Waikato Regional Council Policy Series 2025/27

Freshwater Policy Review – Farm Animal Effluent Technical Advisory Group summary report

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The Waikato Regional Council Freshwater Policy Review team would like to acknowledge the valuable contributions made by all participants, who generously shared their knowledge, experiences, and time to support this work.

Disclaimer

Any draft standards or policy approaches related to farming are preliminary and do not represent adopted council policy. The Technical Advisory Group (TAG) is composed of individuals with relevant technical expertise, but participants are not representative of all stakeholders. The process is designed to gather a wide range of perspectives rather than to reach consensus. Views expressed during workshops reflect individual input and may not indicate agreement across the group. Feedback from TAG participants is captured in aggregate form and is not attributable to specific individuals or groups. Notes and comments from these sessions are one of several inputs into the overall plan development process. Project engagement is ongoing.

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Executive summary

Waikato Regional Council (WRC) is making changes to freshwater aspects in its regional policy statement[1] (RPS) and Waikato Regional Plan[2] (WRP). These updates are being delivered through the Freshwater Policy Review (FPR), the project established to implement changes in response to national direction. As part of this review, the council sought technical input from a range of subject experts to test and refine the development of the policy direction for freshwater. To do this, Technical Advisory Groups (TAGs) were established, comprising of specialised technical experts who provided input into specific technical components of the freshwater policy as it was being developed.

The purpose of this report is to provide a summary of the FPR Farm Animal Effluent (FAE) TAG workshops which took place during October and November 2025. The first section of the report outlines how TAGs fit within the overall FPR, what TAGs are, and their purpose, the TAG recruitment and selection process, and the workshop format. The second and third sections provide broad descriptions of the feedback received from TAG participants. Appendices provide the materials that were presented to attendees, as well as records of the meeting minutes for a more in-depth description.

A total of two half day farm animal effluent TAG workshops were held. The workshops were offered in a 'hybrid' format, meaning participants could choose to attend either online or in-person. All participants who agreed to take part in the TAG attended both workshops in person at the WRC offices. The first workshop focused on discussing high level concepts of draft standards for farm animal effluent storage and land application, while the second centred on behaviour change and rule implementation.

In terms of how to approach implementing the draft policy approach, TAG members agreed that staging implementation would be preferred. Since implementing new regulations will be a large undertaking, it was suggested that the council make use of a risk/likelihood matrix to assist them in identifying which tasks to prioritise. Specifically, farming activities which are the most likely to occur and pose the greatest risk, should be targeted first.

The TAG workshops brought together technical experts from industry, research, and council staff to discuss effluent storage, land application, compliance, and behaviour change. Participants consistently highlighted that the current rules lack clarity and specificity, resulting in confusion among farmers and inconsistent compliance. In particular, there is a need for explicit standards on storage volumes, record-keeping, and infrastructure requirements. The group emphasised that a "one-size-fits-all" approach is not effective; instead, management plans and technical advice should be tailored to individual farm systems and risk profiles.

Training and capability-building emerged as a critical theme. The TAG recommended that on-going training for farmers and staff be integrated into farm management plans, with both minimum standards and role-specific modules. This would help ensure that farmers understand their obligations and are equipped to manage effluent systems effectively. The group also supported a staged implementation of new standards, using a risk/likelihood matrix to prioritise high-risk activities and target council support where it is most needed.

Effluent management should be integrated with broader farm planning, such as fertiliser management and freshwater farm plans, to avoid duplication and streamline compliance. Technical recommendations included adopting explicit calculation methods for storage volumes (such as the Dairy Effluent Storage Calculator), setting standards for modern systems like bladders and feed pads, supporting deferred irrigation as best practice, and encouraging the use of record-keeping and monitoring tools.

Implementation challenges remain, with the scale of response likely to vary across farms, ranging from management practice changes through to more substantive infrastructure upgrades to meet new standards. The TAG noted concerns about equity, particularly regarding how rules may affect different farm types and risk profiles. Achieving industry buy-in will be important, and collaboration between WRC and sector organisations is recommended to facilitate a smoother transition.

In conclusion, feedback from TAG participants suggested a range of technical insights and potential approaches for improving FAE management. Participants commonly emphasised clearer rules, risk-based management, and integrated training as areas that could support better compliance and environmental outcomes.

This feedback will be considered, alongside other engagement inputs, as the Freshwater Policy Review further refines the policy approach.

1 Introduction

WRC is updating freshwater provisions in the RPS and WRP through the Freshwater Policy Review, responding to national direction. TAGs comprising of subject experts were formed to provide input and refine policy development. The purpose of this report is to provide a summary of the input from the FAE TAG workshops which took place during October and November 2025. The first section of the report outlines how TAGs fit within the overall FPR, what TAGs are, and their purpose, the TAG recruitment and selection process, and the workshop format. The second and third sections provide broad descriptions of the feedback received from TAG participants. Appendices provide the materials that were presented to attendees, as well as records of the meeting minutes for a more in-depth description.

1.1 Engagement

WRC undertook two rounds of region-wide engagement to engage tangata whenua and the community in freshwater policy development. Round 1 (2022) included 10 meetings at community venues and marae, supported by online sessions, using interactive “bus stop” stations to gather input on Te Mana o te Wai, visions, values, outcomes, attributes, and actions. Round 2 (2023) focused on draft provisions, seeking feedback on visions, outcomes, limits, and rules. Citizen Reference Groups were established across the FPR freshwater management units to incorporate local community knowledge, while Ngā Tira Mātauranga (NTM) provided ongoing technical advice on mātauranga Māori and legislative requirements.

The intent of the TAGs is to provide focused expertise on issues such as farm animal effluent, sensitive receiving environments, and land use. Their feedback will be integrated with other engagement streams to ensure policy development is informed by a wide range of perspectives.

The FPR has established and conducted to date a Collaborative Science Advisory Group (CSAG) and the FAE TAG. Key topics for technical discussion focused on the specific expertise of each group and included sensitive receiving environments, attributes, target setting, freshwater management units, and farm animal effluent. Other TAGs will be formed to discuss farming and land use, and commercial vegetable production.

The information and input provided by the advisory groups will be used to inform further refinement of the draft policy approaches, then taken for further testing as part of sector, iwi and community engagement.

1.2 Purpose of Technical Advisory Groups

In the context of the FPR, WRC’s TAGs provide technical input into options for policy outcomes for freshwater and ecosystems. This is based on the technical knowledge and experience members bring about resource use, including highlighting potential actions, issues, and solutions with the draft policy approach.

The TAG process ensures policy is robust, practical, and evidence based. For example, the farming TAG will focus on developing implementable options to reduce contaminant losses. Insights from these groups feed directly into policy drafting, building on previous work and giving effect to Te Mana o Te Wai. This phase emphasises testing ideas, gathering feedback, and refining options ahead of sector, iwi, and community engagement through 2026.

1.3 Technical Advisory Group member recruitment and selection process

Initial policy planning for engagement involved identifying what questions that each TAG would need to provide input on. For each of the TAGs, staff outlined the expertise sought of members to respond to those questions to inform the potential makeup of the groups. During this process, Council also considered whether to utilise existing or established groups or if a dedicated FPR group was needed. Based on the draft outline of the potential expertise and makeup of TAGs, WRC technical specialists (including science, policy, and the Primary Industry Engagement team) further identified and provided potential names for TAG membership. The TAG workstream lead then followed up with WRC technical specialists and sector representatives to refine the list of potential TAG members. The paragraph below outlines the process for the establishment of the FAE TAG.

The TAG workstream lead undertook some preliminary scoping of TAG members, including some informal discussion with external individuals to gauge interest. Due to ongoing uncertainty around signalled changes in national direction, and a FPR project refresh, along with a need to focus on policy and science that delivers ongoing benefits, the timing of TAGs was adjusted to later in 2025.

Also, in discussions with DairyNZ regarding TAGs, they suggested utilising an already existing group of farm animal effluent technical specialists called the Effluent Advisory Group. Most of the names on the draft list for this TAG were part of this nationally run group with many based in the Waikato region.

Membership was refined following these initial conversations and to address any potential conflicts of interest.

An email was sent on 2nd October 2025 inviting potential specialist participants to be part of the TAG process. A total of ten participants were invited to participate in the TAG, and five people responded and confirmed participation as TAG members. The invitation included ground rules for TAG participants and outlined what support WRC would provide.

Summary of the five TAG participants expertise:

- Recognised experts in farm dairy effluent management, including research, system design, and accreditation processes.
- Experience in water quantity management and farm programmes.
- Knowledge of farm environmental planning systems and regulatory frameworks.
- Leadership in industry groups focused on effluent management and standards.
- Practical experience in policy implementation and behaviour change strategies.

1.4 FAE workshop format and structure

Two, half day FAE TAG workshops were held during October and November 2025. The workshops were offered as a 'hybrid' format allowing participants to attend either online or in-person. All participants chose to attend both workshops in person at WRC offices (160 Ward Street, Hamilton). Workshop material was shared via SharePoint a web-based collaboration and document management platform. Workshop notes were taken at each workshop. Notes from each workshop reflect the general discussion without identifying individual contributors.

The first workshop focused on discussing high-level components and general concepts for standards related to storage and land application, rather than reviewing fully drafted standards. The group was invited to consider the proposed approach and suggest alternative ideas. The second workshop centred on exploring the scale of behavioural change that might be required in response to these concepts, as well as the practicalities of implementing requirements,

including options for staging. Each session was led by an independent facilitator and supported by WRC staff, with documents shared via SharePoint.

Following the first workshop, a word document, with potential rule components (high level) and draft minimum standards were shared via SharePoint to gather more detailed feedback on the draft approach.

The following sections provide a summary of input from the FAE TAG workshops.

2 Workshop one

The first workshop, held on the 30th of October 2025, focused on seeking technical input into further developing standards for effluent storage, land application, and minimum practice requirements. The session began with an overview of the FPR's purpose and context, and current regional plan. Participants discussed issues with the current approach to managing farm animal effluent. There was a brief presentation of some WRC compliance information. Participants then reviewed the draft approach for effluent storage infrastructure and management practices, land application methods, and considered minimum standards for farms to manage effluent effectively. The workshop concluded with reflections on any additional issues the TAG wanted to raise and next steps for the policy development process.

The input sought focused on the overall components of the approach to managing farm animal effluent, with an emphasis on identifying the key elements of that approach rather than the policy framework, the rule cascade, and activity status. This was partly shaped by signalled changes in national direction. The group did briefly discuss the activity status of the rules, reflecting on experiences from the current permitted approach.

For a copy of the materials WRC presented to TAG participants, including, the workshop agenda, introductory material in the discussion document, and presentation slides, please refer to Appendices A, B, and C.

The following sections provide a summary of the feedback provided by TAG participants. For a more in-depth account, please refer to the meeting notes in Appendix D.

2.1 Background and key issues

The first session of the workshop began with a brief presentation outlining the current regional plan, broader effluent management issues in the Waikato region, emerging challenges and identified gaps. This included recent State of the Environment monitoring results. This was followed by open discussion where participants provided the following feedback:

Lack of clarity

- A recurring theme amongst the comments was that the current Regional Plan approach to farm animal effluent lacks clarity. Farmers are not clear what is required of them and what the end goal is, and there are '*too many grey areas.*' Example noted by TAG participants:
    - The rules do not specify the farm must have storage
    - Record keeping is not required
    - Races and underpasses are not captured in the rules

When making these points and examples, respondents noted that while the Regional Plan may not provide clear direction, WRC compliance staff are requesting information or flagging non-compliance. However, farmers often do not know they need to manage this aspect of the farm system or are not keeping this type of information.

- One respondent emphasised that whenever a standard is set, there should be a clear and practical method for measuring compliance. Building on this, another noted that a recurring issue in the current plan is that some rule requirements have never been enforced, simply because there is no established way to measure or assess compliance with those parts of the rules.
- It was expressed that certain regulations/standards should be included in Plan Change 1 (PC1) and freshwater farm plans, in order to prevent 'doubling up.'
    - Similarly, it was noted that *'integration with the broader regional plan is important.'*

Farmers' perceptions and/or understanding of rules

- A few comments focused on farmers' perceptions and/or understanding of rules/regulations. There was also discussion about how farms perceive permitted activity rules, farmers may believe that they do not need to know the rules or often assuming that because an activity is permitted, they are allowed to farm without restriction, rather than understanding that they need to farm within the rules.
- Participants expressed that while some farmers feel as though the rules keep changing, it is the approach to implementing these rules that has shifted over time.
- It was stated that some technical standards in the current rules may give some farmers a 'false sense of security.' For example, the requirement for the discharge not to exceed the effluent depth of 25mm per application, can lead farmers to believe their operations are compliant when in fact they may not be taking into account their particular situation or associated risk.

Education

- Education and support for farmers were viewed as important. There was comment that effluent management was 'falling through the cracks', there were lack of training opportunities, and that the industry was shifting focus to other priorities such as greenhouse gas emissions.

Advice and use of consultants and rural professionals

- Participants commented that they knew of examples where farmers who had approached WRC seeking advice to ensure they met compliance were directed to industry consultants. There was some recognition that this expertise does sit with industry.
- Participants noted that there were no requirements in the rules for farmers to work with rural professionals, engage or use consultants, to confirm that their system was compliant.
- It was noted that although some consultants provide advice and indicate that farmers' systems are compliant - they may not be compliant. However, it was acknowledged that the farmer is ultimately responsible.

Risks and emergency management

- The group emphasised that rules/regulations need to consider emergency and risk management for extreme weather events (for example, Cyclone Gabriel).
- When discussing compliance assessment or ratings it was noted that this is measured against a permitted activity rule that does not link back to farm risk. In comparison, freshwater farm plan assessments do measure risks.
- Risk management should be considered important from a compliance perspective.
    - If the council is provided with evidence of compliance, proof of placement records, training, and management, this demonstrates the operation is compliant overall, even if the council finds a non-compliant issue on the specific day they visit.

Costs

- It was explained that some farmers consider the comparative costs of paying fines for non-compliance or investing in systems which meet compliance standards.
    - If fines are increased and if farmers cannot get insurance, this may change their decision.
- It was also noted, as an example where farmers who have consent application issues would be faced with a choice between paying for the services of a planner or commissioning an environmental assessment, which has the potential to cost thousands of dollars.

Practices increasingly used in the region and regional plan gaps

Animal housing:

- There are companies selling unsealed herd home systems which are fully compliant with district council building code requirements. Generally, WRC monitoring is not considering these systems at the moment. If these systems are given compliance attention in the future, they may create long-term risks for farmers.

Storage bladders and storage tanks:

- It was stated that both storage bladders and storage tanks have the potential to become future compliance issues.
- It was noted that very little industry guidance is provided about bladders and tanks. For example, IrrigationNZ did not include them as part of the effluent code and IPENZ Practice Note 21 focuses on storage ponds.
- While IPENZ Practice Note 21 and the latest standards currently address ponds, there is a need to bring tanks and bladders into the discussion and develop appropriate industry standards and guidance for these storage options.

Activity status

While not a particular focus of this session there was a brief discussion of activity status:

- Some in the group discussed an approach that used a combination of permitted and consent activity rules, for example those with low risk could be permitted and those with substandard ponds would need to make changes or get a consent.
- It was noted that consents are seen as providing greater clarity than permitted activities, but it was also noted that this needs to be supported by good rules and is very resource intensive.
- A concern was also raised during discussion on activity status about the signalled changes to the RMA, particularly the shift away from controlled activities. The proposed move towards permitted activities rules could result in consented farmers being subject to more stringent rules status (discretionary activity rules), which would bring greater costs and risks to farmers.

Questions posed by TAG members

During the discussion, TAG members asked the following questions and raised points to consider regarding the effluent management approach:

- How much investment is needed to mitigate an issue that might not be as significant, and the effluent or nutrients could originate from other areas on the farm?
- What are the intended outcomes for water quality and the associated risks? Are the rules being designed to achieve these outcomes? For example, are they targeting nutrients, E. coli for swimming, diffuse discharges to water, or ponding?

2.2 Session one – Storage of farm animal effluent

Participants were asked to *"List top issues with the current set of permitted activity rules and what is contributing to some of these poorer outcomes 'big fix areas.'"*

Storage requirements

- TAG members noted that current rules do not specify storage requirements or a calculation method.
- There was discussion about setting a storage volume standard (e.g., Dairy Effluent Storage Calculator (DESC)-calculated 90th percentile) and concerns about farmers becoming non-compliant if rules change after they have upgraded their systems.
- Participants expressed that clearer on-farm expectations are needed. Farmers often believe their systems are compliant, only to discover non-compliance during council visits.

- It was questioned how situations will be handled when a farmer has upgraded their operation, but they become non-compliant when the rules change.

Relevance to modern systems

- It was questioned how the current rules are relevant to modern systems – such as, bladders, feed-pads, underpasses, and water housing.

Soil classification

- The group discussed the challenge of classifying soils as high or low risk for effluent management. While S-Maps provide factsheets for all soil types, participants noted there is a lack of clarity and enforceability in distinguishing between high and low risk soils, highlighting the need for more precise classification methods to support effective rule implementation.

Risk assessments

- Workshop participants highlighted that the current rules do not address risk management, noting, "there is nothing written regarding anything that can be done about risk."
- It was observed that a farmer may be fully compliant on one day but non-compliant the next, often due to unforeseen issues such as equipment failure. This underscores the limitations of point-in-time compliance checks and suggests a need to move away from this approach.
- Feedback also recognised that incorporating formal risk assessment into the rules would be challenging. Instead, the group emphasised that the regulatory approach should focus on ongoing maintenance, active management, regular observation, and having contingency plans in place to respond to unexpected events.

Nutrient testing

- In terms of 150kg/N/ha – 200kg/N/ha, compulsory nutrient testing should be included in the standards.
- Unless a farmer is going to run 'Overseer' to work out their nutrient level, they are going to rely on 'rule of thumb.'
- Effluent systems are discharging different nitrogen concentrations depending on separation systems and system design.

Land application

- Participants noted that irrigation must only be undertaken when there is a soil moisture deficit. Another noted that that a soil moisture deficit is not needed for low-risk soils – only high-risk soils.
- Respondents felt that irrigation application depths must depend on the type of soil.

Lack of management and design criteria

- TAG participants noted that there are a lack of management and design criteria within the regulations/rules. This can lead to farmers building cheap, unmanageable systems which will struggle to be compliant.
- Respondents have observed examples where systems are designed around specific products (e.g., wanting the storage to be a bladder), rather than designing a system first. Ideally, the system design should determine what type of storage is needed, not the other way around.
- Quite often, it was said, storage bladders are sold and it then becomes the farmer's job to make it fit for the consent application. It was suggested that there needs to be standards about design.

Storage sized to a good system

- It was stated that storage size consideration should start with the overall effluent system first.

Management tailored to farm systems

- TAG members stated that management plans and any advice provided to farmers should be specific to their farm operation.

2.3 Session two – What needs improvement

TAG participants were asked to identify areas for improvement in current practice, focusing on infrastructure, technology, and management approaches for both storage and land application. The discussion emphasised practical strategies to reduce impacts, with input extending beyond specific rules to include broader management practices. The framing of the question, as reflected in the workshop notes, was intentionally open and did not seek recommendations for new rules.

2.3.1 Storage – What needs improvement

Pond levels going into high-risk months

- It was suggested that Freshwater Farm Plan requirements are used to manage the risk of pond levels going into high-risk months rather than setting a specific pond level condition in the regional plan rules.
- Another individual expressed that *'there needs to be linkage to freshwater farm plans in terms of where the actions are going to be'* to manage pond levels and risk.

Rules/Guidance re: Pond Drop Test

- TAG participants advocated for sensible rules and guidance around the requirements for farms to complete a pond drop test. They suggested that the rules refer to IPENZ Practice Note 21[1] for guidance on seepage testing.

Qualifications of pond design

- There was a recommendation that the entire farm animal effluent system design required an overview.
- It was emphasised that it is important for the 'right people' to design pond systems – as it is not simply a matter of determining pond size.
- Farmers, it was said, should have options rather than being told to upgrade their existing ponds or install a new pond. Other approaches can be used, and farmers should be provided with the right advice so that they can make an informed decision.

Appropriate solid management for systems

- It was clarified that 'solids' included organic matter from winter housing calf sheds.
- The TAG respondents agreed appropriate solid separation is necessary for systems.
- It was suggested that the regulations regarding solid management systems need to provide specifics for size, capacity, and the need to be sealed. It was felt that 'everything' needs to be sealed and contained.
- There was recognition that many farmers are being punished ('pinged') for not managing solids.
- WRC staff/facilitator asked the following question: *What percentage of farms have solids in the pond, and the pond is being stirred?*
    - TAG participants estimated that the answer was 5% (*of farms?*).
    - They clarified *'if it's a grass only system it doesn't matter, if you've got a feed pad attached to it that starts to matter.'*

[1] This refers to the Practice Note 21: Farm Dairy Effluent Ponds Appendix B: Pond seepage testing at the time of the TAG workshops. It is now the DairyNZ Code of Practice for Effluent Seepage Testing (September 2025).

    - It was thought a more important question is: how many farms have installed a system to separate solids, but it is ineffective? If the proportion of solids is too large, it can become problematic.
- It was noted that storage bladders fill up with solids if the solid materials are not separated before going into the storage bladder. This can result in the solids blocking the vents and creating a system failure.
- WRC staff/facilitator asked the following question: *'How many farms throughout the Waikato* do *you estimate have storage bladders? Is it very common?'*
    - TAG participants stated that storage bladders were not very common, with an estimated 5% of farms using them.
    - It was noted, however, that when storage bladders fail, they can cause significant issues.
- In reference to bunkers and underpasses, it was stated that *'everything needs to be sealed, contained and appropriate.'*
- Regarding solids storage, one individual stated that the focus should be on capacity rather than requirements. They said that the focus should be around capacity for solids produced and that it is contained, as well as how often the storage is emptied.
- It was noted that the current rules do not consider the surface which solids are stored on; and this gap should be addressed in future regulations.
- Another individual discussed infrastructure and noted there is a lot more chip and composting material being generated and that needs management. Material management is not always considered.
- One participant stated, 'anything from sheds is usually spread straight to the land' and consideration may be needed if the material from calf sheds is spread across the same area for multiple years.

Solid storage, milk discharges and leachate management

- It was stated that the rules should be specific around solid storage requirements including capacity, how often emptied and stored on a sealed surface.
- TAG participants said that silage leachate should be directed to storage.
- It was noted that the current permitted activity rule does not specify whether farmers can or cannot put leachate into effluent storage system or milk into their systems in the event of an emergency.

Emergency plans

- In response to questions about the impact of milk discharge on water quality, it was noted that milk entering waterways can harm biodiversity due to its high biological oxygen demand. While not universally acknowledged as a requirement, the discussion highlighted the importance of having emergency plans within farm management plans to address issues such as adverse weather events, power outages, and milk dumping.

Lined pond location next to waterways

- One participant suggested that 'existing protections' should apply to farms who have lined ponds built close to waterways, as this is where the dairy shed was often located.
- Regarding existing protections, storage calculations that were done in the past are no longer compliant due to DESC updates (e.g., soil risk updates). Consequently, 'grandfathering' may be needed for storage systems designed based on past versions of the DESC.

WRC staff/facilitator asked the following questions and received these corresponding answers:

- *How do you manage that [where a DESC upgrade means your storage is no longer at 90%, and would be non-compliant], are there things that farmers could do that doesn't require updating their storage volume but increasing their land area or something else?*

- The most common option for multi-owned farms on a risk-based system, to achieve compliance could be increasing the time effluent is pumped from the storage which is challenging for staff and causes wear and tear on equipment. The other options are then to upgrade to larger pumps or to use a land applicator that can apply to a lower depth.

- *What changes took place to when the dairy effluent storage calculator was updated that is impacting calculations?*
  - TAG respondents identified the following factors/changes:
    - The previous version did not have a cap on drainage.
    - The update/online web version includes 10mm drainage for low-risk soils.
    - The calculator does not account for contractor only systems.
    - The calculator does not account for whether a farmer undertakes once-a-year application to other parts of their farm, or another work-around.

- *Can the DESC be used for other types of dairy? For example, dairy goats'*
  - TAG participants confirmed that the DESC does work for dairy goats.

- *How much collaboration happens in these systems across farms?*
  - It was acknowledged that collaboration between neighbouring farms is infrequent due to distance and farms increasing in size.

Impacts of greenhouse gas (GHG) mitigation

- Examples of this included eco-panel guidance for pond levels and solid separators to capture GHG release risk in solids.
- It was stated that *'at some point soon there will be a situation of compromise between what system is being designed for effluent and what system might be designed for greenhouse gas reduction.'*
- One participant explained that there is support for the notion that solid separation may reduce greenhouse gases by 40% - which may encourage more farmers to install solid separation.

2.3.2 Land application – What needs improvement

Irrigator performance

- Regular servicing of effluent irrigators is required.
- It was noted that many farmers use either Halo or Levno systems to monitor their milk storage tanks/vats. These milking vat monitoring systems could be 'piggybacked' to include some sort of monitoring system to assist with effluent management.
- TAG participants noted that it is important to have a failsafe put in place to stop the effluent irrigator.
- One fail safe suggestion was a 'simple pressure monitoring device' on the delivery pump which can detect either high or low pressure. This was not seen as a large expense. Watching the irrigator when in use was another example provided to manage risk.

Soil moisture deficit measure – probes

- It was stated that the soil moisture deficit measure should depend on the type of soil on the farm/property.
- One individual questioned whether there should be something within the rules regarding soil moisture.
  - Another participant asked if the NIWA Daily Site Guide was sufficient.
- Regardless of what the rule is, respondents expressed that it should be both specific and simple. It is important that regulations do not lead to behaviours that create further risk.

- One commenter suggested that a reading and recording of soil moisture should be done prior to every irrigation and then saved on a smartphone to provide a record.
- It was noted that not all farmers are using nutrient value.
    - WRC staff posed the following question: '*Would this be a rule, component of a rule or just an advice note. There are all sorts of information saying "don't irrigate until you plant, or your soil moisture is XYZ. It is practically challenging to do monitoring and compliance - you have to be out on the farm to take a reading. Could council ask for records, and apps and do it through there?'*
    - The meeting participants replied *'Potentially, yes. It is a workability thing – council will need to take a look at how the apps and their records work and determine how it fits in with monitoring and compliance officers' requirements. It could be a risk-based thing tailored to farm plans.'*

Training

- It was noted that Ag ITO (Agricultural Industry Training Organisation) is no longer available.
- One participant suggested that a 2-to-3-day course in person would be a possible minimum requirement – rather than online content/material.
- Another individual stated that if online training was used, it could be developed by WRC and include pictures.
- It was stated that although some of the older guidebooks may need to be updated, they still contain good content.
    - One participant noted that the depth of the knowledge/training will depend on the position of the individual worker. For example, the first in charge will need to know more than the second in charge.
- It was acknowledged that although technology can provide assistance, e.g., using phone apps to turn systems on and off.
- There was recognition that although lots of data is collected, it is not always used effectively.
- Who is responsible for training was discussed.
    - One commenter asked *'who will create the resources and keep them updated?'* and *'would it be better held in council?'*
        - It was expressed that it might be more suited to the council as they are 'always monitoring effluent.' Whereas DairyNZ and milk supply companies may not consider this a priority.
    - Another individual asked whether the training should be a joint initiative between WRC and DairyNZ – as this had been the approach used previously.
    - There was discussion on what the incentive for farmers would be to do training. Would completing the training mean that the activity is a permitted activity rather than a consented one? If not, the training is merely a cost.
    - It was stated that training needs to be incentivised.
- It was asked how farmers could prove that training has been done.
    - The response was that photos with a date stamp and geo-location should be required.

Suitable record keeping

- On the topic of record keeping, TAG participants explained that the administration of irrigation is high and includes which paddocks have been irrigated, the application rates (including. volume), and hose layout.
    - It was noted that *'ponding and runoff can occur when the irrigation gear is being dragged around the paddock.'*
- WRC staff/facilitator posed the following question: *'Are the issues being raised a mixture of regulatory requirements and what the farm and farm owners need to do as well? Or are you seeing those as the standards?'*

- TAG participants expressed that they saw it as being *'regulatory'* and a matter of *'council compliance'* as well.

Irrigator bucket testing

- It was stated that irrigator bucket testing must be carried out on an annual basis.
- DairyNZ, it was noted, have an online spreadsheet [irrigation bucket test calculator]2 to assist farmers with carrying our bucket testing.

Effluent block area/size

- One response in the workshop highlighted that effluent discharge areas should include a 20 metre setback from waterbodies. The group noted that while setbacks are widely used, the appropriate distance should be tailored to each farm's risk profile and system, rather than applying a blanket rule. This helps minimise the risk of direct discharge into waterways.
- TAG participants expressed support for use of Freshwater Farm Plans as the effluent block area/size are site-specific.
- When asked if the group have any position regarding what the setback should be, participants expressed that the setback should be tailored to the specific farm and system. It was noted that the focus should be on having rules which relate to the possible risks, rather than having a 'blanket rule' approach.
- WRC staff posed the following question to TAG participants: *You have indicated that you would not be in favour of having a setback, so then the reliance to manage risk as an end point for compliance would still have to be something such as no direct discharge into a waterway, runoff or airborne discharge, is that the stop gap?*
    - It was noted that there are currently no[3] *Waikato Regional Plan* rules regarding setbacks from the boundary and/or from houses, where other councils have setbacks.
    - Some district councils have 20 metre setbacks. Hauraki has setbacks at 300 metre setback– which was said to be *'best practice.'* in the Code. This standard is 300metre from the house, a neighbour's house, road, or external boundary. The group noted that distance was a lot given '*most farms are only 100m wide.'*

2.4 Session three – Solutions, refinements and gaps

TAG participants were presented with a diagram and an overview of the draft approach by WRC staff. The four main components of the approach were: storage, land applications, stockholding areas, and timing and staging requirements. Attendees were invited to make comments on standards for storage and land application, solutions, refinement and gaps.

2.4.1 Storage – Solutions, refinements and gaps

Stormwater diversion

- Respondents acknowledge that while it would be good to get rid of stormwater diversion, existing facilities are very expensive.
- It was noted that there are 'too many' incidents where farmers have stormwater and/or yard diversions, but they are not properly managing these – and so they are consequently 'pinged.'
- There are situations where farmers can capture the rain and include it in their system; and farmers should size their pond according to whether stormwater is being incorporated.
    - The DESC can take stormwater diversion into account.
- Participants agreed with the notion of storm water diversion for roof and roof areas, but they disagreed with it being used for yards and other places.

[2] Tools - Irrigation Bucket Test | DairyNZ

[3] Note: that there are 'setbacks' in the WRP - a discharge within 20m setback from Significant Geothermal Features (WRP Rule 3.5.5.1 and 3.5.5.2) and a feed pad and standoff pad shall not be located at least 20m from surface water (Rule 34.5.5.2).

- Want the wording of any stormwater standards to reflect that farmers want the water and effluent but that this is not stored in summer as both water and effluent are needed for the land.
- It was stated that WRC need to be careful with the phrasing used within the plan, so that farmers do not receive a technical non-compliance.

Certification and documentation

- Should include certification of liners. It was noted that farmers do request copies of certificates for pond liners, and they need to have these available upon request.
- One suggestion was a certificate of completion from an engineer and another from the company which sold it, explaining the liner was installed according to standards and the product will last for the next 10 years or more (i.e., a producer statement).
- It was noted to have completion certificates for pond drop tests. Rather than seeing a report, farmers should receive a signed certificate which can then be sent to the council.

Storage bladders, consent requirements, and standards: Workshop discussion highlights

- WRC staff posed the following question: *'Do we write rules to try to transition people out of bladders, or will people need to have a consent to have a storage bladder?'*
    - It was stated *'If a [system] design is done properly, it [bladder storage] can be okay.'*
    - It was noted that bladder storage systems are not inherently problematic; their effectiveness depends on being part of a well-designed overall system. The discussion did not advocate for or against bladders specifically but emphasised that appropriate design and integration are key considerations. Further comments in the workshop addressed the role of consenting in managing risks associated with these systems.
- 'That could be the solution that if you've got a bladder, you've got to have a consent because then with your consent you manage the risk'. Then you are having a conversation and agreement with council about what the risks are, or you are using a bladder, what you need to do to manage the risk. After that, the farmer can decide whether to have a bladder or build a storage pond. A TAG participant asked if this approach would also be applicable to tanks of ponds built into hillsides? Another respondent noted that having ponds built into hillsides can fall under the 'Dam Act'[4] which requires an engineer's report from the district council.
    - It was asked if pond failure from instability on hillsides poses the same risk as a bladder?
    - It was noted that that risk was only going to happen *'during adverse weather it will be the water that will cause a slip' to occur.*

  One participant asked if a pond can be built by an effluent system designer, but without engineering signoff, which meets the standards set in IPENZ Practice Note 21? There is no company building ponds to meet the standards, that don't get an engineer sign-off but meet all the standards.
    - It was stated that in the new Code of Practice, an engineer will need to sign off a certificate. They thought the current Practice Note sign-off by an engineer is the standard but there is no obligation.
    - In reference to Minimum Standard #14[5], it was stated that this standard would discourage the use of bladders. It was explained that if a farmer is required to place a bunding around a bladder, they might as well install a pond. It was asked of other TAG participants *'if the bund collects water and there is a spill will this go into the waterway?'*
    - It was questioned whether a bund would be useful in the event of a bladder failure, and therefore why would you require bunding.

[4] Building (Dam Safety) Regulations 2022

[5] Minimum Standard #14 Farm animal effluent storage bladders must have suitable bunding to contain or direct any spills or failures away from surface water courses or drains.

- When the TAG was reviewing the draft minimum practice standards a general comment was made that consideration of a set of standards/code of practice, rather than using numbers, as these will need to be continually updated.

Failsafe (mechanism for alternative) – designed for system – isolation – notification

- It was asked if systems of solids separation fail often.
- A participant compared *'weeping walls'* and *'mechanical separators.'* More time is required for a farmer to monitor mechanical separators, and they are quite high maintenance. If a system is installed and 'bits' start getting inside of it, this can become expensive. Regardless of whether a 'weeping wall' or 'mechanical separator', a farmer needs a maintenance plan for solid management infrastructure.
- In reference to draft Minimum Standard #17[6], participants expressed that they were advocates for failsafe systems and something that should be written into the rules. They acknowledged that there is the potential to make this best practice across the industry within the Waikato region.
    - Though it was expressed that this could depend on how the concept/mechanism is defined.
    - It was suggested that perhaps there should be an effluent management plan that includes a failsafe and defining what is meant by the term 'failsafe'.
    - It was questioned if there was a need for an exemption clause for when a failsafe cannot be put in place for practical reasons.
- It was noted that a failsafe should be designed for the system.
- It was proposed that farmers who do not wish to install a failsafe would need to monitor the operating system in order to balance the risk.

Effluent Management Plan readily viewable at farm

- One participant suggested that an Effluent Management Plan could be part of the Freshwater Farm Plan. This requirement would be part of a rule condition.
- It was recommended that the Effluent Management Plans need to be more specific, similar to earthworks plans.

2.4.2 Land application – Solutions, refinements and gaps

- One participant noted that the nutrient loading (fertiliser) rule in the operative regional plan—requiring a nutrient management plan for applications over 190 kg/ha/year[7]—was introduced 15 years ago but has never been implemented. Since this requirement has been superseded by freshwater farm plans and was never actively used, it was suggested that the fertiliser application rule should be removed from the updated regional plan.
- Another participant raised the question of whether hydraulic loading (as calculated by the DESC) could be better linked to actual effluent area and loading, so that farms have sufficient area and apply effluent when soil temperatures are optimal (e.g., 7°C or 10°C) for nutrient uptake. The group discussed that while nutrients could technically be applied in June and July when soil temperatures are low (e.g., -4°C), plants are dormant and not actively taking up nutrients, meaning the nutrients are not utilised. The group was seeking ways to address this practice, specifically, how to avoid application when there is no nutrient uptake.

[6] Minimum Standard #16 Irrigators must have a failsafe system installed that shuts off the farm animal effluent pump and ceases irrigation when the irrigator reaches the end of its run or when there is any fault including a pressure drop or stalled irrigator. These systems must be in use every time farm animal effluent is applied to land.

[7] Note that the National Environmental Standards for Freshwater include a requirement that application of synthetic nitrogen fertiliser to pastoral land does not exceed 190 kg/ha/year. In the Waikato Regional Plan, a nutrient management plan must be prepared and implemented to guide fertiliser application if applying fertiliser at a rate exceeding 60 kg of nitrogen per hectare per year, or where fertiliser is applied to land that has had stock effluent applied within the previous 12 months.

- Another member noted an example from PC1[8] that there is nitrogen fertiliser application unless temperature is above set degrees temperature.

Working volume

- A participant questioned where the concept of 'a minimum of 75% working volume available' came from. WRC staff explained that this standard is from PC1.
- A participant clarified that the PC1 working volume standard requires a reduction to 75% working volume by May9. Working volume refers to how much of your pond you are not using, which is a minimum requirement. This includes 300 mm at the top and 300 mm at the bottom.
- You can't ever completely empty the pond because the liner will lift. Therefore, there must always be a minimum volume of 300 mm at the bottom to hold the liner in place. Working volume is also included in the DESC.
- This level can vary by region; some regions have a standard of 500 mm freeboard.
- There was discussion about what is this volume measured from, for example is it 500mm to account for sludge in the pond or is the measure 300mm.

Storage bladders (draft Minimum Standards #14 and #15)

- Regarding draft Minimum Standards #14[10], it was stated that if a bund is built for a bladder (which, by default has to be sealable), the bund will capture rain and become full before the bladder fails.
- In reference to draft Minimum Standard #15[11], there was support for both recommendations – the use of a visible measurement device and/or having a minimum freeboard (height between the waterline and top of the storage) of 300mm.
    - Though one participant questioned how someone would interpret these standards for compliance if the storage bladders were used for contingency storage.
    - Another asked how farmers could measure the freeboard on a bladder since the liquid levels are not visible within the enclosed bladder system.
- It was expressed that a separate set of rules/guidance is required for storage bladders. Due to the risks posed by bladders, it was suggested that there could be a potential consent for these systems, as well as conditions. It was proposed that consent requirements, could be based on the height of the bladder.

Effluent spreading method

- Regarding the application of solid effluent, one participant noted that there are currently no standards outlined in the regulations; and it was questioned if there should be a different standard for the application of solid effluent. They felt that the high nutrient justified the use of different standards.
- An effluent management/spreading plan, it was stated, should be based on risks and (*contain a record of*) how much solid a farmer is spreading.
- In reference to nutrient testing, a respondent acknowledged that it takes time to collect a sample and wait for the results (if using a contractor). For nitrogen, it was suggested that testing kits should be used at the source.
- It was suggested that effluent spreading digital apps can be a useful tool for farmers. These can detail what the farmer will want to apply and at what rate they should apply

[8] Proposed Plan Change 1 Waikato and Waipa Catchment decisions version Schedule D1 Part D: 1. f. No nitrogenous fertiliser is applied during the months of June and July in any year unless the temperature is tested and found to be greater than 10 degrees Celsius within the root zone.

[9] Proposed Plan Change 1 Decisions Version: Schedule D1. Part D. 8 b. Effluent ponds are managed to ensure there is a minimum of 75% working volume available between 1 March and 1 May each year.

[10] Draft Minimum standard #14 Farm animal effluent storage bladders must have suitable bunding to contain or direct any spills or failures away from surface water courses or drains.

[11] Draft Minimum Standard #15: 14. Install a visible measurement device on farm animal effluent storage bladders to indicate the maximum level they can hold and ensuring they do not reach this level. Alternatively, maintaining a freeboard of 300 mm.

effluent. If rules require the use of these apps, then farmers will have documented evidence to demonstrate they have used it.

Farm tracks and yards (Minimum Standards #24 and #25)

- A respondent noted that draft Minimum Standards #24[12] and #25[13], which refer to farm tracks and yards, should be covered in the freshwater farm plan.
- It was stated that not all farm tracks and underpasses can be constructed so that their discharges are diverted to a farmer's effluent storage.
- There was concern about confusing messaging around certain structures for example, sediment detention ponds that end up collecting effluent from track ponds. Some participants noted that these structures were being described as mitigation for track run-off, while in practice they raise compliance issues related to effluent management and monitoring.

Effluent management plan (Minimum Standards #1, #2 and #3)[14]

- A participant questioned if effluent management plans will be a component of the farm plan. WRC staff clarified that an effluent plan could be a separate document, but part of the farm plan.
- It was suggested that effluent management plans be simple to do and should not require a consultant to complete. It was acknowledged that these plans could be used as a place for record keeping.

Composting barns

- In reference to composting barns and the capture of effluent, an individual explained that these should be properly designed, need to be sealed and have a drainage point.

Deferred irrigation

- Respondents expressed disagreement with draft minimum standard #8[15] regularly applying effluent to land to allow for available storage in wet weather. If the storage has been sized correctly, farms don't need to have to directly apply to land and want to be able to defer irrigation for two months. It was suggested that the wording of this standard needed to be changed so farms do not get a technical non-compliance when it doesn't matter.

2.5 Overall summary – Workshop one

The bullet points below highlight the core/reoccurring themes present within the discussions of the first workshop. The first TAG workshop, held on 30 October 2025, brought together technical experts to inform the development of standards for effluent storage, land application, and minimum practice requirements in the Waikato region. The session began with an overview of the FPR's purpose and context, followed by discussion of current regional plan provisions and compliance challenges.

Key themes and findings:

- **Lack of clarity in current rules:** Participants repeatedly noted that the existing regional plan lacks clarity, leaving farmers uncertain about what is required. Grey areas persist

[12] Draft Minimum Standard #24: Farm tracks and underpasses are constructed to divert discharges to a farm animal effluent storage facility or diverted onto land where it cannot enter surface water.

[13] Draft Minimum Standard #25: All practicable steps should be taken to minimise the potential adverse effects on freshwater quality and ecosystem health of farm animal effluent run off from stockyards, covered yards, calf raising areas and laneways

[14] Draft Minimum Standard #1. The farm has a comprehensive effluent management plan prepared in accordance with Schedule X that must include farm animal effluent system contingency plans, and training responsibilities.
#2: Any person involved in the management of farm animal effluent must review the Farm Environment Plan effluent management plan annually and be aware of and comply with any consent conditions.
#3. Maintain a record of farm staff farm animal effluent system training.

[15] Draft Minimum Standard #8: Regularly applying farm animal effluent to land when conditions allow to ensure maximum storage is available during large rainfall events and during prolonged periods of wet weather.

such as missing storage requirements and record-keeping provisions and many rules have never been consistently measured or enforced, limiting their practicality. The absence of clear, observable standards (for example explicit storage criteria, record-keeping expectations) creates inconsistent understanding and compliance. The commonly referenced 25 mm application depth can also be misleading, with bucket tests showing shoulder depths closer to 48–50 mm. Several requirements are difficult to measure in practice, reducing enforceability. Participants emphasised that rules must address whole-system performance (storage, irrigator, management), not just pond size, and highlighted risks associated with emerging systems like bladders and tanks, which can fail without proper solids management or appropriate siting.

- **Compliance and risk management:** The group noted that permitted activity rules do not adequately account for risk. Farmers may be compliant one day and non-compliant the next due to unforeseen events, highlighting the limits of point-in-time checks. Participants agreed that effective compliance requires ongoing maintenance, operating procedures, contingency planning, and evidence such as records. They emphasised that risk management should be integrated into Freshwater Farm Plans (FWFPs) rather than relying solely on inspections.
- **Education and support:** Effluent management is increasingly "falling through the cracks" as industry priorities shift and training opportunities decline. Participants stressed the need for practical education and day-to-day support for farmers. They noted that point-in-time inspections overlook operational risks, emphasising the importance of ongoing maintenance, operating procedures, contingency planning, and documented evidence integrated into FWFPs. To lift performance, participants recommended reinstating minimum training expectations, embedding training records within FWFPs, and using simple monitoring tools such as bucket tests and basic on-farm checks.
- **Advice and use of consultants:** While farmers often seek advice from industry consultants, there is no requirement to engage certified professionals. Ultimately, responsibility for compliance rests with the farmer.
- **Emergency management:** The workshop stressed the importance of planning for extreme weather events and emergencies, noting that long-term risk minimisation is critical.
- **Infrastructure and practice gaps:** Issues were identified with modern systems (e.g., bladders, feed pads, underpasses) and the lack of management/design criteria in regulations. The group called for standards that reflect current practices and technology.
- **Nutrient management:** There was discussion about the need for compulsory nutrient testing and the limitations of current rules regarding nutrient loading and application timing. Participants sought alignment between hydraulic limits and nutrient outcomes (for example realistic pathways to assess the 150 kg N/ha/yr standard), while avoiding duplication with fertiliser rules and FWFPs.
- **Practical solutions:** TAG participants focused on practical strategies to reduce impacts, including improved solids management, tailored advice, and stronger record-keeping systems. Their input extended beyond rule design to broader operational improvements. Suggestions included adopting measurable and observable standards, using risk- and system-specific setbacks, requiring explicit solids storage and leachate controls, and considering transitional provisions or 'grandfathering' where updates to the DESC could unintentionally render previous investments non-compliant.

The workshop participants provided technical input and highlighted the need for clearer, more practical standards that address risk, support ongoing management, and to reflect the realities of farm operations. Participants also identified the need for clearer, observable, and risk-based standards; whole-system design expectations; integration with FWFPs (including records and training); and updated provisions for modern storage systems. The feedback will inform the next steps in policy development, with further engagement planned to refine standards and address identified gaps.

3 Workshop two

The second workshop, held on the 13th of November 2025, focused on exploring the challenges and opportunities of implementing the draft farm animal effluent requirements. The session aimed to understand the magnitude of change required and to consider implementation approaches that balance environmental outcomes with farm feasibility and available support.

The workshop began with a recap and checking for any additional feedback from Workshop 1. Participants examined current practice, the scale of change required, key challenges and barriers, and implementation. They then received an overview presentation on draft options for timing and staging implementation and engaged in group discussion to explore these options, including advantages, challenges, risks, and any alternative approaches. Participants also shared their preferred options and reasoning.

The workshop concluded with reflections on additional considerations and next steps, including project timelines and feedback processes.

For a copy of the materials WRC presented to TAG participants including, the meeting agenda, discussion memo, and presentation slides, please refer to Appendices F, G, and H.

The following sections provide a **brief** summary of the feedback provided by TAG participants. For a more in-depth account, please refer to the meeting minutes in Appendix I.

3.1 Background and recap

There was a quick recap of feedback from Workshop 1, followed by further feedback provided by TAG participants:

Training and building capability

- It was acknowledged that the complexities in managing farm animal effluent systems arise from the need to ensure that infrastructure and day-to-day management are provided for.
- Those attending noted that training staff and having documentation of this training was very important. TAG participants agreed that there is a need for training requirements and improved access to training courses. One long-term solution that was suggested was a compulsory national training module, which would ideally be industry-led.
    - Over time, training opportunities have decreased, and many farmers are unsure where to go to access training. The industry struggles with the availability of trainers.
    - *'Training of farm staff is currently the exception, rather than the rule.'*
- Attendees discussed how *'training could be triggered, integrated into farm plans, and tailored to individual farm systems.'*
    - In reference to what is prompting people to undertake training the TAG noted that training is normally done on an individual basis, and is dependent on the specific farm, or if something has gone wrong.
- When discussing possible options for training, respondents said:
    - A compulsory online module would be better than nothing.
    - It was recommended that training development be industry led and *'from a best practice perspective.'*
    - There was discussion on who is best placed to take ownership, one participant noted that since the council is the one constant organisation, or perhaps it would be better for them to help develop the training collaboratively. Another felt that this should not be driven by council, and varying views on the role milk companies might play.

    - One approach could be every staff member involved in FAE management should complete a basic, system-specific training module. This ensures that all personnel have the essential knowledge required to operate and maintain the particular FAE system used on the farm.
    - Farmers might be shocked if they are required to give their staff mandatory two-day training courses. It might be better to tailor training to the specific farm/operation.
- It was suggested that, since farms are their own commercial business and must be compliant with legislation, training would be better situated as part of peoples' farm plans.
    - By capturing training within the farm plan, farms can document their management procedures and ensure that owners or managers complete training tailored to the specific needs and complexities of their operation. This approach supports compliance while recognising the autonomy of farms as individual businesses.
- WRC staff posed the following question: *'are there any systems that already exist that we could learn from and set up in the same way?'*
    - By capturing training within the farm plan, farms can document their management procedures and ensure that owners or managers complete training tailored to the specific needs and complexities of their operation. This approach supports compliance while recognising the autonomy of farms as individual businesses.
    - It was noted that some companies offer generic structured plans that can be tailored to individual farm needs, and that milk supply companies conduct annual audits. However, a key challenge is that farms may be compliant at the time of an inspection by a milk company or council, but this does not guarantee compliance throughout the entire year. The discussion highlighted the need for greater consistency across different types of assessments, with examples such as WOF and QCONZ audits, as well as council compliance checks. The importance of aligning farm plans and compliance processes to support year-round standards was also emphasised.

Application and design standards

- Emphasis was placed on focusing on outcomes, understanding what happens when issues arise and what farmers are trying to fix. For example, ponding occurs because effluent cannot drain to groundwater.
- Participants acknowledged that setting a hard and fast number is challenging. Instead, guidance should help identify risks within farm plans.
- There was support for including something in the regional plan to define "where the lines are" to reduce grey areas and provide clarity.
- Suggestions included exploring whether rules could indicate what constitutes a risk—perhaps not as regulation but through guidance notes.
- One participant proposed modelling or testing to understand the impact of effluent management, including implementation costs for storage and the resulting improvements in water quality. This links back to managing risk.

Farm systems, risk and staging implementation

- There was comment that WRC should be able to provide every farm with risk maps, farm plans completed for each farm and farm application as matched to that risk. This, in combination with every farm having a farm plan, would provide a better foundation than what currently exists.
    - For soil types in S-Maps that are not quite right, then industry could have the process to go through and verify what's there.
    - It would be useful to have industry experts review these rules as well. For soil types in S-Maps that are not quite right, then industry could have the process to go through and verify what's there that could be provided to WRC.

- It was noted that application depth and application rates are two different concepts.
    - For rates, standard tables can be used. Depths, however, are added into the DESC.
- It was stated that PC1 has done a good job regarding the topic of 'slope' and how farmers should approach this issue.
- Regulation/rule design will need to consider national direction to ensure that provisions are not being duplicated (particularly in regard to stockholding areas).

Compliance and practicality

- Participants debated how to address grey areas in compliance. There was concern about inconsistency between being technically compliant and achieving good environmental outcomes.
- The group considered whether setbacks and standards should vary with slope, and how risk could be better managed through farm plans rather than strict regulation.
- The attendees discussed the role of the freshwater farm plan in being able to assist with managing risk without applying strict standards and ensuring outcomes are being met. The group noted the need to consider the split between compliance under PC1 and freshwater farm plans. Effluent management could be monitored and implemented in different ways, either through the current compliance structure, national freshwater farm plans, or direct enforcement by the regional council. It is important to ensure obligations fall under the correct framework and avoid duplication. This needs to be a key consideration so the process is not made more complex than necessary and remains practical for everyone.
- The group noted that whilst there has been discussion of the 150kg/N/ha/yr loading rate, they had not yet discussed how to measure that standard, in the rule standards or in a farm plan.
    - One participant felt that once a year, farms should actually work out loading including measure of depth for the farm irrigator. Another question raised by the group was whether to use something like Overseer instead of relying on a default approach. 'Overseer' software could be used, but it is an expense and the system could change or a main component (e.g., irrigator) changes.
    - It can be difficult to apply a 'rule of thumb' (e.g., 4ha per 100 cows) as the *'required effluent area can be changing by 20% each year, according to concentration of supplements that are coming in according to the season.'*
    - The timing of applying the nitrogen will be important as well.

  It was noted by staff that the 150kg/N/ha/yr is a standard in PC1, is that number appropriate and logical?
    - The group noted that the current effluent permitted activity references 150kg and the purchased surplus in PC1. If you think about what a plant needs to grow, that 150 seems about right, logically.
    - The 190kg/N/ha/yr synthetic nitrogen fertiliser cap was also mentioned. It's about trying to get farmers to take the nutrient content of effluent into account when they're doing the short-term freshwater plan risk assessment.
    - Examples from other regions look at a total combined N input from all sources, working with farms in Hawkes Bay (measure effluent every month, depth testing twice a year and do nutrient maps plus fertiliser). This can be costly and could still be ponding and non-compliance on other areas of the farm.
    - Management plan would prompt consideration of how to use that nutrient.
        - A conflict may occur when the storage calculator only deals with hydraulic load but not nutrient loading.
- During the workshop, TAG participants were asked how best to achieve effective compliance and improved effluent management practices, particularly considering the diverse communities and social groups WRC engages with.
    - One response was *'a clear rule with a long implementation plan, and to allow all who are building ponds or making changes to follow through. To not have the peaks of workload and planning time. You would have a registration at the*

start and of the list of options – would lean towards the storage calculation and the 90th percentile as a driver.' From the high-risk list, such as if you have 10 days of storage you have to take action sooner.
    - Another participant agreed that a risk-based system would be good. There must be information already, such as catchments that are riskier than others.
        - A risk-based approach, for implementation would be better for the environment and would assist different areas that are high risk in investing.
- The next question posed to TAG members by the facilitator was *'is it worth engaging with commercial operators for things such as accreditation/WOF?'*
    - The market opportunity, for operators to become accredited no longer exists. Some operators who are not accredited can still receive work from the council – so becoming certified does not add value.
    - We want to stop farmers who are building ponds without DESC. There is one time to 'get it right', we have to make sure that they are doing the storage calculation at that point, prior to installing new systems.
    - Farmers will be eventually motivated to increase their storage or adapt their system – since improvements can result in this becoming a permitted activity and reducing their ongoing-costs.
- WRC staff then asked if it would be feasible to set a standard in a future rule (for example, 'any new effluent pond built must have the following things completed')?
    - It was thought that milk supply companies would be supportive of this approach for new ponds, however, there does need to be lead-in times. In addition, it was stated that this rule should not require farmers to purchase a new pond if their current one is working well.
    - Established ponds which are non-compliant can become compliant by reviewing and upgrading the system. Trade-off is important, particularly for retrospective storage calculations.
- TAG participants were then asked: *'do you think there is a threshold for significant upgrades, versus new ponds? And what level of assistance would you want farmers to have when making these decisions?'*
    - It was stated that assessments need to be done by someone accredited, they do not need to be an engineer.
    - No one in the Waikato is starting from scratch.
    - DairyNZ, and the region have the systems in place, including training opportunities. We have the things that the industry need. 'We just have to create the rules so that everyone is using them'
    - Useability assessment should be part of the system design; it is not always done well. *'When a consent officer is going through an application, the same scrutiny isn't necessarily applied in some councils.'*

3.2 Session one – Current practice, magnitude of change and implementation

WRC staff posed the following question: *'What is the scale of change that is required?'*

- There was comment that there are compliant systems, but farms are not managing them. There is not the impetus for them to change. This comes back to understanding the outcomes and training.
- Attendees thought that Freshwater Farm Plans will work since there is the potential for WOFs (Warrants of Fitness) and actions to be added straight away. It can explicitly tell farmers, '*here's what you have to do and here's the timeline to complete it.'*
- The discussion highlighted that achieving effective effluent management across the region is a substantial task, requiring improvements in both infrastructure and day-to-day management. It was estimated that around 80% of farms need to make some level

of improvement, with roughly 60% of the challenge relating to infrastructure and the remainder to management practices and staff capability (the people involved).

- While some farms are already ahead of the game, and many are working towards meeting standards, a small proportion remain laggards. This variation means that rules and compliance mechanisms must be designed to address the "lowest common denominator," ensuring that even those slow to adapt are brought up to standard. There was comment that: *'this may be where the consent versus permitted activity comes in – you don't need a consent because you're managing it and have a history of managing it.'*
- Staged upgrades were recommended, allowing farmers to start with correct storage (using the DESC calculator) and then progressively improve other aspects, such as irrigation systems, over time.
- The storage and applicator were seen as the crucial factors.
- The importance of clear standards and conditions in the rules was emphasised, so that the consent team can reliably identify non-compliance. Moderation of standards—such as those used in WOF and accreditation processes -was suggested to ensure fairness and consistency across assessments.
- The group also recognised practical constraints, such as the limited capacity of council staff to visit farms (currently about 500 per year) and discussed how changes to central government funding models might enable more frequent monitoring and increased staffing.
- Finally, it was noted that some farms have never been visited by council, underscoring the need for a comprehensive registration system to ensure all dairy farms are accounted for. This would support more effective compliance monitoring and help determine the true scale of change required, both in terms of infrastructure upgrades and shifts in management behaviour.

3.3 Session two – Options exploration

This part of the workshop involved a broad, interactive discussion about possible approaches to implementing the new requirements. Participants considered various options for staging, including how timing and prioritisation might work, and the potential scales for rollout, such as by geographic area, individual property, or other groupings. While several implementation strategies were mentioned, including risk-based approaches, fixed dates, and performance or infrastructure criteria, the conversation naturally cantered on the concept of a risk matrix.
Rather than addressing each question separately, the group explored the advantages, challenges, and risks of different staging options in a general way, with particular interest in how a risk matrix could help guide prioritisation and decision-making for implementation.
TAG participants were presented with these three questions:

1. *What advantages, challenges or risks do you see in the draft staging options?*
2. *Are there other options that need to be explored?*
3. *What is your preferred option and why?*

General discussion

Advantages and Risks

- *'Initial thoughts, there's a plan stop process [freshwater planning document] now, you've got a staging planning process to put the regional plan in place which might give us four years* down *the track from now – so there's no reason why farmers shouldn't be compliant within the next four years.'* Looking from that perspective does there need to be much consideration of staging?
- It was acknowledged, however, that people may choose to wait since they know that things may change.
- It can be frustrating for farmers to implement systems which they are told makes their operation compliant – only to later find out that they are actually non-compliant.

- One attendee expressed a preference for an approach based on risk assessment. For example, a storage calculator risk assessment or a volume risk assessment.
- There was discussion that, while soil risk is an important factor for effluent management, the current maps identifying high-risk soil types are not sufficiently accurate for reliable decision-making. Participants noted that improvements in mapping and data quality are needed to better support risk-based approaches, particularly when prioritising areas for staged implementation or targeted interventions.
- 'The rigour of the data, using defaults, going into storage calculations may be an issue.'

Resourcing and staging timing

- Considering how many people are needed to support farms with system design and building or upgrades, suggest that there really does need to be staging. For example, *'staging for how long all the systems take to be built for those who need it'* but *'something separate for those who are nearly there and just need a bit more to make it compliant.'*

Farm Planning

Policy staff asked if there would be risks if WRC had a roll out for farm animal effluent requirements independent of the farm plan roll out? What would these risks be?

- The hope would be that people who have a system designed and implemented from now on would be advised that that they will need documents which form the basis of evidence for freshwater farm plans. They would provide these documents, receive their ticks, and then they will have the data and evidence to demonstrate that they're a lower risk.
- Education is important also but farmers *'don't keep that stuff'* – keep documentation.
- Fixing high-risk issues sooner will benefit water quality as a whole.
- It was stated that things should be 'black and white' – rather than shades of grey.

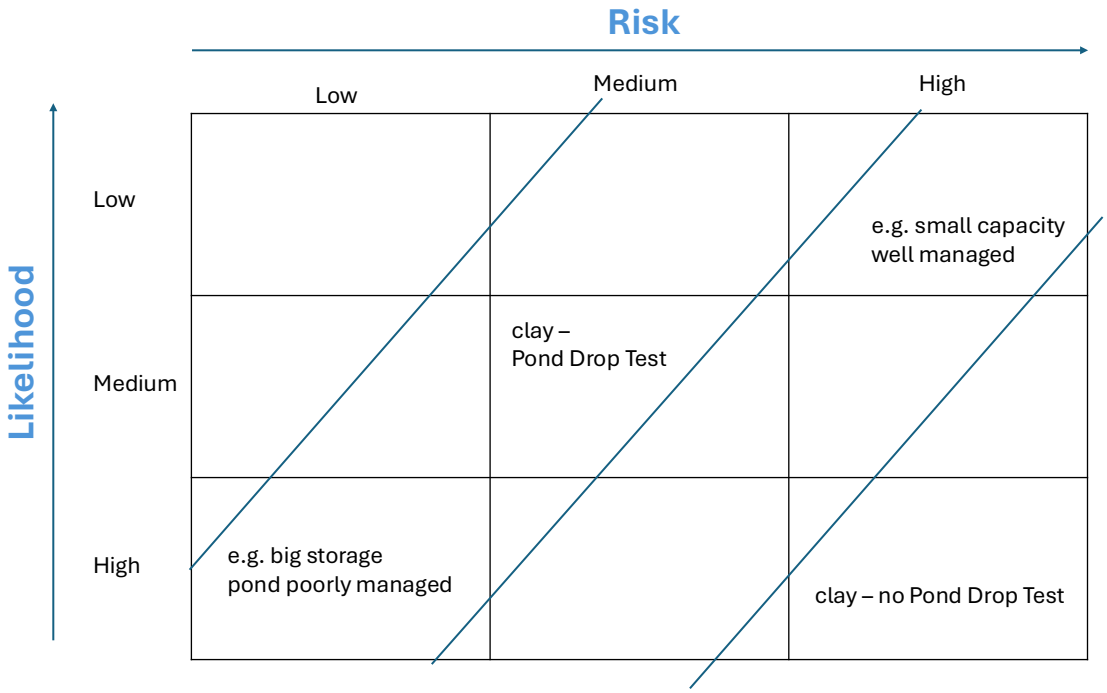
Risk/Likelihood Matrix

TAG participants were asked *'do we have an idea of what would constitute a higher risk system and how could we define that so that would then be the trigger?'*

- A staged implementation approach was proposed by a TAG participant and presented:
    - A risk/likelihood matrix graph where effluent could overlay onto a risk/likelihood matrix – risk sits on one axis and likelihood on the other.
    - The matrix could be designed to distinguish between permitted and activities requiring consents.
    - This matrix could also assist WRC *'to set these parameters to make sure we've got enough capacity to support these people with the timeline we want.'* On this note, it could be used to understand what resources council would need.
- PC1 and how it determines an intermittent waterway was seen as a good example. *'Here's 5 statements – if you hit 3 of these, you're an intermittent waterway and you need to fence it.'*
    - A similar approach could be done with the effluent risk/likelihood matrix. *'here are the 5 things that are risks if you hit this you're in this area, if you don't you got more time, but you've still got to manage.')*
- It was stated, *'a farm plan is still a direction of travel so farmers can start the journey, rather than wait.'*
- High-risk individuals who would prefer to wait under a risk/likelihood matrix would not be able to as the assessment would demonstrate that their operation sits within the 'consent required' section of the matrix.
- WRC does have data to support a risk/likelihood approach:
    - S-map and slope data
    - Data could be extracted from a record of the farms WRC compliance team has visited and who has passed or failed. This information could be entered into the matrix.

- The limits of compliance data were noted by staff (e.g., reasoning for non-compliance not included, some farms have not been visited for several years – so things will have changed, etc.).
- *'Future compliance visits could start collating the data that will be needed.'*

- It is important to consider risk management – if a farmer does not have fail-safes, what are the risks and what is the likelihood.
- There was discussion that several levels of risk/likelihood may result in some farms moving in and out of different matrix areas.
  - It was stated that this situation was 'always' going to exist. The focus should be on guidance around what a farmer should do when they are in the position.
- Possible risk layers of measurement:
  - Soil type
  - Storage capacity
  - Infrastructure management
- The approach can be framed as prioritising support for farms that have previously encountered compliance issues focusing on "who can we help first" rather than simply targeting the worst performers.
- *'The matrix could also just be used as a guideline for timing rather than who's who.'*



Implementation Timing, Equity, Cost, and Industry Engagement: Key Considerations for Effluent Compliance

- One commenter stated that they preferred the idea of having a set date for farms to be either consented or permitted (activities) by. So, all farms would need a consent by that date. Then the risk-based approach would then fall onto how council then prioritise work.
  - The same individual, however, also acknowledged *'but I do get concerned if we talked about that being written into the rule when then we've got some farmers being penalised for having different soils. And some farmers would also be penalised, depending on where they're sitting at.'*
- From an equity perspective, it was seen as simpler to apply the same standard to everyone.
  - '…that's probably one of the issues at the moment is a lot of farmers don't think there's equity in the effluent space in the Waikato especially with storage sealing and sizing.'

Cost

- Most rules, it was said, are developed so that low-risk systems are cheaper and easier to set up. More money is spent with higher risks (for example, peat making it challenging to set up ponds). *'In regard to the resourcing issue – could look at some kind of funded subsidisation for companies to become accreditation. Biggest push back on accreditation is the cost of it and how much time it takes.'*

Pushback

- TAG participants were asked *'what is going to be the biggest pushback on something like this* approach*?* The TAG members' response was *'change and the time it takes to socialise the rules.'* Currently, there are still farmers saying they do not know the rules.

Industry buy-in

- WRC policy staff asked how they can achieve buy-in and/or acceptance from the industry regarding thresholds. *'Who's going to help council set the lines, or thresholds, set in the standards?'*
    - TAG participants explained that 'a lot of the lines are already there.' For example, DairyNZ documents high-risk soils and ponds.
- Attendees thought that WRC would get good buy-in from farmers on this direction within the first two years of implementation.

Tools

- WRC policy staff asked how they can achieve buy-in and/or acceptance from the industry regarding thresholds. *'Have slope and soil type at a farm level. Have soil pocket guide.* And *storage calculator is objective. So that's two tools that are difficult to argue with from a council perspective.'*

Engagement with farmers

WRC staff asked, *'for engagement with farmers is this something that would be more effective coming from industry or regional councils?'*

- TAG members thought it should come from industries but with support from the regulating authorities.
- *'Need to get everyone on board.'*

- Frame it as an 'act now so you don't have to get a consent later.'
- There needs to be balance between the carrot and the stick.

Anything else?

The question was asked if WRC needed to consider anything else.

- Staging will help.
- If a farmer has a history of previous compliance and they can provide proof what they're already doing, this should be taken into account.
- The gaps between farm compliance visits and inconsistency with compliance visits causes challenges.
- Consider using airplanes and satellites to take photos of operations (e.g., effluent pond).

3.4 Overall summary – Workshop two

The second workshop, held on 13 November 2025, explored the challenges and opportunities of implementing draft farm animal effluent requirements. The session aimed to understand the scale of change needed, discuss practical implementation approaches, and balance environmental outcomes with farm feasibility and available support.

Key themes and findings

Training and building capability

- **Training gaps:** Participants agreed that effective effluent management relies on both sound infrastructure and strong day-to-day practice. They supported more accessible, industry-led training, potentially including a compulsory national module, with role-specific expectations and proof of training incorporated into FWFPs. Delivery should be industry-led with council support, and incentives such as eligibility for permitted activity pathways could help drive uptake.
- **Farm-Specific training:** Training should be tailored to individual farm systems and integrated into farm plans. Documentation of staff training is important for compliance.
- **Responsibility:** While some felt council could play a role, most preferred training to be industry-driven (e.g., by milk companies), with farms responsible for ensuring compliance as part of their business operations.

Application and design standards

- **Outcome focus:** The group emphasised focusing on environmental outcomes rather than rigid numeric standards. There was interest in using modelling or testing to understand the impact of effluent management changes.
- **Reducing grey areas:** Participants wanted clearer rules to reduce ambiguity, but also flexibility to address risk through farm plans and guidance notes rather than strict regulation.

Farm systems, risk, and staging implementation

- **Risk mapping:** There was comment that WRC should provide risk maps for every farm, with farm plans tailored to match each farm's risk profile. Industry input was viewed as valuable for verifying and refining these rules.
- **Staged upgrades:** Improvements should be staged, starting with storage and progressing to other system upgrades. About 80% of farms need some improvement, with 60% of the challenge relating to infrastructure and the rest to management practices.
- **Compliance challenges:** Technical compliance alone is insufficient; effective effluent management also depends on ongoing operational practice and staff capability. FWFPs can support this by including clear checklists and timelines for required actions. Standards should be practical and measurable, supported by evidence such as records, photos, simple devices, or bucket tests. Establishing baselines through registration of dairy farms and the use of aerial or GIS (Geographic Information Systems) tools would further strengthen monitoring and verification.

Implementation options and risk matrix

- **Staging approaches:** The group discussed various options for rolling out new requirements, including risk-based approaches, fixed dates, and performance or infrastructure criteria.
- **Risk/Likelihood Matrix:** There was strong support for using a risk/likelihood matrix to guide prioritisation and decision-making. The matrix would help distinguish between permitted and consented activities, direct WRC's effort, and support equity-conscious staging to avoid disadvantaging certain soil types or early adopters. Potential inputs include soil and slope data, storage capacity, compliance history, and management practices.
- **Equity and Buy-In:** Simpler, universal standards were seen as more equitable, but risk-based approaches allow for more targeted support. Industry buy-in is critical, and tools like soil maps and storage calculators are seen as objective and helpful.

Practical considerations

- **Monitoring and registration:** The need for a comprehensive registration system for all dairy farms was highlighted, along with improved compliance monitoring (potentially using aerial imagery and GIS).
- **Cost and accreditation:** Cost is a barrier to accreditation, and subsidisation could help. There was also discussion about the need for moderation and consistency in compliance assessments.
- **Engagement:** Effective engagement with farmers should be industry-led but supported by regulators. Communication should emphasise the benefits of early action ("act now so you don't have to get a consent later") and balance incentives with enforcement.

Workshop 2 participants highlighted the importance of a practical, risk-based, and staged approach to effluent management, supported by clear rules, strong industry engagement, robust training, and targeted assistance for higher-risk farms. A risk/likelihood matrix was identified as an option to support staged implementation, target farmer support, prioritisation and support consistent compliance expectations. The feedback will be considered as part of the next steps in policy development and refinement of the approach and implementation strategies.

4 Conclusion

TAG discussions emphasised a staged approach to FAE compliance, aligned with farm plan rollouts, while ensuring equity and clear standards. A risk-based framework was strongly supported, using factors like soil type, slope, storage capacity, and management practices to prioritise high-risk farms. Accurate data and measurement were viewed as important, requiring robust tools and baseline assessments. Integration of effluent plans into freshwater farm plans and maintaining records were seen as essential. Education and industry-led engagement were viewed as important to driving uptake, supported by incentives and enforcement. While infrastructure upgrades matter, management practices and cost barriers need attention, with suggestions for subsidies. Catchment-specific actions, especially for high-risk areas were perceived as important for water quality. Clear, enforceable standards and industry buy-in are needed, leveraging existing tools like soil risk maps and effluent storage calculators.

Overall, TAG participants highlighted clearer rules, whole-system design expectations, risk-based staging using a matrix, integrated training and records within FWFPs, and consistent, observable compliance measures as essential to achieve durable improvements in environmental outcomes and community confidence.

The bullet points below highlight the core/reoccurring themes raised by TAG participants from both workshops:

- **Whole system:** Participants emphasised the need for an effluent management approach that considers the whole system, with changes phased over time (e.g., pond upgrades first, followed by irrigation improvements). They noted that multiple system improvements are possible and that a new or larger pond is not always required.
- **Standards and guidance for tanks and bladders:** While IPENZ Practice Note 21 and the latest standards currently address ponds there is a need for proper industry standards and guidance to also cover tanks and bladders.
- **Training is important:** Participants stressed the importance of creating training materials – both mandatory courses that everyone would have to complete and specialised ones for specific roles. The need for practical education and support for farmers was emphasised.
- **Lack of clarity in current rules and compliance:** Participants consistently noted that the existing regional plan lacks clarity, leaving farmers uncertain about requirements and expectations. Many rules have never been consistently measured or enforced, contributing to gaps in enforceability particularly around storage specifications, record-keeping, and measurable on-farm standards. They also raised concerns about risks associated with modern infrastructure such as bladders and tanks. Moving from point-in-time checks to evidence-based compliance linked to FWFPs, supported by clear training expectations, role-specific modules, and simple verification tools (e.g., bucket tests, visible gauges, fail-safes), was seen as essential for improving consistency and accountability.
- **Co-operation between council and industry:** A number of comments discussed how the process of change will be easier to achieve if both council and industry can work together.
- **Make use of tools:** There was support that regulations make use of tools, for example, calculators and soil maps; but data would need to be up to date.
- **Practical considerations:** Including improved compliance monitoring and registration, practical strategies to reduce impacts, good record keeping, and cost and accreditation.
- **Nutrient management:** There was discussion about the need for compulsory nutrient testing and the limitations of current rules regarding nutrient loading and application timing.

- **Staging implementation is preferred:** Those attending agreed that staging of the requirements, would be the preferred approach to give time for farms to make changes and for resourcing - would be received more positively by farmers.
    - **Use a risk/likelihood matrix:** TAG members suggested that implementation of a staged approach to implementation of requirements be based on a risk/likelihood matrix to identify which farming behaviours/activities need to be prioritised.
- **Prioritise the biggest risks:** Once the risk/likelihood matrix has been used, WRC should then focus on tackling the issues that are both the most likely and the largest risk. Note also the importance of planning for extreme weather events in regard to long-term risk minimisation.

Finally, this report presents the technical input raised by TAG participants in relation to the design of the policy approach for FAE. It is intended as an engagement summary, capturing the technical insights, practical considerations, and implementation preferences discussed through the TAG process.

TAG participants identified a range of opportunities to strengthen and fine tune FAE management, with consistent emphasis on clearer, enforceable rules, risk-based and staged implementation, integration with freshwater farm plans and the importance of education, training, and industry collaboration to support compliance and environmental outcomes. Participants also highlighted the need for accurate data, practical tools, and proportionate responses that prioritise the highest-risk activities and locations.

The information summarised in this report will be used to inform the next stages of policy development through the FPR process, alongside other engagement outputs and technical input.

5 Appendices

5.1 Appendix A - Workshop one agenda

Rārangi take
Agenda

Waikato Regional Council
Te Kaunihera ā Rohe o Waikato

Freshwater Policy Review - Farm Animal Effluent Technical Advisory Group

Date	Thursday 30 October 2025
Time/Location	9.00am – 1:00pm Tui-Kowhai meeting room, Level 1, Waikato Regional Council, 160 Ward Street, Hamilton
Online	Join the meeting now
Participants	Caleb Highman, Dr Debbie Care, Shaun Hazelton, Trevor Foley, Adrian Brocksopp
Apologies	
In attendance	Ruth Lourey (WRC Topic Lead), Angela Fenemor (Freshwater Review Policy Lead), Jon Palmer (WRC Principal Technical Advisor) and Angus McKenzie (Facilitator)

Purpose

To seek input from participants to assist the Waikato Regional Council (WRC) with the further development of land application, storage and minimum standards under the Waikato Freshwater Policy Review to improve the management of farm animal effluent issues in the region.

Context

The Freshwater Policy Review (the review) is focussed on how we manage our environment so that our freshwater bodies are healthy. It responds to Government direction on how freshwater is managed in New Zealand to stop further degradation, improve water quality and ecosystem health.

A key issue being considered as part of the review is improving the management of farm animal effluent. The draft policy approach focuses on managing key activities including farm effluent storage, infrastructure and discharges by setting technical and practice standards. These standards are informed by known gaps in current practices, established industry practices and technologies, alignment with other regions, and insights from compliance monitoring in the Waikato. The intention is that the standards will manage risks and raise compliance levels to protect waterways from unintended discharges.

The scope of activities for consideration in this workshop includes standards in relation to:

- Land use for storage infrastructure and discharge of farm animal effluent from livestock kept in confined areas (e.g., dairy cows, goats, sheep, beef cattle, chickens, horses, pigs), including stock holding areas, feedlots and barns.
- Storage/composting of organic material containing manure from indoor-housed stock.

Doc # 33447669

He taiao mauriora — **Healthy environment**
He hapori hihiri — **Vibrant communities**
He ōhanga pakari — **Strong economy**

Time	Item	Topic	Lead
9.00am	A	**Introduction** • Welcome and karakia whakatau • Agenda for the day • Understanding the task • Guidelines for working together	Angus McKenzie
9.10am	B	**Overview presentation and discussion** • Freshwater Policy Review – context, progress update • Background and key issues for the Waikato in relation to the management of farm animal effluent. • Improving the management of farm animal effluent effects – a draft approach	Ruth Lourey
9.30am	C	**Workshop session 1 – Storage of farm animal effluent** • What farm animal effluent storage practices (infrastructure/technology, and management practices) need improvement? • What changes/additions are needed to the draft storage standards to address the issues identified?	Angus McKenzie
10.20am		Break	
10.40am	D	**Workshop session 2 - Land application standards** • What land application practices (infrastructure/technology, and management practices) need improvement? • What changes/additions are needed to the draft land application standards to address the issues identified?	Angus McKenzie
11.30am	E	**Workshop session 3 – Minimum practice standards** • What else should farms be expected to do as a minimum when managing farm animal effluent, including infrastructure, technology, and management practices? • What other changes/additions are needed to the draft minimum standards?	Angus McKenzie
12.00noon	F	**Reflections on workshop sessions** • What other aspects of farm animal effluent do we need to consider? • What else do we still need to address?	Angus McKenzie
12.20pm	G	Next steps and material for workshop 2	Angus McKenzie and Ruth Lourey

Time	Item	Topic	Lead
Meeting closure: 12.30pm			

Reading documents
Introductory Material - Workshop 1: Freshwater Policy Review Farm Animal (Doc #33371621)

Karakia whakatau	
Tukua te wairua	Allow one's spirit
kia rere ki ngā taumata	to exercise its potential
Hei ārahi i ā tātou mahi	To guide us in our work
Me tā tātou whai	as well as in our pursuit
i ngā tikanga a rātou mā	of our ancestral traditions
Kia mau, kia ita	Take hold and preserve it
Kia kore ai e ngaro	Ensure it is never lost
Kia pupuru, kia whakamaua	Hold fast. Secure it.
Kia tina! TINA!	Draw together!
Haumi ē	Affirm!
Hui ē! Tāiki E!	

5.2 Appendix B – Workshop one discussion memo

Discussion document: Freshwater Policy Review Farm Animal Effluent Technical Advisory Group

File No:	22 05 10
Date:	23 October 2025
To:	Freshwater Policy Review Farm Animal Effluent Technical Advisory Group
From:	Ruth Lourey, Policy Advisor Waikato Regional Council
Subject:	**Introductory Material - Workshop 1: Freshwater Policy Review Farm Animal Effluent Technical Advisory Group**

Purpose

The purpose of this discussion document is to outline the key issues with the current policy approach for managing farm animal effluent, describe some draft implementation standards to address these issues, in order to seek feedback and input from the Technical Advisory Group through targeted questions.

We are seeking your feedback on the draft implementation standards outlined below, including how practical, clear and effective they are in supporting good farming practice and consequently, water quality outcomes.

The draft approach outlined in this document is for discussion purposes only and does not represent Council policy. Please note that any description of possible requirements, rule thresholds, and standards are placeholders (in the overall draft approach section of this report) intended to support general discussion, they are not intended to be, and should not be considered to be, draft wording of policies, rules or plan standards.

Current issues

The management of farm animal effluent in the Waikato region has evolved significantly since the operative Waikato Regional Plan (WRP) was introduced.

Early in the life of the WRP, the effluent provisions did not consistently deliver the expected infrastructure standards or management practices. Issues included inadequate storage capacity, poor sealing (e.g. lack of synthetic liners) and storage management (e.g. stormwater diversion, and managing pond levels), and shortcoming in irrigation infrastructure and land application management (e.g. insufficient land application area, ponding).

Over time, Council and industry efforts, supported by community expectations and high-profile prosecutions, have driven improvements in farm animal effluent compliance. Infrastructure improvements have reduced the level of need for general surveillance-based monitoring, allowing a focus on higher-risk farms where inadequate effluent systems and/or continued poor performance exists. Investments have also been made in education, accredited system designers, effluent warrants of fitness, and industry-developed standards.

Despite these gains, challenges persist. The current rules include some specific controls over land application rate, run-off/ponding standards, permeability (leakage) requirements for infrastructure, and setbacks from receiving environments but lack detail on what is required to achieve expectations, making enforcement difficult. For example, farms may appear compliant during inspections despite having inadequate infrastructure, and some standards (e.g. permeability thresholds) are difficult to verify in practice. The nutrient and hydraulic loading limits for land application are not well-suited to all soil types and do not incentivise lower-rate application systems.

There has also been a gradual change in farming systems, with a noticeable shift toward more indoor housing and feeding operations. Alongside this, effluent management approaches and technologies have also progressed, with improvements such as more precise land application methods and the adoption of new treatment technologies.

State of the Environment[1] monitoring indicates that the installation of treatment ponds and the practice of irrigating effluent onto paddocks are having a positive impact. The observed decline in ammonia and phosphorus levels at most river monitoring sites is consistent with widespread reductions in effluent discharges. However, the lack of improvement in faecal bacteria levels suggests that further work is needed to address remaining sources. This may require increased focus on sources such as tracks and laneways, as well as other critical source areas and the introduction of more restrictive limits.

Discharges of untreated farm animal effluent to water are prohibited under the operative Waikato Regional Plan and should remain so. There is now broad agreement that treated effluent discharges to water are unacceptable and should not be provided for under future rules.

Proposed policy response

The overall policy approach for managing farm animal effluent (including the storage and associated discharges) will need to respond to these issues, by ensuring that any standards that are included in any new regional plan are clear and certain for all plan users, and we can ensure all farmers are operating at the required standard.

Overall draft approach to farm animal effluent

As part of informing our draft policy approach, we will be exploring different types of standards to manage land used for effluent holding facilities, the associated infrastructure for storage and land application, and discharges (including solid effluent storage and land application). These standards include:

- Design standards: Specify physical or engineering requirements for example, the required storage capacity, liner permeability, or sealing method for effluent ponds.
- Outcome standards: Describe the outcome or result that is to be achieved (e.g. no ponding or runoff) while allowing the farmer to determine the best way to achieve that on their property
- Practice controls (to be included as minimum standards): Set the baseline requirements (practices and mitigations and requirement on how they undertake activities) that all farms must meet (where relevant).

The draft approach includes:

1. Standards for the storage capacity of effluent holding facilities and setback distances from water bodies
2. Management of infrastructure used for land application and associated discharge practices

[1] Te oranga o te taiao Waikato State of the Environment 2022 State of the Environment 2022 | Waikato Regional Council

3. Using industry-developed standards, calculators and certification by suitably qualified people and engineers to validate the standards have been achieved and that the tools (e.g. storage calculator) have been appropriately applied.

The aim is to ensure all farms have:

- Adequate effluent storage that is well designed, managed, and maintained to reduce the risk of effluent being discharged during unsuitable conditions or any unintentional discharge to water; and
- Land application systems that are properly designed, installed, and maintained to prevent unintended discharge to water, and managed to minimise the risk of discharges to water bodies.

This topic also includes feedlots, stockholding areas, pig effluent and chicken litter, but these specific activities are not part of this group's input.

Activity status and standards

It is important to note that this TAG discussion will not address the specific rule framework or the appropriate activity status for particular activities. Central government has indicated that resource management legislative reform is expected to occur in 2026, and the form and structure of future plans may differ from the current approach. Given this, our focus is on developing sound and durable policy principles that can inform plan provisions regardless of the eventual legislative framework.

The standards described in this report may have different roles in the eventual rule framework. They could act as rule gateways or thresholds, or form part of conditions or matters of control/discretion. The draft approach includes a combination of controls, outcome, design and practice (or minimum) standards (in this case set as the minimum that all farms are required to meet, to control land use for effluent holding facilities and effluent discharges.

Farm plans are also referenced in this document, but no decisions have been made regarding the use of national Freshwater Farm Plans (FWFPs) or any additional requirements that may be included in a regional plan. At this stage, think of farm plans as a general concept that are required rather than a specific regulatory tool.

Component 1: Storage

The draft policy approach for farm animal effluent storage facilities includes a requirement for all farms to have adequate, well-designed, and maintained farm animal effluent storage systems to prevent discharges during unsuitable conditions or unintentional releases to water. Key aspects of this policy approach include:

- Storage facilities are to be sized appropriately and certified by a suitably qualified person. For dairy cows, this means using the Dairy Effluent Storage Calculator (DESC) sized to the 90th percentile; for other animals, an appropriate method must be used, as determined by a suitably qualified person.
- A requirement for farmers to provide either a pond completion certificate issued by an engineer or a pond drop test (PDT) certificate, at a set date. Their certificate must demonstrate that the pond meets the test criteria and does not exceed the maximum allowable change in pond level, and adheres to the required frequency of testing.
- That at least 75 percent of the working storage volume is available (yet to be determined if, and or what date or time period should apply)

- A requirement to meet the relevant practice minimum standards (refer to Appendix 1 of this document).
- Where upgrades or new facilities are required, design certification that the facility meets engineering standards (e.g. IPENZ Practice Notes 21 and 27), and has a leak detection system
- A requirement for infrastructure to be setback from sensitive or high-risk areas (such as waterways and critical source areas).

The increasing use of housing infrastructure for livestock brings up important questions about managing storage infrastructure for organic waste that includes farm animal effluent. It may be useful to consider how to deal with different types of waste, and if making a distinction between solid and liquid effluent is appropriate. This distinction may reflect where practices such as where PDT can be undertaken and where a permeability standard should be applied.

Different standards may be appropriate for farm animal effluent, compared to the storage infrastructure requirements for organic waste that contains farm animal effluent. The latter could be categorised as solid effluent or the storage of solid effluent, like that collected from a screw press or bunker, as well as from the bottom of a wintering shed. This approach to solid storage could include:

- Leachate from the storage of solid farm animal effluent must be contained and directed to a farm animal effluent storage facility.
- Solid farm animal effluent is stored on a sealed surface so that water cannot permeate at a rate greater than 1×10^{-9} m/s.

Component 2: Land application infrastructure and practices

The draft approach for managing the discharge of farm animal effluent focuses on establishing standards for the design, installation, and maintenance of land application systems for applying effluent to land. Key draft elements include:

- Application rate limits (above which, for example, more scrutiny and or more stringent rule activity status might apply):
    - Nitrogen loading ≤ 150 kgN/ha/year
    - Liquid effluent depth ≤ 10 mm per application (could vary based on soil e.g. low risk farm dairy effluent application soils on flat land)
- When requested, provide certification by suitably qualified person and farm plan audit results and supporting information that demonstrates compliance with the loading depth and the application rate.
- A requirement that discharges are setback from areas such as waterways and property boundaries.
- A requirement that the discharge does not directly enter surface water, pond on the land surface, or runoff beyond the irrigated area A requirement to meet the relevant practice minimum standards (refer to Appendix 1 of this document).
- Record-keeping: application timing, volume and location provided on request.

The draft approach for managing the discharge of solid effluent includes a requirement that the discharge must not:

- Contain any hazardous substances, pests, pest agents, unwanted organisms, or organisms of interest; or
- Occur onto the same area of land where a previous application is still visible.

The relevant practice minimum standards (refer to Appendix 1 of this report) for discharges include those related to farm animal effluent irrigation. These standards may require recording and demonstrating application depth using testing tools, such as bucket testing.

Component 3: Feedlots and other stockholding areas

The draft approach for managing feedlots and other stockholding areas focuses on addressing gaps in the NES-F regulations for feedlots and other stockholding areas. In addition, farmers will also need to meet any new regional plan requirements for effluent storage and land application.

Component 4: Timing and staging of implementation

The implementation of any new policy approach and associated rules/regulations will need to be staged over time to enable farmers to plan for and fund infrastructure upgrades, and to provide capacity within the industry to service and certify any upgrades required across the region. There are several options available for staging implementation, taking into account the scale of dairy farming in the region, the need for support from qualified professionals for certification and engineering design, and the practical delivery of policy outcomes over time. Options will be presented to the Technical Advisory Group as part of the second workshop, for consideration, advice and feedback.

Proposed Plan Change 1

Proposed Waikato Regional Plan Change 1: Waikato and Waipā River Catchments (PC1) includes farm environment plan requirements that address aspects of farm animal effluent management. These include:

- Standards (permitted dairy), goals and principles (consent) in the farm environment plan schedules
- A requirement to provide on request information about effluent management practices, nitrogen risk, and nitrogen loss rate assessment.

Refer to Appendix 2 for the specific farm environment plan schedule of requirements related to farm animal effluent.

Feedback from the Technical Advisory Group

To get this right for all plan users, we need expert input at this stage of the process. Here are a few things we'd like you to keep in mind when considering the information presented to the Technical Advisory Group:

- regulation typically establishes standards that are applicable to most farms, and it's not practical to develop rules that cater to every situation.
- standards need to manage risk, support water quality outcomes, and provide the community with confidence that the approach will contribute to those outcomes.
- where possible, regulations should also provide clear direction on how compliance will be assessed.
- importantly, provisions must be forward-looking. We should consider how the proposed standards will perform under future conditions, including changes in the frequency and severity of weather events, as well as advances in technology and evolving farming practices in the region.

When designing the policy approach, we need to evaluate the effectiveness and efficiency of the policy options under consideration. To assist us in ensuring the policy option meets the efficiency and effectiveness tests, we would appreciate if you could include supporting information when providing your responses to our technical questions, for example:

- Relevant rationale or justification for your feedback
- Any supporting technical references, standards, industry guidance or examples

- Other supporting information that will assist staff in evaluating the options

This information helps design a robust, implementable, and evidence-based policy approach.

Standards

Section 1 Storage Volume and Level Management

The draft approach aims to ensure the integrity of the farm animal effluent storage system is maintained. It emphasises the importance of having contingencies in place, and that farm animal effluent systems have sufficient storage capacity to enable the storage of hold effluent when conditions are unsuitable for land application. The goal is to manage storage levels effectively, ensuring the application of farm animal effluent to land does not occur under conditions that will result in discharges entering water.

While the overall approach considers multiple components of effluent system design and management (as described earlier), this section focuses specifically on two key aspects: storage volume and storage level management.

Box 1

The draft approach includes standards:

1. The farm animal effluent storage facility is sized either:
   a. for dairy cows, at no less than the **90th percentile calculated** in accordance with the **Dairy Effluent Storage Calculator** and determined by a Suitably Qualified Person – Pond Storage; or
   b. for animals other than dairy cows, certified as sufficient using an appropriate method as determined by a Suitably Qualified Person – Pond Storage; and
2. Certification by a Suitably Qualified Person – Pond Storage and supporting information that demonstrates compliance with condition (1) must be provided to Waikato Regional Council within 6-months of [date of notification] (unless otherwise agreed in writing by the Waikato Regional Council) and otherwise upon request; and

- The farm animal effluent storage facility has at least 75 percent **working storage volume** available[2] (yet to be determined if, and or what date or time period should apply); and

Volume

The draft approach requires storage to be sized based on the 90th percentile volume, as calculated using the DESC. Recognising the importance of adequate storage capacity to enable deferred irrigation, the results of using the DESC may indicate a need for upgrades or even new infrastructure. Given the need for correctly inputted farm information, the calculation must be certified by a suitably qualified professional.

Similar requirements for dairy effluent storage calculations can be found in more recently operative plans in other regions, including the Regional Plan: Water for Otago (2025) and the Proposed Southland Land and Water Plan (operative in part, May 2024).

Factors such as staff time to manage systems properly, peak cow numbers, and increasingly variable weather (e.g. very wet seasons) all contribute to the need for enough storage capacity to allow for deferred irrigation.

[2] The Farm Environment plan standards in proposed PC1 (decision version) permitted activity schedule include Schedule D1 Part D 8 (b)"Effluent ponds are managed to ensure there is a minimum of 75% working volume available by 1 May each year, to provide capacity for the wet winter period"

At present, the placeholder sizing is the 90th percentile. The DESC calculates the volume of effluent generated and assumes that land application occurs on every occasion when soil conditions are suitable. If irrigation does not occur on all suitable days (for example, due to staffing, equipment issues, or operational delays), the actual storage requirement will be greater than what the DESC predicts. This assumption is particularly important for farms on high-risk soils, where land application opportunities may be limited. In practice, prolonged wet weather and reduced application opportunities can place additional pressure on storage systems, and compliance issues have been observed as a result.

The Dairy Effluent Storage Calculator guide[3] includes a section on interpreting data and understanding output reports states that the required storage volume shows the probability (%) that a given storage volume (in m^3) will be adequate for any one year. The 90% probability indicates that the calculated storage volume will be sufficient in any given year, meaning the system may be insufficient in one year out of ten.

Storage level standard

There are some recognised challenges with developing a working volume standard. Setting a requirement for ponds to maintain 75% of their working volume introduces thresholds that, in practice, present several issues requiring consideration in policy design.

One issue is the practicality of always maintaining a fixed percentage of available storage. Operators often need to use the full capacity of their ponds during winter. A requirement to maintain 75% availability year-round could be unworkable and may not be able to be complied with.

The intent is to manage the storage level over that period so that the level is decreasing ahead of wetter conditions. But it's difficult to write a standard that captures this, and to verify compliance, because the level could be different from pond to pond.

Ultimately, the behaviour we want to encourage is that, leading into wetter periods, operators have reduced pond levels to ensure sufficient storage capacity for deferred irrigation. Ideally, you wouldn't want the counterproductive outcome of farmers to maintain that 75% level, undertaking land application when soils are above water capacity. While the direction of change, decreasing levels, is clear, defining the amount or level remains a challenge.

We are interested in understanding whether the proposed approach is workable, and whether there are alternative or complementary methods that should be considered.

In addition to how storage volume is determined and managed, ideally the approach should support farms in having the right type or standard of infrastructure. Consideration could be given to whether the approach reflects the relative risk of different infrastructure types, including how that risk may change over time. For example, even well-designed infrastructure may become more vulnerable as it ages or if damaged, so requirements to ensure systems remain sealed and are periodically tested could be important.

Section 2 – Infrastructure type and risk

Our policy approach needs to cater for different risk profiles and the various types of infrastructure used across dairy farms in the Waikato. Some standards, such as PDTs, cannot be applied to all types of effluent storage facilities or for some high-risk farms or systems. Risk may vary based on factors such as biophysical characteristics of the farm, infrastructure type, or storage capacity. For example, there is limited industry guidance and few tools available for bladder systems, which can carry a higher risk of critical failure compared to other storage types.

[3] A guide to using the Dairy Effluent Storage Calculator (DESC) Step by step instructions on how to calculate storage requirements October 2015 using_the_dairy_effluent_storage_calculator_dnz40_114.pdf

The approach could consider managing some types of infrastructure such as storage bladders, or surface tanks differently, particularly where failure poses a greater environmental risk, or where it is difficult to confirm structural integrity, sealing, or put in place contingency measures. Alternatively, if the infrastructure is appropriately sealed (and sized), the type may not matter.

We're also considering whether construction/seal type (concrete, clay, impermeable synthetic/geomembrane, storage bladders) should be used as a rule threshold, for example, identifying specific types or sizes (small storage or sump only) of infrastructure that require more scrutiny, or signalling which types of pond seal type we want to phase out or promote.

Options might include:

A. A threshold that some infrastructure type/s e.g. bladder storage requires more scrutiny and or more stringent rule activity status.
B. Allow storage bladders if overall system meets standards. Rely on other standards e.g. storage volume. For example, it may be appropriate to allow or provide for storage bladders + minimum storage volume or designed by engineer with bunding to contain content should it rupture or have other contingencies
C. Certification of pond integrity could be required for lined, concrete clay and or synthetic sealed storage infrastructure. For infrastructure that cannot undergo testing (e.g. PDT) such as ancillary structures, above-ground tanks, storage bladders, and solid animal effluent storage facilities alternative certification or design standards may be needed.
D. Require leak detection system in new infrastructure.

Box 2

Possible rule threshold (where other types of facilities require more scrutiny):

1. The farm animal effluent storage facility must be constructed of:
   a. concrete; or
   b. impermeable synthetic/geomembrane; or
   c. clay; and

Section 3 - Sealing

The draft approach seeks to ensure that effluent (including organic material that contains effluent) is collected on a sealed surface or within a sealed storage facility. The approach proposes requiring a pond drop test (PDT) as the method for verifying that the effluent storage facility is appropriately sealed, rather than setting a permeability standard for farm animal effluent storage. This verification includes meeting standards and a visual assessment as part of the PDT.

Where a PDT is not feasible, such as for stockholding areas or solid effluent storage facilities, the use of a permeability standard is being considered as an alternative.

While PN21 Appendix B[4] provides a useful reference for testing frequency and seepage rates, we are also seeking feedback on whether these standards should be adopted directly, adapted, or replaced with alternative approaches.

In addition to overall questions about the approach to requiring sealed storage systems and how to set and measure the standard, we are seeking input (if a pond drop test is required) on:

1. Frequency of seepage testing
2. Maximum pond acceptable seepage rate for compliance (pass/fail) standards and or
3. Whether pond depth should be a factor considered when setting a pass/ fail criteria

[4] DairyNZ/EngineeringNZ Practice Note 21: Farm Dairy Effluent Ponds APPENDIX B: POND SEEPAGE TESTING app-b-pn21-pond-seepage-testing-march-2024.pdf

4. Whether the provisions should include a schedule establishing relevant pond test criteria (methodology, example in Appendix 3 of this report from the Draft Otago Land and Water Regional Plan 2024 or refer to Southland Land and Water Plan 2024[5]), and what would they be, or as meeting the pond drop test criteria in Practice Note 21 (PN21) Farm Dairy Effluent Ponds Appendix B: Pond Seepage Testing.

Testing frequency options

One option is to align frequency of testing with PN21 Appendix B (Figure 1 PDT Testing Frequency Flowchart for Effluent Ponds page 9), which outlines retesting intervals of 10, 5, or 3 years for:

- New ponds or modified ponds (with or without a Pond Completion Certificate), and
- Existing ponds, previously untested ponds.

Refer to Appendix 4 of this report for the PN21 testing frequency flowchart.

The rule requirements could align with the testing frequency flowchart including the pond completion certificate timing pathway. This could include timeframes for when a pond test certificate is required, checks for visible cracks and defects, and the criteria or methodology used to determine whether a pond passes or fails.

It would also cover the timing of subsequent pond drop tests. These elements could help define standards and ensure consistency in how compliance is assessed and reported.

An alternative might be whether a simplified approach (e.g. a fixed 5-year retest for all ponds) may be more practical.

If seepage timing reports are accepted as supporting evidence of compliance, consideration is needed around what constitutes an acceptable result.

Setting seepage criteria

PN21 Appendix B notes that the Regional Council's will need to decide at what maximum pond test seepage rate they will accept for pond drop test to be compliant (PN21 Appendix B page 13).

Box 3:

a. a pond drop test certificate for the farm animal effluent storage facility conducted within 5 years prior to [date of notification], certified by a Suitably Qualified Person Farm Animal Effluent Systems, as:
   i. Having no visible cracks, holes or defects that would allow farm animal effluent to leak from the farm animal effluent storage facility; and
   ii. meeting the relevant pond drop test criteria in [Schedule/ or PN21 Appendix B] (excluding ancillary structures, above-ground tanks, storage bladders, and solid animal effluent storage facilities); and
   iii. does not exceed the maximum allowable pond level change (mm per 24 hours) in table x; and

It also highlights that pond depth affects seepage rates due to hydraulic head:

"Deeper ponds have a higher hydraulic head, which can result in higher seepage rates even with the same liner" (section 5.7.2 PN21 Appendix 1 page 13-14).

The report also states that pond depth is a factor for consideration by regional councils when considering setting of any pass/fail criterion for results.

[5] Proposed Southland Water and Land Plan example Appendix P Effluent Pond Drop Test Methodology pSWLP - Clean version following 9th Interim Decision PDF CURRENT.pdf

An alternative to a 'flat' seepage limit is to use a depth-adjusted approach, such as Table in Part 4 of APP27[6] of the Otago Regional Council Draft Otago Land and Water Regional Plan. This table links pond depth with maximum allowable pond level change during a pond drop test. For example, FF-R14-PER1 requires:

> *"(b) meeting the relevant pond drop test criteria in APP27 – Animal effluent (excluding above-ground tanks, bladders, and solid animal effluent storage facilities)."*

Refer Appendix 2 of this report for a copy of Table in Part 4 of APP27.

Section 4: Land application

We're seeking your input on the draft approach to managing land application practices and land application infrastructure, including conditions which seek to limit the quantity of contaminants discharged.

In addition to outcome-based discharge standards (e.g. no ponding, no runoff beyond the irrigated area), the draft approach is considering standards for land application rates.

The existing regional plan includes land application rate limits (hydraulic and nutrient loading), but these can be problematic:

- The current nutrient loading limit[7] is not appropriate for all relevant land uses (e.g. cut and carry 600 kg/N/ha/yr).
- The hydraulic rate limit[8] may not sufficiently incentivise investment in lower-rate application systems that support good practice.
- Ability to measure compliance with these standards.

Another possible consideration is that Proposed Plan Change 1 Waikato and Waipa Catchment. Under its permitted activity farm plan requirements, a 150 kgN/ha/year nitrogen loading standard is set[9]. However, this does not mean the region-wide approach to farm animal effluent must adopt the same standard or approach.

Box 4

The draft approach includes:

1. The nitrogen loading to land from farm animal effluent must not exceed 150 kgN/ha/yr; and
2. The maximum loading rate of liquid farm animal effluent onto any part of the irrigated land must not exceed a depth of 10 millimetres per application; and
3. The discharge does not result in farm animal effluent:
   a. directly entering into surface water, including via overland flow;
   b. ponding on the land surface;
   c. run off beyond the irrigated area; and
4. The discharge of solid farm animal effluent must not:
   a. contain any hazardous substance, pest, pest agent, unwanted organism or organism of interest.
   b. occur onto the same area of land where a previous application is still visible.
   c. contain any waste from human effluent treatment processes; and

[6] Draft Otago Land and Water Regional Plan. Final draft for Council meeting. 23 October 2024: lwrp-proposed-plan-draft-for-notification-decision.pdf AND Draft Otago Land and Water Regional Plan: Appendices, Schedules, and Maps Final draft for Council meeting. 23 October 2024 lwrp-proposed-plan-appendices-and-schedules-draft-for-notification-decision.pdf

[7] Waikato Regional Plan Table 3-4 Nitrogen Loading Rate for Various Users [incorrectly number Table 3-8 in the rules]

[8] Waikato Regional Plan Rule 3.5.5.1 e) The maximum loading rate of effluent onto any part of the irrigated land shall not exceed 25 millimetres depth per application.

[9] Proposed Waikato Regional Plan Change 1: Waikato and Waipā River Catchments Decisions Version Waikato Regional Council Policy Series 2020/02 Schedule D1 Requirements for Farm Environment Plans for farming under Rule 3.11.4.3 Part D 8c) "The effluent block is sized to ensure nitrogen applications from applied effluent are less than 150kgN/ha/year."

We recognise that farmers are familiar with the current requirements, and we're exploring how to carry forward aspects of the existing framework while clearly updating it to reflect current best practice.

The draft approach proposes updating the effluent application depth and loading rates. The current plan includes loading rates for various land uses (e.g. grazed pasture, cut-and-carry, Pinus radiata, eucalyptus, maize silage). We're considering whether to retain the current land use specific loading rates, revise them, or adopt a single limit or an entirely new approach.

Some other possible considerations and options might include:

A. Updated nitrogen loading rate - possibly expanded to include additional land uses and supported by a clear method of calculation.
B. Single nitrogen loading rate (as in PC1 farm plan requirements)
C. Return periods per application, e.g. including a minimum return period
D. Potentially tailored to equipment type (high rate and low rate), soil risk (e.g. high-risk farm dairy effluent soils, low risk farm dairy effluent soils[10]), and slope
E. Other standards using industry guidance, codes of practice, or calculators[11].
F. Rule standards that align application with soil moisture, plant uptake, and avoid exceeding soil capacity.

While there are recognised challenges with these types of standards, an alternative view in support of retaining them is that it's important to include conditions that limit the quantity of contaminants being discharged. These standards help reinforce the policy narrative that environmental outcomes will not deteriorate and ideally, will improve. They also provide clear direction for farmers about the scale of activity that may be considered to have less than minor environmental effects, and where resource consent is required to authorise the activity.

We recognise that application rate is only one aspect of land application risk. As noted in Houlbrooke et al 2025[12] "*The potential risk of direct contamination of water following application of FDE [farm dairy effluent} to land varies depending on soil-water transport mechanisms, climate variables, irrigation equipment, storage volume and management decisions. Given the importance of soil hydrological processes, FDE management practices should be matched with soil and landscape features to minimise the risk of direct losses of contaminants.*"

We're seeking your views on how best to manage land application and practices, including:

- Whether and how to account for landscape risk and soil types (e.g. slope, drainage, soil structure, hydrology).
- How to translate these risks into standards that are practical, monitorable, and not overly complex.
- The potential role of mapping, industry guidance, decision frameworks, and simple monitoring tools (e.g. bucket tests).

Section 5: Practice minimum standards farm animal effluent

We are exploring setting practice minimum standards that all farms, for relevant activities, would be expected to meet. These standards would act as a baseline, in addition to specific requirements for the use of land for farm animal effluent systems, storage upgrades and discharge and management improvements. This could include situations where a particular mitigation or management action is

[10] Soil risk map - soil risk for farm dairy effluent application | Waikato Regional Council; DairyNZ Pocket guide to determine soil risk for farm dairy effluent application pocket-guide-to-determine-soil-risk-for-farm-dairy-effluent-application-2020.pdf

[11] DairyNZ Good farming practices for environmental management, Dairy Farm Systems good-farming-practices-environmental-management-dairy-farm-systems-august-2025.pdf

[12] Houlbrooke DJ, Laurenson S, Monaghan RM, Carrick ST and Horne DJ 2025. Development of a decision framework for matching farm dairy effluent management practices to soil and landscape risk features, NZ Journal of Agricultural Research, Vol. 68, Issue 6
Full article: Development of a decision framework for matching farm dairy effluent management practices to soil and landscape risk features

important, but it is difficult to define a measurable standard. Refer to Appendix 3 of this report for the draft practice minimum standards.

Rules could reference or incorporate these practice standards, in the same way permitted activity rules include standards that farmers must comply with. The proposed intent is to set minimum requirements, including if for example staging of implementation is required to establish interim standards/ or set a minimum standard to be meet. These are just a baseline farms can do more. Farm plans could also be used as a mechanism to demonstrate adherence to relevant minimum practice standards and other design and outcome standards.

There may also be a role for effluent management plans, as a component of farm plans, to support activities and practice standards that are harder to define through technical specifications such as regular irrigator equipment checks and maintenance. Effluent management plans could also provide a way to record information like land application timing and area.

We're interested in your views on both the proposed minimum practice standards and how they could work as part of the regional plan approach.

This section assumes that the draft standards will contribute to improved water quality, and that some form of farm planning (such as Freshwater Farm Plans or council-required plans) will be in place.

These draft implementation components form the basis of the proposed policy approach. Your feedback will help refine the standards and ensure they are practical, effective, and account for future.

Workshop 2: Implementation and Impact

In TAG workshop 2, we'd like your input on how best to stage the rollout of new requirements and how to support both implementation and freshwater outcomes.

To better understand the magnitude of change and where to focus effort, we're also seeking insights into current farm practices and the availability of professional support in the region, and information on what change may be required to comply with the requirements.

Appendices:

Appendix 1: Draft farm animal effluent practice standards
Appendix 2: Proposed Waikato Regional Plan Change 1 Decisions version Farm Environment Plan Effluent Standards, Goals and Principles
Appendix 3: Draft Otago Land and Water Regional Plan Schedule APP27 - Animal Effluent
Appendix 4: PDT Testing Frequency Flowchart for Effluent Ponds

Appendix 1: Draft farm animal effluent minimum practice standards

Draft farm animal effluent practice standards
Effluent Management Plan (component of the FEP) 1. The farm has a comprehensive effluent management plan prepared in accordance with Schedule X[13] that must include farm animal effluent system contingency plans, and training responsibilities. 2. Any person involved in the management of farm animal effluent must review the Farm Environment Plan effluent management plan annually and be aware of and comply with any consent conditions. 3. Maintain a record of farm staff farm animal effluent system training.
Management of the farm animal effluent system 4. Ensure that the farm animal effluent storage facility always maintains a minimum of 300 mm freeboard. 5. Install a visual depth gauge on the farm animal effluent storage facility to clearly illustrate the freeboard level. 6. All components of the farm animal effluent system shall be operated and maintained in good functional order. 7. There must be no overflow of farm animal effluent from any storage facility or part of the disposal system (e.g., pipes or hydrants). 8. Regularly applying farm animal effluent to land when conditions allow to ensure maximum storage is available during large rainfall events and during prolonged periods of wet weather. 9. Farm animal effluent storage facilities must be managed to ensure sufficient storage for deferred irrigation is available during prolonged periods of wet weather. 10. Emptying the farm animal effluent storage facility as much as possible before expected rainfall events, provided that maximum application rates are not exceeded. 11. Contingency events are actively managed, including modifying normal operations to address issues like pump failures or prolonged adverse weather.
Permeability seal 12. If the integrity or sealing of the farm animal effluent storage facility has potentially or been compromised (e.g., damaged, visible leaking, mechanical cleaning), a certificate certified by a Suitably Qualified Engineer or Suitably Qualified Person Farm Animal Systems must be provided to Waikato Regional Council within 20 working days of receipt of certification results.
Decommissioned ponds and storage bladders: 13. If the use of a farm animal effluent storage facility is discontinued, it must be disconnected from the existing farm animal effluent intakes and fully decommissioned by removing all farm animal effluent contaminated liquid and sludge within 12 months of ceasing use.
Farm animal effluent storage bladders 14. Farm animal effluent storage bladders must have suitable bunding to contain or direct any spills or failures away from surface water courses or drains. 15. Install a visible measurement device on farm animal effluent storage bladders to indicate the maximum level they can hold, and ensuring they do not reach this level. Alternatively, maintaining a freeboard of 300 mm.
Farm animal effluent irrigation 16. Irrigators must be maintained regularly according to the manufacturer's recommendations. This includes periodic checks of nozzles to ensure proper function and distribution. 17. Irrigators must have a failsafe system installed that shuts off the farm animal effluent pump and ceases irrigation when the irrigator reaches the end of its run or when there is

[13] Draft Schedule will set out what the Effluent Management Plan must contens and timeframe for review.

Draft farm animal effluent practice standards
any fault including a pressure drop or stalled irrigator. These systems must be in use every time farm animal effluent is applied to land. 18. Record and demonstrate (bucket test), the application rate/depth of all property irrigators.
Stormwater diversion 19. Divert roof water from sheds, other farm buildings and yard stormwater from the farm animal effluent storage facility wherever practical 20. Instal any stormwater diversion system before any junction where it can mix with farm animal effluent. 21. Ensure a clearly visible alert system is in place to advise staff if the stormwater diversion system is on, ensuring only clean stormwater is diverted.
Feedlots, stockholding areas and wintering barns 22. New feedlots, stockholding areas, and wintering barns must not be located in a floodplain 23. Feedlots, wintering barns and other stock holding areas surfaces are bunded to prevent solid and liquid farm animal effluent run-off from the infrastructure.
Farm tracks, laneways, stockyards, covered yards, calf raising areas and underpass 24. Farm tracks and underpasses are constructed to divert discharges to a farm animal effluent storage facility or diverted onto land where it cannot enter surface water. 25. All practicable steps should be taken to minimise the potential adverse effects on freshwater quality and ecosystem health of farm animal effluent run off from stockyards, covered yards, calf raising areas and laneways.

Appendix 2: Proposed Waikato Regional Plan Change 1: Waikato and Waipā River Catchments Decisions version Waikato Regional Council Policy Series 2020/02

Schedule D1 - Requirements for Farm Environment Plans for farming under Rule 3.11.4.3

8. Effluent management

a. Dairy effluent storage consistent with a 90% (or greater) conformance with the Dairy Effluent Storage Calculator (DESC) is in place at the date that the FEP is required.
A guide to using the Dairy Effluent Storage Calculator (DESC); Step by step instructions on how to calculate storage requirements, DairyNZ 2015.
https://www.dairynz.co.nz/media/3223285/Using_the_Dairy_Effluent_Storage_Calculator_DNZ40_114.pdf
b. Effluent ponds are managed to ensure there is a minimum of 75% working volume available by 1 May each year, to provide capacity for the wet winter period.
c. The effluent block is sized to ensure nitrogen applications from applied effluent are less than 150kgN/ha/year.
d. The effluent system is designed and operated to ensure that the conditions of Rule 3.5.5.1 and Rule 3.5.5.2 are met at all times, unless a specific consent has been sought under Rules 3.5.5.3 to 3.5.5.5 to depart from the standards in Rule 3.5.5.1 and Rule 3.5.5.2 in which case the conditions of that consent shall be met at all times.
e. Yard areas (drystock and dairy) to be managed to ensure runoff of untreated farm animal effluent to water does not occur. Where dairy yards are sealed and washed down effluent must be collected into an effluent system and managed as set out in a) to d) above.
f. Major incident risks (e.g. spillages or other unauthorised discharges) are identified and emergency procedures are in place.
g. Effluent system maintenance and monitoring is carried out on a regular basis.
h. All effluent applications are recorded – location, duration, application rate, and where relevant identity of contract spreader.

Schedule D2 - Requirements for Farm Environment Plans for farming that requires consent

Goal 7 – Effluent

To minimise losses of nitrogen, phosphorus, sediment and microbial pathogens to waterways from farm animal effluent systems.

Principles

1. Ensure the effluent system meets the industry-specific Code of Practice or equivalent standard.
2. Have sufficient storage available for farm animal effluent and wastewater and actively manage effluent storage levels to ensure no discharge of effluent to waterways at all times.
3. Ensure equipment for spreading effluent and other organic manures is well maintained and calibrated.
4. Apply effluent to pasture and crops at depths, rates and times to match plant requirements and soil water holding capacity without pooling or running off.

Part 4 – Pond drop test requirements and criteria

This appendix outlines the requirements for undertaking pond drop tests on *animal effluent storage facilities* that are part of an *animal effluent system* and the pass criteria for drop test results.

Requirements

(a) A minimum of 24 hours of accurate data within a single test period.

(b) Total test error of less than ±1 mm.

(c) Continuous readings are to be taken over the entire test period at not more than 10 second intervals.

(d) Any change in pond fluid level over the test period needs to be accounted for.

(e) Ponds must be at or over 75% design depth (excluding freeboard) before a test can be undertaken.

(f) The level of *sludge* or crust on the pond during the test should be minimal so that it does not impact on test results.

(g) The pond surface is not frozen during any part of the testing.

(h) An anemometer is installed for the duration of the test and only data obtained when the wind speed does not exceed 50 kilometres per hour (14 m per second) at the test site is used in the test results.

Maximum allowable pond level change

When tested in accordance with the requirements above, the *animal effluent storage facility* is considered to meet the pond drop test criteria if the maximum pond level change does not exceed the following:

Table 33: Maximum allowable pond level change

Maximum design depth of pond (m) excluding freeboard	Maximum allowable pond level change (mm per 24 hours)
<0.5	1.2
0.5 to 1.0	1.4
1.0 to 1.5	1.6
1.5 to 2.0	1.8
>2.0	2.0

Appendix 4: PDT Testing Frequency Flowchart for Effluent Ponds –Source Practice Note 21 – Appendix B

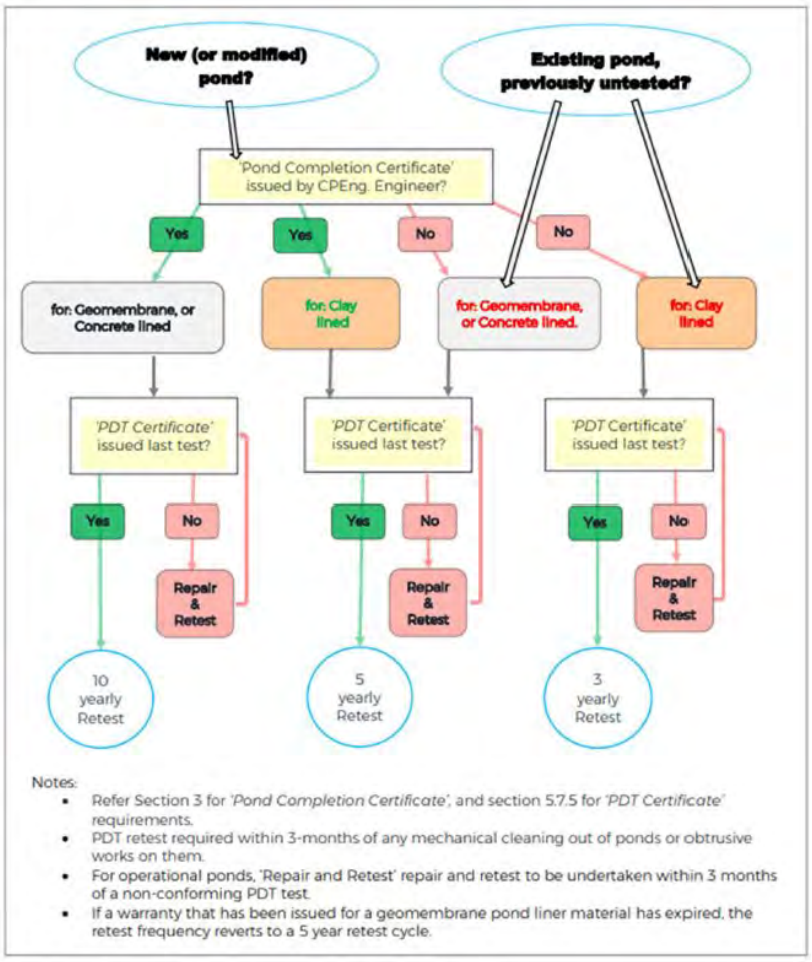


Figure 1: PDT Testing Frequency Flowchart for Effluent Ponds

5.3 Appendix C – Workshop one presentation

Freshwater Policy Review

- Review of all freshwater related chapters of the operative Regional Plan (excludes geothermal and air chapters)
- Responds to statutory responsibilities under the Resource Management Act, the National Policy Statement for Freshwater Management, and our obligations under Treaty settlements
- National reforms are reshaping the landscape: proposed new legislation, replacement of the NPSFM and an extended plan notification deadline to December 2027

Freshwater Policy Review

- Engagement:
  - Collaborative Science Advisory Group established (August – October 2025).
  - Farming Technical Advisory Group/s, sector and wider community engagement, to follow in 2026.
- Aiming for ‘working draft’ policy documents by end of 2026
- Final notification planned for late 2027

Current Regional Plan

- An outcome-based, more permissive approach has not consistently resulted in the expected effluent infrastructure, and current rules provide insufficient direction on achieving compliance
- Systems with ongoing limitations remain, including inadequately sealed storage, insufficient storage capacity, and irrigation infrastructure and land application practices that do not consistently prevent issues such as ponding and runoff
- Compliance and improvements have largely been achieved through substantial investment in compliance monitoring and enforcement, alongside industry guidance and programmes

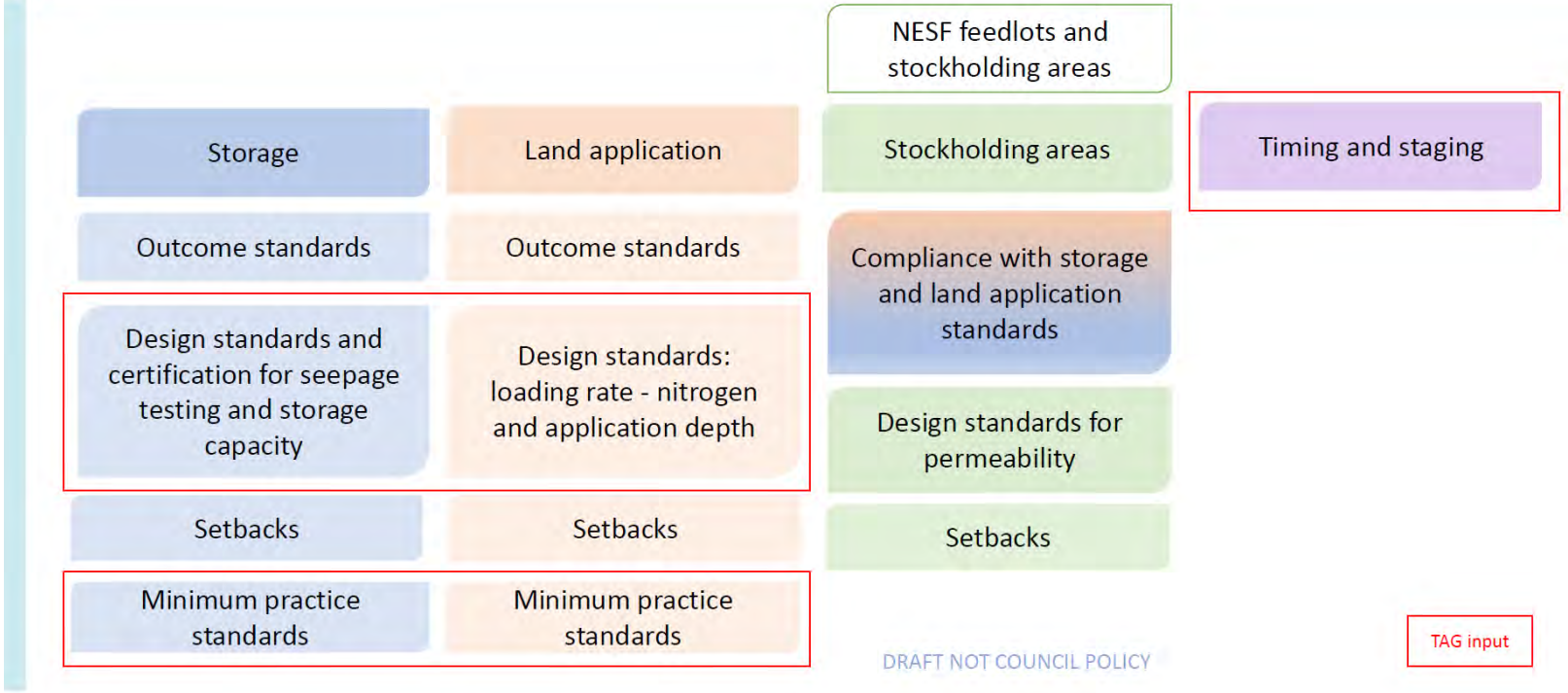
Current Regional Plan

- Compliance can be difficult to demonstrate, particularly for land application rates and permeability threshold
- Likely fallen behind other regions requirements and industry best practice standards
- Discharge of treated effluent to water requires a consent. This practice is considered inconsistent with current expectations
- Emerging gaps:
  - More feeding and housing systems, but no specific standards for bedding material
  - New technologies and management practices

Current Regional Plan

- We know upgrades to system and land application works. State of the Environment monitoring shows progress:
  - Installation of treatment ponds and irrigating effluent onto paddocks is working, reflected in a decline in ammonia and phosphorus at most river monitoring sites
  - Faecal bacteria levels indicate that more work is needed on sources, such as farm tracks and laneways

Draft approach



Draft approach - storage

	Design standards	Minimum practice standards
Collect effluent on a sealed surface or sealed storage facility	• Certification • Pond Drop Test - storage facility • Permeability standard (stockholding areas, feedlots etc)	• Permeability seal (if integrity of facility compromised, recertification is required)
Reduce effluent volume (liquid going in)		• Stormwater diversion
Have enough storage (for soil wet soil conditions, busy periods, equipment failure)	• Certified 90% storage using the DESC or for other animals certified that it meets the standard	
Managing storage pond level • Managing working volume level (enough capacity to hold effluent between irrigation) • Maintain freeboard level (buffer/space to prevent overflow)	• Working volume (operational level)	• Maintain a minimum freeboard level. • No overflow • Regularly apply effluent to land when conditions allow to ensure storage available in wet weather • Managed to ensure sufficient storage for deferred irrigation. Emptying as much as possible before expected rainfall events • Visual depth gauge
Operation of storage	DRAFT NOT COUNCIL POLICY	• Contingency events are actively managed • Decommissioning ponds and storage bladders

Draft approach – Land application

	Design standards	Minimum practice standards
How much volume is going on to soils	• No ponding, runoff, or directly entering into surface water • Hydraulic rate limit/loading depth	• Record of the application rate/depth of irrigators
How fast is it going on the soil (application rate)	• No ponding, runoff, or directly entering into surface water	
How much nutrient applied/nutrient loading – each pass or each year	• No ponding, runoff, or directly entering into surface water • Nutrient loading limit (year)	• Record of the application rate/depth of irrigators
Enough area to meet nutrient loading and the soil can absorb and hold the applied water and effluent - avoiding ponding, runoff and leaching	• No ponding, runoff, or directly entering into surface water	• Irrigator maintained regularly, fail safe system, • Record of the application rate/depth

Workshop session 1

Storage

Design standards and practice standards

waikatoregion.govt.nz

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Focus Questions – Storage

- What farm animal effluent storage practices (infrastructure/ technology, and management practices) need improvement?
- What changes/additions are needed to the draft storage standards to address the issues identified?

Workshop session 2

Land application

Design standards and practice standards

waikatoregion.govt.nz

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Focus Questions – Land application

- What land application practices (infrastructure/technology, and management practices) need improvement?
- What changes/additions are needed to the draft land application standards to address the issues identified?

Workshop session 3

Practice standards

waikatoregion.govt.nz

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Focus Questions – Minimum Practice Standards

- What else should farms be expected to do as a minimum when managing farm animal effluent, including infrastructure, technology, and management practices?

- What other changes/additions are needed to the draft minimum practice standards?

Reflections

- What other aspects of farm animal effluent do we need to consider?
- What else do we still need to address?

Next Steps and workshop 2

- **Staging Implementation**: Exploring the need for staged implementation. Seeking input on:
  - How to prioritise rollout
  - Criteria for spatial staging
  - Industry support and risk management during rollout
- **Behaviour Change and Baselines**: Understanding current farm practices, farm infrastructure and support capacity. Seeking input on:
  - Challenges in meeting new standards
  - Supporting transition and implementation
  - Estimating the scale of upgrades needed
  - Professional capacity, capability and consistency


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5.4 Appendix D – Workshop one record

Freshwater Policy Review Farm Animal Effluent Technical Advisory Group - Workshop 1 notes

Meeting	Workshop 1 – Farm Animal Effluent Technical Advisory Group
Date	Friday 30 October 2025
Venue	Tui/Kowhai meeting room, Ground floor, 160 Ward Street, Waikato Regional Council, Hamilton
Time	9.00am- 12:30pm
Attendance	Angus McKenzie (Facilitator [PlaceGroup]), Ruth Lourey (WRC Topic Lead), Caleb Higham (Open Country), Trevor Foley (Independent), Dr Debbie Care (AgVice), Adrian Brocksopp (Miraka) and Shaun Hazelton (DairyNZ)
Online	Jon Palmer (WRC, Principal Technical Advisor – Primary Sector Delivery, Resource Use), Angela Fenemor (Policy Workstream Lead, [Incite] for WRC).
Apologies	Nil
Documents	Presentation Workshop 1 Farm Animal Effluent Technical Advisory Group - Freshwater Policy Review – 2025 Doc # 33005139 Agenda Technical Advisory Group Farm Animal Effluent Freshwater Policy Review 30 October 2025 Doc # 33589247 Discussion Document Workshop 1 30 Oct 2025 Farm Animal Effluent Technical Advisory Group Freshwater Policy Review Doc # 33371621

1. INTRODUCTION

Angus McKenzie outlined the purpose of the meeting and explained that the farming policies are in draft form and are not council policy. The draft approach is being tested by the Technical Advisory Groups (TAGs).

TAG members introduced themselves.

2. TIKANGA/GROUND RULES for all meetings

- One person talking, everyone listening
- Being respectful of others
- Cellphones on silent/off
- Chatham House Rule

- Permission for recording and automatic transcription of the meeting: the members of the TAG were asked for their permission for the meeting to be recorded along with an automatic transcription to assist with note taking/review. The meeting attendees agreed.

3. HEALTH and SAFETY

Ruth Lourey outlined housekeeping matters and building health and safety information.

4. OVERVIEW PRESENTATION AND DISCUSSION

Angela Fenemor and Ruth Lourey spoke to the PowerPoint presentation.

- *A brief outline of the Freshwater Policy Review. In 2023, a refresh occurred to look at the project and to determine what the key directions were for the Waikato region. The geothermal and air chapters will not be reviewed.*

- *Key obligations in the Waikato region include Treaty Settlements and Te Ture Whaimana which must be given effect to.*
- *Planned community and iwi engagement was outlined.*
- *Working drafts of policy documents are due by the end of 2026.*
- *Final notification of policy by the end of 2027.*

Background and key issues - current regional plan and effluent management in the Waikato
A presentation was given outlining some of the issues with the regional plan and effluent management in the Waikato Region.

The meeting responded with the following comments:

- Difficulties with council implementing rules. There was a lack of clarity – what is the end goal – what is required?
- Certainty, too many grey areas such as no specific direction to have storage, but council then determines that there is to be no ponding and runoff. If you've only got a sump, that means farms must need some storage. Things are not written down and clear.
- The implementation of the rules has changed over time – farmers feel the rules and the goal posts keep changing.
- Things are not written clearly in the rules. For example, farmers forget the rules – they keep farming.
- The 150kg of effluent N/ha/year has only been measured by dairy companies. Parts of the rules have never been measured, implemented, or had compliance measures against them. There needs to be a way of assessing the standards to determine compliance.
- Rules have been the same for quite some years. Perception that the rules are changing. The rules have not changed, the implementation approach has changed.
- Farmers do not know the rules, because it's under a permitted activity they think they don't have to know the rules and that they are allowed to farm - not understanding that they need to farm within the rules.
- Only a few rules and those are permitted activity rules. The 25mm maximum depth application - 25mm on clay is not appropriate. Application depth should be limited to soil type. For example, you could at the right time put 25mm on a Waihou sandy loam. Marine clay in the Hauraki the depth could probably sit at a maximum of 10mm.
- 25mm can give farmers a false sense of security that they are compliant but when checked they find they are non-compliant - they consider that they are meeting the 25mm. Not taking into account their own situation, farmers are just reading the rule and not considering how the rule applies in their situation or taking into account risk.
- There is low understanding – it's the maximum depth of 25mm, not average. When doing a bucket test at 25mm the shoulders often sit at 48-50mm.
- 25 mm could be more than 150 kg/N/ha/year - means that farmers can only irrigate that paddock once a year.
- Examples from farmers that they have approached WRC seeking advice about building something and wanting to know if they will be compliant. Council is directing farmers to industry consultants.
- There is no requirement in the rules that the farmers go to a certified person.
- Some consultants give advice indicating things are compliant when they are not. Ultimately the obligation is on the farmer.
- The systems should be capable of being compliant, 365 days of the year.
- Emergency management needs to be considered, if you have a weather bomb, like Cyclone Gabriel, there are now periods times when farms can't build a system that will be compliant. Rather something needs to be set up to minimise long-term risks, the months after the major event are more important.
- Still managing up to those events for example, it's in a drought and effluent ponds are full and farmers are getting away with it. Farmers can and should plan accordingly.

- Integration with the broader regional plan is important for example the 150 kg /N/ha/yr effluent ideally would be integrated with the farmers fertiliser application, nutrient management.
- Activity status:
    - Combination of permitted and consent - substandard ponds, then stage up, then up to 85% storage at end of pond life then need to build new systems, there are ways to manage until that point, they size up.
    - Consent brings some clarity – farmers know the rules with a consent, with a permitted activity is greyer/softer. Consenting everyone will put onus on council to have good rules, but it's very intensive.
    - Prefer if can prove low risk then permitted – at the moment we are giving everyone the option, but they are not living up to their side of the bargain.
- How they are managing the system is important. Education - Massive shifts have been experienced in the dairy industry from the amount of education and support for effluent to a new focus (e.g., greenhouse gas). There is nothing there to support farmers to be a permitted activity.
- From an overall view, effluent is a small proportion, it's only 8- 10% of the nutrient/nitrogen loss on farm. Industry expected effluent management to have to be moved on but it hasn't. New people aren't being trained. Effluent management is falling through the cracks.
- Consents from FWFP perspective, costs of other consents, for example in other regions are increasing.
- Another concern is the broader RMA signalled changes that they won't have controlled activities. They are pushing for permitted activities rules, but consented farmers will then be discretionary rules which does come with more cost and risk to the farmer.

Continued with the presentation, including noting that there are new practices in the region such as housing systems, which are a gap in the plan.

Comments from the group:

- There are a lot of covered herd home providers and companies that are selling unsealed herd home systems that are fully compliant with council rules as per the District Council building code. The Regional Council is not looking at those systems at this stage which may mean that farmers have long-term risk if these systems are given compliance attention in the future.
- Bladders which will become a tsunami in 10 years' time. Include tanks as a future issue. Bladders are a short-term solution, but what happens when they become non-compliant. They become non-compliant when they have burst; they don't have seepage issues, they burst.
- There is not a lot of guidance/information about bladder tanks.
- IrrigationNZ was looking at bladders as part of the effluent code, but that didn't seem to happen.
- IPENZ Practice Note 21 and the latest standards deal with ponds only. Tanks and bladders – these need to be brought into the discussion with proper industry standards and guidance set.

Staff gave a presentation on dairy effluent compliance in the region, using data from farm visits between 2017/18 onwards. They noted that not all farms are visited every year, so the dataset has some limitations. The presentation also touched on how the data was compiled and some of the challenges in interpreting compliance. Key points raised by staff about data limitations included:

- Even with 90% compliance, the large number of dairy farms in the region means that there's still a significant number of non-compliant farms.
- Some of this data may reflect some of the challenges with determining compliance, alongside how the current plan has been written.

At the next meeting, staff will share the compliance data in more detail, and the group will begin talking about how WRC might focus efforts on those farm that need to lift their performance.

Discussion by the group:

- Farmers get messaging via milk supply companies that farmers are not meeting expectations and council will be taking action. However, looking at the compliance data overall indicates compliance is very good.
- Moderate compliance, its compliance with the permitted activity rule. It does not link back to risk even though risk exists. Freshwater farm plans (FWFP) assessment is measured on risk, effluent compliance is measured on an action, on a point in a day.
- What is moderate non-compliance? Needs clarity. Where is the list that describes contributions to moderate non-compliance rating in the compliance data?
- What are the outcomes for water quality and risk to water quality? Are the rules being written for this? Is it nutrients? Is it *E.coli* for swimming and diffuse discharges to water, is it ponding?
- Relate back to risk like PC1 and FWFPs, should this work be along a similar vein.
- Risks to groundwater quality. Risk degree on water quality vs surface water. Example on marine clay profile – the ponds were tested and dug from the same profile and they passed – there was no ponding and runoff yet a fine was made against the farmer. Farmers also have to fight to prove that any runoff did not affect groundwater which causes farmers to give up. Farmers do not have the science or the evidence to back-up what they are saying.
- Comparative costs from paying the fine, and compliance – may change with increase in fines and when farmers can't get insurance for non-compliance.
- Clay ponds and synthetic liners vs risk, assessment and costs. Council compliance team sent a letter that they were no longer going to accept pond tests or pond leakage tests and that the industry has had plenty of time to sort and install synthetic liners. There is plenty of evidence to suggest that some of those other ways of lining can be compliant with the rules.
- Farmers with consent application issues are then stuck with options either paying for a planner or for an environmental assessment which has the potential to cost thousands of dollars depending upon the system. This is occurring in other regions too.
- Risk management is important from a compliance perspective so, when council arrives there is evidence of compliance, proof of placement records, training, management - so that there is an evidence base that this is a one off in case they see ponding on the day.
- If council arrives and doesn't take into account that ponding was an accident then the farmer becomes non-compliant even though they have records of what has been done, testing, etc.
- Record keeping under the Waikato rules are not needed however, council also states that they may ask to see records when they visit the farm. Once again this is a grey area.

Further explanation and discussion of the compliance data being shared on the screen:

- *Query from the TAG about the compliance data terminology: what does the term 'unknown' relate to? Staff noted:*
    - *It can be a range of things but when council visits a farm they may be unable to determine whether a pond is sealed or not. Compliance staff may ask for additional information from the farmer which some farmers choose not to provide. Similarly with the feed pad and the standing off infrastructure, those 'unknown' numbers are quite high and that's probably, in part, a reflection of the compliance programme focus.*
- *State of the Environment monitoring - we are seeing that what's happening in the region and all the investment by farmers in upgrades being reflected in the water quality monitoring results in the region. There's been a decline in ammonia and phosphorus levels, and this is consistent with widespread reduction in effluent discharges.*

Group discussion:

- How much investment do we need to do, to mitigate something which might not be as big an issue and may be coming from other places on farm?
- Some things should be in PC1 and freshwater farm plans. Farmers can't have people visiting their properties and being audited by two different parties for the same thing. It will be integrated in a risk assessment done for PC1 for farmers' environmental plans – there are actions. We are not missing out on anything - but not doubling up. Another consideration is what compliance can go into a farm plan? When talking about races, underpasses are not included in any activity rules and yet a lot of farmers are being 'pinged' for not having management of effluent from underpasses. Farmers don't know they have to manage this. If the underpass looks is part of the race, then maybe compliance isn't required? This is up to interpretation - someone may say it's a sealed surface, so it needs to be managed.
- Do not refer to treatment pond, they are now referred to as storage ponds.

5. **WORKSHOP SESSION 1: Issues with the current rules/regime?** (refer Appendix A)
Task 1: List top issues with the current set of permitted activity rules and what is contributing to some of these poorer outcomes "big fix areas"

Refer to Appendix A for a copy of the session notes on butcher paper. Points in bold reflect the issues recorded on the butcher paper. Additional points listed below were raised during discussions.

- Storage requirements are not stated. You must have storage, calculated using …
- Enforceability.
- Farms meet the 90%, but when they upgrade that 90% value will increase - how do you manage farms that have upgraded and will be non-compliant with these changes.
- Discussion of the 90% tile in the DESC:
    - It's a daily time-step model, so if it's a beautiful sunny day till 6pm and then you get rain from 6pm onwards the model says you can't irrigate that day. It's not perfect to work out exactly if you could irrigate that day.

Relevance to modern systems (e.g., bladders, underpasses, feed pads/water housing).

- Look at those rules and think how can these be implemented? How do you manage these systems - If it's a system 1 dairy farm with a pond it's easy, but for everyone else it's hard.

Clarity of actual on-farm expectations e.g., 25mm depth, storage requirements.

- Clarity when reading the rules. Clarity about on-farm expectations, farmers think they are compliant, but when they get a compliance visit the farmer find they are non-compliant.

Classification of soils – low vs high risk

- How to classify soils.
- S-Maps have facts sheets on all the soils.

Lack of clarity and enforceability

Management

Risk assessments

- There is nothing written regarding anything that can be done about risk. If council turn up on the day the farmer is either compliant or non-compliant. For example: oval hoses not put on the cam-lock properly is really high risk because it pulls off. That risk

assessment built into the rules is quite difficult. Sometimes you'll be compliant, but tomorrow you might not be because that hose has popped off.
    - It's about ongoing maintenance and management keeping an eye on things and having a contingency plan if something happens.
- Getting away from point-in-time type visit.

Irrigation application depths – must depend on soil types

Nutrient testing. 150-200kg/ha – should be in the rules – Compulsory testing of farm effluent.

- Nutrient testing should be included in the plan, in terms of the 150kg/N- 200kg/ha.
- With nutrients unless you are going to run Overseer to work out your nutrient level - you are relying on rule of thumb. Effluent systems are discharging different nitrogen concentrations. For example, some say 6 mm equates to 150kg/ha, while others say 25mm, is about 110kg /ha. If applying urea as a 30kg N/ha, then application around 7 to 10 mms. This shows the difference in concentration depending on separation systems, and system design. Not many irrigators are putting on 5-10mm most are putting on far higher than that.

Irrigation must only be undertaken when there is a soil moisture deficit.

- If there is a 10mm soil moisture deficit on clay, then you can irrigate because of the infiltration rates.
- For low-risk soils, you don't need a soil moisture deficit - drainage. Would be needed for high risk.

No storage requirement and how to calculate it [in the rules].

No management criteria in design – can build a cheap unmanageable system.

- No management criteria in design, no design criteria in the rules so you can build a system, but people running cheap systems will struggle.
- Seeing people designing ponds rather than systems, example bladders – system designed to fit the product, ponds are the other way around i.e. how many contingency days, how many days you want to irrigate, what your irrigator can do and then you pond size is increased to reflect these.
- Quite often bladders are sold and it is the job of the farmer to make it fit for the consent application. There needs to be some standards around that.

Storage sized to a good system.

- Starting with the system first – massive ponds with a 'shitty' irrigator running at 40mm or a poor pump still running in the traditional sump.

Management tailored to the farm system.

- Management plans tailored to the farm system - the advice and the people helping them develop those management plans need to be specific for how they need to run their farm.

Right advice

- The right advice as well, so farmers know who to go and what the advice is.

6. WOKSHOP SESSION 2A: Storage. What needs improvement? (refer Appendix B)

Pond levels going into high-risk months (FWFP requirements to manage risk rather than specific condition)

- There needs to be linkage to freshwater farm plans in terms of where the actions are going to be.

Sensible rules/guidance around requirements to complete pond drop test

- With regard to Practice Note 21.

Qualifications of pond design (design system, not just determine pond size)

- Whole system overview – e.g. build a massive pond or get a new irrigator
- The right people designing these – they are designing a system not just to determine a pond size. Examples where the only thing being taken into account is the DESC, that is giving rise to bladders.
- If you are designing around the system this would account for those farms which already have lined ponds. If you're designing around the system, you can make changes to the system to keep that lined pond. The farmer has options. It is key to ensuring that existing ponds that farmers aren't be told to upgrade or put in a new pond – other things can be done but you need to have the right advice.

Appropriate solid management for systems e.g., bladder (solid storage capacity). Includes organic matter from winter housing calf sheds.

- Appropriate solid separation for system/capacity.
- Example – solid management in bladders, so that bladders continue to work
- Solid storage next to ponds, often undersized, storage material coming off winter housing and calf sheds. More specifics around what the size needs to be. Capacity, size, and need to be sealed.
- A lot of people still get 'pinged' on not managing solids.
- Everything, including underpasses, needs to be sealed and nibbed/ sealed and contained.

Question: What percentage do you see where there are solids in the pond and the pond is stirred?

Answer: 5%. If it's a grass only system it doesn't matter, if you've got a feed pad attached to it that starts to matter. The question is how many have got something in to separate the solids out but it's not effective? There are probably more solids going in and more like 30%. The stirrer is probably just managing, but the ones where there's too much going in there – is likely to be problematic.

- Bladders fill up with solids if they're not separated before they go in. The solids go into the bladder. There are brands that advertise that you can stir the water, they end up filling up, block the vents then you have system failure.

Question: How many farms throughout the Waikato do you estimate have storage bladders? Is it very common?

Answer: 5%. Not common, but when they fail it's a big issue. Examples on small family farms or areas where there are old, small farms in a hilly situation – the only place the pond can go is where the pond currently is and so they clean that out and put a bladder there.

- Bunkers, underpasses, everything needs to be sealed, contained and appropriate.
- There are specifics around solids storage requirements. It's more about capacity, rather than solid storage requirements. It's all about capacity for solids produced and contained and how often the storage is emptied. Some are only emptied at cropping time.
- Need to consider the surface the solids are stored on – this isn't mentioned in the current rules.
- Infrastructure – there is a lot more chip and composting material. Its management is not always thought about. Organic matter with effluent is scraped and stored. A lot of this material ends up dumped in paddocks on makeshift storage. The material has been collected and needs to be managed.
- Anything from sheds is usually spread straight to the land. For calf sheds, it may be necessary to think about if the same area is used for multiple years.

Specific around solids storage requirements (capacity, how often, sealed)

- Solid storage next to a pond because it's often undersized and storage of materials coming out of winter housing and calf sheds.

- More specifics around what that size needs to be – capacity, emptying frequency and whether it is sealed or not.

Management around silage leachate

- Silage leachate should be directed to storage.
- The current permitted activity doesn't specify that you can or can't put milk or leachate into your system such as an emergency where milk needs to be dumped.
- Silage leachate will probably come into freshwater farm plans and emergency plans around things like adverse weather or if milking dumping is necessary.

Emergency Plans – adverse weather – milk (dumping)

- All of that (above) needs to get wrapped into management because of things like power outages.
- There is nothing in the rules, so people don't take emergencies into consideration in the design.
- *When asked about the impact of milk discharges:* Issue is the risk and BOD (biological oxygen demand) if it gets into water - kills everything.

Lined pond location next to waterways

- Lined ponds have been built close to waterways because that's where the dairy shed was built and that's where they used to discharge. Some existing protections must be provided for those farmers.

Further to the point about existing protection - Storage calculations have been done in the past, but updates (e.g., you are now at 80% rather than 90%) or the soil risk updates have since made some farmers non-compliant. There is "grandfathering" that is needed.

Question: How do you manage that, are there things that farmers could do that doesn't require updating their storage volume but increasing their land area or something else?

- The most common one for multi-owned farms that are on a risk based system you can get up to 5 and 6 hours pumping for them to be compliant which is a long time for staff to worry about and causes wear and tear on gear. The options are then to upgrade the pumps to something larger or the applicator to a lower depth.

Question: What changes took place when the dairy effluent storage calculator was updated that is impacting calculations?

- The DESC currently only goes up to 2013. The old version didn't have a cap on drainage. When it was updated and put online 10mm drainage for low risk soils was included. The other thing that the calculator doesn't do is account for contractor only systems or if a farmer undertakes once a year application to other parts of the farm or other work around.

Question: Can the DESC be used for other types of dairy. For example, dairy goats?

- Group indicated that the DESC does work for dairy goats.

Question: How much collaboration happens in these systems across farms?

- Collaboration between neighbouring farms doesn't happen often due to distance being problematic as well as farms getting bigger.

Impacts of Greenhouse gas (GHG) mitigation (e.g., eco-panel guidance for pond levels, solid separator purchases and installed to capture GHG release risk in solids)

- At some point soon there will be a situation of compromise between what system is being designed for effluent and what system might be designed for greenhouse gas reduction. The eco-pond will start having chemicals put into it to reduce the greenhouse gases but that might come out with guidance – your pond has got to be so full all the time for it to be effective. There is also advocacy that solid separation may

reduce greenhouse gases by 40% so now there may be a lot of farmers putting in solid separation. Something to think about for the future. Perverse behaviours might occur regarding results.

7. WORKSHOP SESSION 2B: Land application - What land applications need improvement? (refer to Appendix C)

Irrigator performance

- Regular service is required.
- Nozzle replacement. Advice - change rubberware in cowshed when doing nozzle replacement.
- Irrigation performance – most run irrigators as slow as possible, as they don't like moving them. Sometimes a stationary sprinkler might be better due to time constraints. Have low depth tools. Makes management hard.
- A lot of farmers have either Halo or Levno to monitor their milking vats. These can be piggyback to have some sort of monitoring system attached to their effluent management.
- Some form of irrigator stop – end of run turn pump off – failsafe.
- A fail safe is key.
- Regarding the fail safe, that could be just the farmer watching the irrigator. The farmer takes that risk.
- A simple pressure monitoring device on the pump delivery either detects high or low pressure and it's not a big expense. If a drag hose becomes disconnected or comes to the end of the line they do have an auto shut-off valve – the pressure builds up on the irrigator and it shuts off.

Soil moisture deficit measure – probes

- Depending on soil type on the farm
- Should there be something in the rules regarding soil moisture? Only one probe is required per soil type.
- Is the NIWA Daily Site Guide sufficient? Is that close enough? It depends upon where they are in relation to the farm. Southland does, and it's better than nothing.
- A reading and recording of information should be done prior to every irrigation which can be saved on mobile phones as an app.
- There needs to be specificity regarding depth because a lot of farmers have that 'red line' they feel they can't irrigate at 79 or at 81 but can irrigate at 79 and put 20mm on. They know they have 1% of available storage and that happens frequently.
- Whatever the rule is, it needs to be simple, and it cannot create perverse behaviour which then creates more risk.
- Farmers are still not using nutrient value.

Questions: Would this be a rule, component of a rule or just an advice note. There are all sorts of information saying "don't irrigate until you plant, or your soil moisture is XYZ. It is practically challenging to do monitoring and compliance - you have to be out on the farm to take a reading. Could council ask for records, and apps and do it through there?

- Potentially, yes. It is a workability thing – council will need to take a look at how the apps and their records work and determine how it fits in with monitoring and compliance officers' requirements. It could be a risk-based thing tailored to farm plans.

Training (Ag Ito has now gone)

- There should be 2-3 days training in a training room, not just online (could be a minimum requirement).
- Could be online training that WRC has developed, including pictures.

- There's the farmers' guide to running trail irrigators which is still relevant but does require an update as it is approximately 50 years old, but the content is still good. This could be used to train staff and be included in the Farm Management Plan.
- For a second in charge all they need to know is if they see the irrigator not moving or a coupling drop off then they know to turn it off straight away and to check its going once you turn it on.
- Technology can help – e.g., phone on off for staff.
- Some companies are reporting lots of data, but the warnings are often lacking – there may be a stop warning but there are no low flow warnings. There is also no intelligence to indicate that the irrigator has been in the same paddock for three months. There are no insights.
- There is a lot of recording done but there are not a lot of smarts with it sometimes.
- Training – it's not necessarily a point of obligation however, there has been movement from the dairy industry having responsibility for training via DairyNZ then the milk supply companies took up the training and now they are moving away from this. Who will create the resources and keep them updated? Would it be better held in council? Council is always monitoring effluent. It is not such a priority for DairyNZ or the milk supply companies as new things are always coming along.
- Should it be the WRC/DairyNZ Joint Initiative? That's what it used to be.
- What is your incentive to do it. Permitted activity versus consent if you're not going to do it [training], will you get a consent? So, you get a cost rather than an incentive. If it's going to be done, you've got to have an incentive. You haven't got the cost but you're a permitted activity. You've got responsibility. How do we prove it's been done? Photos should be required with a date stamp and geo-located.

Suitable record keeping

- Which paddocks have been irrigated and the application rates (volume). When you've got a standard travelling irrigator that runs for 3m per minute the irrigator will have to be moved a lot. It's going to get down the end of the paddock in 90 minutes. Where is the other 4.5 hours go now that the irrigator is being set up again? The administration of this is high. Hose layout must be a consideration. Ponding and runoff can occur when the irrigation gear is being dragged around the paddock.

Question: Are the issues being raised a mixture of regulatory requirements and what the farm and farm owners need to do as well or are you seeing those as the standards?

- It is regulatory because if the irrigator is going too slowly, it's ponding in the paddock which is a breach of the rules. It is easy to measure – go to the farm, put a peg in the ground then monitor for 5 minutes to see how far the irrigator went. This is a council compliance thing as well.

Annual irrigator bucket testing must be carried out

- DairyNZ has an online spreadsheet.

Effluent block area/size … must include 20m setbacks from waterbodies

- Land application - All councils are talking about setbacks from waterways.
- Support FWFP site-specific nature of those areas. For example - a pump and torpedo system put in 50m versus putting in 10m. Bay of Plenty Regional Council is very specific about irrigation and, if a farmer has two creeks running through the effluent block, the farmer must come back 20m either side of that and deduct that off the effluent block size.
- Effective area.
- Does the group have any position on what that setback should be? Thoughts are that the setback is tailored to the farm and to the system, so, depending upon what irrigator is being used will depend upon the setback. It's about having rules relating to risk rather than having a blanket rule.

Question: You have indicated that you wouldn't be in favour of having a setback, so then the reliance to manage risk as an end point for compliance would still have to be something such as no direct discharge into a waterway – runoff or airborne – that would be the stop gap?

- Answer: If the farmer is running 5mm and it's landing 5m from the edge of the waterway.
- At present there are no rules regarding setbacks from the boundary or from houses whereas other district councils have setbacks at 20m. Hauraki has 300m. 300m is best practice in the code from the house or from a neighbour's house, road or external boundary. Most farms are only 100m wide.

8. WORKSHOP SESSION 3: Solutions/refinements, gaps – exploring the standards (refer Appendix B)

Draft approach diagram and overview of draft approach: This was explained. The meeting was advised that this approach is not council policy. The four (4) main components of the draft approach are: storage, land applications, stockholding areas, timing and staging requirements. The freshwater policy review team will need to think about the current fertiliser rule in the Regional Plan and exploring options in terms of nitrogen management more generally. Tracks and races more generally will be a critical source.

The meeting was invited to make comments on standards for storage and land application and regarding solutions, refinement and gaps.

Session 3 - Storage - solutions/refinements and gaps

Stormwater diversion:

- Would be great to get rid of it but existing facilities are very expensive. There are too many incidents where people have got stormwater or yard diversion and they're not managing it properly and they're getting pinged. There are also situations where you can capture the rain and put it into your system. The DESC takes stormwater diversion into account - you need to record if you have a diversion in place - you should be sizing your pond according to whether stormwater is being allowed for.
- Stormwater diversion – agreed for roof and roof areas but not for yards and everything else.
- Water isn't stored in summer because water and effluent are needed for the land. Need to be careful how this is phrased in the plan, so farmers don't get a technical non-compliance.

Stockyards – Freshwater Farm Plan risk assessment

Certification and documentation

- Should include certification of liners. Need to be available if requested. Farmers request copies of certificates for pond liners.
- Question from staff whether this liner certification would be part of a pond completion certificate?
    - Completion certificates - this is something that has been put forward in the code of practices - a certificate of completion from an engineer and the company sends you a certificate saying that you've done it in accordance with standards and this is good to go for the next 10+ years. Known as a producer statement.
- *Pond drop test:* Same for PDT as completion certificate for PDT. Rather than seeing a report, farmers receive a signed certificate which can be sent to council.
- *Question from staff: Should council have a portal to enable farmers to lodge documents into that portal to ensure there is an immediate record of it?* Hopefully a freshwater farm plan and the council can review that.
- Can a pond be built that meets IPENZ Practice Note 21? There is no company doing this, there is no engineer sign-off, but the farm needs to meet all of the standards of

IPENZ Practice Note 21. In the new Code of Practice, an engineer will need to sign the certificate.

Bladders – consent agreed risk, ponds in hillsides /Bladder height – link through to a set of standards.

Questions: Do we write rules to try transition people out of bladders, or will people need to have a consent to have a bladder?

- If a design is done properly, it can be okay. The solution could be that if you have a bladder you've got to have a consent, because then with your consent, you manage your risk. You agree with council – there's no risk because there is no waterway so a bund is not required, or there is risk here so if you want to use a bladder, this is what you will need to do.
- To have tanks or ponds built into hillsides this gets caught up in the Dam Act which requires an engineer's report for the district council. Is pond failure from instability on hillsides the same risk as a bladder? During adverse weather it will be the water that will cause a slip.

- *Draft minimum standards #14 farm animal storage bladders must have suitable bunding to contain or direct any spill or failures away.* If that goes into any rules, there will no longer be bladders used because if you've got to put bunding around a bladder you might just as well have a pond. If the bund collects water and there is a spill will this go into the river? If there is a bladder failure the bund is not going to do anything?
- If building a bund around a bladder which is sealable – the bund will capture rainwater the bund will be full even before the bladder has burst.

- *Minimum standard #15:* How do you know what the freeboard is in a storage bladder? You don't know how much there is, you are only estimating by bladder height and most of these bladders are 1.6 maximum height. If this is exceeded, they will explode. A separate rule/guidance is required for bladders. Potential consent for bladder together with conditions because they are so risky. Consent to be based on the height of the bladder. The supplier should supply all documentation anyway. Consider a set of standards (code of practice) instead of having numbers (e.g., 300mm freeboard) in the plan otherwise the plan will continually need to be updated.

Documentation

Fail safe (mechanism for alternative) – designed for system – isolation – notification

- System of solids separation do they fail often? Weeping walls vs mechanical separators – the time required for someone to monitor the mechanical ones, you need consistency – they are quite high maintenance – people put them in then don't maintain them. If a system is put in and it starts getting 'bits' in it, and that becomes expensive. If something is going to be put in, then it needs a maintenance plan both for weeping walls and mechanical separator.
- *Minimum standard #16* - irrigators must have a fail-safe system installed. There is the potential if you wanted to make that practice across the industry within the Waikato.
- This depends upon what a fail-safe is defined as. The meeting agreed that the members were advocates of fail-safe system. It is something that should be written in to the rules. Perhaps there should be an effluent management plan that includes these. Does there need to be a 'get out' clause where a fail-safe can't be put on practically? The clause could read "There needs to be a fail-safe, unless you have xxx in place" (unless xxx is the get out clause). The xxx could be a pressure thing that links to a text message – it's high pressure/low pressure which won't stop the system alert, but it could be

something that either isolates the system or gives an immediate notification. Fail safes need to be designed for the system.
- For farmers who do not wish to install system fail safes, they would need to monitor the system operating which would balance the risk.

Effluent Management Plan readily viewable at farm

- An effluent management could be part of the freshwater farm plan – that could be part of the condition. There is a lot of information that could go into the document such as staff training so that is part of the contingency.
- Need to be more specific – like earthworks plans. If you have to undertake earthworks the contractors must have a site management plan at the site and a council officer will visit and photograph the document which has been specifically designed for information/planning irrespective of whether it is at the dairy shed, at the pump or somewhere prominent on the farm so everyone knows the process.

Session 3 - Land application - Solutions/refinements and gaps

- *Nutrient loading* in the regional plan. If you apply over 190 kg/ha a year[16], you have to do a nutrient management plan. The regional plan was developed 15 years ago but no one has ever looked at since which was then superseded by freshwater farm plans. Nutrient loading was never implemented – remove it from the plan.

- Is there any way we can link the *hydraulic loading*, which is all the calculator does with actual effluent area and loading so that you've got enough area and that you're applying your effluent when your soil is 7 degrees above or 10 degrees above so that we're getting utilisation of effluent nutrients. Nutrients could be applied though June - July when soil temperature sits at -4 degrees and works for the hydraulic capacity because there is capacity in the soil but there's no utilisation of that nutrient because the plants are 'dormant' so how do we bring those up? PC1 has 6 degrees to 8 degrees and rising.

Working Volume:

- The working volume for PC1 that's a reduction to 75% by May. Also working volume, or how much of your pond you are not using, which is a minimum. It is 300mm top and 300mm bottom.
- The question was asked if the 300mm the same as the freeboard level? The freeboard level is almost the same as the standard in PC1. This can vary in some regions which some have a standard of 500mm freeboard. You can't ever empty out the pond because the liner will lift. So, there is a minimum volume of 300mm at the bottom to hold the liner. Working volume is also included in the DESC.
- 75% of working volume - where did this come from? PC1. There is obviously a different interpretation of the sludge factor of the pond from 300mm to 500mm. A participant at the meeting indicated that it is 500mm which is what most farmers believe it to be. 300mm is a minimum.
- Before the season starts you have to have 75% working volume available. Example - If your management plan says that you are wanting to use the nutrients, irrigating out of the sump, waiting for a contractor to put in a crop, or to empty pond, etc,

Bladders:

- Freeboard *minimum standards*:
    - The storage bladders freeboard standard – the visible measurement device is good and works really well.

[16] **NES-F regulation:** the application of synthetic nitrogen fertiliser to pastoral land does not exceed 190kg/ha/yr.
WRP:- prepare and implement a nutrient management plan if you are applying fertiliser:
• at a rate that exceeds 60kg of nitrogen per hectare per year, or
• to land that has had stock effluent applied to it in the past 12 months

    - Freeboard is something that is measurable and if you have less than 300mm you are in trouble.
    - It becomes contingency storage
    - How someone interprets that for compliance?

- *Minimum standard #15:* How do you measure freeboard on a bladder? All you are looking at is the height - most are 1.6 max height – if you exceed that they explode. Rule for bladder or separate guidance? Potentially why you need a consent for bladder. Standard for the height.
- *Minimum standard #14:* Bladder if you build a bund, and by default that has to be sealable, that area will capture all the rain and be full before bladder burst.
- Committed to addressing in code practice and farm plans. If the standards say that it is designed, specifications and doing it to the code of practice. Update the standards – point to the code of practice standard rather than standards to the rules. *It was noted that there are some challenges changing referenced documents in planning document.*

Effluent spreading method

- Discussion of the use of contractors. Farms use to have a signed contract between the farmer and the contractor – depths, no go areas, awareness of the rules etc
- Holding off all your solids to go onto the crop, it's not going on at 5mm, it's going on at 25mm with solids in it. The nitrogen content is massive and probably too high. Should there be a different standard for the application of solid effluent? There are currently no standards in council rules – there should be because it's high nutrient. Its slurry that is high nutrient.
- Management plan based on risks and how much solid you are spreading. Nutrient testing: noted the time to get a sample and wait for results if using a contractor.
- Great idea for nutrient management, knowing what you are putting on, e.g., they will put on slurry and then add urea.
- Testing kits for nitrogen at source.
- App/tool - farm can detail what you want to apply and will tell you what to apply at the rate – If rules could be linked to using such a tool, then people can document that evidence to show they have used it. Council could fund it to keep that tool going.

Tracks and yards: Minimum standards

- *Minimum standards #24 and #25 – farm tracks and yards*. These should be covered in the freshwater farm plan. Can't have farm tracks and underpasses are constructed and divert discharges to a farmer's effluent storage – a farm track could be 3 days aways from the effluent storage facility.
- Example of sediment detention ponds collecting effluent from track ponds. Confusing messaging about these structures being put in to capture track run-off as a mitigation, and compliance monitoring and management of effluent response.

Effluent Management Plan (Minimum Standards #1, 2 and 3)

- The effluent plan – are these a component of the farm plan? It is a separate document that could be part of the farm plan – it becomes an action within the farm plan which could be updated annually.
- *There is a placeholder for a schedule to list what needs to be in the effluent management plan.*
- It needs to be simple to complete, don't make it so that it needs a consultant to do, it's an operational plan (how do I operate daily e.g., when you see the effluent level up to the 300mm freeboard make sure irrigation occurs). This could be a place where some of the record keeping could occur.

- *Composting barns* and the capture of effluent - where you have woodchip - it's fine to have a drainage place you can see where nothing is coming out. Constructed properly

and compacted. Needs to be sealed and you can have a drainage point. Should be designed, they are just a standoff pad with a roof.

- *Minimum standard #8* – Regularly apply effluent to land when conditions allow. Comments: Not agreed with. If the storage has been sized correctly, farms don't want to have to directly apply, farms We want to be able to defer irrigation for two months. The wording needs to change.

9. Reflections and next steps

We're proposing to send out a simplified version of the memo, with the full table available on SharePoint. The table has five columns, and you're invited to add your views or opinions - you don't need to agree with everything.

This is a chance to provide comments on the draft standards in the developing framework before the next workshop.

The next workshop is to draw on your practical knowledge of implementation including what rollout might look like, how it could be staged and prioritised, what kind of industry support is needed, and how long it might take to shift behaviour and lift performance. We're also looking to estimate the scale of upgrades to meet the draft standards, consider professional capacity, and consistency across the region.

Comments:

- Stranded capital /infrastructure.
- DairyNZ have commissioned a cost benefit analysis in the West Coast – example of transition from discharge to water to discharge to land.
- Linking timeframes to risk and water quality outcome.
- FWFP timeframes and implementation – 6 years.
- Long term funding and investment – WRC investment support/co- funding, accreditation
- Roll out of PC1, FWFP, V6 consents, Effluent in the next 3 years and overload on farmers, how to streamline, minimise double-up, bundle everything a farmer does in farm plans.
- Update the farmer guide.
- National standards for effluent.

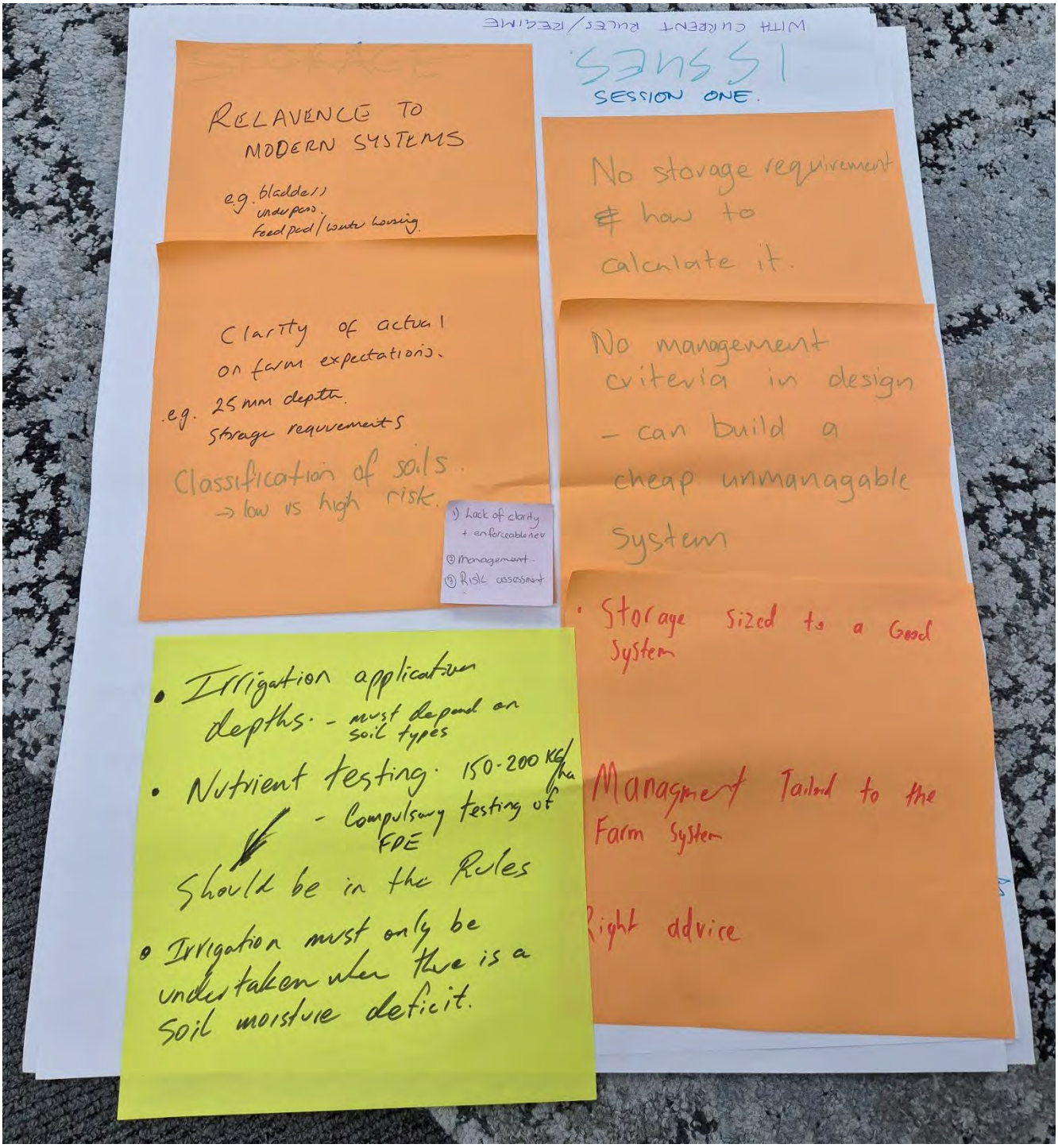
There will be a farming TAG in the new year to have some of these conversations.

The facilitator thanked the meeting for their attendance.

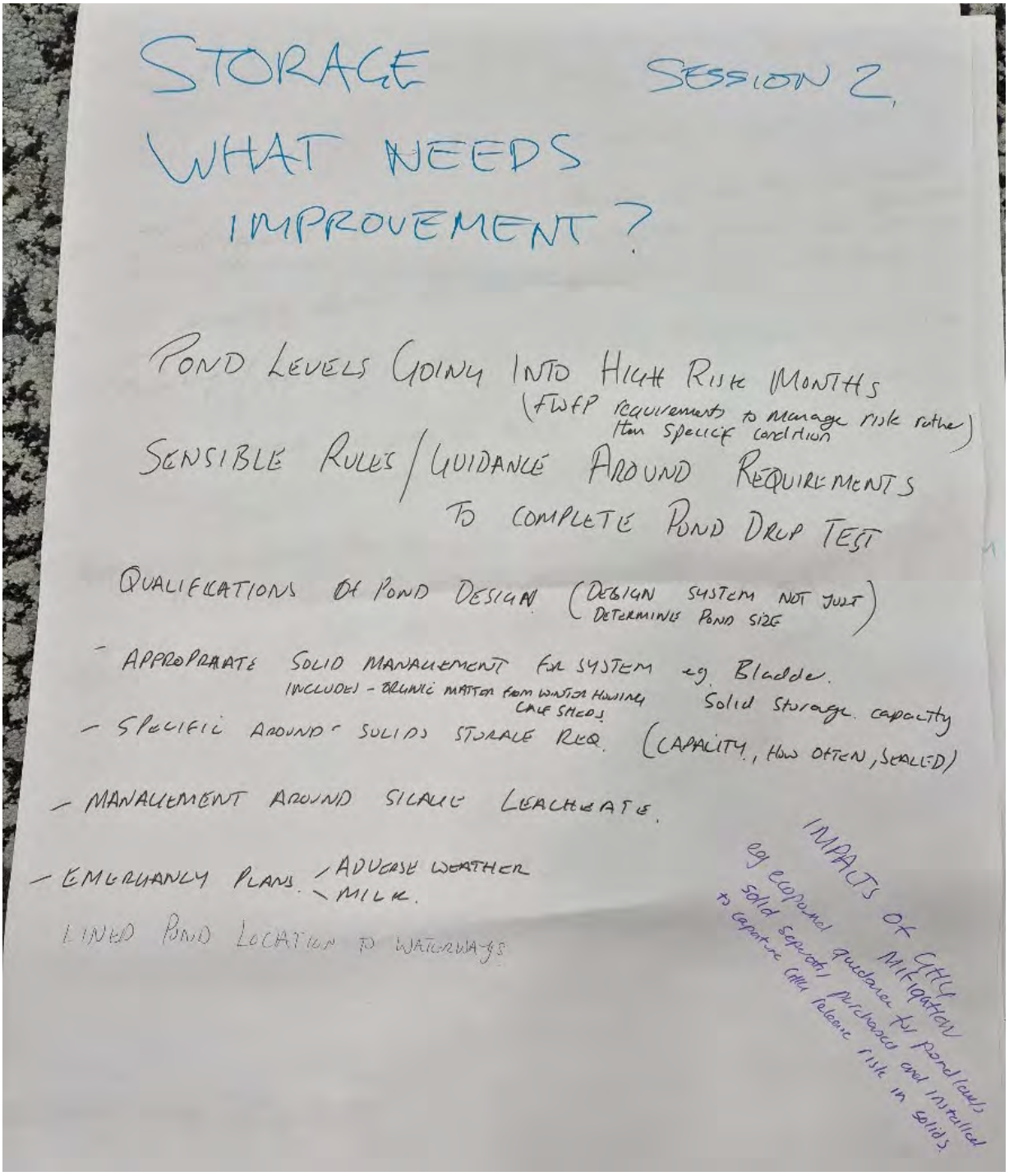
MEETING CONCLUDED AT 12.30pm with a karakia given by Angus McKenzie.

NEXT WORKSHOP: Thursday 13 November 2025. Curren practice, change required and staging implementation and baselines.

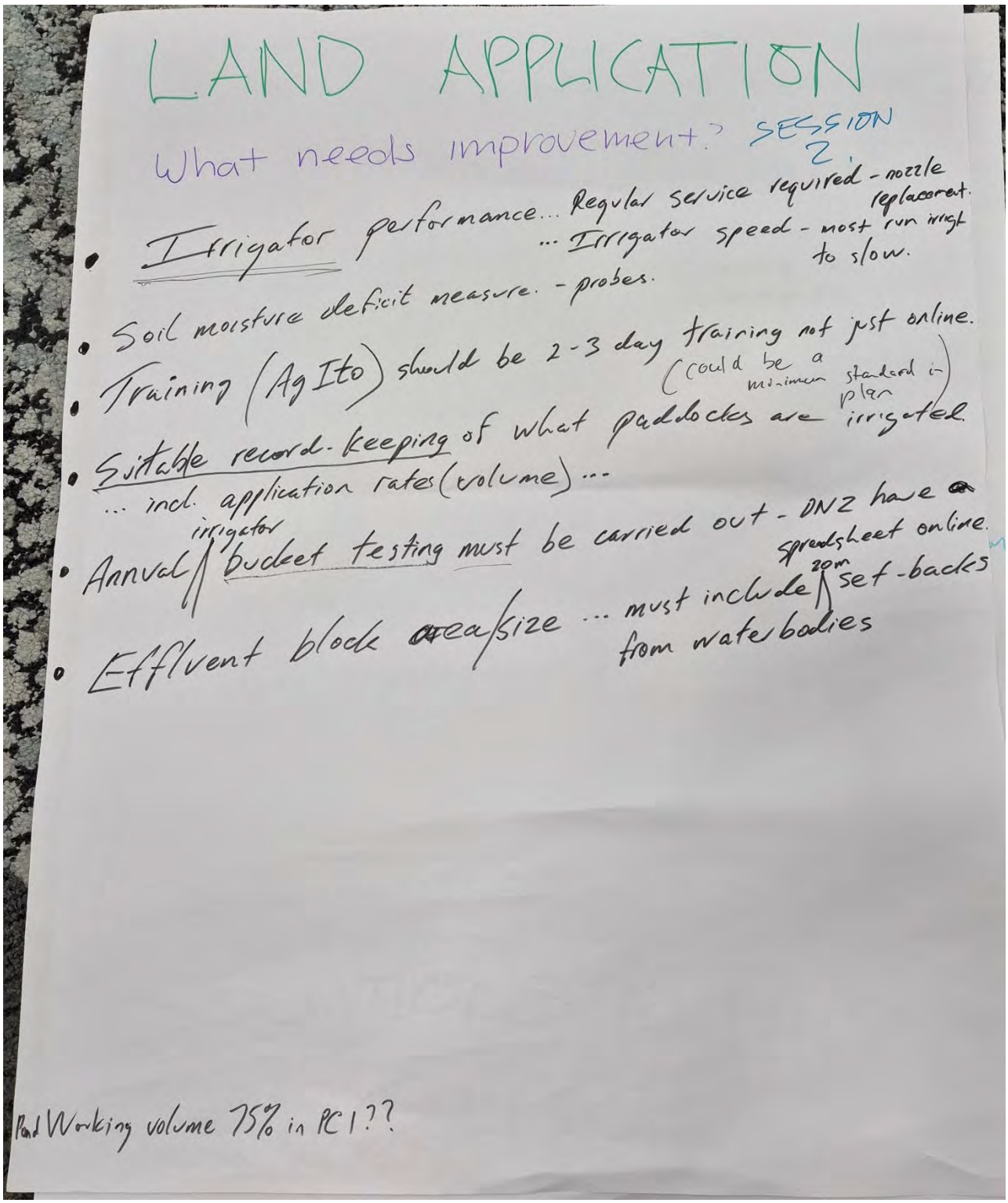
APPENDIX A: Session 1 Issues with the current rules/regime



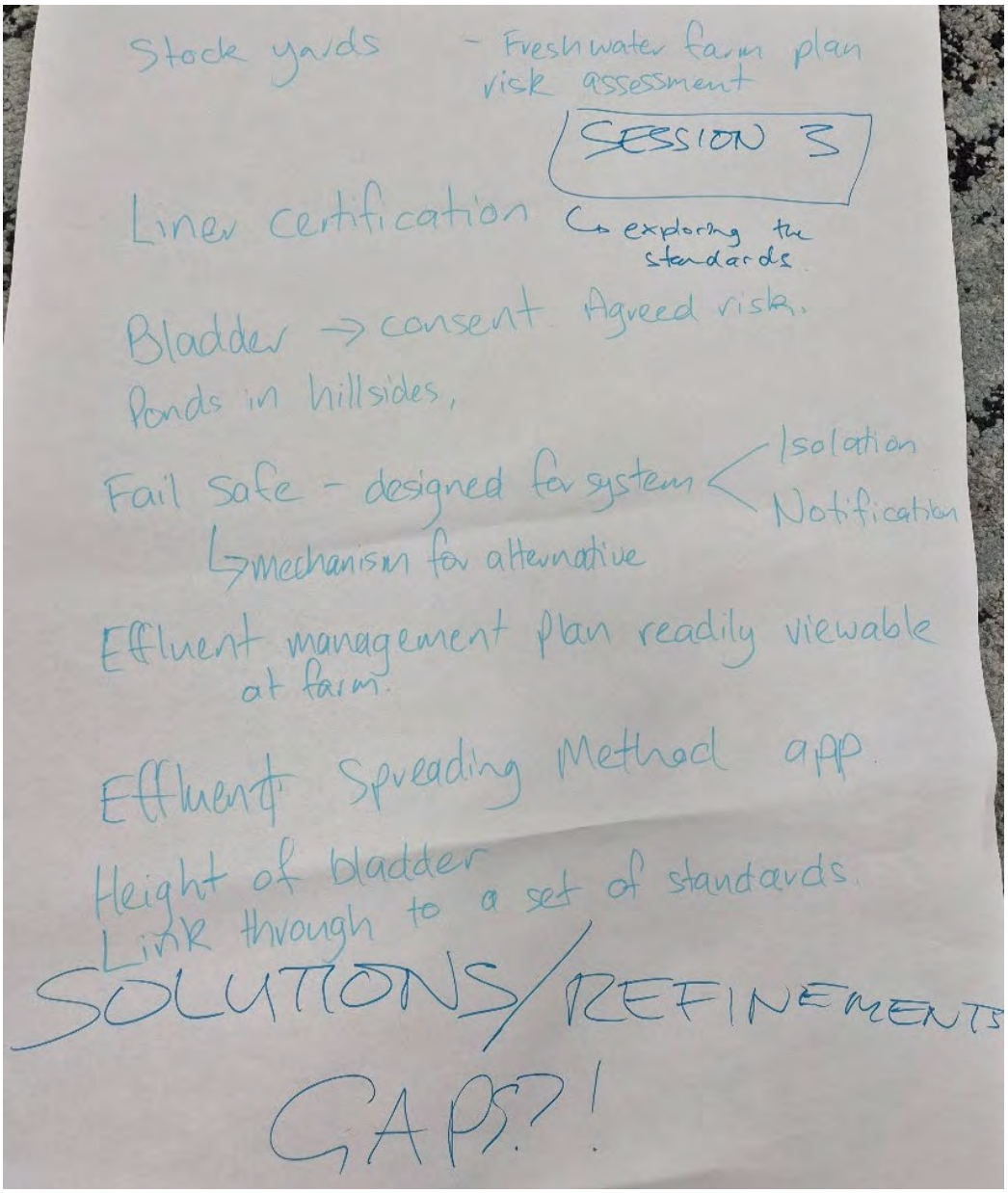
Appendix B: Session 2A - What need improvement? solutions/refinements and gaps



Appendix C: Session 2B: Land Applications – What needs improvement



Appendix D: Session 3. Storage and land application - Solutions/refinements/gaps?



5.5 Appendix E – Workshop one follow-up task

Follow- up Task from Workshop 1- Freshwater Policy Review Farm Animal Effluent Technical Advisory Group

20 October 2025

Thank you again for your contributions to Workshop 1 (30 October 2025). As part of the follow-up and preparation for Workshop 2, we'd appreciate your feedback on the draft standards presented.

Please refer to the table provided, which outlines:

- BLUE: Design standards for effluent storage and land application. These are a general descriptors of the draft approach (not draft wording)
- PINK: Other minimum practice standards

Note: The standards and thresholds shown are placeholders only and do not represent Council policy.

For more detail on the draft approach, please also refer to the discussion document circulated prior to Workshop 1.

Task: Please review the draft storage standards and provide your feedback on the following question:

What changes or additions are needed to the draft storage standards?

You're welcome to include relevant references, tools, or note where improvements could be made (e.g. better management, duplication, gaps, etc.).

Please comment directly in the table below under your name. Your input will help shape the next iteration of the standards and guide the focus of discussion at Workshop 2.

ITEM		Participant A	Participant B	Participant C	Participant D
	Draft Design Standards - Storage				
1	Storage facilities are to be **sized and certified** by a suitably qualified person. For dairy cows, this means using the **Dairy Effluent Storage Calculator** (DESC) sized to the 90th percentile; for other animals, an appropriate method must be used, as determined by a suitably qualified person.	Agree,appropriate storage has a big influence on a farmers requirement to apply to land when conditions are less than idea, that increasing the risk to the environment and the risk of noncompliance activities being undertaken	What does certified mean in this context? FDE WoF/accredited level.	Agree but subject to SQP One area I am in coms with IrrigationNZ on is how to develop a signoff of a DESC provider via the accredited advisors program. We see alot of south island DESC's being done for exisitng ponds by consultants who cook some simple areas of the DESC. Please reach out if you want to discuss how we can set this up.	I agree that a DESC must be generated and provided by an SQP. I also suggest that the description summary must be precise and must explain the inputs and outputs of the DESC. I so not agree that the 90 percentile number should be used, (Horizons council does not accept the 90% number) ... In my opinion for example, why would an accredited effluent system designer design a system that is only compliant for 90 per cent of the year!
2	A requirement for farmers to provide either **a pond completion certificate** issued by an engineer or **a pond drop test (PDT) certificate**, at a set date. Their certificate must demonstrate that the pond meets the test criteria and does not exceed the maximum allowable change in pond level, and adheres to the required frequency of testing.	What do we mean by set date? At a random compliance visit? How long is a pond completion certificate or PDT valid for? Farmers will do this if it provides them with a period of acknowledged compliance (e.g. 5 years, 10 years)	Why an engineer – so many ponds are lined and not leaking? This will impact those farmers which were early adopters and lined their ponds to do the right thing r	Pond completion certificate is new therfor we need something for those farmers between 2010 and now whom have invested significantly. Leak detection plays a key role for assessing losses from synthetic lined systems.	I agree with this partly - The DairyNZ resource "A farmer's guide to building a new effluent storage pond" recommends on Pg 24 of the resource, that the farmer should receive a PS1 and a PS4 from the pond constructor and the respective warrantees from the pond liner provider. The liner warrantee must be for a minimum of 20 years for the

				PDT guidance via DairyNZ is coming for frequency which can be determined through the FWFP. Initial pond test should be a requirment for clay ponds but WRC will need to consider the poor implementation of PDTs by WRC compliance as some farms have done a test and some have ignored requests with no punishment. We do not want to reward those that ignored councils request.	product and 5 years for the installation. In terms of an Engineer's report, this generally is unnecessary and expensive! (unless the pond is constructed on a hill side or a precarious location.
3	That at least 75 percent of the **working storage volume** is available (yet to be determined if, and or what date or time period should apply)	Like the idea, but how would it be monitored and measured (especially old ponds with no design maps) or what date would you use e.g. 1 May (date needs to be post autumn pasture establishment as summer crops areas are often used for effluent application. If you have an individual date then a pond can only be checked on that date as before that date, they could still be planning to empty it. After that date it could have filled up since that date. Clear definitions need to be included how and what is in the calculation e.g. weeping walls, reception pond, bladders, 2 pond and discharges (if there are still any) Is 75% achievable taking into account freeboard and solids in the bottom. Also, there isa big difference in being 74 % working volume and say 20working volume, but both are none compliant This cannot be a $800 exercise for a farmer to prove if a compliance officer asks for evidence. What would be the non-compliance rating if a farmer fails, also timing may mean emptying to become on compliant may not be immediately possible as short term weather conditions do not allow	This should be advice note I think – hard to enforce. Rule is when pond overflows	This is a good backup that should be captured under a requirement to have a tailored managment plan. We would not want a bunch of technical non-compliance just because the season has not been traditional and farmers had to wait another few days to irrigate. What would they do if it was 74% but irrigation would cause ponding. Some ponds 75% working volume will be 30 days storage and others it might by 1 day depending on the soil risk and irrigation methods adopted.	I like the policy that the NRC use – the farmer must start the new season with the minimal amount of effluent in the pond. This could be the 500mm of sludge factor in the bottom of the pond. NRC will issue an Abatement notice if a farmer starts the new season with say a full pond! I see this issue regularly, the farmer spends a lot of money on a new system, and they don't manage it properly! ... in other words, the farm has no available storage if the pond is full at critical times of the year!
4	Where upgrades or new facilities are required, design certification that the facility meets engineering standards (e.g. IPENZ Practice Notes 21 and 27), and has a leak detection system.	Agree	Meets engineering standards – agree. Not nec an engineers sign off	Leak Detection is a must unless its clay lined or above ground (tanks and bladders). This allows long term managment and observation. Would be better to reference the quality of the provider vs the standard. Recommend something like, New facilities are to be designed and installed by a SQP generally a accredited designer who meets relevant industry standards.	Agree. All new storage ponds must have a leak detection system installed in the base of the new pond by the earthmoving contractor.

				These providers will stay but the industry standards will constantly adapt over time	
5	A requirement for infrastructure to be **setback** from sensitive or high-risk areas (such as waterways and critical source areas).	Agree	Agree	Agree to a small setback of 5m to allow for actions like bunding to occur in emergency. Really need to be cautious here are Dairy sheds have been built close to water to discharge until the transition to land occured. These systems have been installed around waterways due to the functional need and to save moving a cowshed. Protections for existing systems needs to be in place.	Agree. In my opinion, the existing recommendation of 20m is too close – I suggest 50m – particularly from a water body or a drain.
6	**Leachate** from the storage of solid farm animal effluent must be contained and directed to a farm animal effluent storage facility.	Agree, however Any thoughts around calf shed bedding short term storage as impractical to incorporate into the dairy shed effluent system	Agree – leachate being the liquid component only. Calf sheds – that will be a whole other issue wrt infrastructure	Agree Calf sheds and leachate from silage storage should be discussed somewhere to.	Agree 100%!
7	**Solid farm animal effluent is stored on a sealed surface** so that water cannot permeate at a rate greater than 1×10^{-9} m/s.	Agree	Agree	Agree	Totally agree!
	Draft Minimum Practice Standards – Storage				
8	Ensure that the farm animal effluent storage facility always maintains a minimum of 300 mm **freeboard.**	Is freeboard to allow emergency storage space or stop overflow due to wave motion. Does it need to be a quantity number relative to herd size as you could have the same size pond for a 500-cow herd and a 750-cow herd (one right sized and one oversized) but the same minimum emergency storage quantity. How do we implement the same conditions on a bladder and/or a weeping wall and pond system where the pond could be at a 300mm free board level, but the weeping walls have just been emptied creating ample emergency storage	Number should actually be relative to the surface area of the pond. If it is available as "emergency" storage what happens when it is used for that (very wet weather)	If an accredited provider is designing this storage than the freeboard condition is not needed. This should be tailored to the farm. The freeboard like others said is often for wave action on larger ponds. I would prefer that WRC had a emergency storage requirement of 5 days as an alternative which could capture ponds, bladders and tanks. This provision would penalise and ponds which we do not want to do.	Yes, agree. This must apply to all farm animal effluent storage facilities. The 300mm freeboard allowance for ponds was always to allow for wave action. Some high wind locations should have a 500mm freeboard minimum. The NZCP1 45m distance rule also takes into account that air-borne pathogens can be an issue near milking systems.
9	Install a **visual depth gauge** on the farm animal effluent storage facility to clearly illustrate the freeboard level.	See above comment, can we use a standard 300mm	Hard to implement on a 2;1 batter placstic pond liner	This should be covered under a management plan condition. Under the management plan WRC could list that a farmer needs processes in place to identify and manage storage levels.	Agree. This is easy to do! A simple red/ yellow/green line could be painted or attached / welded on one side of the pond liner.
10	All components of the farm animal effluent system shall be operated and maintained in **good functional order**.	Agree	Agree, but functional might be open to interpretation	Remove this and have maintenance listed in the management plan requirement.	Agree. The WoF is a classic example of using this model if there is doubt.
11	There must be **no overflow** of farm animal effluent from any storage facility or part of the disposal system (e.g., pipes or hydrants).	Agree, however need to allow for minimal quantities when changing fittings etc. We cannot have a farmer being non-compliant for breaking a pipe fitting to move the irrigator to the next	Agree with Adrian	Agree with the team. This condition should focus on the effluent generating areas where it shall be contained.	Agree. I also agree with Adrian's comments here.

		paddock if a rule was literally enforced "no". Any overflow of effluent should not exceed practical acceptable amount for the operation of the effluent system e.g. breaking pipes to move an irrigator.		The irrigation component is captured by ponding and runoff rules. Council would then be able to assess how bad the losses from the irrigator hydrant is.	
12	Regularly applying farm animal effluent to land when conditions allow to ensure maximum storage is available during large rainfall events and during prolonged periods of wet weather.	How would this be enforced or monitored? Also does this discourage deferred irrigation, which is preferrable if storage is adequately size and managed. E.g. purposeful storage of winter effluent to be applied to spring cropping paddocks	Can't be enforced really, and the DESC has specific rules for effluent application including deferred for high-risk soils. This is applying ahead of large events, ideally there would be enough storage with pond sizing	Farm needs management plan and nutrient budget. A plan to start applying when soils hit X temp and the farm finishes calving for example. Some might have a weather gauge with soil moisture levels being the threshold for irrigate or not. This could be a fishhook for contract only. Farmer might have 120 days storage and pump three times a year.	Simply this is farm management. DairyNZ used to promote a fine week of weather ahead for example – "so get the pond level down! "
13	Farm animal effluent storage facilities must be managed to ensure sufficient storage for deferred irrigation is available during prolonged periods of wet weather.	Does DESC allow for deferred irrigation in the calculation, or is it added on afterwards	Done on soil risk so should be enough BUT the climate data is now OLD and hopefully will be fixed soon. Climate change will impact this also	DESC done by a SQP is key here. We don't want farmers or joe blog consultant doing a DESC that does not match the irrigation, soil risk and storage volumes determined. Will create another option for technical non-compliance without any impact on enviromental efffects.	Agree. "The DESC model assumes that the effluent block will be irrigated on every available day throughout the season when there is a soil moisture deficit, and conditions are suitable to apply Farm Dairy Effluent."
14	**Emptying** the farm animal effluent storage facility as much as possible before expected rainfall events, provided that maximum application rates are not exceeded.	Don't agree. Directing farmers to Apply their effluent before a known rainfall event for the rain to then wash effluent into overland ephemeral flows!!!!	As above	As everyone else listed. We also don't want people to be directed to apply as higher rate as the rule allows as the principle is to match rates with soil risk and system design.	Agree. Once again, this is a management issue and looking ahead at the weather forecast and applying FDE to the soil moisture deficit, and at the correct infiltration rates dependant on the soil type.
15	**Contingency events are actively managed**, including modifying normal operations to address issues like pump failures or prolonged adverse weather.	"Contingency plans are documented, and events are actively managed"	Have a plan of what to do in this. Build contingency into the DESC when sizing pond	Managment Plan as condition in rule that has this as a part of the plan. The farm needs a plan to manage for contingency	The farm owner must have a mitigating option e.g, a petrol driven trash pump for transfer /temp irrigation, or a tractor pump.
16	If the integrity or sealing of the farm animal effluent storage facility has potentially or been **compromised** (e.g., damaged, visible leaking, mechanical cleaning), a **certificate certified by a Suitably Qualified Engineer or Suitably Qualified Person Farm Animal System**s must be provided to Waikato Regional Council within 20 working days of receipt of certification results.	What kind of certificate, we need to state. Do we refer to P21. And PDT methodology	What is a **Suitably Qualified Person Farm Animal System**s	A pond drop test, leak detection test or report from the installer would be tools to use here. No need for any extra costs to a farmer that has leak detection installed that isn't leaking	Agree. This can be provided by the lining supplier.
17	If the use of a farm animal effluent storage facility is discontinued, it must be disconnected from the existing farm animal effluent intakes and fully decommissioned by removing all farm animal effluent contaminated liquid and sludge within 12 months of ceasing use.	Agree, but most decommissioning to date is of oxidation and clay lined ponds. In years to come we could be decommissioning tanks, concreate ponds, bladder that also could have alternative uses. e.g. water storage	Agree – need to document with photos. Adrians comments are true too – and also what do we do with all that pond lining material?	Agree with others here	Agree, an photos taken of the process for the council. Generally this is carried out when the pond is decommissioned and pumped & dried out.
18	Farm animal effluent storage bladders must have suitable bunding to contain or direct any spills or failures away from surface water courses or drains.	Should there be a metered distance. Are we implying here that a bund needs to be sealed with an appropriated storage capacity. This could be the death of the	Bunds currently are made of soil or sand – will hold for a bit but not for long. In some ways tanks should have the same rules	I think that this should be left to industry standards. The COP will provide guidance here but not all situations may require bunding. If there is 200m to the	Agree. The bunded area should contain all the FDE. However, it could be directed away from a drain or water body to pasture in extreme/unlikely events.

		bladder in many instances. Would this relate to new or already installed bladders?		nearest waterway on a flat farm you would probably want it to run rather than bund. Rather than bladders I prefer “Above ground storage is to have plans and infrastructure in place to prevent runoff to surface water” This captures tanks, bladders and above ground ponds.	
19	Install **a visible measurement device** on farm animal effluent storage bladders to indicate the maximum level they can hold and ensuring they do not reach this level. Alternatively, maintaining a freeboard of 300 mm.	Needs to be consistent with item 8 in terms of the amount and why	Yes – does not want to be max level as that is too late, needs to be 300 mm or more	System designed by a accredited designer will have guidance directing this once the review is complete.	Agree. This could easily be written on the bladder walls by the manufacturer. 1.6m is generally the maximum height.
20	**Divert roof water** from sheds, other farm buildings and yard stormwater from the farm animal effluent storage facility wherever practical	Should be a farmer's choice, not practical on older sheds due to roof heights and concrete layout. No issues with new builds	This is good to have but there are times a farmer likes to have the choice to harvest any rainwater e.g. summer, so appropriate diversion?	Strongly disagree. Alot of the time the environmental effects are better to capture the stormwater into the pond, especially where the shed is around waterways. Also dilution of FDE is beneficial. The council should focus on does the system design match the DESC.	Agree.
21	Install any **stormwater diversion** system before any junction where it can mix with farm animal effluent.	Not always possible, again needs to be a farmer's choice relative to system and staffing	Agree	As above, farmers choice and should be accounted for in the system design.	Agree. This can easily be installed with tee joins and slider valves for example.
22	Ensure a clearly **visible alert system** is in place to advise staff if the stormwater diversion system is on, ensuring only clean stormwater is diverted.	Agree	Yes	Yes but do not want all farmers needing SWD. We have seen a trend with more farmers taking SWD out of systems due to staff risk. They are better off irrigating extra water than having effluent running into the stream through SWD that someone forgot to turn back off.	Agree, there are plenty of options available for this purpose!
	Draft Design Standards – Land application				
23	Application rate limits (above which, for example, more scrutiny and or more stringent rule activity status might apply): o Nitrogen loading ≤ 150 kg N/ha/year o Liquid effluent depth ≤ 10 mm per application (could vary based on soil e.g. low risk farm dairy effluent application soils on flat land)	Many irrigators cannot apply below 10mm, so depth should be appropriate to soil type and contours	Note we have rate limits then a depth – two separate things, should be drive by soil risk, but this will need good mapping support from WRC	150kg is a fine threshold for consent or PA and allowsa tool for councils to request if they find a situation where they have concern. I know they already ask for effluent area under the current surveys so can operate as current here Land applicaiton minimum should stay at 25mm as per exisitng plan. New systems should be irrigating to the standards designed which will be captured in FWFP and DESC. When soils are optimum to irrigate farmers might change rates and depths to get more FDE out but then adjust back during higher risk periods of the season.	Agree. FDE nutrient testing is inexpensive. Most travelling irrigators run too slow and lack maintenance therefore will not deliver a 10mm application depth!
24	When requested, provide certification by suitably qualified person and farm plan audit results and supporting information that demonstrates compliance with the loading depth and the application rate.	I cannot see an application rate requirement anywhere?	Depth and rate two separate things, can have low depth high rate which may give temporary ponding	Annual bucket test put into the FWFP is perfect here. Should not require costs and time to have an expert come out to a perfectly operating irrigator.	Agree. An annual bucket test must be carried out on the irrigator (s)
25	A requirement that discharges are setback from areas such as waterways and property boundaries.	Needs to be distance quoted, as not able t implement by farmer, auditor or compliance officer	Go with FDE code and standard limits.	This depends on irrigation method. Large cannon may need 100m from boundary whereas a contractor spraying direct to	There has always been a 20m setback rule in the Code of Practice.

				pasture needs no setback. Waterway setback as a generic 5m should not impact many farmers. Anything larger above 15/20m will impact alot of farms with drains and long skinny paddocks.	
26	A requirement that the discharge does not directly enter surface water, pond on the land surface, or runoff beyond the irrigated area A requirement to meet the relevant practice minimum standards (refer to Appendix 1 of this document).	Ned to see appendix 1 to comment.	Run off to water is the criteria?	This reads messy. I don't think farmers have an issue with the current state of no runoff of FDE.	I need to see Appendix 1.
27	Record-keeping: application timing, volume and location provided on request.	If basic calculation yes e.g., 20m3 hr/3hr. If actual metered, then no	Agree – farmers should know this so they can do depth and nutrient calcs	Agree, farmers can record on our excel sheets, in a dairy diary or using the likes of Halo precision mapping and GIS monitoring. This is key to show a pattern of nutrient distribution and for farmers this is a useful way to demonstrate that they are applying as they should. Council compliance officers have no evidence to suggest they are not over applying in the same paddock every day otherwise.	Agree. DairyNZ have wall charts available for this purpose – of the Fonterra dairy diary can be used.
28	A requirement that the discharge of solid effluent must not: • Contain any hazardous substances, pests, pest agents, unwanted organisms, or organisms of interest; or • Occur onto the same area of land where a previous application is still visible.	Do not understand what trying to achieve with point 2. Surely the limiting factor is kg N/ha per application, per ha and crop requirement	How is this monitored> BP one is not effluent?	This will be tricky for example, Large weeping walls store 6/12 months of solids. Birds spread pest plant seeds into these bunkers which farmers need to spread. Solids storage should be spread thinly to land	More clarification needed here.
	Draft Minimum Practice Standards – Land Application				
29	Irrigators must be maintained regularly according to the manufacturer's recommendations. This includes periodic checks of nozzles to ensure proper function and distribution.	yes	And put in a plan	Put into the management plan and record via FWFP. Compliance officer then has something to hold farmer to account for then. Without the link to the management plan and FWFP the farmer can just say it's been done and council have no way to measure.	Agree – change the rubber nozzles when the shed rubber-ware is changed – or annually.
30	Irrigators must have a failsafe system installed that shuts off the farm animal effluent pump and ceases irrigation when the irrigator reaches the end of its run or when there is any fault including a pressure drop or stalled irrigator. These systems must be in use every time farm animal effluent is applied to land.	Nice to have, but not sure if can be practically implemented, also are their alternative mitigations e.g., watching the irrigator, timers etc	Agree	Yes it sounds good but for some low cost systems the best failsafe is having a plan which has the farmer watch the irrigator. This was the traditional failsafe recommended by councils (don't turn it on and go to town for lunch). The requirement should be for the farmer to have a failsafe and this can be determined by the farmer as extra oversight or investing in tools	Agree. The reputable irrigator manufacturers can supply an auto shut off valve for around $800. Pressure drop /increase sensors are also relatively cheap.
31	Record and demonstrate (bucket test), the application rate/depth of all property irrigators.	Double up with 24	Make this the action to achieve 24	Agree with everyone here	Agree.
	Draft Practice Standards – Feedlots and other stockholding areas				
32	The draft approach for managing **feedlots and other stockholding** areas focuses on addressing gaps in the NES-F regulations for feedlots and other stockholding areas.	What do you see as gaps?	Need definitions or the dairy shed becomes stock holding area	Need some more info. Sacrifice paddocks is a clear gap but sometimes	Yes, the 'gaps" need clarification.

				the environmental outcome is best to turn a safe part of the farm to this instead of messing up others.	
33	Meet the storage and land application standards.		yes	Agree	Agree
34	Permeability standard (10^{-9} m/s)		yes	Agree but existing systems may be hard to demonstrate so how do we deal with this.	Agree
35	Setbacks requirements.		Same as above	Probably but also is a concrete nibbed stockholding area that drains away from the river a real issue? Also existing systems and how to we recognise the expensive investment	Agree.
	Draft Design Standards – Feedlots and other stockholding areas				
36	New feedlots, stockholding areas, and wintering barns must not be located in a floodplain.	yes	ok	Need definitions here. Given climate change and maps capturing more area as floodprone how do we deal with the inaccuracies and situations where there are wrong maps I have an example in Auckland where this feedpad is in a floodplane under council's new map. The farmer has had to waste 40k on a site assessment to prove its never going to flood.	Agree.
37	Feedlots, wintering barns and other stock holding areas surfaces are bunded to prevent solid and liquid farm animal effluent run-off from the infrastructure.	Bunded not the right wording. All effluent is maintained within the sealed areas and collected for disposal	All effluent is maintained within the sealed areas and collected for disposal		Agree but, captured and contained.
38	**Farm tracks, laneways, stockyards, covered yards, calf raising areas and underpasses** Farm tracks and underpasses are constructed to divert discharges to a farm animal effluent storage facility or diverted onto land where it cannot enter surface water.	This would need to be split out to relate the requirement to risk. e.g. divert a farm track discharge to a farm effluent holding facilities?? Underpass effluent can be diverted to land	These needs changing as per Ad comments	Underpasses are tricky as some are the race continued and some need maintenance and therefore storage. Look at our ballance farm environment award winner the MacKinnon family's which is into a hill so flat and is cleaner than most of the other races on farm. We have also heard that WRC compliance are now calling sediment detainment bunds effluent storage. This goes against WRC direction when those farmers converted to dairy and required races to have sediment bunds and traps. Wording could be “farmers are to implement measures to manage risks of runoff from tracks, races and underpasses”	Agree.
39	**Farm tracks, laneways, stockyards, covered yards, calf raising areas and underpasses** All practicable steps should be taken to minimise the potential adverse effects on freshwater quality and ecosystem health of farm animal effluent run off from stockyards, covered yards, calf raising areas and laneways.	Too high level. Do not include		Very high bar. Something like farmers are to identify steps and minimise risk to water demonstrated via the FWFP.	
	Other draft practice standards				

40	**Effluent Management Plan (component of the FEP)** 1. The farm has a comprehensive effluent management plan prepared in accordance with Schedule X[17] that must include farm animal effluent system contingency plans, and training responsibilities. 2. Any person involved in the management of farm animal effluent must review the Farm Environment Plan effluent management plan annually and be aware of and comply with any consent conditions. 3. Maintain a record of farm staff farm animal effluent system training.	This needs to be a simple practical farm staff level 2 pager not a $3000 comprehensive plan that a farm worker will not look at or understand	Agree with the content, and at an owner level but needs to be broken down to a practical level for farm staff as part of training	Agree and would love to bulk this up to remove alot of the conditions listed above. Tailoring risk to the farm in a plan is key. Having the plan written as a requirement then puts the pressure on the farm to operate to that plan, resulting in less risk of standards slipping. WRC audit or inspection can review performance in alignment with what their plan says.	Agree with all. DairyNZ have a EMP template available.

[17] Schedule would set out what the Effluent Management Plan must contain and timeframe for review.

5.6 Appendix F – Workshop two agenda

Rārangi take
Agenda

Waikato Regional Council
Te Kaunihera ā Rohe o Waikato

Freshwater Policy Review – Farm Animal Effluent Technical Advisory Group

Date	13 November 2025
Time/Location	9.00am – 1:00pm Tui-Kowhai meeting room, Level 1, Waikato Regional Council, 160 Ward Street, Hamilton
Participants	Caleb Highman, Dr Debbie Care, Shaun Hazelton, Trevor Foley, Adrian Brocksopp
Apologies	
In attendance	Ruth Lourey (WRC Topic Lead), Angela Fenemor (Freshwater Review Policy Lead), Jon Palmer (WRC Principal Technical Advisor), Angus McKenzie (Facilitator)

Purpose

To explore the challenges and opportunities of implementing the draft farm animal effluent requirements, understand the magnitude of change required, and consider implementation approaches that balance environmental outcomes with farm feasibility and available support.

Context

We are seeking input from the group on two key areas.

Understanding the change required

To support policy design and ensure the proposed approach is both practical and effective, we are seeking input on the scale of change required. This includes understanding who may be affected by the draft changes, the extent of farm system changes that may be needed in response, and the level of support currently available from rural professionals to assist with implementation.

Staging implementation

Given the number of farms in the region, and that the draft approach will require support from engineers, rural professionals, and industry tools and guidance, we are considering if, and how, to phase the requirements. This could be supported by a better understanding the main barriers to implementation, identifying any logical groupings that could inform how requirements are staged, and assessing timeframes. We are also interested in how implementation could be aligned with available support, including technical advice, and contractor capacity.

Time	Item	Topic	Lead
9.00am	A	**Introduction** • Welcome • Agenda for the day • Understanding the task	Angus McKenzie
9.15am	B	**Review of additional feedback from workshop 1**	Ruth Lourey
9.30am	C	**Overview presentation and group discussion** • Draft options for timing and staging implementation	Ruth Lourey
10.20am		**Break**	
10.35am	D	**Workshop session 1 – Current practice, magnitude of change and implementation** • What scale of change is required? • What will be the biggest challenges/barriers to implementing the draft standards? • How long might implementation take?	Angus McKenzie
11.25am	E	**Workshop session 2 – Options exploration** • What advantages, challenges or risks do you see in the draft staging options? • Are there other options that need to be explored? • What is your preferred option and why?	Angus McKenzie
12.15pm	F	**Workshop review and reflections** • What else do we need to consider?	Angus McKenzie
12.30pm	H	**Next steps** • Project timelines • Feedback process • Other planned TAGs	Angus McKenzie and Ruth Lourey
Reading documents			
Links for reference only			
Introductory Material – Workshop 2: Freshwater Policy Review Farm Animal Effluent Technical Advisory Group - Doc # 33567587			

5.7 Appendix G – Workshop two discussion memo

Discussion document – Freshwater Policy Review Farm Animal Effluent Technical Advisory Group

File No:	22 05 10
Date:	6 November 2025
To:	Freshwater Policy Review Farm Animal Effluent Technical Advisory Group
From:	Ruth Lourey, Policy Advisor Waikato Regional Council
Subject:	**Introductory Material – Workshop 2: Freshwater Policy Review Farm Animal Effluent Technical Advisory Group**

Purpose

The purpose of this discussion document is to outline options for staging the implementation of the draft farm animal effluent policy approach. It also provides context around current compliance to inform discussion on current practices, what changes will be required, and how this change can be supported and resourced. This information will help inform the design of the approach and assessment of the effectiveness and efficiency of the policy options, including the economic analysis.

Background

There are a range of options for prioritising, staging, or phasing the implementation of requirements related to farm animal effluent management. The aim is to consider whether these requirements should be introduced all at once or staged over time, and on what basis that staging might occur. Understanding current practices, baseline behaviours, and the magnitude of change required will help inform policy approach design and how implementation can be phased. This includes:

- Identifying practical barriers and assessing readiness across different farm types
- Considering the extent of farm system changes that may be needed in response to the proposed requirements
- Understanding the level of support currently available from rural professionals to assist with implementation
- Aligning support from engineers, rural professionals, and industry tools with the rollout of requirements
- Implementation of organisational support, including WRC and industry

This will help assess implementability, including whether appropriate support mechanisms are in place and whether the policy is designed to enable change.

Current practice and magnitude of change

To inform engagement discussions, including questions around compliance and cost implications, we have compiled relevant data from WRC's compliance programme. The information is presented at both the Freshwater Management Unit (FMU) scale and region wide.

Doc # 33567587

The dataset includes:

- Overall compliance status
- Sealing material and sealing assessments
- Effluent storage capacity assessments
- Standoff and feedpad infrastructure assessments

Some information collected on the number of stock underpasses has also been included.

This information provides a snapshot of current compliance patterns and infrastructure characteristics across the region.

Compliance Programme Data Summary

The information below is based on data collected through WRC's compliance programme between 2017 and 2025 (partial year).

Please note that WRC visits a proportion of farms each year, and the number of farms visited in a year varies. To generate a region-wide dataset that is as complete as possible, the most recent compliance record for each farm has been used. As a result, some records date back to 2017/2018, while others are from as recent as 2025. In addition, over this time, WRC has changed how it records compliance. The historic (previous) and current compliance records have been aligned with the compliance descriptors adopted for the Freshwater Policy Review dataset.

The original (historic and current) compliance ratings have been mapped to the updated descriptors for some level of consistency across the dataset. While every effort was made to match records, this process has potentially introduced some variability, including within the "moderate non-compliance" category. For example, farms previously classified closer to "non-compliant" and those with a lower risk rating in the compliance assessment may all now fall under "moderate," potentially resulting in an underrepresentation of the "non-compliant" category (either moderate or significant non-compliance).

This alignment enables a more consistent regional overview for policy analysis, but it is important to interpret the data with an understanding of these limitations.

Additionally, the results may reflect challenges in determining compliance with rule standards, as well as changes in the focus of the compliance programme. In recent years, there has been more of an emphasis on effluent storage infrastructure, with comparatively less attention given to standoff and feedpad infrastructure. This may partly explain the number of farms recorded as "unknown," and also where compliance with standards could not be determined, for example, where infrastructure is sealed and not visible during inspections, or where follow-up information from farmers (such as sealing certifications or engineer sign-off) has not been provided. In some cases, ponds may have been visually inspected, but visual assessments alone do not reliably confirm sealing standards unless there are obvious issues. Without supporting documentation, it is not always possible to verify whether the infrastructure meets the required standards, resulting in a significant number of farms being classified as "unknown." This, in part, could also reflect instances where the current rules standards do not provide sufficient clarity or measures for compliance to determine a compliance rating.

WRC aims to visit all farms over a five-year period. It should be noted that a "no record" status may simply reflect that no information was recorded during a particular visit for that activity. Also, within

the compliance dataset, there is an overall property compliance rating[1] for all consented and assessed activities (e.g., compliance with dairy effluent PA and water take consent). So, farms may have an overall compliance rating for these activities, but it's possible that at the time of the visit, a specific effluent-related rating was not recorded.

Table 1: Compliance rating descriptors as used in the Freshwater Policy Review

Rating	General Descriptor
Full compliance	Generally full compliance with all relevant consent conditions, plan rules, regulations, and national environmental standards.
Moderate non-compliance	Ranges from non-compliance with some relevant conditions (low risk or technical in nature) to non-compliance with most conditions, where there are moderate environmental consequences or risks.
Significant non-compliance	Non-compliance with many relevant conditions, where there are significant environmental consequences and/or a high risk of adverse effects.
Unknown	Compliance status could not be determined due to insufficient information or inability to assess infrastructure.

Notes on the data

- While the dataset spans multiple years, it does not represent change over time. It is a snapshot based on the most recent available record per farm.
- The "unknown" category may in part reflect limitations in the ability to assess certain infrastructure types.
- The alignment of historic (i.e. previous) and current compliance ratings to Freshwater Policy Review descriptors may affect the distribution across compliance rating categories.

Refer to Attachment 1 for the data alignment changes in the compliance record value and general description of the compliance rating.

Compliance Data - Freshwater Management Unit

Refer to Attachment 2 for the region wide compliance data and FMU compliance data in table format.

[1] This all regional plan requirements rating data has not been included in this discussion document, overall compliance is the compliance rating related to fam animal effluent.

Graph 1: Overall Compliance by FMU

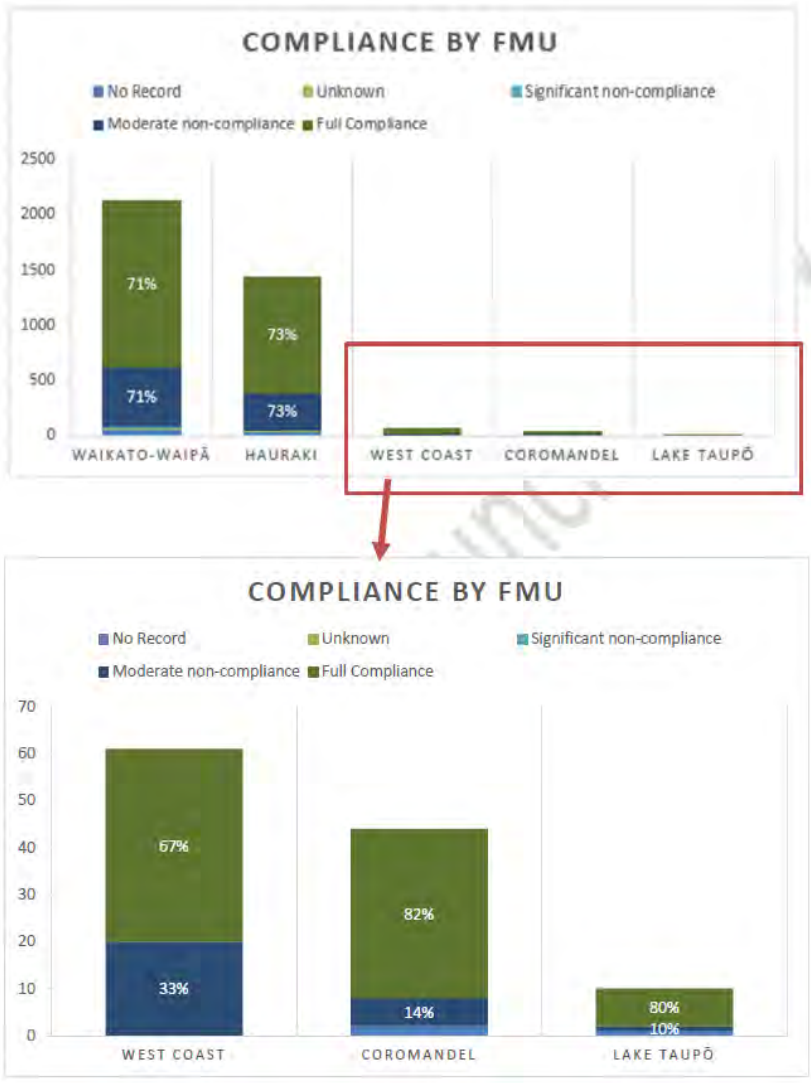
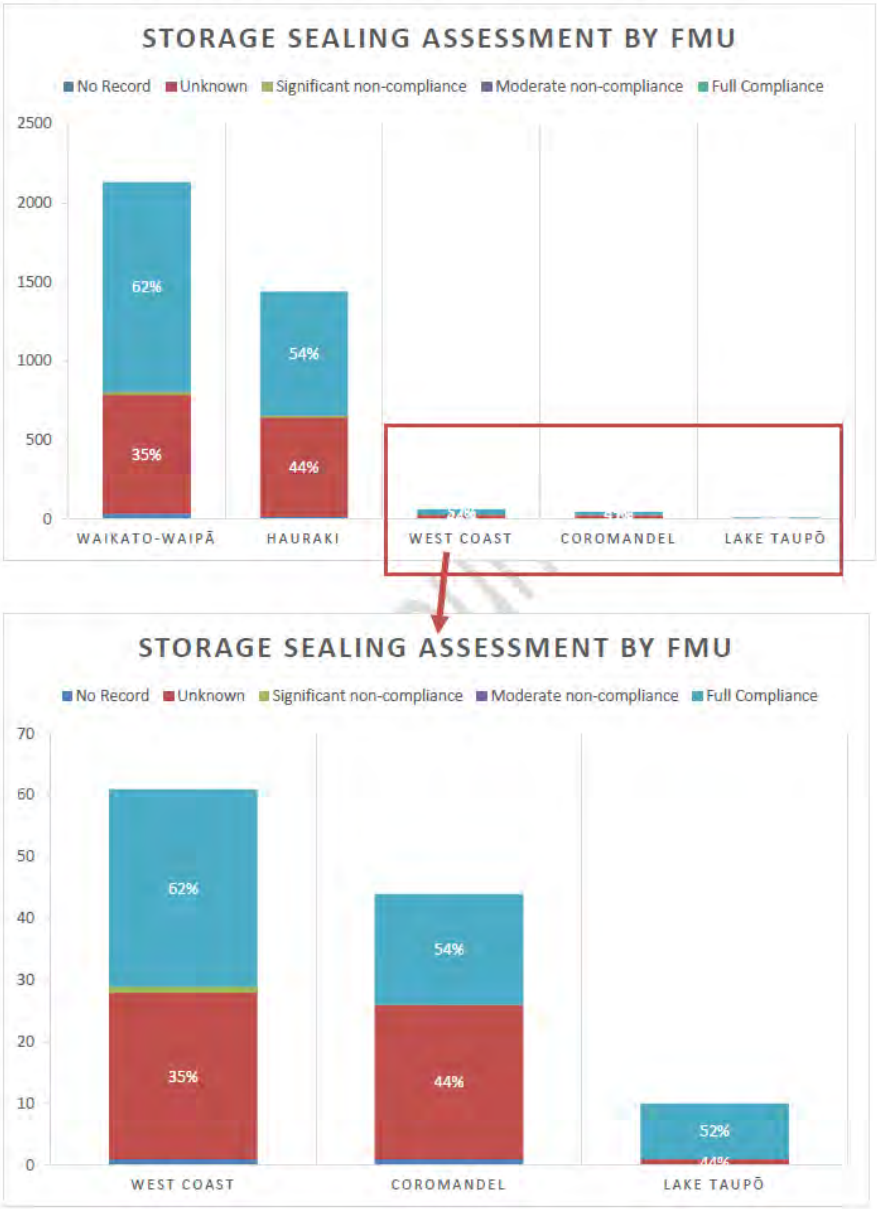


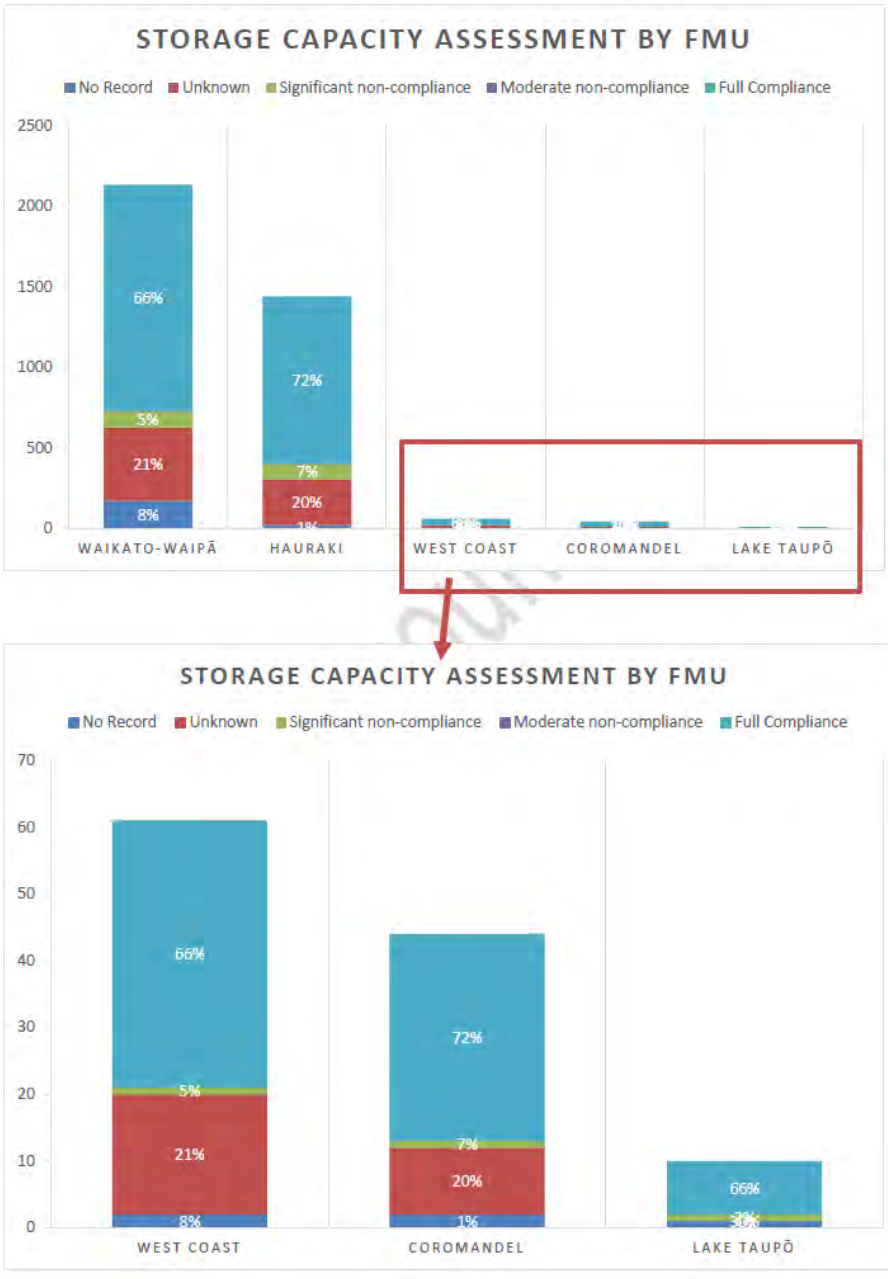
Table 2: Storage Sealing Material by FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Compacted clay	33	23	1	1	1
Earthen ponds	832	661	24	37	1
concrete	110	131	1	1	1
Multiple	74	44	4	1	
Synthetic	958	514	12	20	7
Other	100	56	1	1	
No record	25	10	1		
	2132	**1439**	**44**	**61**	**10**

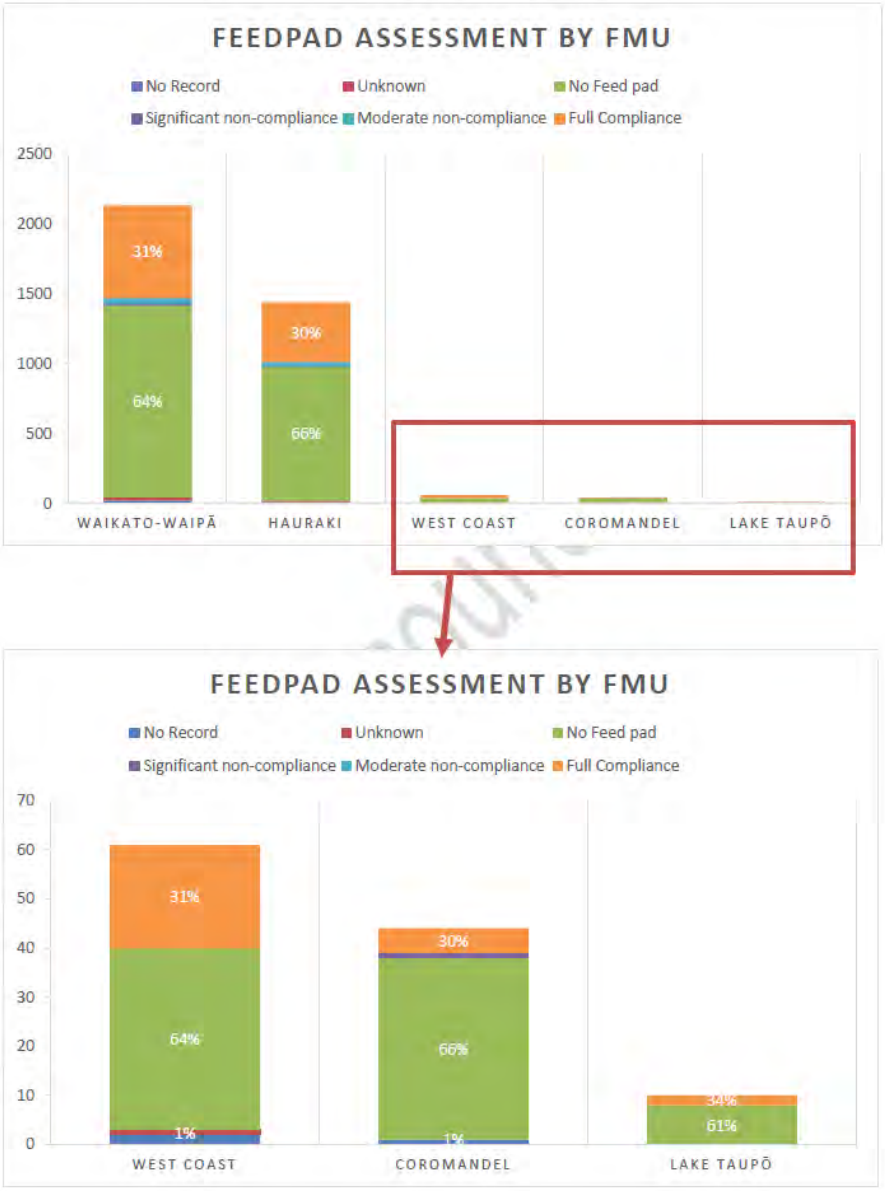
Graph 2: Storage Sealing Assessment – FMU



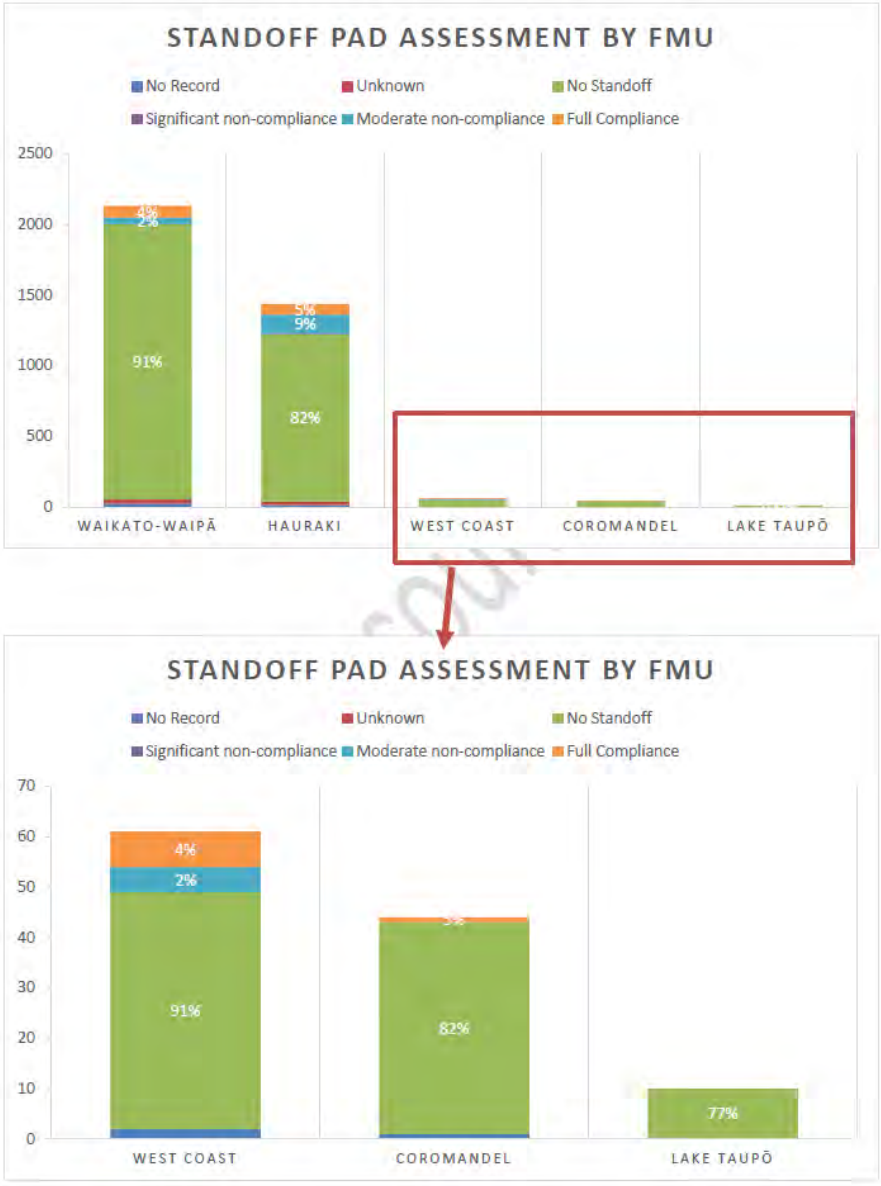
Graph 3: Storage Capacity Assessment – FMU



Graph 4: Feedpad Assessment – FMU



Graph 5: Standing off assessment - FMU



Farm underpasses in the Waikato region

WRC has recently undertaken work to better understand the number and effluent management of stock underpasses across the region. The compliance programme has identified underpasses as a source of compliance issues, particularly where effluent has not been appropriately directed to farm effluent storage systems or do not have a suitable system to apply this effluent to land in place.

This desktop assessment focuses on identifying the extent of underpass infrastructure. This is intended to help prioritise compliance programme effort for example, by identifying high-risk underpasses for follow-up field visits.

The analysis found:

- Total underpasses recorded: 1,259
- Underpasses assessed as Critical, Minor, or Not Assessed: 633
- High-risk underpasses identified: 135

When assessing underpasses as high risk, the following factors were considered:

- Previously identified as high risk
- Little or no information available in WRC records
- Effluent discharge point (pipe or grate) not identified, or discharging to paddock or drain
- Located in a high-risk area near a waterway, with inadequate infrastructure
- No effluent management system in place, with risk of discharge (e.g., sloping entry/exit)

The desktop assessment involved reviewing WRC file notes, inspection letters, and media. Tools such as Our Maps were used to locate waterways, and Google Earth provided closer ground-level perspectives.

Additional compliance information

Billington E WRC 2024. Dairy Effluent Compliance Report. Agenda Environmental Performance Committee Meeting 14th August 2024. Agenda of Environmental Performance Committee Meeting - Wednesday, 14 August 2024 - Core Share (opentext.eu)

Timing and staging implementation

The implementation of farm animal effluent requirements is expected to contribute to improvements in water quality over time. However, there is likely to be a lag between the introduction of requirements, on-farm action, and observable changes in water quality outcomes.

Staging implementation is being considered to help balance the time and support needed for landowners to respond with progress toward water quality improvements and address any ongoing compliance issues. Implementation is likely to require time, resources, and some integration or scheduling across landowners, WRC, and industry. A staged approach may help prioritise effort where it is most needed, or support more effective uptake, and or manage capacity constraints. However, it also has implications for the timing of freshwater and ecosystem health outcomes and the resolution of existing compliance challenges, which need to be considered in assessing staging options.

Implementation considerations

There are approximately 3,600 dairy farms in the catchment, along with other farming operations and infrastructure (e.g. stockholding and feedlot areas) that will need to meet farm animal effluent requirements. Many landowners will require support and advice to implement the new requirements.

This could include resources from WRC, expert consultants, training providers, and industry organisations.

This suggests the need for some form of prioritisation or phasing, either in terms of implementation or the specific actions required on the land. A staged approach could help distribute requirements and support efforts more evenly over time, rather than concentrating them all at once.

The trade-off is that substandard systems and practices remain in place, and extending timeframes for compliance may delay improvements in water quality. While staging may help manage capacity constraints and support more effective uptake, it also affects the timing of freshwater and ecosystem health outcomes, and the resolution of existing compliance challenges, all of which need to be considered when evaluating staging options.

Rather than recommending a specific approach, this document describes key options and considerations or a framework for assessing them. Staging or phased implementation may be based on various factors, including geographical area, risk, performance criteria, or infrastructure type or quality. These staging options could be based on more than one factor.

Potential scales for staging include:

- Geographical area e.g., part FMU or FMU scale
- Property-level e.g., storage capacity
- Any scale

Staging options within those scales include:

- Risk based approaches, such as:
    - Sub-catchment contaminant risk
    - High risk FDE soils
- Set date + lead in time
- Performance of the system or infrastructure quality (type of system, volume of storage)
- Staging within provisions

Another important consideration is alignment with national direction or existing provisions.

Note: Some of these options may not be used as a basis for staging but could instead inform rule thresholds (e.g. to determine when consent is required for an activity).

While outside the scope of this specific discussion, there are broader implementation considerations for the regional plan provisions as a whole, for example, phasing of consents across all management activities or alignment with farm plan requirements. This could be challenging due to varying influences on the timing of requirements and the number of activities being addressed through the Freshwater Policy Review.

Table 3 Farm Animal Effluent staging options

#	Options for staging	Description	Scale
Option 1	*Risk based:* High Risk Soils	Risk based staging at the property level considering biophysical factors. Risk based: Property or catchment scale. • Spatially based scheduling (i.e. by catchment), informed by environmental risk. For example, selection of geographic areas and phasing	Property Level

		could be based on using spatial data to identify high-risk soils for farm animal effluent Example options: 1. Align with farm plan roll out (timing of requirements at a catchment scale). 2. Soils Risk for FAE, starting with farms on high risk soils (or large proportion of high-risk soils). High risk soils sloping land, impeded drainage or low infiltration rate or with artificial drainage or coarse soil structure. 3. Soil Risk Farm Animal Effluent + vulnerable catchments with Sensitve Receiving Environment.	
Option 2	*Risk based:* Nitrogen Risk Catchment	Risk based staging at the catchment/sub catchment level, based on contaminant risk/priority. *Risk based:* • A risk based approach aligns farm activity consenting and prioritisation with identified nitrogen risk catchments. • Prioritise catchments at risk or priority e.g. where scale of intervention and the desired behaviour change required is greatest. This could be, for example for catchments with Sensitve Receiving Environments, lakes, or other high-risk areas.	Geographical area
Option 3	Performance	System performance based staging. Focus on how the system performs in practice (e.g. operational issues, compliance issues). Examples: 1. Rules could require information to be provided to WRC about the farms systems and then implementation staged to target the "worst" systems first.	Property level
Option 4	*System Quality:* • Type of System • Volume of Storage	Focuses on physical characteristics of the system (e.g., type of pond lining, storage volume). Staging based on the number of days of storage (e.g., farms with limited storage cannot always defer irrigation and therefore increased risk of discharges) or staging based on system quality or types. Requires information to set threshold. Assumes certain system types or sizes pose higher inherent risk, even if currently compliant. Examples 1. Use a threshold formula based on days storage 2. Prioritising upgrades for higher risk systems e.g. clay-lined ponds, sump only, bladders.	Property
Option 5	Set date + lead in time or staging within provisions	• Hard date to comply, with some delay in date for practices that more substantial investment or take long planning and implementation. • Allow existing systems to operate as permitted activities on an interim basis. After a specified date, resource consent is required if permitted	Any

		activity standards cannot be met. New construction or upgrades would require consent immediately. Examples: • Some or all farms need a consent, for effluent storage systems and or discharges on 'hard date' x years after plan operative • Interim provisions until a staged date e.g. application date, or for practices that more substantial investment or take long planning and implementation. *Rule x comes into immediate effect; but stock exclusion or farm plan required by listed dates.* • Some standards with rule require action after set time period and required to complete and certify by a specified date and provide to WRC e.g. complete a PDT every 2 years. • Staging aligned with national direction, such as the rollout of freshwater farm plans.	

In addition to the scale and option-based factors outlined above, there are broader considerations that influence the feasibility, timing, and effectiveness of a staged implementation approach. These include environmental outcomes, institutional capacity, and behaviour change dynamics.

Implementation factors

The implementation of provisions including policy approach drafting, rollout (e.g., consenting and extension activities), industry support for compliance, follow-up actions (such as the frequency of pond drop tests), and subsequent compliance and monitoring should take into account key implementation factors. These considerations can inform both the policy design and the practical implementation of rule requirements.

A. Overall considerations

- Availability of sufficient information (monitored sites or modelled), understanding of risks, and that the information is in a format or scale suitable for regulation and enforcement.
- Existing data and monitoring sites, along with potential implications for future monitoring.
- Impacts of delays on freshwater outcomes, including strategies to manage risks associated with delayed requirements. This includes tools or approaches to support ongoing compliance during delays, such as WRC compliance enforcement and monitoring.
- Effectiveness and efficiency of current approaches and level of compliance - for example, how long plan users have already had to improve practices.
- Opportunities to align requirements (e.g., farm plans and effluent management plans) to simplify implementation and reduce duplication. Includes consideration of alignment or overlap with national direction.

B. Implementation Feasibility, Resources and Capacity

- Capacity of WRC staff (e.g., consent processing), industry and sector professionals to provide support and advice to farmers and growers.

- Availability of expert consultants and industry groups, including time needed for training.
- Resources required for preparation and processing of resource consents.
- Professional capacity/expertise for system design (e.g. effluent facilities) and implementation.
- Opportunities for targeted approaches in specific areas rather than broad, region-wide application.
- Capacity of farmers and external support providers (e.g., rural professionals, industry groups), including advice, technical support, and planning for significant investment.
- Capacity-building needs, including training programmes and system design expertise.

C. Timing, Timing Sensitivity and Practicality

- Lead-in time required for infrastructure upgrades.
- Feasibility of interim rules (e.g. supported by pond drop tests or temporary measures).
- Range of timing considerations within standards, such as certification cycles (e.g. pond drop tests).
- Urgency based on freshwater outcomes (e.g. risks of delay in sensitive areas) and the ability to delay without compromising outcomes.

Attachment 1: Data alignment changes in the compliance record value and general descriptions of the compliance rating

Previous and Current Descriptor - Compliance Programme	New Descriptor – Freshwater Policy Review
Previous - Full compliance	Full compliance
Previous - High level of compliance	Full compliance
Previous- Partial compliance	Moderate non-compliance
Previous - Provisional compliance	Full compliance
Previous - Significant non-compliance	Significant non-compliance
Previous - Not assessed	Unknown
Previous - Acceptable	Full Compliance
Previous- Good practice	Full Compliance
Previous- Inadequate	Non-compliant
Previous - Uncertain	Unknown
Previous - Critical	Significant non-compliance
Previous - Minor	Moderate non-compliance
Previous - Not assessed	Unknown
Previous - No feed pad	No feedpad
Previous - No stand off	No standoff
Current - Full compliance	Full compliance
Current - Low risk non-compliance	Moderate non-compliance
Current - Moderate non-compliance	Moderate non-compliance
Current - Significant non-compliance	Significant non-compliance

Previous Compliance Programme Rating Descriptions

Uncertain	Sealing: No documentation or proof of sealing standard is on file (e.g., no warranty or certification provided). The pond has been visually inspected, but visual checks alone do not reliably confirm sealing standards unless there is a clear issue.
Inadequate	Sealing: Information has been provided, and the sealing standard has not meet compliance requirements.
Good Practice	Sealing: Council has evidence or documentation confirming that the pond is adequately sealed. This could be for an earthen, or lined/synthetic/concrete storage facility
Acceptable	Sealing: The pond is lined, but no supporting documentation is on file to verify sealing standard.

Current Compliance Programme Rating Descriptions

Full compliance	Full compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
Low risk non-compliance	Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
Moderate non-compliance	Non-compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some

	environmental consequences and/or there is a moderate risk of adverse environmental effects.
Significant non-compliance	Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.

Attachment 2: Freshwater Policy Review Compliance Data - Region

Table 4: Overall compliance - Region

	Number of properties
Full compliance	2655
Moderate non-compliance	898
Significant non-compliance	35
Unknown	13
No record	85
	3686

Table 5: Storage Sealing Material - Region

	Number of properties
Compacted clay	59
Earthen ponds	1555
concrete	244
Multiple	123
Synthetic	1511
Other	158
No record	36
	3686

Table 6: Storage Sealing Assessment - Region

	Number of properties
Full compliance	2168
Moderate non-compliance	5
Significant non-compliance	26
Unknown	1436
No record	51
	3686

Table 7: Effluent Storage Capacity Assessment - Region

	Number of properties
Full compliance	2517
Moderate non-compliance	9
Significant non-compliance	193
Unknown	766
No record	201
	3686

Table 8: Feedpad Assessment - Region

	Number of properties
Full compliance	1116
Moderate non-compliance	77
Significant non-compliance	11
No feedpad	2408
Unknown	36
No record	38
	3686

Table 9: Standoff Assessment - Region

	Number of properties
Full compliance	167
Moderate non-compliance	184
Significant non-compliance	7
No standoff pad	3231
Unknown	56
No record	41
	3686

Attachment 3: Freshwater Policy Review Compliance Data – FMU

Table 10: Overall compliance - FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Full compliance	1515	1055	36	41	8
Moderate compliance	532	339	6	20	1
Significant non-compliant	25	10			
Unknown	11	2			
No Record	49	33	2		1
	2132	**1439**	**44**	**61**	**10**

Table 11: Storage Sealing Material – FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Compacted clay	33	23	1	1	1
Earthen ponds	832	661	24	37	1
concrete	110	131	1	1	1
Multiple	74	44	4	1	
Synthetic	958	514	12	20	7
Other	100	56	1	1	
No record	25	10	1		
	2132	**1439**	**44**	**61**	**10**

Table 12: Storage Sealing Assessment - FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Full compliance	1325	784	18	32	9
Moderate compliance	3	2			
Significant non-compliance	16	9		1	
Unknown	753	630	25	27	1
No Record	35	14	1	1	
	2132	**1439**	**44**	**61**	**10**

Table 13: Storage Capacity Assessment – FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Full compliance	1400	1038	31	40	8
Moderate Compliance	7	2			
Significant non-compliance	96	94	1	1	1
Unknown	454	284	10	18	
No Record	175	21	2	2	1
	2132	**1439**	**44**	**61**	**10**

Table 14: Feedpad Assessment – FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Full compliance	662	426	5	21	2
Moderate compliance	44	33			
Significant non-compliance	8	2	1		
No feedpad	1371	955	37	37	8
Unknown	25	12		1	
No record	22	11	1	2	
	2132	**1439**	**44**	**61**	**10**

Table 15: Standing off assessment – FMU

	Waikato Waipa	Hauraki	Coromandel	West Coast	Lake Taupo
Full compliance	82	77	1	7	
Moderate non-compliance	47	132		5	
Significant non-compliance	1	6			
No standoff	1948	1184	42	47	10
Unknown	29	27			
No record	25	13	1	2	
	2132	**1439**	**44**	**61**	**10**

5.8 Appendix H – Workshop two presentation

Workshop session 1

TAG feedback from workshop 1: What needs improvement

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What you told us - Storage

- **Pond Level:** Managing pond levels going into high risk months (farm plan rather than specific conditions)
- **Seal:** Guidance around requirement to complete PDT. Sensible rules.
- Design systems not just determine pond size
- **Solids:**
  - Appropriate solid management for the system e.g. bladders, organic matter containing effluent
  - Solid storage requirements, how often and sealed
- **Emergency plans** for e.g. adverse weather, milk discharges
- Lined pond location relative to waterways
- Impacts of greenhouse gas mitigations

What you told us - Land application

- **Irrigator performance:** regular servicing required, nozzle replacement, irrigator speed – most run irrigator slow
- Soil moisture deficit measurement – probes
- **Training:** 2-3 days training - could be a standard in the plan
- **Record keeping:** What paddocks are irrigated, application rates (volume)
- Annual irrigator **bucket testing** must be carried out – DairyNZ online spreadsheet
- Effluent block area/size, must include 20m **setback** from waterbodies

Follow-up input after workshop 2

- Building on from your feedback on draft standards we would like some more feedback on how this might work in a regional plan.
- To capture this feedback, a follow-up document with relevant questions will be available on SharePoint for your input.

Workshop session 2

Testing our baselines

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Current practice and magnitude of change

- Your input will help build an understanding of what changes might be required in response to the new requirements, provide insight into the costs and potential challenges, and inform advice for decision-makers
- Testing our baselines
  - Understand current farming practice
  - Identify the scale, rate and nature of change needed
  - Where targeted support or effort is required
  - Inform staging or prioritisation
  - Consider the roles of organisations in implementing the policy approach

Why this matters

- Helps us assess how far current farm practices are from draft standards and motivation to change
- Consider likely responses and strategies to achieve policy outcomes
- Identify risks of not delivering intended outcomes (counterproductive)
- Highlight where technology or practice changes are required or where farm system suitability might present challenges
- Supports effectiveness and efficiency evaluation of:
  - What behaviour change will occur in response and its contribution to outcomes
  - Implementation challenges and support needs
  - Magnitude of change and costs

Focus Questions – Baselines

- What scale of change is required?
- What will be the biggest challenges/barriers to implementing the draft standards?
- How long might implementation take?

Workshop session 3

Staging implementation

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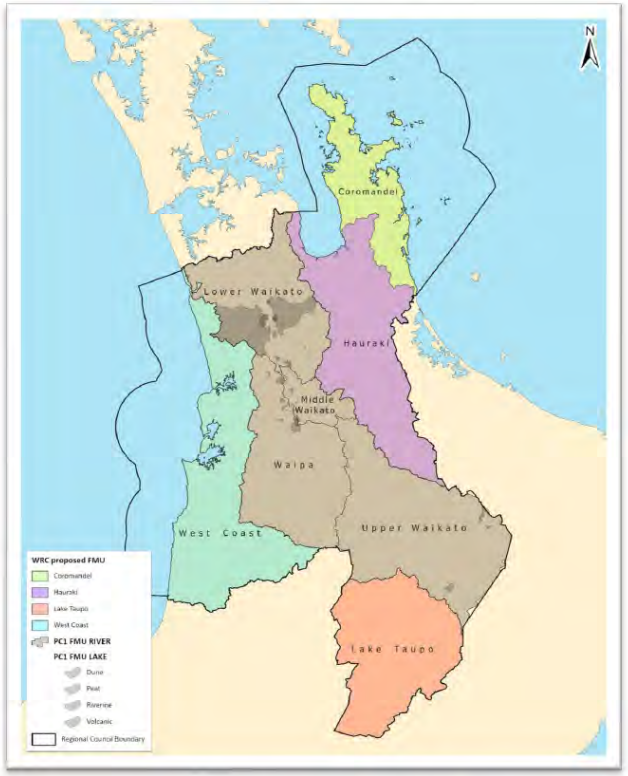
Compliance Data

- WRC monitoring and compliance programme ratings data for
  - Overall compliance status
  - Effluent storage capacity assessments
  - Sealing material type
  - Sealing assessments
  - Stand off and feed pad infrastructure assessments

Staging

- Staged implementation timing and prioritisation such as focusing on high-priority sub-catchments first (e.g. those with SRE or Nitrogen Risk Catchments) or informed by environmental risk (e.g. high risk FDE soils) or built in lead in time.

- Potential scales for staging include:
  - Geographical area e.g., part FMU or FMU scale
  - Property-level
  - Any scale/no scale



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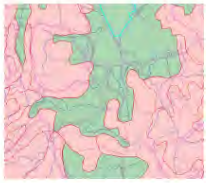
Staging options



Risk-based approach, such as:

- Sub-catchment contaminant risk
- High risk soils

Set date + lead in time or Staging within provisions

Performance or infrastructure quality e.g. type of system, volume of storage

Implementation considerations

Information and Risk Understanding

- Do we have enough information to understand and manage risks?
- Is it available at the right scale for regulation and enforcement?

Timing and Readiness

- How much lead-in time is needed (e.g. for infrastructure upgrades)?
- What are the risks and impacts if there are delays?

Implementation considerations

Current Approach and Compliance

- How effective are current approaches?
- How long have farmers had to improve practices?
- What is the level of community confidence?

Support and Capacity

- What support is available from WRC, industry, and rural professionals?
- Is there enough capacity and expertise (including training needs)?
- What resources are required for consent preparation and processing?

Targeting

- Should we focus on specific high-risk areas rather than applying a region-wide approach

Focus Questions – Staging implementation

- What advantages, challenges or risks do you see in the draft staging options?
- Are there other options that need to be explored?
- What is your preferred option and why?

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5.9 Appendix I – Workshop two record

Freshwater Policy Review Farm Animal Effluent Technical Advisory Group - Workshop 2 notes

Meeting	Workshop 2 – Farm Animal Effluent Technical Advisory Group
Date	Thursday 13 November 2025
Venue	Tui/Kowhai meeting room, Ground floor, 160 Ward Street, Waikato Regional Council, Hamilton
Time	9.00am- 12:30pm
Attendance	Angus McKenzie (Facilitator [PlaceGroup]), Ruth Lourey (WRC Topic Lead), Caleb Higham (Open Country), Trevor Foley (Independent), Dr Debbie Care (AgVice), Adrian Brocksopp (Miraka) and Shaun Hazelton (DairyNZ)
Online	Jon Palmer (WRC, Principal Technical Advisor – Primary Sector Delivery, Resource Use), Angela Fenemor (Policy Workstream Lead, [Incite] for WRC).
Apologies	Nil
Documents	Presentation Workshop 2 Farm Animal Effluent Technical Advisory Group - Freshwater Policy Review – 2025 Doc # 33405339 Agenda - Technical Advisory Group Farm Animal Effluent Freshwater Policy Review 13 November 2025 Doc # 33566825 Discussion Document Workshop 2 – 13 Nov 2025 Farm Animal Effluent Technical Advisory Group Freshwater Policy Review Doc # 33567587

1. INTRODUCTION

- This workshop focussed on implementation options and what the best way is to roll this out, best case scenarios, spatial scale, challenges and risks.
- A reminder of the ground rules from workshop 1, including Chatham House Rule.
- At the request of participants, the WRC team also provided an overview of the Freshwater Policy Review Project (FWPR) structure and timeframes.

2. Review of additional feedback from workshop 1

- Last workshop focussed on storage and land application. Now we want to think about what farmers response might be to the draft policy approach, how much change will be involved in that and what some of the challenges might be.

3. Overview presentation and group discussion

- There was discussion of the TAG feedback from first workshop. See presentation - Attachment 1.
- Noted there may be some confusion between application depth and application rates, these are two different things. Application depth is currently a rule requirement. We need to clearly differentiate between the two components in any new policy.

Training and building capability

- Recognition that complexities in managing FAE systems will arise from the need to ensure both the infrastructure and the day to day management is appropriately provided for.
- There was agreement on the need for training requirements and better access to courses. Some corporate clients or groups have developed training on operating procedures, but this is not widespread. A compulsory training module, ideally led by

industry (e.g. DairyNZ), was suggested as a long-term solution. Discussion covered how training requirements could be triggered, integrated into farm plans, and tailored to individual farm systems

- Availability of trainers is a challenge for the industry. There have been periods of different organisations taking over training depending on funding models, resulting in inconsistency, with no clear option available at the moment. Training of staff is currently the exception, rather than the rule.

- <u>Options for training:</u>
    - A compulsory online model would be better than nothing at all.
    - Development would need to be industry led and from a best practice perspective.
    - Need consistent ownership of training provision - can't be short term.
    - Council is the one constant organisation, so perhaps better to develop the training collaboratively.
- <u>Trigger for training</u>
    - Normally done on an individual basis (if someone hasn't done it), or dependent on the farm, or if there is an issue.
    - Could have a minimum level training to the FAE system you will be using, and then overall knowledge training which is personal development.

<u>Record of training and understanding training needs</u>

- Farm plan would have an effluent management plan with procedures and records of the farm owner/manager going through that training with the farmer responsible for specific complexities of a farm.
- Could be a shock to farmers if they must give all their staff mandatory two-day training – might be better to tailor per farm. Management plan tailored to whatever level you want to manage, focussed on the outcomes.

- Not sure training should be driven by council, would be better to be driven by sector (e.g. milk companies supply agreements that must have irrigator tested).
    - Suggest that this should be captured as part of the Farm Plan, rather than milk companies. Farms are their own commercial business, and they need to be compliant with legislation.
- *Are there any systems, in relation to other requirements such as Health and Safety, that already exist that we could learn from and set up in the same way?*
    - Safety: there are companies set up to provide generic structured plans that can then be tailored.
    - Milk supply companies have an audit every year. Farm shed inspections have the same problems as these system –they are compliant on the day they are visited by a milk company or council to see if they are compliant but not necessarily compliant 365 days of the year.
    - Need Consistency. Examples, WOF, QCONZ, and consistency from council compliance assessment. Farm Plan example discussed.

Application and design standards

- Noted focussing on the 'outcomes' is important – i.e "what happens when…."
- Good to have something in the regional plan, so everyone understands where the lines are to reduce the grey areas. Again, focussing on the outcomes and what we are trying to minimised or fix is helpful. Example of ponding and what might enter ground water.
- Outcomes – Like to see either modelling or testing about what the impact of effluent management is. How the cost to implement for storage and what the impact on water quality improvement is. Comes back to risk.
- Not sure about setting a 20m setback from waterbodies in Hauraki, it's more about risk or could be 7 degrees slope. Hump and hollows are another example. Hard to have a

hard and fast number. There is part that can be regulated, but can there be a way to show in the rules what can be considered as risk in a farm plan (so not in regulation, but as guidance notes).

Farm systems, risk and staging implementation

- WRC should be able to provide risk maps for every farm and then farm plans are done to every farm and the farm effluent application is done to that risk. So farms have a foundation than what we have now.
- WRC team noted we are starting work on identifying high risk areas.
- For soil types in S-Maps that are not quite right, then industry could have the process to go through and verify what's there.
- Farm Plan: Getting farmers to know their landscape. Evidence of risk could be simple as slope and a photo.
- Fact sheets are available on S-maps. E.g. attach factsheet on soils with storage calculation.
- Re application depth vs rates, are two different things. For rates is soil type driven there are standard tables, but the depth is what you add into the calculator. So if your soils are high risk, it has to be a low depth – but it also should also be a low rate. There are tools that do high rate, low depth so you have temporary ponding that disappears if there is a deficit.
- Refer back to conversation about environment outcome or effects, versus guidance. The 25mm doesn't do anything but provide some guidance. It's the ponding and runoff that is the issue, for example you could apply at 10mm and maybe still get ponding. You can't go above 25mm. Other comment that 25mm is massive.
- In the Code there is a maximum of 25mm on low-risk soils. This should limit drainage to 10mm. To apply the 25mm you have to have a soil moisture deficit, even on low-risk soils.
- The 10 mm drainage is not a measured environmental impact. The experts that developed the storage calculator took a pragmatic approach to drainage loss number.
- 10mm is a 'plan to' number, it's not what we want all the time. On low-risk soils it doesn't matter – it's about making sure that you are not pushing so much through the soil profile that there is loss of effluent.
- Noted that PC1 has done a good job with defining slope risk, slope map, and there is also going to be an assessment process where a farmer can also define in a farm plan if they should or shouldn't be classified as 15 degrees. (28.37)
- WRC team explained there will be notes from both workshops and a draft version of a report from this TAG to provide feedback – then a final in January. There won't be any specific provision drafting however we can put some effort into redrafting the minimum standards.
- We will need to consider national direction (NES–F) and ensure we're not duplicating provisions (particularly around stockholding areas).

Compliance and practicality

- Participants debated how to address grey areas in compliance. There was concern about inconsistency between being technically compliant and achieving good environmental outcomes (e.g. "no ponding" on clay soils with preferential flow).
- The group considered whether setbacks and standards should vary with slope, and how risk could be better managed through farm plans rather than strict regulation.
- The group discussed the role of the freshwater farm plan in being able to assist with this, while ensuring outcomes are being met. Give consideration between the split between an enforcement type approach and freshwater farm plans.
- The group discussed the role of the freshwater farm plan in being able to assist with compliance, while ensuring water quality outcomes are being met. Give consideration between the split between an enforcement type approach and freshwater farm plans., There are many ways that standards could be monitored and implemented,

including through the compliance framework provided by national freshwater farm plans, and at a local level the PC1 approach, or direct enforcement by Regional Council. It will be important to make sure that the obligations drop into the right approach and there is no double up.

- The balance needs to be a significant consideration because we could make this bigger than it needs to be or we can make it easier by focusing on outcomes. This is, just better for everyone.
- Noted we still haven't figured out how we're going to measure the 150/kg/N/ha/yr loading rate. Even if it's in a farm plan, how are we going to measure it
    - Once a year, farms should actually work loading out including doing measure of depth for the farm irrigator and calculating loading
    - Would that be rather than doing a default using something like Overseer? Overseer could be used, but it is an expense. Could do Overseer but that's $780 a year and if you don't put any data in it, it doesn't work.
    - You could do the measurements once and enter into Overseer, and then if your system doesn't change, that's a number you can hold to.
    - The main component of a system is the irrigator, and that can change though.
    - The required effluent area can be changing by 20% each year, according to concentration of supplements that are coming in according to the season so it's very difficult to have a rule of thumb anymore. (35:31)
    - The timing of applying the 150 will be important as well (winter vs when the grass is growing). Overseer will assume even application throughout the year across the whole effluent block – best practice.
    - The 150kg/N/ha/year number is appropriate and logical. It's about trying to get farmers to take the nutrient content of effluent into account when they're doing the short term plan risk assessment.
    - WRC staff noted that – have seen other councils look for a total combined N input of all sources
        - In Hawkes Bay they do that and they have to measure effluent monthly and do twice yearly nutrient testing and nutrient maps and fertiliser and this is costly
    - Compliance measuring is only on their effluent area so they can do what they want on the rest of the farm.
    - Staff sough clarification on an earlier comment by TAG about double up asking: if looking at the regulation of the 190kg/ha/year synthetic N cap, if you add the 150kg/ha/yr effluent to that, is that where you're looking at the double up or the concern that you could be putting up to 400kg/ha/yr? I've seen some councils do a total N load of 200kg and then they just have to manage that accordingly. Is that the challenge?
        - The regional plan also has a rule where you need a nutrient budget if you apply it as a 60kg per application but I don't think council has ever enforced it. That would instantly prompt farms to do consider what do they need each month to get optimum pasture growth.
    - But then you run into the conflict where the storage calculator only deals with the hydraulic loading, not the nutrient loading so you end up with that winter where its dry and cold, but you can still irrigate because there's a deficit.
    - Have had some farms to bank their ponds and then put it on all at once like its urea – it was a good exercise but only lasted one season because it was too difficult (availability of contractors, pond sizes that weren't designed to be a nutrient bank etc)

The workshop facilitator asked – socially, what would be the best way to get this done i.e. the communities that we're dealing with?

- A clear rule with a long implementation plan to allow all who are building ponds or changing things to follow through. To not have the peaks of workload. Would have to

have a registration at the start and of the list of options – would lean towards the storage calc and the 90th percentile as a driver.

- Risk based would be good – WRC must have a database – are there some catchments that are riskier than others? If its risk based from an implementation plan then that's better for the environment and it also means those places that are high risk are going to invest in the right things.
- Next discussion - is it worth engaging with commercial operators:
    - The market opportunity, if council are utilising are promoting that that service, There are some operators that are not accredited as they don't see the value add. has gone for operators to get accredited. There are still some good operators who aren't accredited yet because they can still get work from council not getting accredited (no value add). It's a cost.
    - Most farmers now who want to put a new pond in will get a dairy effluent storage calculator done rather than just going to anyone with the exception of anyone buying a bladder
    - What we want to stop is those building a ponds without using the dairy effluent storage calculator. We have one time to get it right – want to make sure they're doing it when they are building them.
    - The guys that have built one and you are maybe 75th percentile storage, in terms of the outcomes for water quality, you have already dropped your risk way low, but you probably still meet the need to get a consent – whereas if you're at the 90th percentile you could potentially have it as a permitted activity and not have the ongoing costs. Should eventually drive farms to do the right thing and increase their storage or adapt their system.
    - Staff asked – do you think it would work to have a standard in a future rule - could be any new effluent pond built must have these things completed….(storage effluent calculation etc)
    - Yes, dairy companies would be supportive of this for new ponds. There needs to be lead in times and it doesn't mean that council has to make everyone get a new pond, the one they have may be working well.
    - Noted can make established ponds compliant by looking at system changes as well (might not need a bigger pond in every circumstance). A trade-off, especially with retrospective calculations
    - Staff question: – do you think there is a threshold for significant upgrades versus new ponds? And who can do the assessments, level of assistance?
    - Needs to be someone accredited, they don't need to be an engineer.
    - No one in the Waikato is starting from scratch. All the systems are in place, including training opportunities etc
    - We just have to create the rules so that everyone is using them.
    - Useability assessment should be part of the system design, it's not always done well.
    - When a consent officer is going through an application, the same scrutiny isn't necessarily applied in some councils.

4. Workshop session 1 – Current practice, magnitude of change and implementation

Workshop question What is the scale of change (regional picture) is required?

Think it's a large job. Both for infrastructure and management. Perhaps 80 per cent need to improve in some what

- How much of that is infrastructure versus management? Both, infrastructure maybe 60 % of the time, it's mostly people.
- It was noted example for milk company who in the past work with farmer WOFs – Dairy Effluent calculator and check in every three years on farm action that the level of non-compliance was no different to any other milk supply company. There are compliant systems, but farms are not managing them. There is not the impetus for them to change.

- This comes back to understanding the outcomes and training and can see Freshwater Farm Plans working because can add WOFs and actions can go in there straight away. Here's what you have to do and here's the timeline to complete it. This will increase effluent compliance across the country. This is a massive task, the education and giving someone a timeline.
- If a farmer needs to upgrade their systems, they should do it in a staged way. Start with correct storage (DESC) and then manage it from there – whether they use a contractor or the existing irrigator and then next year upgrade to a low rate, low depth irrigator – can be staged, even over three years. The storage and the applicator are the key things. It's that whole system view. Spreading capital. Risk based assessment of staged implementation. Some farms note that there's not clarity in the rule on what they need to do, some will wait until Council tell them they're non-compliant and then that gives them their timelines.
- Frustrating for other farmers who spent the money. Early adopters of lined ponds, will be disproportionally impacted. For example, with the new PDT guidance, if you put in a liner 10 to 15 years ago you have had the environmental benefits, but now there is a lot of testing you now need to do to prove it is not leaking. Leak detection systems at that time were not common.
- Staff asked what are the barriers? Not been caught yet, they don't understand the reality of getting the outcome wrong or that non-compliance will not happen to them.
- We're still trying to get those 5% laggards; we have 70% working towards it and 25% who are ahead of the game – but we have to set rules for the lowest common denominator
- This may be where the consent vs permitted activity comes in – you don't need a consent because you're managing it and have a history of managing it. This at least would be a reward for history of managing effluent.
- Effluent compliance trigger for a consent you are not demonstrating a history of managing effluent.

Staff noted and asked – the compliance people need enough in the standards and conditions for the consents team to know when someone meeting those requirements. If the only trigger is when something goes wrong, or council sees something wrong, then the rules it's not working, and motivating change. How do we make sure we have enough direction in the rules?

- Is it a checklist for farmers – do I meet the DESC rule, do I measure my application depth, am I pumping more than two hours a day. Theres a whole lot of metrics as a guide (as a compliance checklist if council turns up) to direct people on a pathway. This may give an impetus to people if they don't want a consent and if you want a permitted activity, do these things.
- Should be moderation of the standard in the WOF process that there is currently in the accreditation process.
- Understand the compliance monitoring funding model from central govt might change that allows costs to be recouped from visits for permitted activities. This may assist in changing this with staffing numbers being increased for more visits and appropriate levels of monitoring.
- *The TAG discussed frequency of WRC compliance team farm visit, and example from other regions.*
    - Where consented the council have a funding mechanism for compliance monitoring.
    - Effluent is not the only permitted activity.
    - Noted there is also the issue of the farms that have never been visited by council.
- This comes back to the need for farms registration as the first step, so council knows where all dairy farms are.

Facilitator question: Can we answer the question – in terms of storage infrastructure and management and key behaviours in the overall system – what is the scale of change required?

Number of farms who have 30 or 50 days storage.

There are a lot of people that have the technical things right but haven't got the training.

Group discussion of changes that might be needed:

Storage:
% of those farms that have the opportunity to meet the 90%tile + possibly meet DESC and sealed and those farms may need new irrigator. (thinking about 90%tile DESC and meeting the permeability standard 1x10-9).

- People might not meet the 90%tile now, but could pull a couple of leavers, e.g. low flow rate irrigator.
- To raise that number of complaint farms doesn't mean everyone's got to go spend 200K, it's just managed their system they've got at the moment better, or put infrastructure into the system to meet that standard.
- Changing an irrigator, doesn't necessarily mean you are changing the system. Look at the pump, pressure, volume. Looking at both pump and irrigation.

% of farms are going to have to put in a new pond.
There are thing that can be done, tests, that are not hard to get done but give a lot of information.

Management: owner operator (manage the system entirely themselves, tend to be smaller farms), vs staff. Management could be more consistent.

- You can find non-compliance if you go looking for it.

Examples of farms that don't have DESC, farms that don't have a lined pond.

BREAK

5. Workshop session 2 – Options exploration

Workshop questions:

1. What advantages, challenges or risks do you see in the draft staging options?
2. Are there other options that need to be explored?
3. What is your preferred option and why?

Presentation:

- Staged implementation timing and prioritisation such as focusing on high-priority sub-catchment first (e.g. those with SRE or N risk catchments) or informed by environmental risk (e.g. high risk FDE soils) or built in lead time.
- Potential scales for staging include Geographical area (e.g. Part FMU or FMU scale) property level, any scale/no scale)
- Options for staging: risk-based approach (such as sub-catchment contaminant risk, high risk soils), set date and lead in time (or staging within provisions), [performance or infrastructure quality (e.g. type of system, volume of storage)

Discussion

- Initial thoughts, there's a Plan Stop process now, you've got a staging planning process to put the regional plan in place which might give us four years down the track from now – so there's no reason why farmers shouldn't be compliant within the next four years
- On the other hand, people may wait, knowing that things may change (PC1, people stopped doing some good things), no one is going to want to build their system now, that it might not meet requirements in the future (example sustainable milk plans and

PC1, people stopped doing the voluntary improvement because they didn't know what they were doing was going to be right or not).

- Preference is storage calculation risk assessment or a volume risk assessment. Don't think there are accurate enough maps for the high-risk soil type. Nitrogen risk effluent isn't the biggest risk for N. Whether you go for something else, - *E. coli* risk for example would have more weight. You need to think about storage calculation, if using that, the number of people being able/good enough to do them, over a couple of years.
- One tool (rather then simplified storage volume calculation, and DESC) would be preferable.
- TAG members sought clarification that we are thinking about implementation against all draft rules (approach) e.g. 150kn N etc, not just a right sized effluent pond. But are we looking at the full farm system, or just FAE?
    - Staff noted that part of the conversation we're having, for example you have your effluent management plan as part of your farm plan so you'd want the timing to align. Would need to do our best with national direction changes in terms of timing.
- Frustrating for farms who put a system in that they've been told makes them compliant, only to find out they are not compliant. Are those because they haven't had the advice to start with, yes or the person who has sold the system, or it isn't able to be managed to that standard.
- How many people need to get around all the farms and how long to get the systems design and all the systems take to be built for those who need it. Really does need staging. Would like, either a long phase, or something separate for those who are nearly there, or a consent they can apply for if not quite meeting the standards, and just need a bit more to make it compliant. Would like some way for a council officer to give consideration for this - decision about risk level
- The rigour of the data going into storage calculations, using defaults (or e.g. standard 10mm), may be an issue. Needs to be measured to put the value in to get the current pump rate and depth and risk maps using WRC maps and S-maps. That's what some consultants will do. But for people that need to have these things – how do we measure these standards to ensure we get good data, and those putting in the data.
- Staff asked a question around staging implementation aligning with farm plan rollout. Assume all actions don't have to be done at once and there will be staging within farm plan roll out as well – is there any risk of us having different roll out for FAE requirements that's independent of the farm plan roll out. What are the risks there?
    - Hope that people getting a system designed and implemented from now, should be advised they'll need these documents that form the basis of evidence for your freshwater farm plan and then when it comes to that, then you provide the documents and essentially you get the ticks and it's a risk assessment and you've got the data and the evidence to show you're a lower risk.
    - It's an education thing too – lots of farmers don't keep that stuff.
    - If the plan still has the rule from day one that you can't have ponding and run-off – that still probably gives them control to manage the really bad systems (all the people who aren't managing correctly). That will be something continuing rather than a new thing for farmers to think about. The main things are those about raising the bar.
    - For ponding run-off or non-compliance or high-risk storage – if the compliance team have the ability to flag something up that then essentially after a certain number of years then gets reduced down. Then you fix the high-risk issues sooner which is going to benefit water quality a whole lot more. Then it's just what is that level for the compliance team?
    - Need black and white (not shades of grey).
- Question on focus for catchments. What are the main water quality issues? Answer In terms of water quality for Hauraki FMU, N is one of the major concerns. Looking at groundwater pathways for N in particular and how that enters surface water and the

sensitive receiving environment of the Firth of Thames and what we need to do to provide for that area as well.

- Staff question - we were talking earlier about what might be a trigger for phased implementation. You started talking about storage pond size and whether or not that could be used as a as a trigger for staging. But it seems as though the conversation went to - actually it's whole of system risk that we should be managing. So, do we have an idea of what would constitute a higher risk system and how could we define that so that would then be the trigger?
- An approach was proposed by a TAG participant - Risk/likelihood matrix. Risk on one axis, likelihood on another:
    - Risk and likelihood matrix. Why don't we overlay effluent onto a risk/likelihood matrix?
    - Examples - A small capacity pond, but it's really low managed, so there's a high risk, but the likelihood is probably pretty low versus a pond that's got really big storage, but they've got poor management, so the risk is really low, but the likelihood something going wrong is high.
    - Then on the matrix graph, one example would mean you're sitting in the 'need a consent area' (could be a questionnaire or an assessment that's done), other examples would mean they sit in the permitted activity area. So if you want to move from the first area to the other, you either change your activity or you get a consent. Eg clay lined, no pond drop test or if you get a PDT you reduce your risk. Could on the matrix boxes put 5 or 6 key questions, to works out who in the catchment to focus on.
    - Where do we need to set these parameters to make sure we've got enough capacity to support these people with the timeline we want? Use this to understand what resources needed.
- Example of the slope map using WRC's LiDAR, if you want to use soil risk maps as a gateway, or as an educational tool.
- Soil risk could be one of a number or risk questions.
- Good example is PC1 and how an intermittent waterway is determined. Here are 5 statements – if you hit 3 of these, you're an intermittent waterway and you need to fence it, if you don't, then don't need to fence.
- Could do the same with the matrix – here are the 5 things that are risks if you hit this you're in this area, if you don't you got more time, but you've still got to manage.
- TAG member question about what scale of soil risk would be, property or catchment? It's what's your risk. It spreads capacity.
- And a farm plan is still a direction of travel so farmers can start the journey, rather than wait.
- People that are high-risk that were going to wait under this risk/likelihood matrix wouldn't be able to because the assessment would show they are in the area of the matrix that says they need a consent.
- Council does have the data to support the develop of the matrix – S-map and slope.
- Council do have a record of farms they've visited and who is passing and who is failing so that data could be entered into the matrix. And look at risk management – if they have no fail-safes, what's the risk, what's the likelihood.
- Staff noted there are some limits with compliance data and it's not always recorded in the reasonings as to why a farmer is non-compliant. Some of the farms in that data wouldn't have been visited since 2017, so at that point they may have had a pond that was small, or some issue, but since then they've upgraded.
- You could take every activity and action and get a group of experts to apply risk/ likelihood. It could be done as an app, the user does not see the risk rating, they are just asked the questions. So would need to survey or do an assessment for each farm.
- Future compliance visits could start collating the data that will be needed. Can focus on people who have been 'pinged' before or might prompt a check on their risk rating – sell it as 'who do we need to help first'.

Question from staff: Just thinking about how many levels of risks , that then create different requirements in the rule, and for example changes in tools e.g. DESC some farms with pop in and out of the matrix areas.

- We're always going to have that, (for example PC1 and the nitrogen scorecard) – just need to have some guidance written around what you do if you're in this situation

- Biophysical: Could have soil-type, risk matrix to do with soils (eg DairyNZ), as one of the risk layers of measurement.
- There are also good resources like the pocket guide. Could have storage capacity as another data layer, layer soil types, layer infrastructure management as another. These layers would populate the layers in the matrix.
- Question from staff –Thinking about risk and likelihood, risks could be described in the rule of the plan, but the likelihood is more behavioural stuff that needs to be described in a farm plan. Need to work out how that works together. Really clear in the rule and the rest, the grey areas, that relies on people and their management needs to sit in a farm plan outside the rule framework where risks are described
- TAG participant question: This type of risk matrix is in almost every regional council document, so how do you implement it for other thing, not effluent, it must be written into other rules?
- Staff: There's a compliance risk matrix that sits behind rules that's based on history. There must be a way to consider peoples past compliance history to do it through the rules instead of just through the consent process.
- The matrix could also just be used as a guideline for timing that you set for people, rather than who's who.
- Staff: - I keep thinking back to one of the biggest risks or delineation of risk across our region is soil type and so maybe soil order is at first stop and then you apply a matrix like this e.g. Hauraki are always go to have a high level of risk because of the clay soils.
- Staff: – see these matrices in consenting frameworks and compliance teams use them to triage consents for who they need to visit but don't see it in regional plan documents themselves. Do we need to bring it up into the plan to put it into regulation rather than in the guidance?
- Would target the high-risk soil farms first. That for storage and land application.
- Slope is another high-risk factor
- Prefer the idea of having a consent set date so all farms would need to either be permitted or be consented by that date, and then the risk based approach falls into how the Council then prioritising what work they're focusing on because, there's only X amount of staff - but I do get concerned if we talked about that being written into the rule when then we've got some farmers being penalised for having different soils. And some farmers would also be penalised, depending on where they're sitting at. From an equity perspective, it's always simpler when everyone's got the same standard. Because that's probably one of the issues at the moment is a lot of farmers don't think there's equity in the effluent space in the Waikato especially with storage sealing and sizing
- Staff: - often we hear people only want to do things on their property that are required to manage risk rather than rolling out a blanket rule that everyone just must adhere to so that So it's about how we manage that in terms of equity, recognising that some farms are actually low risk, and we don't need them to do as much as some of those high risk properties.
- Noted low risk from the effluent side of things – most rules are developed so that low risk means cheaper and easier system to set up. Higher risk you get, the more you're spending – especially for peat where it's challenging to set up ponds as well.
- Staff- Economists will be looking at that, including how much you pay for the land
- In regard to the resourcing issue – could look at some kind of funded subsidisation for accreditation. Biggest push back on accreditation is the cost of it and how much time it takes
- Can also have a model where someone else goes and collects the data from the farm and then someone qualifies does the assessment

- Staff – what's going to be the biggest push-back on something like this?
    - Change. And the time it takes to socialize the rules. Still have people saying they don't know the rules.
- Staff – how do we get industry buy in or acceptance of what those thresholds are? A lot of conversation around 'it can depend'. Any standard we pick, we're picking a line, but we're going to picking a line of what's high risk and there'll be a lot of debate of who falls where. Who's going to help council set the lines?
    - A lot of the lines are already there. High risk for soils are already documented by DairyNZ. High risk for ponds is already documented because we have the dairy effluent storage calculator.
    - Have slope and soil type at a farm level. Have soil pocket guide. And storage calculator is objective. So that's two tools that are difficult to argue with from a council perspective
    - And you've already got your permitted activity rules, so if I'm applying anymore than 150kg a year then I'm high risk. If I'm applying more than 25mm, I'm high risk. And would have a depth test done as well
- Think you'd get good buy in from farmers on this direction within the first two years.
- Staff question – for engagement with farmers is this something that would be more effective coming from industry or regional councils?
    - Think the industries but with support from the regulator
    - Need to get everyone on board (milk supply companies and the industry)
- Do an 'act now so you don't have to have a consent.' Tick these five boxes and….
- Need a balance between carrot and stick.
- Staff – So the 5 risk areas, is suspect the that one or 2 of those could mean a big spend if buying infrastructure, and that some of these could be reasonably cost effective fixes.. To get buy in we need to be able to separate out those costs.
- Need to realise that infrastructure isn't the only solution – can do other changes in the system other than a pump (e.g., getting an irrigator)
- The staging helps. Also credit for previous compliance history with proof of what you're already doing. It should be taken into account.
- One of the trouble is gaps between how long some farms have been visited and inconsistency with compliance visits.
- Noted as first step to register – then planes and satellites can be used efficiently to take photos of an effluent pond. There's good imagery available now.
- Can start gathering the baseline data now with the spatial team automating it, and then when someone registers they say how many cows they have.

6. Next steps

- Will be collating all the feedback over the next couple of days. Priority is to get estimates on compliance for staging and what is the scale of improvement required (talking with the economist).
- We've talked about some of these improvements not just being about infrastructure, but also being about overall system and whether or not we can differentiate some of those costings. So we are going to get that underway pretty promptly so that we can start thinking and presenting some information back to sectors or even reporting back to you as a as a group for feedback, collating all of this information and also the work that you're preparing as part of your homework, which we're really appreciative of.
- We're going to be summarising that and submitting it to the group for your feedback so that you're comfortable with how we're summarising how these sessions have gone, making sure that we haven't misrepresented what you've said and how we've used that information.
- Will get this out to TAGs prior to Christmas – final report by January.
- The Farming TAG starts in February. Also looking for farm system experts for the TAG group.

- Will be considering similar types of concepts that we want to talk about – risk based approach looking at catchment information and data to classify farm system types and how we best manage those risks through a regulatory framework
- Will also be considering at a Commercial Vegetable Production CVP TAG (TAG participant noted Andrew Conlan would be good for this TAG).
- Would like some water quality modelling or data to back up the need or could be achieved.
- Example if a farmer needs to fence and sort out their effluent, they need to know what the priority is for investment from a water quality perspective (what to do first)
- Staff- We'll be looking at whole of farm requirements, so not just looking at the like nutrient management, not just looking at effluent management in isolation. We want to take a step back and say these are what might be required across the plan on a property. So what does that look like? What are the costs and what are the benefits of doing that?
- Staff - Farming TAG will be three sessions (combining dairy and dry stock)
    - The first one would be just a bit of an overview of the project and the approach that we want to take managing your actions proportional to the risk.
    - And splitting them into catchments or areas where there's risk in terms of overland flow contaminants. So that's the E coli, sediment and phosphorus.
    - And then looking at how we might approach risk in terms of those areas where there's high risk for nitrogen contaminant loss.
    - And then stock exclusion provisions as a separate session
- Looking at aligning mitigations to our regulatory response to risk and making it proportionate to risk level.
- TAG members noted that it would be good to have equal representation in the room on that TAG. Look at DairyNZ, the dairy companies, and Beef and Lamb
- Look at industry supporting groups – CVP would have things like Potatoes NZ (like Beef and Lamb etc). Often people have already worked together on other plan changes.
- Timelines currently proposed plan for notification at end of 2027.

Attachment 1: Risk/Likelihood Matrix