Dairy farm effluent

– the rules for achieving compliance in Taranaki

This checklist is a self audit to help farmers to achieve resource consent compliance. The checklist is for your own information and you do not have to share it with any organisation.

We recommend any boxes that are not ticked are followed up as soon as possible, as they could result in enforcement action. If you need assistance, please contact one of the organisations listed at the back of the checklist.

- You must remain compliant with your consent requirements every day – regardless of the time of year, weather, breakdowns or staffing issues
- Ensure you have a contingency plan in place to cope with all eventualities
- Make sure the staff on your farm know the rules, are familiar with your consent, are fully trained in the operation and maintenance of the effluent system, and know what to do and who to contact if the system breaks down
- Always aim for best practice rather than just achieving compliance
- DairyNZ and your milk supply company have resources and support available to you to help you achieve best management practice on your farm 365 days of the year.

Version 5, March 2015

Taranaki checklist

Get familiar with the conditions of your consent and actively seek compliance	
Much of the non-compliance reported in the Taranaki is for minor issues that can easily be avoided. Take the time to go through your consent and make sure that all the administrative conditions have been fulfilled	
Have you got a copy of your resource consent?	
Have you made any significant changes to the effluent system?	
Effluent is applied to the area specified on the consent as a minimum	
The number of cows being milked is within the limit specified on the consent	
All previous consents that are no longer required have been surrendered	
All other requirements of the consent have been fulfilled	
If property has been bought/sold consent has been transferred to the new owner	

Irrigation to land

Have an effluent system that is capable of complying with your consent conditions, in terms of both infrastructure and ongoing maintenance	
There is sufficient effluent storage for times when soil moisture levels are high[1]	
All effluent is contained within structures (ponds or sumps) as specified in your consent, prior to application	
Sumps must be sealed and are designed so that no overflow will reach surface water (ideally overflow will be directed to a holding pond)	
Stormwater diversion system in place and used correctly	
The application area is large enough to meet the requirements of the consent for N loading (effluent application rate shall not exceed 200kg N/ha/year)[2]. For more information refer to *A farmer's guide to managing farm dairy effluent*	
The pump pressure is sufficient to ensure effluent can be applied in a way that does not result in ponding or effluent runoff	
A regular maintenance regime is in place for the effluent system – such as greasing, hosing down, storage, unblocking stirrer, nozzles, tyres, checking pipes and hydrants etc. For more information refer to *A staff guide to operating your effluent irrigation system – travelling irrigator* and *A staff guide to operating your effluent irrigation system – low rate irrigator*	
Contingency measures are in place in the event of a system failure[3]	
Effluent solids, sludges and slurries (i.e. from ponds, feed pads and sand trap cleanings) are stored on a sealed surface where any leachate/runoff can be directed back to the effluent system. Solids are spread evenly on pasture to avoid overloading with nutrients in one area	
Get the right amount of effluent on the soil at the right time and in the right place	
At an application rate (mm/hr) and depth (mm) which does not result in ponding and effluent runoff (no ponding on the surface that remains for more than 30 min after discharge has ceased)[4]	
At least 25m from waterbodies, 150m from any dwelling and 50m from any bore, well or spring used for water supply purposes	

Oxidation ponds

Have an effluent system that is capable of complying with your consent conditions, in terms of both infrastructure and ongoing maintenance	
The ponds are the correct size for the maximum number of cows being milked	
The ponds are sealed[5]	
A dilution rate of 1:100 can be maintained at all times at the point of discharge or a tertiary treatment system is installed[6]	
Stormwater diversion system in place and used correctly	
Treated effluent discharge does not cause adverse environmental effects to the receiving waterbody below the mixing zone (discolouration, foams, odours etc)[7]	
At or beyond the downstream boundary of a mixing zone, the discharge shall not cause the concentration of unionised ammonia to exceed 0.025gm^{-3} NH3 expressed as nitrogen, nor the concentration of filtered BOD to exceed 2.0gm^{-3} [8]	
The discharge shall not exceed 100 gm^{-3} of suspended solids[8]	
Untreated effluent cannot reach surface water	
The first (anaerobic) pond is desludged regularly[9]	
A baffle is installed on the outlet pipe of the first pond	
There is at least 0.5m of freeboard above the water level	
The second (aerobic) pond is clear of solids and/or weeds	
People and systems (these are not always requirements of your consent, but will help you and your staff comply)	
Everyone in the farming operation understands the importance of effluent management and the consequences of non-compliance	
Everyone knows what to do if something goes wrong	
A training schedule is maintained for staff with direct effluent management responsibilities	
An effluent management plan is in place that clearly defines responsibilities and procedures ***Good practice:*** record effluent irrigator runs - location, date, number of returns etc. For more information refer to the *Effluent management plan* poster	
External training courses are utilised to increase understanding of good practice	
Other sources of effluent outside the farm dairy that need to be well managed	
Feed pad effluent – should be collected and added to your effluent system. Ensure your system has capacity to cope with the additional demands of feed and standoff pads	
Stand-off pad effluent – all effluent should be contained within the bedding layer, or collected and added to your effluent system	
Effluent runoff from bridges/culverts/underpasses/races must not discharge directly to waterways	

Rule 30 of the Taranaki Regional Freshwater Plan

Rule 30: Silage pits, offal, and farm rubbish

The discharge of offal, farm rubbish, leachate from silage pits and feedlots and other on-farm waste material into or onto land excluding those materials covered by Rules 22 and 35-39.

This is a permitted activity, provided:

- Discharge occurs onto or into production land;
- Only waste generated on the subject property shall be discharged;
- Discharge shall not occur within 50m of any bore, well or spring used for water supply purposes;
- Discharge shall not occur within 25m of any surface water body;
- Discharge shall not lead or be liable to lead to any contaminants entering surface water;
- Disposal of any surplus agrichemical solution and containers shall be undertaken in accordance with recommendations of the manufacturer or supplier, as stated in the directions on the product container label;
- Offal pits shall be securely covered
- Offal pits shall be at least 15m from any other offal pit that has been used within the previous five years.

[1] Storage requirements will vary for every farm, dependent on soil type and climate

[2] Get effluent tested to get accurate nutrient values, and refer to your nutrient management plan to determine your farm's N and K loading on your effluent area

[3] Contingency measures include things like additional storage capacity, having a spare pump or irrigator, staff know who to call etc

[4] Topography, rainfall, soil moisture and soil type (drainage) all influence the risk of run-off and ponding

[5] Sealed means does not leak, such as concrete, lined or compacted clay (in Taranaki compacted clay is adequate)

[6] Some older resource consents allow for a dilution rate of 1:60 – this will change to 1:100 at renewal

[7] Mixing zone distance is specified in your consent, if not, it is determined as seven times the width of the stream

[8] It is your responsibility to ensure you're meeting the water quality expectations of your consent – if you're unsure, get your discharge tested. Contact Taranaki Regional Council for information

[9] Some signs of ponds not working and needing to be emptied are excessive crusting or vegetation growing on surface of pond, odour, no bubbling. Ensure when emptying ponds to leave 1/3 of sludge in the bottom to keep a supply of mature bacteria

Riparian management

Riparian management when carried out effectively will:

- Filter sediment and pollutants
- Take up nutrients that would otherwise enter waterways
- Prevent stock from entering and fouling waterways
- Enhance stock management, safety and health
- Regulate stream flow and stabilise stream banks
- Enhance biodiversity by improving habitats for bird life and aquatic life
- Enhance the aesthetics and therefore the value of a farm property
- Provide shade and shelter for stock.

DairyNZ, Fonterra and Federated Farmers strongly endorse Taranaki Regional Council's riparian planting programme, and urge you to work together with the council to implement your riparian management plan. Taranaki Regional Council can help you by:

- Designing individual property riparian plans using GIS technology free of charge
- Accessing appropriate native plants at cost through the Taranaki Regional Council's native plant scheme.

Keep in mind

- Plants need to be ordered a year in advance so that plants can be contract grown at cost
- Include ongoing time and cost in annual work plans and budgets over a number of years
- Planting can be handled by contractors, with the costs being tax-deductible. Some schools also carry out planting as a fundraiser
- Under a voluntary approach, Regional Action Plan targets under the Clean Streams Accord will not be met if planting continues at its current slow rate
- Alternative options to ensure the implementation of riparian management will be considered when the Taranaki Regional Council - Regional Freshwater Plan is reviewed in 2011.

Contacts

If you need assistance with any effluent compliance issues, call one of these organisations for help:

DairyNZ	Sustainability team 0800 4 DairyNZ (0800 4 324 7969)
Fonterra	Sustainability team 0800 65 65 68
Open Country Dairy	0508 Our Milk (0508 687 6455)
Taranaki Regional Council	0800 736 222
Federated Farmers	0800 Farming (0800 327 6464)
Primary ITO	0800 80 20 80