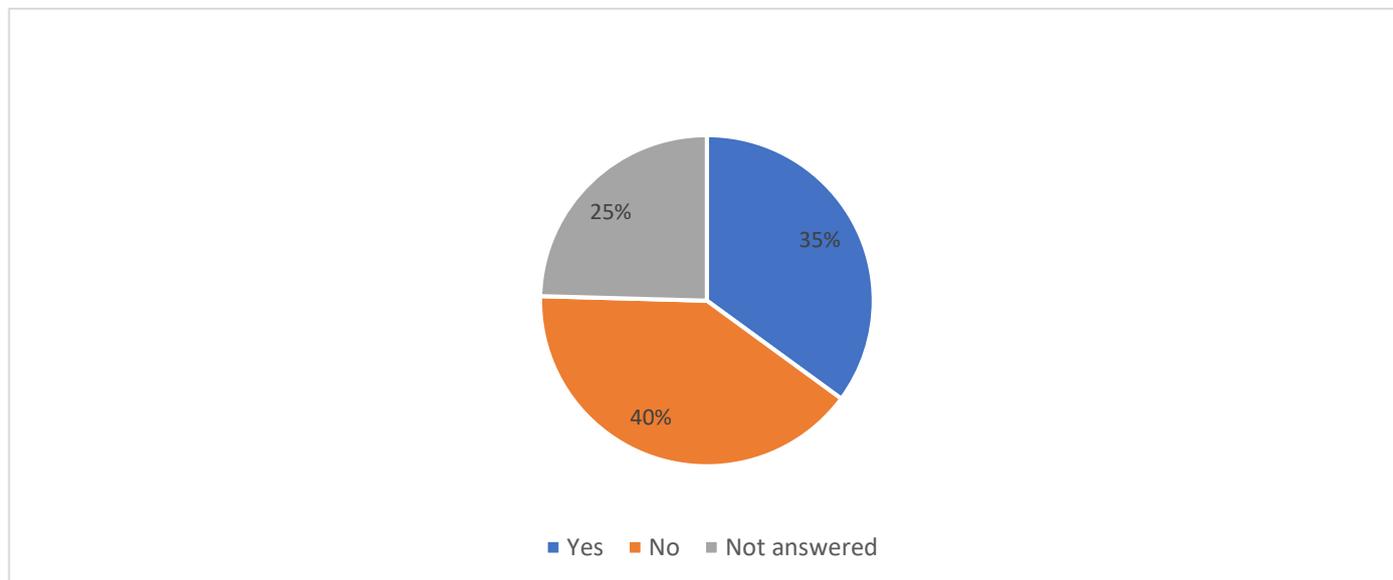


Figure 109 Responses to the listed cost of the proposed regulations on the community

35% (n=24) of respondents agreed with the costs listed in the discussion paper, 40% (n=27) disagreed. The comments received from the collective of EHOs expressed concern over the cost to owners of introducing Australian Standard AS/NZS1547:2012 into regulation and the resultant increase in the size of land application systems. Other comments implied there would be an increased cost to homeowners due to increased cost of wastewater systems and additional wastewater testing.

The DoH considers the estimation provided by the collective of EHOs is an overestimation of the impact of AS/NZS1547:2012 to owners of single lots. Sizing for land applications systems in permeable soils such as sands is relatively similar. Sites in less permeable soils such as clays would require much larger land application areas under the Australian Standard. In less permeable soils, a larger area is required to ensure sufficient drainage, which in turn reduces the likelihood of the system failing. An option would be to move to a secondary treatment system which produces a higher quality of effluent and provides more disposal options. Some local governments stated switching to a secondary treatment unit would generate an estimated increase of between \$7,000 and \$15,000 for a homeowner (including a SSE).

An estimate obtained for a septic tank with 9m leach drains for a 4-bedroom house soils was ~\$13,000²¹. In comparison, costing received for the same site installing a secondary treatment unit with the same sized leach drains was estimated at approximately \$16,500²². Servicing estimates are approximately \$250 - \$300 per service depending on location, with a projected two services per year. The cost of installing a secondary onsite wastewater system compared to a primary onsite wastewater system may potentially increase costs by approximately 27%. This is approximately a 1.3 % (~\$4,000) increase on a new \$300,000 dollar build. These costs are estimates only and would vary significantly between regions; however, it highlights, that a secondary treatment unit is a viable alternative to a septic tank on certain sites.

The DoH estimates approximately 1,654 onsite wastewater system applications were approved by local governments across the State in the 2019/2020 local government reporting period²³. A large percentage of these would be on sandy soils and the introduction of the Australian Standard would not increase the size of a land application system significantly.

The cost of a SSE is an additional cost to a residential build. The cost of a SSE varies depending on the information available on a range of factors pertaining to the site. The GSP now requires SSEs to be undertaken to Australian/New Zealand Standards. The Australian/New Zealand Standard states that the extent of the SSE should be matched to size of the development and the likely nature and extent of potential health and environmental impacts. Single residential sites with simple sandy soils therefore would require a reduced scope SSE compared to a site in less permeable soils, and a single residential lot would not require the scale SSE required for a subdivision. The DoH has been advised that a SSE for a single site may range from between \$2,500 and \$3,500. The average cost to build a home in Australia is around \$473,000.

Sizing and flexibility

Current regulations were based on a study²⁴ which focussed on permeable soils such as sands and loams. With an increased need for housing, land is being developed in areas extending beyond the Swan coastal plains. This has resulted in more onsite wastewater systems being built on less permeable soils which has led to system failures. This has been the experience of some local governments, who noted failures such as bubbling and pooling of sewage on sites with less permeable soils²⁵. The Standing Committee on Environment and Public Affairs - Inquiry into Deep Sewerage in the Cockburn Area²⁶ noted that a number of complaints were recorded in the Cockburn area after a relatively wet winter. The inquiry heard anecdotal evidence of children becoming sick after coming into contact with sewerage from malfunctioning systems. This demonstrates the failure of the current regulation and risks with the current approach.

²¹ Personal communication 2021.

²² Personal communication 2021. Aquarius

²³ Radomiljac & Alach, 2021, Environmental Health Indicators for Local Government, (Unpublished)

²⁴ Caldwell Connor Engineers Pty Ltd, 1986. Onsite wastewater Disposal Systems: Final Report.

²⁵ Personal Communication with Local government officer in X, 2021

²⁶ Standing Committee on Environment and Public Affairs, 2009. Inquiry into Deep Sewerage in the Cockburn Area, Report 18. Published [Microsoft Word - ev.dsc.091214.rpf.018.xx.DOC \(parliament.wa.gov.au\)](#)

The DoH agrees that sizing land application areas using the Australian/New Zealand Standard may result in larger application areas and an increase cost to homeowners in some circumstances. The advantage of the Australian/New Zealand Standard is that it has greater scientific rigour than the current regulations and is better for managing the public health risks associated with onsite wastewater system installed on less permeable soils. The Government Sewage Policy already considers AS/NZS 1547:2012 when determining applications for subdivision. The DoH considers that the method for sizing onsite wastewater systems should align with the ethos for subdivision in unsewered areas.

In addition, the Australian/New Zealand Standard provides greater flexibility for owners as it provides more options for disposal than the current regulations. Current regulations allow for leach drains whereas the Australian/New Zealand Standards have provisions for leach drains, flat beds and mounds.

Development

A major concern raised by some local governments has been that the GSP which adopts the Australian/New Zealand Standard limits development.

The DoH does not administer the GSP and therefore is not responsible for the lot size limitations. The GSP has to look at the overall impact of having no scheme sewerage so is required to be more conservative. This ensures that once development is at the single lot level, the site can accommodate systems designed to AS/NZS 1547.

The DoH acknowledges that older developments will need to be flexible and consider a range of solutions including single lots installing a secondary treatment unit. As demonstrated above, the cost increase is not as significant as claimed by some respondents.

144: Do you agree with the mentioned benefits of the proposed regulations to industry and businesses? Please provide any further comments that you have, including any other benefits that were not listed.

Sewerage scheme operators

- Increased flexibility in the proposed approval process that considers any existing requirements under the Water Services Act. The proposed regulations will reduce or avoid unnecessary duplications in compliance requirements.
- For sewerage scheme operators that are exempt from the licensing requirements under the Water Services Act, the new regulations will provide the necessary powers to operate the sewerage scheme effectively.
- Risk-based regulations provide the flexibility to scale the compliance requirements according to the risk and size of the sewerage scheme.

Other areas of the wastewater industry and businesses

- Alignment with Australian/New Zealand Standards and national best practice will streamline the approvals process for the certification of onsite wastewater system.
- Streamlining of the approvals process for onsite wastewater system installations will result in faster processing times.
- The proposed regulations offer increased flexibility to cater for innovation and new technologies.
- Clearer and more consistent direction to industry by formalising current recommendations and policies in regulations.

Do you agree with the mentioned benefits of the proposed regulations to industry and businesses?

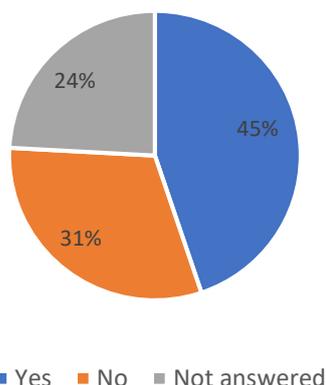


Figure 110 Responses to the proposed benefits to industry and business

45% (n=26) of respondents agreed with the benefits outlines in the discussion paper, 31% (n=18) disagreed. Respondents commented that the benefits listed in the discussion paper did not reflect benefits to industry and business. One respondent stated that industry would be impacted as trade waste was not included in the discussion paper. Trade waste is managed under environmental regulation and is not considered in the wastewater discussion paper as it does not have the same public health risks.

WALGA commented that

“ the DoH proposal to size effluent disposal systems based upon AS1547 will have significant flow on economic effects for all areas of the state not connected to mains sewer. The sizing requirements will significantly and unnecessarily increase the costs of installing new systems and will impede the development of thousands of lots within the state. Primary treatment systems servicing a standard 4 bedroom dwelling in the heavy soils will require 1156m² of area for the drains and necessary setbacks. ... This unnecessary size increase will prevent thousands of blocks being able to subdivide and develop. Further to this the feasibility of installing systems of this size even on the lots that do have the space available is questionable as finding a suitable area to install drains that is free of water, rock and is suitably flat (or can be made suitable flat) would be challenging even on sites with better conditions.”

The GSP outlines minimum block sizes for development to ensure that once developed, lot sizes are sufficient for accepting effluent from onsite wastewater systems. The GSP is not administered by the DoH and as such the proposed wastewater regulations are not a limiting factor related to development.

The introduction of SSE for installing an onsite wastewater system is of benefit to industry in the form of revenue for services. This is estimated at approximately \$4 million.

145: Do you agree with the listed costs of the proposed regulatory framework to industry and businesses? Please provide any further comments that you have, including any other costs that were not listed.

The costs of the proposed regulatory framework on industry and businesses are as follow:

- Although minimal, there are additional regulatory requirements on sewerage scheme operators that may be introduced in the proposed regulations. This includes developing RMP's and auditing requirements on the safety and operation of the scheme. The DoH will work with sewerage scheme operators to ensure the transition to the new regulatory framework is managed to minimise the impact on the service provider and its operations.

Do you agree with the listed costs of the proposed regulatory framework to industry and businesses?

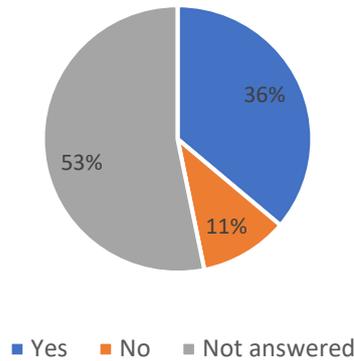


Figure 111 Responses to the listed cost of the proposed regulations on the business and industry

36% (n=24) of respondents agreed with the costs outlined in the discussion paper, 11% (n=7) disagreed and a large proportion, 53% (n=36) did not respond.

The most significant impacts for business and industry from new regulation will be for installers. The DoH has proposed the introduction of licensed installers to improve the standard of installations. The proposed fee is based on the time taken to assess an application and is estimated at approximately \$250 per annum. The total cost to industry is approximately \$58,100 per annum. The cost estimates are based on time taken to process similar licensing activities within the EHD.

146: Do you agree referencing the Australian Standards will provide consistency for authorising agencies?

Do you agree referencing the Australian Standards will provide consistency for authorising agencies?

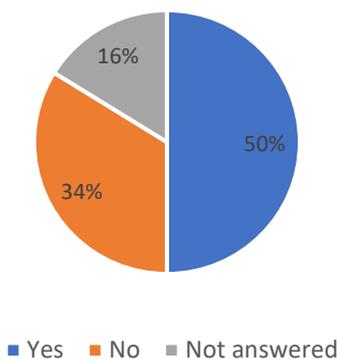


Figure 112 Responses to referencing the Australian Standard in new regulation

50% (n=34) of respondents agreed that referencing the Australian/New Zealand Standards would provide consistency for authorizing agencies. 34% (n=23) did not agree it would provide consistency.

147: Do you agree with the mentioned benefits of the proposed regulations to enforcement agencies? Please provide any further comments that you have, including any other benefits that were not listed.

The proposed regulations will benefit the enforcement agencies in the following areas:

- Streamlining of the approvals process for onsite wastewater system installations will reduce administrative burden on local governments and DoH/CHO. The assessment process is consistent with the current process with the responsibility for the assessment and approval of complex onsite wastewater systems remaining with the CHO. The proposed approvals process will minimise double handling of applications between the local government and CHO.
- Ability for local governments to recover any cost associated with the administration of the regulatory requirements.
- Improved ability to enforce the necessary requirements to manage public health risks associated with the conveyance, treatment, and disposal of wastewater.
- Local governments will no longer have a requirement to conduct SSE on behalf of applicants. Placing the responsibility for good quality SSE on the owner of the system.

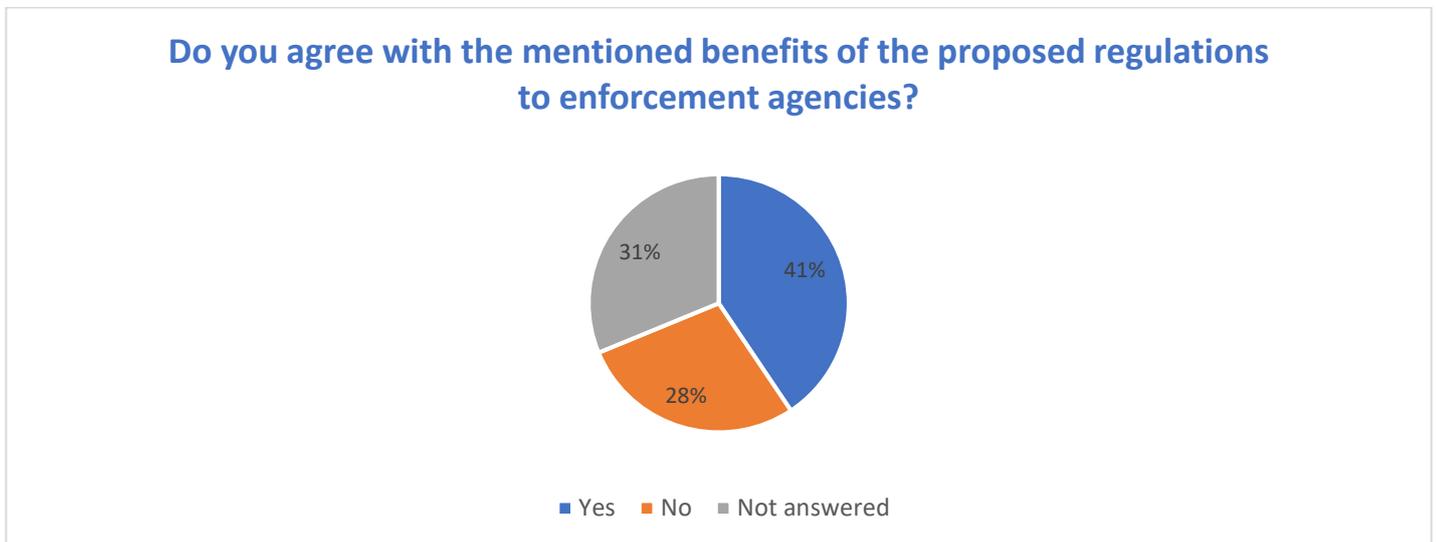


Figure 113 Responses to the proposed benefits of new regulation on enforcement agencies

41% (n=28) of respondents agreed with the proposed benefits to enforcement agencies, 28% (n=19) disagreed with the proposal. 31% (n=21) of respondents did not answer this question. Additional comments included:

- *“..none of the perceived potential benefits listed appear to result in any substantial benefit to enforcement agencies. Existing processes within local government are well established. To change the requirements to the extent described is a significant burden”* (Local government).
- *“DWER supports the proposal to introduce new regulations mandating compliance with the relevant Australian Standards, as this will align Western Australia with the requirements applied in other jurisdictions. It is likely, however, that a flow-on effect from the proposed new regulations will be the need for amendments to the above Contaminated Sites Regulations 2006”* (State government).

148: Do you agree with the listed costs of the proposed regulatory framework to enforcement agencies? Please provide any further comments that you have, including any other costs that were not listed.

The costs on enforcement agencies are as follow:

- As the proposed new regulations are different from the existing legislation, local government personnel will need to be ready with their administrative processes and personnel to cater for the changes. The DoH will provide guidance and support to local governments to assist in the transition to the new regulations under the Public Health Act.
- The DoH may require additional resources to create a database for registration of schemes and to register the existing schemes. However, once established the workload of maintaining registrations would be minimal.
- Both the DoH and local government may incur additional costs related to Proposals 2.5 and 2.6 which requires reporting of overflow events. The cost to both authorities would be minimal. While there is currently no formal requirement for reporting, both authorities currently receive complaints from the public and become involved in investigations. The benefits arise from the reduction in the public health risk by taking a pro-active approach and placing the onus of reporting on the responsible person for the system.

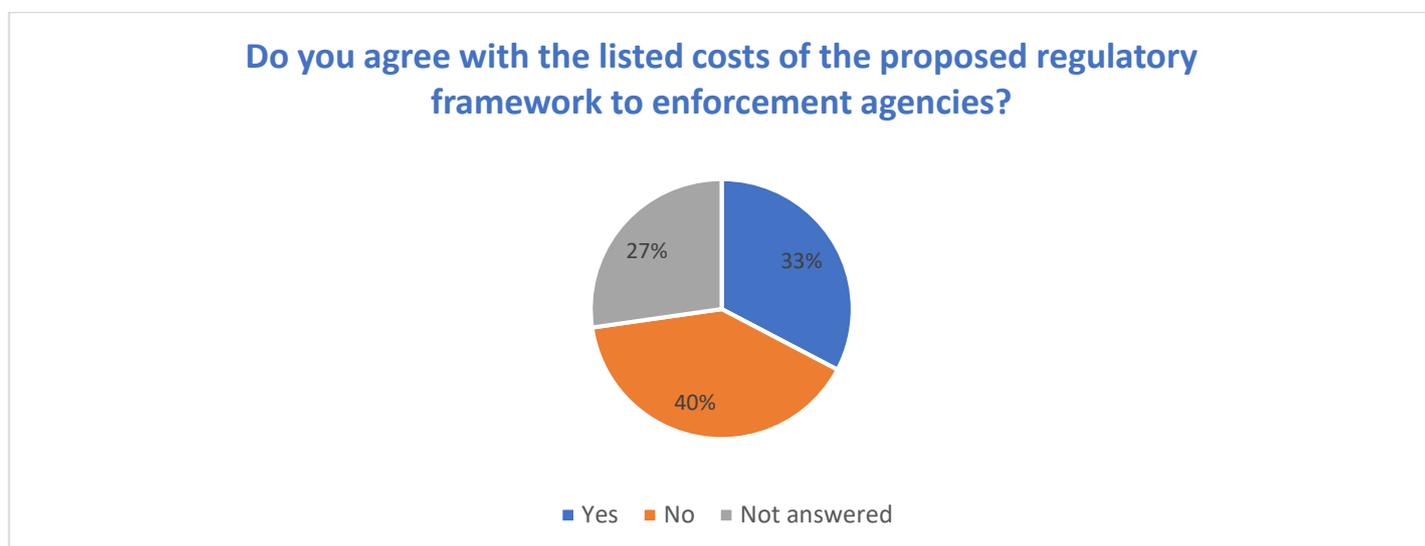


Figure 114 Responses to the listed cost of the proposed regulations on enforcement agencies

33% (n=22) of respondents agreed with the listed costs for enforcement agencies, 40% (n=27) disagreed and 27% (n=18) did not answer this question.

The following points were raised by local governments concerned about the impact of new regulation:

- Cost for additional water sampling
- Updating systems, templates and processes
- Time and cost to train officers on new regulation
- Ongoing administrative costs
- Approving larger systems will be an additional burden on local government
- Additional costs to manage registration of wastewater systems over the life of the system particularly with the monitoring of servicing and sampling requirements.

The DoH notes the concern of some local governments on the implementation of new regulation and acknowledges that while there will be some impacts, areas such as additional water sampling will not be a requirement of new regulation. The removal of the 540L/day limit upon local government approval of commercial onsite wastewater systems will be offset by the new regulation requiring installers to certify their work. This will remove the current practice of EHO's going out to inspect a system during or after installation.

The DoH acknowledges there will be additional cost to local government with the introduction of a range of new regulation including wastewater management. The DoH will conduct training sessions in regional and metropolitan areas in anticipation of the roll out of the new regulations.

149: Are there other support enforcement agencies would like to see provided? Please provide your comments

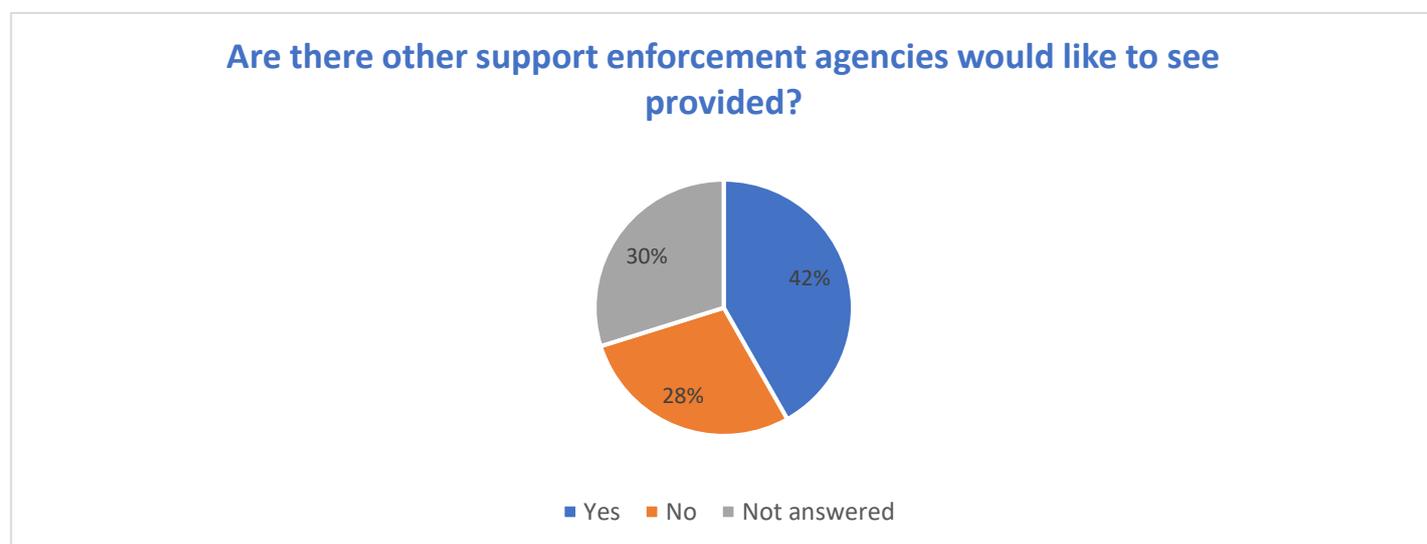


Figure 115 Responses to additional support for enforcement agencies

The following comments were received from local governments.

- *“There may be a need for guidance materials to be developed that relate to new requirements.”*
- *“Training and resources will be required for new aspects that the change in legislation will bring. If Australian Standards are adopted then local government enforcement agencies will need training/workshops providing familiarisation, interpretation guidance and training on relevant aspects of the Australian Standards. There will also need to be further training and guidance provided on the assessment of large residential and non-residential onsite wastewater treatment systems that have traditionally been assessed and approved by the Department of Health if these are to be processed by local government enforcement agencies.”*
- *“Training and supportive documents.”*

The DoH will support local government by developing additional guidance materials and delivering training across a range of areas related to the introduction of new legislation. The DoH will also develop online videos to develop the skills of EHO’s. The DoH will continue to deliver training on interpretation of the Australian/New Zealand Standards and SSEs as this is the area most local governments expressed concern over.

150: Please provide any further comments you have on the proposed regulations that have not been specifically addressed in this discussion paper?

A large amount of comment was provided on this question. The majority of comments were extensions of answers provided in previous questions or an expression of views and did not identify areas of wastewater management that may need oversight in new regulation.

Themes of comments from stakeholders included:

- critique of how the discussion paper was written
- criticism of AS/NZ1547
- training on the delivery of new legislation
- the discussion paper overplayed the public health risks associated with wastewater and
- how new regulation will affect development.

The adoption of AS/NZ1547 has been discussed extensively throughout the discussion paper. The relevant sections (4.3, 4.4 and 4.5) outline the benefits and shortcomings of the standard and recommends an approach for the application of AS/NS1547. Commentary on this subject will not be addressed further in this section.

One of the recurring themes raised through consultation was the effect of proposed regulation on development. Proposed regulation will not limit development. The GSP is published by the DPLH and outlines the State's policy for the management of wastewater at the development level.

The DoH also reiterates that the priority of the Health legislation must be to manage public health risks.

Additional comments are addressed below.

Grease traps

“The current regulations provide no guidance as it relates to grease traps for certain development types. Currently the only specifications and requirements in relation to grease traps exist with the Water Corporation, provisions for grease traps need to be included in the future legislation” (Local government).

The DoH notes the concern raised by some local governments and have considered whether regulation is necessary to manage the public health risks arising from the use of grease traps or for a requirement to install a grease, oil or dirt separator.

Proposed regulation requires that a system must be fit for purpose and must be maintained so that it is fit for purpose. An application to install specifies the system to be installed and the type of wastewater to be treated. This should be sufficient for local government to identify whether there is a need for a proponent to include a separator in their system. The DoH therefore holds the view that this area does not need to be managed through regulation. The DoH will provide guidance material for proponents to assist with appropriate system design.

Reuse and trading treated wastewater

The reuse and trading of wastewater were not considered in this paper. These areas will be discussed in a separate paper on the management of recycling and reuse of wastewater.

The proposed wastewater regulations are required for the transition to the new regulatory framework when the Health (MP) Act and subsidiary regulations will be repealed.

Recycling is not included in current regulation and was not included in the regulatory review program. The DoH recognises a need for regulation of recycled water, and this matter will be considered in a future policy consultation.

Onsite wastewater systems in Sensitive Areas

Installation of an onsite wastewater system in sensitive areas was raised by local and state government entities. Local government indicated they would like support / training for managing systems in these areas. Department of Biodiversity, Conservation and Attractions (DBCA) stated they would like to be consulted when a system is within the Swan Canning Development Control Area.

“There should be a provision for the Department of Biodiversity, Conservation and Attractions' Rivers and Estuaries Branch (Statutory Assessments Unit) to be consulted when a wastewater system is within or adjacent to the Swan Canning Development Control Area, that is, as in the current arrangement.”

The DBCA already has a policy for notification of development in the Swan Canning Development Control Area²⁷. The policy states that local governments, DPLH and redevelopment authorities consult with the Swan River Trust on future development. Consideration for development in these areas would be undertaken at a much earlier stage than a single lot that is covered under the DoH regulation. This should be addressed through the GSP and DWER applications and not DoH regulation.

A local government expressed concern about the management of an onsite wastewater system installed for vulnerable communities, particularly Aboriginal communities on Crown reserves.

“The commentary on the proposed Regulations have not given any information on vulnerable population groups/situations. They could still leave open the issue of oversight of systems installed for vulnerable population groups, particularly Aboriginal communities on Crown reserves. Currently, non-compliance and unsafe outcomes are common in this situation”

The Public Health Act now captures Crown land, systems located within the Crown land will have to demonstrate compliance with new regulation. While it is proposed that systems already installed will not need to go through the proposed approval process for registration, other proposed regulation will be applicable to ensure systems are fit for purpose. The DoH does not consider specific regulation is required for the management of these systems.

Support for the transition to new legislation

A number of comments were received from local government requesting that support be provided for the transition to the new legislation. The DoH will undertake an information dissemination program once the regulations have been developed and prior to their implementation. After implementation of the regulations, continued support and training materials will be provided on the DoH website.

A request was made that training include the new requirements for local government assessment brought about by the removal of the 540L limit of onsite wastewater systems for the applications to install. Specific training will be developed to support local governments in applying new legislation.

Local Government Indemnity

One local government stated new regulation should protect EHO's from legal liability for decisions made. One comment from a local government stated the current regulations indemnify the local government but this did not extend to the individual officer.

Recommendations

A complete list of regulations is provided in Appendix 7.

²⁷ Department of Parks and Wildlife, 2016. Corporate Policy Statement No. 42. Planning for land use, development and permitting affecting the Swan Canning Development Control Area

Appendix 1 – Stakeholder Engagement List

The following stakeholder groups were targeted in communications designed to encourage a submission.

Local Government
137 local governments in WA
Industry
Hamersley iron
Busselton Water
Aqwest
376 Plumbers / Earthmovers / Manufacturers
Consultants
Paxon Group
Quantum Assurance
Bayley Environmental Services
S J Smiths and Associates
360 Environmental Services
Advanced Building Engineers
Bioscience
Land Assessment Pty Ltd
Structerre Consulting
Bio Diverse Solutions
Industry associations
Western Australian Local Government Association WA and MEHMG
Environmental Health Australia (EHA)
Master Plumbers and Gasfitters association of Western Australia
Plumbers Licensing Board, Building and Energy (DMIRS)
Greywater and Wastewater Industry Group
State Government
Department of Mines, Industry Regulation and Safety
Department of Primary Industries and Regional Development
Department of Water and Environmental Regulation
Department of Finance
Water Corporation
Department of Biodiversity, Conservation and Attractions
Department of Local Government, Sport and Cultural Industries
Department of Premier and Cabinet
Department of Transport
Department of Jobs, Tourism, Science and Innovation
Department of Planning, Lands and Heritage

Appendix 2 – Consultation submission list for discussion papers

Industry Representative
ATU Sewage Services and ATU Wastewater Systems
CMEWA
Complete Enviro Solutions
Environmental Engineers International Pty Ltd
Filtrex Innovative Wastewater Solutions
Taylex Australia Pty Ltd
Water Corporation
Water Installations Pty Ltd
Local Government / Environmental Health Officer
City of Bayswater
City of Busselton
City of Canning
City of Cockburn
City of Fremantle
City of Gosnells
City of Greater Geraldton
City of Joondalup
City of Kalamunda
City of Kwinana
City Of Mandurah
City of Rockingham
City of Stirling
City of Swan
City of Wanneroo
Shire of Augusta Margaret River
Shire of Boddington
Shire of Cuballing
Shire of Cue
Shire of Cunderdin
Shire of East Pilbara
Shire of Esperance
Shire of Gingin
Shire of Leonora, Laverton, Menzies, Wiluna & Sandstone
Shire of Manjimup
Shire of Meekatharra

Shire of Merredin
Shire of Mount Magnet
Shire of Mundaring
Shire of Murray
Shire of Ngaanyatjaraku
Shire of Northam
Shire of Quairading
Shire of Yalgoo
Town of Port Hedland
MEMHG
Industry associations/ PEAK
EHA (WA)
WALGA
Other / Resource mining
Plumbers (Individual submissions)
Nirumbuk Environmental Health & Services
Urban Development Institute of Australia
State Government
Department of Primary Industry and Regional Development
Department of Education
Department of Environment and Regulation
Department of Planning Lands and Heritage
Department of Transport
Members of Public

*Respondents who wished to remain confidential were not included in this list

Appendix 3 – Collective Submission

The following details the commentary provided within the 20 identical submissions received in response to the discussion paper.

Our principal request is as follows:

It is recommended that an expert Environmental Health industry working group be tasked with selecting the most relevant and well used clauses of the existing wastewater regulations and combining them with the very small number of useful measures in AS1547, plus the supplementary information to Reg 29, to form the framework of a new set of regulations. Add into new regulations, the methods from the preceding GSP that determine the volume of wastewater permitted to be discharged into the ground based principally upon lot size, and the new Wastewater Regulations when gazetted, would reinstall and improve this well-functioning system of governance.

KEY ISSUES

Wastewater Regulations – Back to the drawing board

The introduction of AS1547 to the Government Sewerage Policy (GSP) by the WA Department of Health (DoH) over the past 4 years, with zero meaningful consultation with Local Government (LG) has simply been a total mistake. It has thrown a well-established and understood, smoothly operating system of rules and regulations into chaos across all of WA. The result has been inconsistency in the application of the GSP due to the need for constant work-arounds to facilitate development through rules that ‘on the ground’ make absolutely no sense to any stakeholder.

The measures in AS1547 are not needed, do not represent best practice in WA, nor are they beneficial to the wastewater industry in WA.

AS1547 serves to:-

- 1) overly complicate a legislative system that operated very effectively
- 2) increase the size of footprints for onsite wastewater systems
- 3) increase the complexity of onsite wastewater systems
- 4) increase the complexity of the application process
- 5) increase the complexity and frequency of maintenance
- 6) increase the use of power and chemicals
- 7) significantly increase the costs at every stage including installation and ongoing maintenance for no appreciable advantage to anyone or to the environment.

For these reasons and those detailed below, local government EHO’s reject the need for AS 1547 to be implemented through the Public Health Act outright and demand that it be abandoned from both the GSP and any future iteration of the Wastewater Regulations, noting that AS1547 is not actually mentioned in the current Wastewater Regulations.

The measures outlined in the discussion paper essentially list the measures that currently exist in the old regulations which have served us perfectly well for many decades. No evidence has been provided to local government to substantiate that the sizes of onsite systems under the current Regulation are inadequate and to support the substantial cost burden to the community. The general thrust to move away from using conventional septic systems, that have operated safely, economically and effectively in rural settings for a century with negligible detrimental impact on human health or the environment, to using overly complex packaged wastewater treatment systems, is grossly unnecessary and misguided.

Additional and detailed information

The release of the wastewater discussion paper has caused grave concern to local government about the future direction of wastewater legislation in WA. Whilst it is recognised that the Wastewater Regulations is in need of reform as part of the transition to the Public Health Act. However, there does not appear to be justification provided for the significant changes being proposed.

Previous consultation documents related to the introduction of regulations for the introduction of the Public Health Act have explored the various public health matters at hand and sought open and genuine feedback the content and structure of future regulation, and potential implications to local government and associated industries. This balanced approach to the review of Regulation has not been applied in this circumstance. The current wastewater discussion paper has been carefully crafted to fully adopt AS1547 – *On-site Domestic Waste Water Management* as an outcome of the consultation, in addition to the formal adoption of AS1546.1, AS1546.2, AS1546.3, and AS1546.4 – which are respectively used at present by the DoH to control the manufacturers fabrication specifications for septic tanks, composting toilets, secondary treatment systems and domestic grey water systems.

Local government has previously raised concerns about the use of AS1547 – *On-site Domestic Waste Water Management* for onsite waste water disposal from as far back as 2018. A working group was formed and several meetings were held with the DoH concerning the introduction of new Regulations and wholesale adoption of AS1547. However, it appears the concerns raised by local government have not been taken into consideration.

Local government vs DoH approvals

The trigger level for DoH assessment of on-site wastewater disposal systems is set too low. Local government are capable and willing to assess and determine the vast majority of applications without the need for referral to DoH. In most cases the local government will be the agency responsible if a system fails anyway. DoH's position is that they can't issue retrospective approvals for systems that have already been installed. This is unrealistic and fails to recognise usual business in local government which allows retrospective approval of compliant development. It is recommended that Local Government Authorities (LGA) to deal with and determine all applications for septic systems and are responsible for the regulations of all installations (including retrospective – see below) unless the EHO or other LGA officer such as a Planner require a DoH input or ruling on a system.

Retrospective Applications and/or Approvals – ability for LGA to require a retrospective application and grant retrospective approval following an assessment such as follows:

- a) Application lodged with plans and fee set at 3 times the normal fee to cover the additional costs in assessing an already installed system
- b) uncover/expose the systems and pump out tanks for an inspection
- c) optional report from a Licensed Plumber describing the installed system
- d) visual inspection of integrity of tanks by local government officer
- e) Principal EHO (PEHO) issues a letter of approval including approved plans.

Complex GSP Calculations.

New GSP volumes are hard to calculate for a potential purchaser or developer. The old GSP allowed a landowner or prospective purchaser/developer to know the maximum volume of effluent that could be discharged into the ground on each lot. The new GSP is flexible but very complicated so that a person could easily misinterpret the formulae and make costly mistakes at the planning stage because the size and type of septic system may not be known until the later approval stage which may involve DoH determination.

It is recommended that the old method of calculating maximum volume of effluent per lot, based on a residential equivalent limit or volume per space available, be adopted as a standard, with ability to vary this subject to a detailed assessment. In the experience of EHO's, the most appropriate and workable volume/formulae for a lot where sewer is unavailable is 1000L per 2000sq/m. It was often very obvious that the arbitrary 540L per 2000sq/m was too low and placed unnecessary restrictions on the use of land in particular industrial land in Perth metro area where we should be optimising opportunities for jobs. Recent advice from State Government indicates that the infill sewer program is unlikely to be rolled into industrial areas due to the larger lot sizes and costs of installing sewer. This will bring some certainty to a system that is currently very vague and inconsistent

Sizing of septic systems based upon AS1547 results in much bigger footprints and/or the forced use of expensive ATU's

AS 1547 results in septic systems that take up a much bigger footprint than conventional septic systems and resulting in the forced selection of an ATU when an ATU is not required or desired. The installation cost of a typical conventional septic system for a 4-bed house is about \$8000 compared to the installation of an ATU at about \$13,000 plus ongoing maintenance and power costs. This is a significant issue based upon the irrational principle that AS1547 represents best practice. Local government EHO's stringently dispute this and reject the unnecessary increase in the number of ATU's in industrial/commercial areas. The main reasons for this are that the conventional septic systems installed for the past 40 years have been suitably sized and have not failed. A survey of PEHO's across WA in July 2019 did not reveal any incidents where failure of a system sized as per the current regulations was found to be due to the size. Most cases of failure involved older single drain systems, or where systems were subject to inundation or were 'overused' e.g. as an unapproved backpacker accommodation. In truth, the formulae used to predict the volume of wastewater and size of conventional septic systems is already too generous and should be reduced as per the attached Regulation 29 supplementary table. The current version of the DoH table is inaccurate and misleading especially for a person who may not be familiar with the industry.

As AS1547 loading rates do not take into consideration the infiltration of wastewater through the sidewalls of the leach drains, the size of a primary disposal system is much larger. This can result in a larger cost burden to developers and members of the public, either through the need to construct much larger leach drains or through the adoption of secondary treatment units to reduce the required effluent disposal footprint. This cost increase is not accompanied by evidence to demonstrate a public health benefit.

Secondary treatment systems have a smaller footprint at considerable ongoing expense to the homeowner plus ongoing maintenance requirements and costs. This also creates an additional burden upon the property owner as well as local government to ensure that an appropriate level of ongoing maintenance is being undertaken.

It is recommended that local government be authorised to assess and determine the majority of septic systems and size them based upon the updated Regulation 29 supplementary table. Local government will accept the responsibility if a system fails because it is undersized.

Water from wash down pads

Water from wash down pads is included in the calculated volumes for GSP. This is unnecessary because the water when discharged into the ground is treated and clean. Often the water from a wash down pad involves high volumes of water of a quality that is comparable with stormwater and shouldn't be considered as sewerage. It is recommended that water from wash down pads not to be included in calculation of volumes per lot.

Industrial/commercial lots

It is sometimes difficult for space to be allocated for septic systems on industrial/commercial lots. Experience indicates that it is common for soak-wells and leach drains to be paved over and trafficked in yards in these areas, and that collapsed infrastructure is extremely rare. It is appropriate for soak-wells to be installed in paved yards in industrial/commercial areas based upon the protocol below. It is recommended that in industrial and commercial areas only, local government will allow them to use soak-wells and/or leach drains, (that have been approved by DoH for trafficked areas), seal/pave over them, and condition them for light traffic. The existing Regulations allow this subject to the approval of the local government based upon the following protocol:

- The default position is that the receptacle for drainage is located in a non-trafficable area, *unless* approved by the local government
- If Town Planning require the development to have landscaping, then the receptacle should be ideally located there
- If paving over is to be considered, then this is only appropriate in sand soils where there is rapid drainage. Heavy or duplex soils need to be excluded from this where evapotranspiration and evaporation is important
- Whilst many leach drain systems claim to be trafficable, this is quite often linked to the depth that the drain is buried underground. Unless the leach drain is buried to an appropriate depth as per manufacturer's instructions to begin with, then no approval should be given for paving and made trafficable
- That residential development be excluded from this provision
- That ATU irrigation lines (not leach drains) are excluded from this provision (too easy to damage)
- Consideration needs to be given to separation of soak-wells for stormwater and effluent.

Effluent volumes in industrial/commercial areas

Prediction of effluent volumes in industrial/commercial areas needs to have a sensible minimum criteria. Otherwise a speculative developer of several industrial units may claim that there will only be two staff in each unit and size the septic system for only two staff. This results in an undersized septic system and no margin for increased numbers of workers on site. This is particularly relevant where the ultimate use of a unit is unknown and number of workers cannot be identified. Given that the minimum toilet provisions are one WC under the BCA and that this is adequate for 10 people it is recommended to size a disposal system to also be suitable for 10 people.

Site and Soil Evaluations

The Regulations need to allow flexibility for the local government to determine when it is necessary for a SSE to be conducted and the detail of information required, to enable necessary costs to the landowner or developer to be minimized where possible. The proposed method of SSE is excessively onerous and complicated for the majority of scenarios.

Minimum qualifications

It is considered appropriate for minimum qualifications be required for installers, service persons and professionals preparing SSE's. This process for approving and certifying these persons should be determined by the DoH together with industry including the Plumbers Licensing Board.

Grease traps

The current Regulations provide no guidance as it relates to grease traps for certain development types. The discussion document continues this trend and also does not make any reference to grease traps. Currently the only specifications and requirements in relation to grease traps exist with the Water Corporation – which of course only can be applied to those properties connected to deep sewer. Therefore, for the sake of the proper performance of effluent disposal systems, provisions for grease traps need to be included in the future legislation.

In doing so, a host of factors need to be considered including:

- 1) Triggers for the requirement of a grease trap (including retrofitting into existing systems)
- 2) Specifications for the design and sizing of grease traps. This needs to correlate to the activities of the business
- 3) Registration of grease traps with local government
- 4) Parameters in relation to the frequency of grease trap pump out
- 5) Records of pump out of grease traps
- 6) Discussion in relation to connecting multiple businesses to the same grease trap (not favoured)
- 7) Compliance tools for those not doing the right thing.

Other development considerations are not addressed

The consultation document fails to address the significant stock of existing lots, already developed. There are two factors to this scenario that need to be considered in regulation, being:

- i. Triggers for upgrade or replacement of an existing onsite effluent disposal systems, such as due to extensions or development of the site. Given the large housing stock that is on existing effluent disposal, there needs to be clearly defined triggers for when upgrades to on-site effluent disposal systems are required and how they should be designed.
- ii. The discussion paper does not address what to do if it is not possible to install an AS1547 compliant leach drain arrangement onto an existing lot.

Local governments are tasked with the responsibility of seeing any effluent disposal system installation, but local governments are also invested in other regulatory aspects of the development process including matters such as bushfire prone design and remnant native vegetation retention. Whilst focused on the singular matter of effluent disposal, the discussion paper fails to consider the implications and practicalities of other development requirements, of which effluent disposal is just one element.

Attachment to the submission - Regulation 29 supplementary table

Regulation 29 Size of septic tank

- (1) The sizes for septic tanks, other than septic tanks on residential premises shall be calculated on a basis of 1 360 litres for a blackwater system and 1 820 litres for a combined system plus the number of litres per person shown in the following Table —

(2)

Type of premises	Blackwater system litres	Combined system litres
Hotel	90	180
Motel	70	140
School (boarding)	70	140
School (day)	30	45
Public Building (frequent use)	15	30

Type of premises	Blackwater system litres	Combined system litres
Public building (infrequent use)	5	10
Caravan park	90	140
Swimming pool	10	15
Drive-in theatres (2 persons per car)	10	10
Factories and shops (based on the number of persons therein on any 8 hour shift)	45	70
Construction camps (temporary)	25	45
Clubs	10	15
Clubs (licensed)	25	35

(2) The sizes of septic tanks to be used in hospitals, nursing homes and similar establishments, shall be as required by the Health Department 3, provided that no blackwater system shall be of less than 1 820 litres capacity and no combined system shall be of less than 3 180 litres capacity.

Appendix 4 – Citizen space online survey questions

1: Would you like your responses to be confidential?

2: What is your name?

3: Which sector/group/category do you associate yourself with the most?

4: What is the name of the organisation you represent? If you are a member of the public please type "public".

5: Please indicate your preferred option for managing public health risks associated with wastewater conveyance, treatment, disposal and reuse.

- Option 1: Maintain the status quo
- Option 2: Deregulate the wastewater industry. Wastewater service providers will be allowed to self-regulate and will only be bound by the general public health duty provisions of the *Public Health Act 2016*.
- Option 3: Develop new public health regulations and supporting documentation for wastewater management under the *Public Health Act 2016*.

6: Why is this your preferred option?

7: Should the new regulations mandate compliance with the relevant Australian Standards? Please expand on your reasoning

8: Do you support defining wastewater to include both trade waste and sewage?

9: If no, how should trade waste be managed?

10: Do you support the creation and definition of the new term "wastewater product"?

11: If not, how should the beneficial reuse of wastewater be defined?

12: Do you agree that the new regulations should declare the conveyance, treatment, disposal or reuse of wastewater must be conducted in a safe and effective manner?

13: Do you agree that the new regulations should declare anyone who undertakes the conveyance, treatment, disposal or reuse of wastewater must maintain the system in good working order? Please select one

14: Are there any other declarations you believe should be included?

15: Do you agree that all premises should be required to dispose of wastewater by connection to a reticulated sewerage scheme if one is available?

16: Do you agree that if a premise is located within a "reasonable distance" of a sewer and the operator of that sewerage network indicates that the network has the capacity to accept that additional wastewater, then the appropriate enforcement agency can require the premise to connect to the sewer? If not, what should the requirement be?

17: Do you agree that where a reticulated sewerage scheme is provided after a premise has been constructed, and the reticulated sewerage scheme operator deems that it is viable, then the premise must connect to the scheme within 6 months of the scheme being provided? If not, how should this situation be managed?

18: Should anyone be exempt from these requirements?

19: Do you agree that if a reticulated sewerage scheme is not available, an appropriate onsite wastewater system must be installed?

20: Should there be a mandatory requirement to report overflow events?

21: Do you agree that the reportable events are:

22: Do you agree the Wastewater Overflow Procedures should be called up in new regulation as a code of practice?

23: Do you agree that the regulations should require that the owner of a system which overflowed:

- Respond to the overflow in a timely manner
- Notify the relevant agencies (identified in their risk management plan) where the overflow is a reportable overflow?
- Notify and assist any persons affected by the overflow?

24: What reporting time frames would be appropriate?

25: Do you agree with the events listed in the Table 2?

26: Do you agree that the regulations should require that the owner of an onsite wastewater system that has overflowed do the following:

- a. Ensure that the area affected is remediated to the satisfaction of the enforcement agency?
- b. Undertake any testing or other response activities if directed to by the appropriate enforcement agency?

27: If no, how should wastewater overflows be managed?

28: Please select your preferred option for managing wastewater schemes?

- **OPTION 1:** Declare the operation of a sewage scheme as a prescribed public health risk activity and require sewerage schemes to hold a registration.
- **OPTION 2:** Declare the operation of a sewage scheme as a prescribed public health risk activity and not require a registration and include regulations in respect to specific items such as those proposed in Sections 2.2 and 2.5 or
- **OPTION 3:** Do NOT declare the operation of a sewerage scheme a public health risk activity, require scheme operators to notify the DOH that they operate a wastewater treatment scheme and use the general public health duty to manage the public health risks.

29: If registration is the preferred option, which wastewater schemes should be registered?

- All wastewater schemes
- Only schemes which have received an exemption to be licensed under the *Water Services Act 2012*
- Other, please explain

30: If registration is the preferred option, should the regulations state that an amendment to a registration is required in the following circumstances:

- a. When an amendment or upgrade of the treatment system is made in a way that will impact the expected quality outcomes
- b. When the scheme starts to generate volumes of treated wastewater that is higher than their maximum allowed volume.
- c. When there is a change in disposal/ end use of treated effluent
- d. When the end use is reuse and there is an extension, increase or decrease of that reuse scheme.

31: If Option 2 is the preferred option, should the regulations include the following requirements for wastewater schemes:

- Preparation, implementation RMPs?
- A requirement to be audited?
- Other, please describe.

32: If Option 2 is the preferred option, should the regulations define a wastewater scheme so that it captures:

- All wastewater schemes
- Only those schemes that are not licensed under another Act
- Other, please describe.

33: Do you agree that new regulation for audits should capture only those wastewater sewerage schemes who hold an exemption under the *Water Services Act 2012*?

34: If the preferred management option requires an audit of a wastewater scheme,

- Internal audits
- External audits

35: If you agree internal audits are required, do you agree that internal audits should be undertaken every two (2) years?

36: If you agree external audits are required, do you agree that external audits should be undertaken every five(5) years?

37: Should the regulations require submission of an external audit report to the DOH within 3 months of it being conducted?

38: If an audit of a wastewater scheme were a requirement of new regulation, do you agree the wastewater scheme operator should appoint the auditor? Please explain your answer? Please explain your answer

39: Do you agree that the DOH provide guidance material to assist wastewater schemes operator to select an appropriate auditor?

40: Do you agree the scope of an audit should follow the Australian Sewerage Quality Management Guidelines?

41: If Option 1 is the proposed management option: Do you agree that the regulations state sewerage schemes operators must develop and implement a risk management plan as part of their registration?

42: If Option 2 is the proposed management option: Do you agree that the regulations state sewerage schemes operators must develop and implement a risk management plan?

43: Do you agree that a Risk Management Plan must be provided to the DOH by the responsible person if they are requested to do so?

44: Do you support the proposal that the wastewater scheme operator can determine the framework used to develop a RMP? Please explain

45: If you do not support the above, should the DOH develop a template that would be provided as guidance material or a code of practice?

46: Do you agree that how wastewater products are to be used should be part of a registration under the *Public Health Act 2016*?

47: Do you agree with the following statement? "Should a sewerage scheme operator wish to change how a wastewater product is used they will be required to apply to have their registration amended."

48: Do you think how a wastewater product is used should be determined using a risk based approach or a prescriptive approach such as a predetermined set of water criteria?

49: If regulation is the preferred option, do you agree the regulations should require local government to have in place "a system of governance" for the management of onsite wastewater systems?

50: If regulation is the preferred option, do you agree the regulations give the CHO the power to prescribe minimum training and skills requirements for operating and maintaining onsite wastewater systems?

51: If regulation is the preferred option, do you agree they should require:

- a. Wastewater must be contained within the lot boundary where it is generated.
- b. An onsite wastewater system must not pose a public health risk to anyone within the boundary of the lot and neighbouring properties.
- c. The location and operation of an onsite wastewater system must not cause damage or impact buildings or structures on the premise on which the system is sited or to neighbouring properties.
- d. Any building or structure must not be constructed around or above an onsite wastewater system unless otherwise approved.
- e. The location and operation of an onsite wastewater system must not cause contamination of groundwater or surface water
- f. An onsite wastewater system is fit for purpose.
- g. An onsite wastewater system must be maintained so that it is fit for purpose.

52: Are there any other minimum requirements the DOH should consider? Please state the requirement and provide detail on why it should be included.

53: Do you agree minimum siting requirements should be required for the location of onsite wastewater systems?

- 54: Do you agree minimum siting requirements should be required for the location of land application systems?
- 55: Should the DOH set prescriptive minimum siting distances in the regulation or a code of practice or should minimum siting requirements follow the risk based approach provided in AS1547?
- 56: Should the Department of Health consider other literature for setting minimum siting distances?
- 57: Do you agree that onsite wastewater system designs should be in line with Australian Standards?
- 58: Do you agree that all onsite wastewater system products should be certified by a certified body/company that is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ)? If, not please explain why.
- 59: Do you agree that a product that has a certification by a JAS-ANZ certified body should be automatically added to the DOH's list of approved systems?
- 60: Do you agree with the proposal that a dwelling may be serviced by a system using:
- a. Alternative technologies rather than an onsite wastewater system? If no, please explain your answer.
 - b. A bespoke system? If no, please explain your answer.
 - c. A modified Australian certified system? If no, please explain your answer.
- 61: Do you agree that all alternative designs or new technologies will need to apply to the CHO to get their design approved?
- 62: Do you agree that alternative designs or new technologies should provide evidence that the system will meet treatment requirements for the proposed end use and may be subject to additional conditions to ensure the system is fit for purpose once installed? If not, how should alternate technologies be managed?
- 63: Do you agree with the proposal that the design of a land application system is approved by the CHO?
- 64: If not, how should land application systems be managed?
- 65: Do you support the proposal that an approval to install is required prior to the installation of the onsite wastewater system? If no, please explain why.
- 66: Do you agree that applicants should have to provide evidence that a system is fit for purpose as summarised above?
- 67: In addition to the information described above, should an application to install include:
- a. The person installing and their qualifications
 - b. How the wastewater product will be disposed or reused
- 68: Are there any additional details that should be required?

69: Should separate registrations be required for separate systems located at the same site? Please provide your reasoning.

70: What conditions should be included as part of a registration?

- a. A service agreement with a registered service project?
- b. A set servicing schedule
- c. Time frames for notification or reporting of servicing?
- d. The end use of the wastewater product
- e. Other conditions as set out by the relevant authority?

71: Do you agree with the following proposal: Any existing onsite wastewater system with a permit to use issued under the Wastewater Regulations be automatically eligible to be registered under the new regulations?

72: Do you agree that if the owner of the system proposes to change the end use of the wastewater product then they will have to apply to have their registration amended?

73: Do you agree that the local government authority should be the prescribed enforcement agency for registration of this public health activity? Please explain.

74: Should local government be authorised to inspect systems to determine that a system is still fit for purpose after registration?

75: Should temporary onsite wastewater systems go through the same approval process as other onsite wastewater systems?

76: When should a temporary onsite wastewater system be approved?

- When it is not possible to connect to a reticulated sewer.
- When it is not feasible to install a permanent onsite wastewater system.
- Both instances.
- Should not require an approval.

77: What do you consider an appropriate timeframe for operating a temporary onsite system?

78: Do you agree with the following proposals put forward by the DOH:

- a. The responsible person shall not permit the holding tank to overflow or become offensive.
- b. The responsible person will have appropriate controls in place to minimise the risk of an overflow event.
- c. A proponent must comply with the requirements set out in their risk management plan.

79: Should the regulations provide prescriptive requirements for operating a temporary onsite wastewater system? Please describe.

80: Do you agree that the local government should be able to exempt any person from the requirement to hold a registration for their onsite wastewater treatment system? Please explain why.

81: Do you agree with the proposal to exempt onsite trade waste systems within prescribed premises that are licensed under the *Environmental Protection Act 1986* from the regulatory requirements detailed in Chapter 6 and for any public health risks to be managed using the general public health duty provisions of the *Public Health Act 2016*? Please explain why.

82: Do you agree that all modifications to systems should only be done by an authorised service technician? If not, why not?

83: Do you agree that the appropriate enforcement agency needs to be notified of the proposed modifications? If not, why not?

84: Do you agree that in situations where the modification is significant then a new approval to install and/ or registration is required? If not, why not?

85: Do you agree that a system can be decommissioned by either a licensed installer or a licensed plumber?

86: Do you agree that decommissioning of a system should take place in the following situations?
a. A building is to be constructed above the apparatus
b. Reticulated sewerage is provided and connection to the reticulated sewerage system has occurred

87: Are there any other situations where decommissioning should occur?

88: What activities should be required as part of decommissioning?

- a. Empty the onsite wastewater system
- b. Removal of the onsite wastewater system
- c. Backfill the area with clean fill
- d. Other, please describe

89: If regulation is the preferred option do you agree with the proposal that the wastewater products from toilets using alternative technologies are regulated the same as other primary treatment systems?

90: If you disagree, how should the wastewater products from a toilet using alternative technology be regulated? Please explain.

91: Do you agree that additional system design requirements are outlined in a code of practice which is called up in new regulation?

92: Do you agree the regulations should reference the design flow rates from AS/NZS 1547?

93: Do you agree with the proposal that a per person, per day flow rate is used?

94: If not, how should the design flow rates should be estimated? Please provide evidence for your suggestion.

95: Do you agree that in situations where a system which uses alternative technologies or does not include sewage, the flow rates sizing of an onsite wastewater system can be based on a lower flow rate? Please explain your answer

96: Do you agree that the regulations should refer to the design loading rate (infiltration rate) for various soil types using Table L of AS/NZS 1547?

97: If not, what design loading rates should the DOH reference? Please provide the evidence for your answer.

98: Do you agree with the proposal to reference the formula from AS1547 to determine the size of the land application system?

99: If you do not agree with this calculation what calculation should be referenced? Please provide evidence for your suggestion.

100: Do you agree that the requirements for a site and soil evaluation are provided in a code of practice which is called up in regulation?

101: Do you support the proposal that a SSE is not required as part of an Application to Install for a premise with a lot with a single dwelling, unless the approving agency requests one? If not, how do you think it should be managed?

102: If adopted, should the regulations state a single dwelling will not be required to submit a SSE with an Application to Install unless requested by the approving agency?

103: If adopted, should the regulations state a SSE will be required for all lots other than those with a single dwelling, unless the approving agency considers it has enough information to assess the application to install?

104: If adopted, should an owner be able to request an exemption where there is enough information already available for the site and soil conditions on site to assess in an Application to Install?

105: Should the DOH maintain the status quo and provide guidance material for conducting an SSE?

106: Which of the following options do you agree with:

- A SSE should be conducted in accordance with AS/NZS 1547 or
- The scale and intensity of a SSE should be determined by the agency approving the application to install.

Please outline what a SSE should be based on and why?

107: Who should be able to conduct a SSE for an Application to Install?

- Environmental engineer / soil scientist / land capability assessor
- Other

108: If other, what qualifications and/ or experience should a suitably qualified person hold?

109: Do you agree the ongoing requirements for managing onsite wastewater systems should be provided in a code of practice that is called up in regulation?

110: Do you agree with the proposal that as part of the product approval the DOH will set the servicing schedule?

111: How do you think the servicing requirements should be assigned?

- a. By individual system, resulting in different servicing schedules for each system registered
- b. Require that all secondary treatment systems are serviced on the same schedule (either every 3 months, every 6 months or annually).
- c. Another way?

112: Do you agree that a service technician should have to immediately report their concerns to the appropriate local government in the following situations?

- a. When they have concerns about the state of the system
- b. When there is a risk that the system may fail or pose a risk to public health in the near future
- c. When there are ongoing problems which affect the system's ability to deal with wastewater that occur for 2 or more services in a row.
- d. When an owner refuses to service a system.

113: Are there any additional situations where immediate reporting should be required?

114: Do you agree with the proposal that after every service the service technician notifies the appropriate local government of the system's registration number and the date/time that the service occurred?

115: If not, what information should be provided to local governments after every service?

116: Do you agree that a service technician submit a service report if they have concerns about the performance of a system?

117: Should the regulations allow for an authorised officer to require testing of the treated water quality from an onsite water system at a NATA accredited laboratory? If no, please provide your rationale.

118: Should the regulations allow for an authorised officer to require testing of the treated water quality from an onsite water system after installation?

119: Who should bear the cost of sampling, please provide your rationale?

120: Should the regulations require scheduled testing of treated wastewater from onsite wastewater systems?

121: Should this be a requirement of registration?

122: Should the testing results be submitted to the approving authority or retained by the owner of the system? Please explain why?

123: Do you agree with the roles of each of the enforcement agencies described in the Table?

124: If not, please provide details on who should be the appropriate enforcement agency.

125: How should wastewater from multiple dwellings on the same lot be managed? Please provide reasoning for your answer.

- Through separate onsite wastewater systems for each building?
- Require a separate onsite wastewater system for each wastewater stream?
- With one system, the design is fit for that purpose?'
- At the discretion of the local government?
- No specific regulation?

126: If regulation is the preferred option, should the regulations require that a person installing an onsite wastewater system be:

- Licenced
- An authorised person
- No specialised training or experience required
- Other, please provide your reasoning

127: Should a person /entity be able to obtain an exemption from holding a licence?

128: Should there be different qualifications and experience for installing the different onsite wastewater systems (“specialised tickets”)?

129: What tickets would you propose?

130: Who do you consider would be the appropriate authority to issue a licence?

131: What evidence and training requirements should a licensed or authorised installer be required to undertake and provide to the appropriate authority?

132: Do you agree that certain types of onsite wastewater treatment systems should only be serviced by a qualified service person?

133: If yes, do you agree with the system types listed above? Are there other types of systems that should be considered?

134: Should a service technician:

- Hold a licence
- Be an authorised person
- Other

135: Should a person /entity be able to obtain an exemption from holding a licence?
If yes, please provide examples and why?

136: Do you agree that the DOH should be the appropriate agency to manage service technicians? If no, who?

137: Do you agree with the evidence that a technician will need to provide to the DOH as part of their application?

138: Do you agree that service technicians should be required to undertake training?

139: Do you agree with the proposed training requirements?

140: If not, what training (if any) should a licensed service technician be required to undertake?

141: Do you agree with providing key requirements for onsite wastewater systems in Codes of Practice and then providing additional guidance material on how to meet and interpret those requirements?

142: Do you agree with the listed benefits of the proposed regulatory framework to the community? Please provide any further comments that you have, including any other benefits that were not listed.

143: Do you agree with the listed costs of the proposed regulatory framework to the community? Please provide any further comments that you have, including any other costs that were not listed.

144: Do you agree with the mentioned benefits of the proposed regulations to industry and businesses? Please provide any further comments that you have, including any other benefits that were not listed.

145: Do you agree with the listed costs of the proposed regulatory framework to industry and businesses? Please provide any further comments that you have, including any other costs that were not listed.

146: Do you agree referencing the Australian Standards will provide consistency for authorising agencies?

147: Do you agree with the mentioned benefits of the proposed regulations to enforcement agencies? Please provide any further comments that you have, including any other benefits that were not listed.

148: Do you agree with the listed costs of the proposed regulatory framework to enforcement agencies? Please provide any further comments that you have, including any other costs that were not listed.

149: Are there other support enforcement agencies would like to see provided? Please provide your comments

150: Please provide any further comments you have on the proposed regulations that have not been specifically addressed in this discussion paper?

Appendix 5 – Proposed Definitions

Table of proposed defined terms to be included in new regulations

Definitions	
Adopted documents* -	Documents adopted by the regulations, and will include: <ul style="list-style-type: none"> • Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units. • Code of Practice for the Reuse of Greywater. • Guidelines for the Non-potable Uses of Recycled Water in Western Australia. • Guidelines for Product Approval of Onsite Wastewater Systems. • Guidance on site and soil evaluation for onsite wastewater management.
Apparatus	Any apparatus for the treatment of sewage and includes any buildings, fittings, works, or appliances used or required in connection with the treatment of sewage, and the disposal of effluent or any residue of such treatment.
Application Area	An area to which treated effluent is applied.
AS/NZS	AS/NZS* Means a document prepared by Standards Australia or Australian / New Zealand Standards.
Commercial food production	The preparation of food for sale, but does not include beverage manufacture.
Conduit	A pipe placed on land, or an artificial channel or tunnel placed on or a part of land, for conveying sewage, and associated fittings, fixtures and structures.
Decommissioning	The partial or complete actions required for wastewater systems no longer in service. Includes onsite wastewater treatment systems and liquid waste systems.
Drain	A conduit or a watercourse or other natural channel for conveying non-trade waste.
Dwelling	Dwelling a building or structure, or part of a building or structure, that is ordinarily used for human habitation, except common property as defined in the <i>Community Titles Act 2018</i> section 3(1) or the <i>Strata Titles Act 1985</i> section 3(1); or A mobile home or houseboat (whether or not it is uninhabited from time to time) and includes the area associated with the dwelling.
Effluent	The liquid discharged from a wastewater treatment system.
Effluent quality	The level of quality achieved by the wastewater treatment unit.
Groundwater	The body of water in the soil, all the pores of which are saturated with water. If the body of water is present at all times it represents permanent or true groundwater.
Liquid Waste	Any kind of sewage other than wastewater and includes “Trade waste” and “Non Trade Wastes”.

Definitions	
Onsite wastewater system	A system that treats and disposes or reuses wastewater within the boundaries of the freehold lot, community strata or survey strata within which wastewater is generated.
Primary Production	includes the extraction of raw materials for industry, and also includes the growing, raising, cultivating picking, harvesting collection or catching of food or livestock, and includes packing, treating and storage, but does not include any process that involves the substantial transformation of raw materials or produce.
Sewage	any waste composed wholly or in part of liquid and includes “Wastewater”, “Liquid Waste” and “Sewage Product”.
Sewer	Means a conduit for conveying wastewater or trade waste.
Sewerage Scheme	has the same meaning as ‘sewerage service’ under the <i>Water Services Act 2012</i> .
Site suitability	The adequacy of the application area for the volume of sewage to be generated and treated by the onsite wastewater system approved for a site.
Soil Absorption Zone	The depth of soil that is required to filter, isolate and absorb wastewater microorganisms, nutrients and particles.
Suitably Qualified Person	a person who has professional qualifications, training skills or relevant experience as approved by the CHO.
Trade Waste	Any liquid waste from manufacturing and industrial sources, or from primary production.
Wastewater	Any kind of faecal matter or urine or any sewage composed wholly or in part of liquid from human sources, and includes any sewage from premises used for domestic purposes, for the housing of animals, or for commercial food production, but does not include Liquid Waste.
Water Service Provider	means a person who has been granted a licence to provide a sewage service under the <i>Water Services Act 2012</i> .

The following terms in the *Health (Miscellaneous Provisions) Act 1911* must be repealed

Apparatus for the treatment of sewage
 Cellar or underground room
 Cesspool
 Dairy
 Dairy produce
 Disposal
 House
 Sanitary convenience
 Sewage
 Trade

Appendix 6 – Calculation Comparison

Table 20 – Comparative Calculation Summary:
Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations and an AS/NZS 1547:2012 based methodology
Specifications : 4 Bedroom Dwellings – Primary Treated Effluent

Soil type	Sizing as per Health (TSDELW) Regulations 1974	Sizing as per AS/NZS 1547:2012 (Max DLR)	Sizing as per AS/NZS 1547:2012 (Conservative DLR)
Category 1 Gravels and Sands	2 x 9m drains	<p>Standard leach drains</p> $L = Q / (DLR \times W)$ $= 900 / (35 \times 1.4)$ <p>= 2 x 9.2m drains</p> <p>Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1)</p> <p>DLR = Maximum rate for category 1 soils assumed no site limitations.</p> <p>W = 600mm receptacle plus 400mm blue metal each side giving a total 1.4m width</p>	<p>Flatbed leach drains:</p> $L = Q / (DLR \times W)$ $= 900 / (20 \times 4)$ <p>= 1 x 11.3m drain</p> <p>Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1)</p> <p>DLR = Conservative rate for category 1 soils, site limitations.</p> <p>W = 4m</p>
Category 2 Sandy Loams Massive	2 x 13m drains	<p>Standard leach drains</p> $L = Q / (DLR \times W)$ $= 900 / (25 \times 1.4)$ <p>= 2 x 13m drains</p> <p>Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1)</p> <p>DLR = Maximum rate for category 2 massive structured soils, no site limitations.</p> <p>W = 600mm receptacle plus 400mm blue metal each side giving a total 1.4m width</p>	<p>Flatbed leach drain</p> $L = Q / (DLR \times W)$ $= 900 / (15 \times 4)$ <p>= 1 x 15m drain</p> <p>Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1)</p> <p>DLR = Conservative rate for category 2 massive structured soils, no site limitations.</p> <p>W = 4m</p>
Category 3	= 2 x 13m drains	Standard leach drain	Flatbed leach drain

Table 20 – Comparative Calculation Summary:
Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations and an AS/NZS 1547:2012 based methodology
Specifications : 4 Bedroom Dwellings – Primary Treated Effluent

Soil type	Sizing as per Health (TSDELW) Regulations 1974	Sizing as per AS/NZS 1547:2012 (Max DLR)	Sizing as per AS/NZS 1547:2012 (Conservative DLR)
Loams Weakly Structured		$L = Q/(DLR \times W)$ $= 900/(15 \times 1.4)$ = 3 x 14.3m drains Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1) DLR = Maximum rate for category 3 weakly structured soils, no site limitations. W = 600mm receptacle plus 400mm blue metal each side giving a total 1.4m width	$L = Q/(DLR \times W)$ $= 900/(10 \times 4)$ = 2 x 11.3m drains Q = 150L/p/d (Table H1) x Population Eq. 6 persons (Table J1) DLR = Conservative rate for category 3 weakly structured soils, flatbed design W = 4m

*AS/NZS1547 contains a range of different soil structures within soil categories 1 – 3. For the purpose of practicality calculations have been run on only one (1) soil structure within each category.

*AS/NZS 1547:2012 divides sandy loams into the categories 'weakly structured' and 'massive'. The indicative permeability of the 'massive' sandy loams category is closer to loams than sands. For this reason the loam category within the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974* has been selected for the most appropriate point of comparison.

*While systems in weakly structured loams are significantly larger when sized under AS/NZS1547, it should be noted that this soil type is the heaviest category of soils within AS/NZS1547 to which meaningful comparison can be made with the regulations. Design loading rates for these soil categories are significantly less under AS/NZS1547 than the loading rates assigned to loams (generally) in the Regulations - which (on account of the loading infiltration rate assigned by schedule 8) are more closely aligned with high or moderate structured loams within AS/NZS1547. In weakly structured loams, the DOH does not consider the additional infiltrative area assigned by AS/NZS1547 to be inappropriate.

*Comparison of system sizing between the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974* and AS/NZS1547 becomes problematic beyond Category 3 soil types. Regulation 48 provides a sizing chart for leach drains based on three basic soil categories being sand, gravel or loams, with no allowances for structural differences within these broad categories. For all other soil categories (including clays), the Regulations prescribe a formula for determining minimum infiltrative area. The formula requires an infiltrative capacity to be determined in accordance with Schedule 8 or the Regulations - whereby an Environmental Health Officer is required to dig a 0.9m³ hole, place a 50mm deep layer of blue metal at the base of the hole, and keep the hole filled with water preferably overnight. The infiltrative capacity of the soil is determined the following morning by measuring the time taken for the water in the hole to fall 25mm. In any circumstance where the water takes longer than 60 minutes to fall 25mm, an infiltrative rate is not assigned, and the process of approval is deferred to the CHO. In effect this means there is no mechanism for local governments to approve onsite wastewater systems for soil types with an infiltration rate below 10m²/day. In these circumstances the CHO will assess an application against AS/NZS1547

Appendix 7 – Recommendations

Chapter 1

1. The DoH recommends the development of new regulation for the management of sewage.
2. The DoH recommends future regulation adopt the Australian Standards for the management of wastewater where appropriate.

Chapter 2

3. The DoH recommends new regulation adopt the definitions in [Appendix 5](#).
4. The DoH recommends that new regulation include two general declarations:
 - Sewage must be conducted in a safe and effective manner and
 - Sewage systems must be maintained in good working order.
5. The DoH recommends that new regulations enable local governments to direct an owner of a premise to connect to a sewer when available.
6. The DoH recommends that new regulation declare that a premise must have an approved onsite sewage treatment system installed prior to habitation where a reticulated sewage scheme is unavailable.
7. The DoH recommends a regulation is required to provide for mandatory reporting of a wastewater overflow event.
8. The DoH recommends new regulation enable authorised officers (enforcement agency) to direct those responsible for an overflow event to remediate the area.
9. The DoH recommends new regulation enable the enforcement agency to set the scope of remediation.
10. The DoH recommends new regulation enable the enforcement agency to direct those responsible for an overflow event to undertake testing and provide validation of remediation.

Chapter 3

11. The DoH recommends that new regulations declare the operation of a sewerage scheme as a public health risk activity that is registerable.
12. The DoH recommends that new regulation allow for exemptions from registration for certain class of schemes. An exemption class would be for schemes that are licensed under the Water Services Act.
13. The DoH recommends that new regulation declare that a registered scheme owner must apply to amend registration if there is:
 - an increase in the volume of wastewater to be treated
 - a change in treatment methodologies,
 - a change in how treated effluent is disposed.
14. The DoH recommends new regulation set the fees for registration at cost recovery.
15. The DoH recommends that new regulation require schemes that reuse wastewater to have a recycled water quality management plan in place.

Chapter 4

16. The DoH recommends that new regulation enables the CHO to prescribe minimum training or skill requirements.
17. The DoH recommends that new regulation declare:
 - An onsite wastewater system must not pose a public health risk to anyone within the boundary of the lot on which it is located or neighbouring properties.
 - The location and operation of an onsite wastewater system must not cause damage or impact buildings or structures on the premise on which the system is sited or to neighbouring properties.
 - Any building or structure must not be constructed around or above an onsite wastewater system so that access to the system, and system function are compromised.
 - An onsite wastewater system must be installed and maintained so that it is fit for purpose.
18. The DoH recommends minimum siting distances for onsite wastewater systems are outlined in a code of practice that is based on Australian Standard AS1547:2012.
19. The DoH recommends new regulation declare that CHO product approval is required for all onsite wastewater systems.
20. The DoH recommends retaining and updating the existing Code of Practice for Product Approval of Onsite Wastewater Systems 2013.
21. The DoH recommends that Land Application Systems are designed in accordance with a code of practice based on the most current version of Australian Standard AS/NZS1547:2012.
22. The DoH recommends that new regulation require an Application to Install for all onsite wastewater systems. The regulation will stipulate those applications that have product approval from CHO are to be assessed by local government. All other applications to install are to be assessed by the DoH. The approval process will apply to temporary onsite wastewater systems.
23. The DoH recommends that new regulations declare site and soil evaluations will be required for all applications for onsite wastewater systems. However, the requirement for site and soil evaluation for single residential will be at enforcement agency discretion. Site and soil evaluation is to be developed in accordance with the DoH's 'Guidance on Site-and-Soil Evaluation for On-site Wastewater Management'.
24. The DoH recommends that new regulation will declare that the installation of an onsite wastewater system is declared a Public Health risk activity that is licensable under Part 8 of the Public Health Act.
25. The DoH recommends that a new Code of Practice for Onsite Wastewater Disposal is developed for adoption in new regulations..
26. The DoH recommends that new regulation require a system to be installed in accordance with the conditions of the approval to install and any applicable code of practice.

27. The DoH recommends that new regulation state that the use of an onsite wastewater system is a public health risk activity that is registerable activity under Part 8 of the Public Health Act.
28. The DoH recommends that new regulation will specify that a system must be registered before a property can be occupied.
29. The DoH recommends a regulation is required to provide that the person who installed a system must provide a certificate of compliance with the application for registration. The certificate of compliance to include:
- the installers name
 - the address of the property where the installation was complete
 - the day the installation was complete
 - the type of onsite wastewater system installed
 - any other information required by the local government, and
 - a statement that certifies the system was installed as per the 'approval to install', the regulations and the onsite wastewater system manufacturers requirements.
30. The DoH recommends new regulation require written approval from the approving agency to undertake any significant modifications to an onsite wastewater system. A significant modification includes:
- The mode of operation of the system is modified, including an increase in the volume of wastewater beyond the design loading volume stated in the approval to install.
 - The size or the location of a land application area is altered from the plans submitted in the approval to install.
 - The method of disposal changes from the approval to install.
31. The DoH recommends any significant modifications to an onsite wastewater system are to be undertaken by a person licensed under Part 8 of the Public Health Act, for that purpose.
32. The DoH recommends that new regulation declare that decommissioning must occur in the following circumstances:
- If a building is to be constructed above it.
 - If the lot/ premise/dwelling connects to a reticulated sewerage service.
 - If foundations for a building on the premises are to be built closer than 2m to the onsite wastewater system or a building is to be constructed above the apparatus, before work commences on building the foundations or before the building is constructed above the onsite wastewater system.
 - If an apparatus has not gone through the approval process and the system cannot meet the regulatory requirements for an onsite wastewater system.
 - If the facilities that it services are removed/demolished.
33. The DoH recommends that new regulation require that a decommissioned system must be made safe.

34. The DoH recommends new technologies are included in the same approval procedures as existing systems, designs are submitted to DoH for approval and will be listed on the DoH website as an approved product. Local government can then grant an approval to install.
35. The DoH recommends that the additional design requirements for an onsite wastewater system are not included in new regulation but are outlined in a code of practice that is adopted by the regulations and is based on Australian Standard AS/NZS1547:2012. The additional design requirements include:
- Flow rates
 - Design loading rates
 - Sizing of land application systems
36. The DoH recommends that an SSE be undertaken by a suitably qualified person.
37. The DoH recommends that new regulation declare:
- A secondary treatment system must be serviced by a person licensed for that purpose under Part 8 of the Public Health Act.
 - An owner of a premise to service a secondary treatment system in accordance with CHO product approval.
 - An owner must retain any service reports with a copy to be retained by the service technician.
 - A service technician must report the date of service and the registration number to local government.
 - A service report must be in a prescribed format.
38. The DoH recommends that new regulation require mandatory reporting of certain conditions after servicing if:
- the land application system is failing.
 - the system has been modified.
 - there is a risk that the system may fail or pose a risk to environmental health in the near future.
 - an owner refuses to service a system.
 - an owner terminates a service agreement.
39. The DoH recommends mandatory wastewater testing is not a requirement of future regulation.
40. The DOH recommends that new regulation enable the CHO to set the minimum requirements and experience required to be licensed for installation of an onsite wastewater systems. The training, qualifications, units of competency, skills and/or experience to be provided in guidance material.
41. The DoH recommends new regulation require that a system must be serviced by a person licensed under Part 8 of the Public Health Act.

42. For the purpose of licencing service personnel, the DoH recommends retaining the current training requirements for technicians authorised to service onsite wastewater systems.
43. The DoH recommends the following Codes of Practice and guidance material are adopted in new regulation:
- *Code of Practice for Product Approval of Onsite Wastewater Systems in Western Australia (Based on Australian Standards)*

**This document can be made available in alternative formats
on request for a person with a disability.**

© Department of Health 2022

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the *Copyright Act 1968*, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.