2010 – 2016

Regional Stock Truck Effluent Strategy for the Waikato region

Environment Waikato
REGIONAL COUNCIL

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Chairman's foreword

Effluent spilling onto roads from stock trucks is a long standing and significant problem in the Waikato region.

These spillages pose safety and health threats to road users and communities, damage to roads and the environment through run-off, along with amenity and invasive effects.

As a dairy farmer I am well aware of the issues surrounding stock truck effluent. The matter is complicated and involves many parties including farmers, stock agents, sale yard operators, meat processing companies, stock transport firms, road controlling authorities and local government.

Stock truck effluent first came to the attention of authorities in March 1992 when a motorcyclist died after his machine skidded on effluent discharging from a stock truck. In 1994 Environment Waikato, in conjunction with South Waikato District Council, hosted a stock truck effluent forum at Tapapa Hall, which attracted over 80 interested parties. As a result of the forum, a Stock Truck Effluent Control Study was completed in June 1994, which recommended a programme, including education, and a pilot of disposal facilities in the south Waikato district, together with a range of other supporting measures.

Over the years the Waikato region has fallen behind in its response to stock truck effluent disposal. A number of other regions have taken a proactive approach and constructed a network of effluent disposal facilities, whereas the Waikato has relied on a small number of existing sites predominantly in south Waikato and Taupo.

Norm Barker
Chairman
Regional Transport Committee

The time has come for the region to relook at the problem and put in place measures to clean up effluent spillages on roads. The problem has not gone away and requires a multi-pronged approach from all parties concerned. The approach will include education, engineering, enforcement, regulation and advocacy to adequately address the issue. A 2009 workshop with Environment Waikato councillors has affirmed a willingness for the regional council to take a coordination role to address stock truck effluent.

The Regional Stock Truck Effluent Working Group has worked hard to prepare this strategy and I would like to acknowledge and thank the members for their contributions.

This strategy provides a very good platform to take the region forward in our effort to reduce stock effluent spillages on regional roads.

I commend this strategy to you.

Norm Barker
Chairman
Regional Transport Committee

Glossary of terms

HNO	The Highway and Network Operations group of the NZ Transport Agency
LGA	Local Government Act 2002
LTP	Long Term Plan
LTMA	Land Transport Management Act 2003
NLTP	National Land Transport Programme
NSTEWG	The National Stock Truck Effluent Working Group, the National Working Group
NZTS	New Zealand Transport Strategy
RCA	Road Controlling Authority
RMA	Resource Management Act 1991
RLTP	Regional Land Transport Programme
RLTS	Regional Land Transport Strategy
RPP	Regional Partnerships and Planning group of the NZ Transport Agency
RPS	Waikato Regional Policy Statement
RSTEWG	The Waikato Regional Stock Truck Effluent Working Group, the Regional Working Group
RTC	Regional Transport Committee
WRP	Waikato Regional Plan

Executive summary

The Regional Stock Truck Effluent Strategy for the Waikato region (the strategy) is based on the vision:

Working toward zero discharge of stock effluent from trucks onto Waikato roads by 2020.

The strategy has been developed by Environment Waikato (Waikato Regional Council) in collaboration with the Regional Stock Truck Effluent Working Group and in accordance with the Regional Land Transport Strategy 2006-2016.

The purpose of the strategy is to set out a holistic strategic framework to prevent or minimise stock truck effluent discharge onto roads in the Waikato region. It achieves this by identifying 14 key objectives, eight policies and 24 actions for all stakeholders who hold joint responsibility for the management of stock truck effluent. The policies have been developed in recognition that there are eight key issues contributing to the amount of effluent being spilt onto roads.

The Waikato region has the largest number of livestock of any region in New Zealand, with over five million livestock. Thousands of stock truck trips are made each year, from farms to meat processing plants, to and from sale yards and between farms, incurring a significant amount of stock effluent discharge onto roads and road reserves.

This problem is exacerbated by a lack of suitable effluent disposal facilities in the region for stock transport carriers to use in-transit or at their destinations. However, the issue is not just for stock transport companies to address.

There are a number of stakeholders directly and indirectly involved in the movement of stock, and a number of contributing factors to the problem, including:

- the farmer, responsible for the management of livestock up to the time they are loaded onto the truck, and for receiving new or relocated stock
- the stock truck, which should have a stock effluent holding tank fitted
- meat processors, which should have stock truck effluent disposal facilities
- sale yards, which should have stock truck effluent disposal facilities
- a lack of in-transit stock truck effluent disposal facilities.

Every stakeholder can contribute to the better management of stock truck effluent to minimise the amount which ends up on the road or roadside receiving environments.

Stock truck effluent spillages onto Waikato roads and environs cause numerous adverse effects, including:

- contamination of land and waterways (the effluent can contain viruses, bacteria, nitrogen and concentrations of noxious plant seeds)
- road safety hazards for cyclists, motorcyclists and motor vehicles
- health hazards to people including cyclists, motorcyclists, pedestrians and roading contractors
- nuisance odours
- negative public perceptions
- damage to road surfaces.

The National Stock Truck Effluent Working Group was established in 1997 to address this problem, and subsequently developed the Industry Code of Practice for the Minimisation of Stock Effluent Spillage from Trucks on the Roads (1999).

The Regional Stock Truck Effluent Working Group was established by Environment Waikato to address this issue at the regional level and to work towards identifying and establishing a series of in-transit sites, along with contributing towards implementing Transit New Zealand's North Island Stock Truck Effluent Strategy (North Island strategy). The North Island strategy promoted the implementation of a network of stock truck effluent disposal sites. Top priorities for in-transit sites are Te Kuiti, Putaruru and Taupo.

Five additional sites under consideration by either the NZ Transport Agency or the Regional Stock Truck Effluent Working Group are:

- Mercer service centre
- Te Kuiti (additional site)
- Otorohanga (an addition to the existing truck wash facility)
- Morrinsville sale yards
- Turangi.

Other potential stock truck effluent disposal sites are:

- Matamata/Kaimai
- Paeroa
- Thames
- Whatawhata
- Frankton
- Mangatawhiri
- Hikuai.

The eight key policies identified in this strategy to address the stock truck effluent problem are:

1 to minimise the amount of effluent deposited by stock in-transit by having stock stood off green feed prior to transportation
2 to establish a series of in-transit stock truck effluent disposal facilities
3 to require the provision of stock truck effluent disposal facilities at all meat processing plants and all sale yards in the Waikato
4 to require the provision and effective use of effluent holding tanks by all stock truck and trailer units
5 to encourage farmers to receive and dispose of stock truck effluent from stock being delivered to their property
6 that the construction, operation and maintenance of in-transit stock truck effluent facilities be regionally coordinated and that the NZ Transport Agency and territorial councils contribute funds on a fair and equitable basis
7 that related regional and district strategies and plans of the Waikato region implement this strategy
8 regional stakeholders will continue to collaborate on all issues related to stock truck effluent.

Through the implementation of these policies and 24 actions, it is expected that the incidence of stock truck discharges onto Waikato roads will be significantly reduced. This will benefit the land transport system, the community and the environment. Additionally, with continued improved practices in the transportation of livestock around the region, it is expected that there will be an improvement to the quality, image, and reputation of agriculture and the region.

Typical spillage scene.

Background and development of strategy

Sale day in Morrinsville.

1 Background and development of strategy

1.1 Introduction

The Waikato Regional Stock Truck Effluent Strategy (the strategy) has been prepared by Environment Waikato in line with the requirements outlined in the Waikato Regional Land Transport Strategy (RLTS) 2006-2016. The RLTS sets a framework for moving towards a more sustainable, integrated and multi-modal transport system for the Waikato region.

Stock truck effluent spillage onto Waikato roads has been viewed for some time as an issue which needs to be addressed because of the adverse effects it has on the natural environment, public health, road safety, road quality and the amenity of other road users.

Environment Waikato has worked in collaboration with the Regional Stock Truck Effluent Working Group (the Regional Working Group) to develop the strategy. Development of the strategy has involved a wide range of local, regional and national stakeholders.

The strategy provides a framework for confirming and progressing new stock effluent disposal sites and identifies an agreed set of policies and actions for all stakeholders to follow, including:

- farmers
- livestock carriers
- stock agents
- sale yard operators and owners
- meat processors
- Environment Waikato and territorial authorities
- road controlling authorities.

A full description of the roles of these stakeholders can be found in Appendix C.

1.2 Purpose

The purpose of the strategy is to set out a strategic framework to prevent stock truck effluent discharge onto roads in the Waikato region. The strategy will be implemented in consultation with the Regional Working Group.

The strategy sets out a regionally agreed set of issues, objectives, policies and actions (including education and funding), that outline the roles and responsibilities of Environment Waikato and the Regional Working Group members and provides clear guidelines for the organisations.

1.3 Why stock truck effluent is a problem

The Waikato region has the largest number of livestock of any region in New Zealand. With over five million livestock (dairy cows, cattle and sheep) there are thousands of stock truck trips per year made from farms to meat processing plants, to and from sale yards and between farms.

While the majority of these trips are undertaken within the region, a large number are to and from adjoining regions, along with long-haul trips to the South Island.

If livestock have not been stood prior to transport, a significant amount of stock effluent is produced during these trips which rapidly fills the stock truck effluent holding tanks. Sometimes this effluent is discharged from the tanks onto the road or onto roadside reserves. An effluent spill can be as little as a few litres or the entire contents of an effluent tank (approximately 200-400 litres).

Stock truck effluent discharges can take a number of forms, including:

- spillages where the stock truck effluent holding tank is full and overflows, or the stock truck has no effluent holding tank
- the deliberate emptying of stock effluent on the roadside.

Spills are also more frequent at particular times of the year, for example on 'Gypsy Day' (at the beginning of June) when farmers, sharemilkers and their stock relocate to other farms often without the stock being stood prior to transport. The lack of suitable effluent disposal facilities in the region exacerbates this problem.

Stock effluent discharge on roads remains a major problem in the Waikato region, prompting concern for human and environmental health and presenting a number of problems for road controlling authorities, Environment Waikato and the industry sector.

1.4 Roles and responsibilities

1.4.1 Industry stakeholders

What seems at face value a simple issue is made more complex by the number of organisations involved in the process of moving stock; it is not only the responsibility of stock transport carriers to address.

The Industry Code of Practice for the Minimisation of Stock Effluent Spillages from Trucks on Roads 1999 (code of practice) identifies a large group of stakeholders, all of whom play a role directly or indirectly in minimising the amount of stock effluent which ends up on Waikato roads.

Stock movement involves a number of stakeholders:

- farmers are responsible for the management of livestock up to the time they are loaded onto the truck (including standing stock for a minimum of four hours prior to transport), and for receiving new or relocated stock
- livestock carriers who should have stock effluent holding tanks fitted on their truck and trailers
- meat processors who should have a stock truck effluent disposal facility on their site
- sale yard operators who should have a stock truck effluent disposal facility on their site
- managers of in-transit stock truck effluent disposal facilities.

Every stakeholder in the process can contribute positively (or negatively) to the management of stock truck effluent and the amount which ends up untreated on the road or in roadside receiving environments.

1.4.2 Regional and local government

The following local government organisations have specific partnership roles.

Territorial authorities

- Work with stakeholders involved with the handling and transportation of stock.
- Can apply for financial assistance from the New Zealand Transport Agency (NZ Transport Agency) to construct and operate in-transit stock effluent disposal facilities.
- Identify suitable in-transit sites.
- Issue, monitor and enforce land use consents for sale yards and meat processing plants.

Environment Waikato

- Coordinator and facilitator.
- Work with territorial authorities, the NZ Transport Agency and industry to help identify suitable in-transit sites.
- Promote the code of practice.
- Assist with education of stakeholders.
- Control discharges to the environment through the Waikato Regional Plan (WRP)
- Establish, with the Regional Working Group, a fair method of sharing the cost of developing and maintaining in-transit stock truck effluent disposal facilities.
- Assist territorial authorities to prepare funding applications to the NZ Transport Agency for stock truck effluent disposal facilities
- On completion of the strategy, develop a programme for implementation.

1.4.3 Tangata whenua

The New Zealand Transport Strategy (NZTS) references the Treaty of Waitangi (p.18) noting:

"The government is committed to upholding the principles of the treaty. Central to the treaty principles is that Maori have a special relationship with their ancestral lands, water, sites, waahi tapu and other taonga. Transport planning and decision making needs to take account of that relationship as well as the more general needs of Maori communities. Therefore the government is committed to ensuring that Maori are involved in making decisions about transport that affect their cultural, economic, environmental and social wellbeing.

The Land Transport Management Act 2003, provides specific opportunities for Maori to participate in decision making processes about land transport and for approved organisations to foster the development of Maori capacity to contribute to these processes."

The overriding vision of the treaty is that of – Mahi tahi – working together in partnership.

It is the intention of the strategy that meaningful engagement occurs with tangata whenua to align with their iwi planning documents. It is important to engage with tangata whenua to enable them to contribute in decision making processes on stock truck effluent collection and disposal. It is recognised that there are particular sensitivities for tangata whenua regarding sewage, effluent and water.

The disposal of effluent is addressed through the Regional Policy Statement (RPS) and the WRP. The RPS is currently being reviewed and tangata whenua are actively involved in this process.

1.5 Strategy structure

The structure of the strategy is outlined in Figure 1.

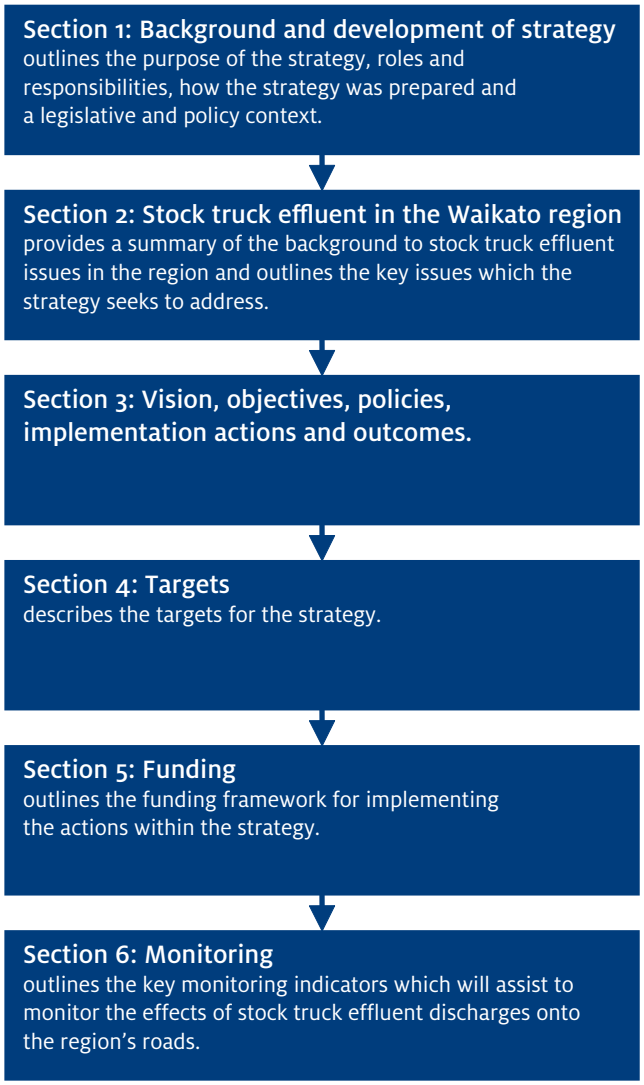

Figure 1: Structure of the strategy.

1.6 Strategy preparation process

The strategy sets out a course of action based on information collected and work undertaken in the region on stock truck effluent issues since 1994.

1.6.1 The National Stock Truck Effluent Working Group

The National Stock Truck Effluent Working Group (the National Working Group) was established in Wellington in 1997 to address the problem of stock truck effluent on roads.

The National Working Group comprises representatives of Federated Farmers, the Meat Industry Association, the Road Transport Forum, the New Zealand Stock and Station Agents Association, road controlling authorities, regional councils, the NZ Transport Agency, and the ministries of transport, agriculture and forestry and fisheries. The National Working Group comes under the umbrella of the Road Controlling Authorities Forum and meets approximately three times a year.

The principle focus of the National Working Group is to ensure there is a nationwide network of effluent disposal facilities, both in-transit and at destination points, namely meat processing plants and sale yards. It is also implementing a communications strategy to ensure that all parties understand and fulfil their roles.

The Industry Code of Practice for the Minimisation of Stock Effluent Spillage from Trucks on the Roads was developed by the National Working Group in 1999.

1.6.2 The Waikato Regional Stock Truck Effluent Working Group

The Regional Working Group was established in 1998 in recognition that stock truck effluent spillage was an issue affecting the region and was one that required a collaborative approach. Members include representatives from all local authorities, Federated Farmers, the Meat Industry Association, the Road Transport Association (RTA), the New Zealand Stock and Station Agents Association, road controlling authorities, the NZ Transport Agency, Ministry of Transport, NZ Police and Associated Auctioneers.

The Regional Working Group was re-convened in 2007 by Environment Waikato in response to delays in constructing the in-transit disposal sites, recognition of the need to monitor the effectiveness of the sites once constructed and to progress implementation of the code of practice. The Regional Working Group has focused on developing the strategy since 2008.

A workshop was held with the Regional Working Group in August 2009 to discuss a draft set of objectives, policies and actions, and a workshop also held with the Environment Waikato Policy Committee in October 2009. Figure 2 shows the strategy development process.

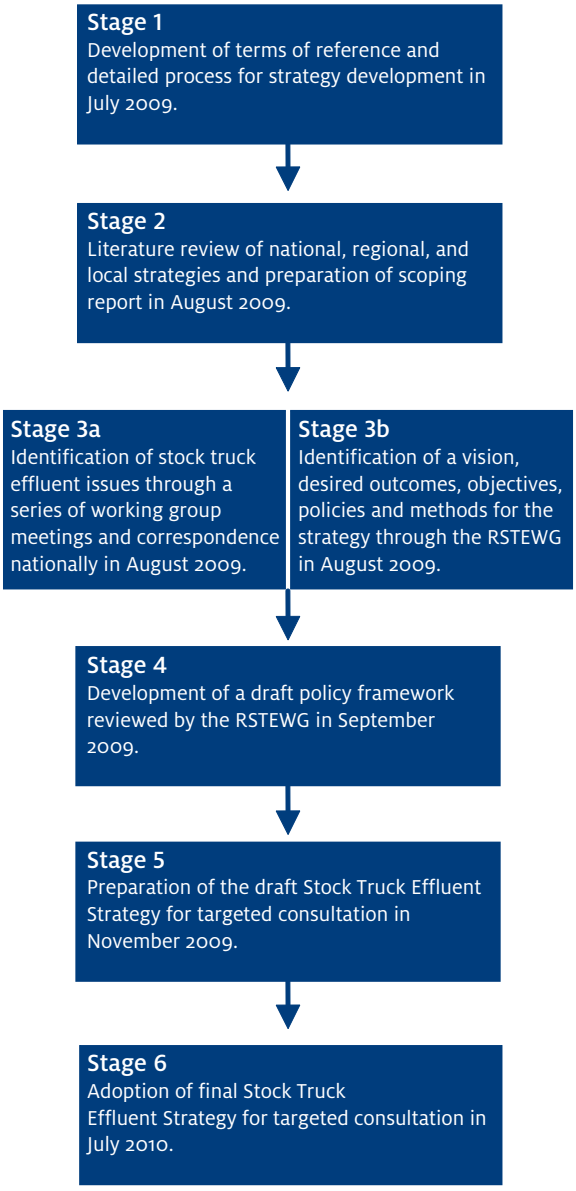

Figure 2: Strategy preparation process.

1.7 Legislative and policy context

There are a number of national and regional legislative and policy drivers that provide the framework for the strategy. These are identified in Figure 3 and summarised in Appendix B.

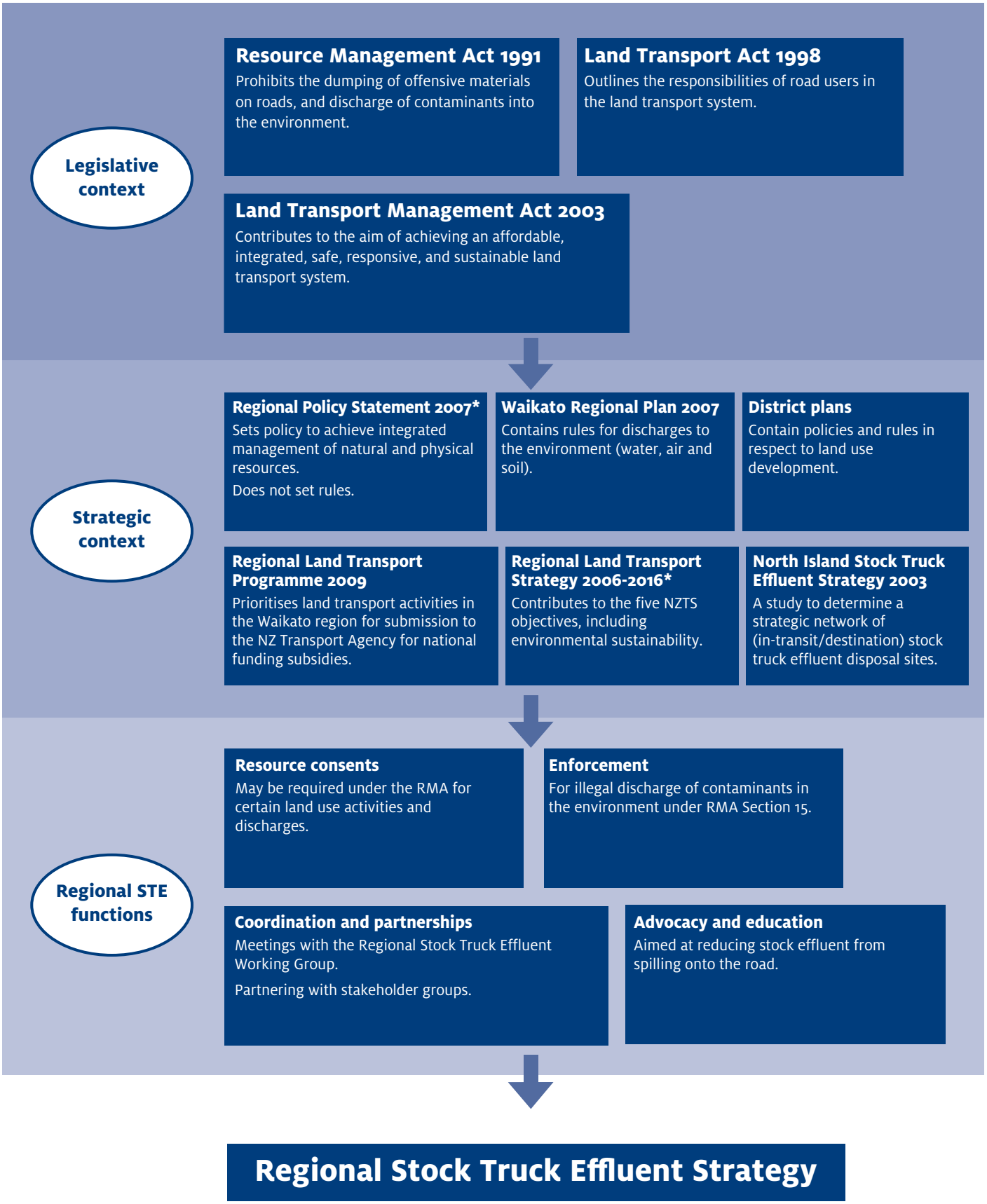

Figure 3 Legislative and policy framework

* Currently under review

Stock truck effluent in the Waikato region

2 Stock truck effluent in the Waikato region

2.1 Background

Transport of livestock by road in New Zealand began in the 1950s. Prior to this, stock was predominantly transported by rail (Thull, 1999).

Stock truck effluent finds its way onto the road or road environs either in-transit or through deliberate dumping. Spills are also increased during certain times of the year.

Stock effluent spillage issues came to the fore nationally in 1992 when a motorcyclist was killed in the south Waikato district when he skidded on effluent spilled from a stock truck. This incident highlighted the issue of road safety in relation to effluent spillage on roads. This incident coincided with the introduction of the Resource Management Act (RMA) which brought with it a greater awareness about the environmental impacts of stock truck effluent on New Zealand roads (Ministry of Transport, 2003).

A Waikato Regional Stock Truck Effluent Forum was held at Tapapa Hall in March 1994 (Environment Waikato, 1994). Recommended outcomes from the forum included education, identification of a network of disposal sites and advocacy to amend the Land Transport Act (LTA) by including animal waste as part of the definition of 'load' (meaning that stock truck effluent spills could be classed as an 'insecure load').

In 1998 two stock truck effluent disposal sites were established by South Waikato District Council at the Putaruru sale yards[1] (collection only) and at Tapapa on State Highway 5 (collection and treatment though a two-pond system) (NSTEWG, 2003).

The stock truck effluent issue was specifically referenced in the RLTS 2002:

"The provision of facilities for collecting effluent from stock trucks, and, where an investigation has identified the need for a facility, territorial authorities will be encouraged to install such a facility. The Regional Land Transport Committee will also lobby central government for a change to the legislation to allow prosecution for effluent from stock trucks being disposed of anywhere other than an appropriate facility (Section 3.1.2)."

It continued to be identified in the RLTS 2006. Action 5.4 states:

"Environment Waikato to support the identification and development of stock truck effluent sites around the region through the Regional Stock Truck Effluent Working Group."

2.1.1 Stock population in the Waikato region

The Waikato region has the fifth largest land area in New Zealand, the fourth highest resident population, and more than twice the number of dairy cattle of Canterbury, the next highest region (see Table 1). In addition it has the nation's second largest number of beef cattle (just behind the adjoining Manawatu region). There are also over two million sheep in the region.

Table 1: Land area, population and livestock numbers per New Zealand region.

Region	Resident population 2006	Land area	Number of dairy cattle	Number of beef cattle	Number of sheep
Canterbury	521,832	56,788	754,937	584,806	7,166,822
Southland	90,873	55,049	432,642	207,588	5,662,387
Otago	193,800	38,478	218,264	292,355	6,031,166
West coast	31,329	36,335	152,481	30,275	54,094
Waikato	382,713	34,711	1,669,472	676,584	2,660,145
Northland	148,470	30,110	367,183	495,833	534,452
Manawatu	222,423	25,306	393,453	680,960	6,746,989
Bay of Plenty	257,379	21,835	299,013	119,743	385,373
Hawkes Bay	147,783	21,399	80,200	438,366	3,624,018
Auckland	1,303,068	16,316	113,344	156,787	287,589
Wellington	448,956	15,943	92,787	155,910	1,822,057
Taranaki	104,124	12,700	589,573	136,715	656,144

Table 1 shows the high number of stock in adjoining regions, some of which will travel to sale yards, meat processing plants and farms using Waikato roads. In particular, the high number of dairy cattle in Taranaki and the high number of sheep in the Manawatu and Hawkes Bay means there are significant cross boundary stock truck trips from these regions. This reinforces the need for a national approach to comprehensively address the issues. Appendix E displays territorial authorities in the region with population and stock numbers.

[1] Putaruru sale yards has since closed in 2003.

2.1.2 Stock numbers transported

Stock being transported by truck either travel to a meat processing plant, sale yards, or to another farm. It is a one-way journey for stock travelling to a meat processing plant, so numbers are likely to be more accurate.

It is more difficult to ascertain accurate numbers of stock travelling in and out of sale yards, as the stock is effectively being trucked to a new destination once sold. Approximate numbers of incoming and outgoing stock trucks to sale yards for the year 2008 are shown in Table 2.

Table 2: Sale days and truck numbers[2]

Sale yard location	Number of sale days per year	Number of trucks arriving and departing per day	Estimated number of truck movements per year
Frankton	180	50	9,000
Morrinsville	130	40	5,200
Te Kuiti	130	40	5,200
Cambridge	46	20	920
Paeroa	60	40	2,400
Tuakau	230	60	13,800
Te Awamutu	60	30	1,800
Taupo	18	12	216
Otorohanga (private farm)	48	4	192
Matamata	50	20	1,000
Total	**952**		**39,728**

It is estimated that somewhere in the vicinity of 39,700 stock truck trips are made every year in the region, to and from sale yards.

There will be an even higher number of trips made to meat processing plants as well as thousands of trips made between farms.

2.1.3 Waikato livestock carriers

The Waikato region has the largest number of livestock carriers in New Zealand, with 29 companies employing some 240 stock trucks. Beef and dairy cattle are the primary stock being transported. Apart from some smaller livestock carriers (with less than three trucks in the fleet), most companies drive in all directions in the region and further in the North Island. About eight companies travel to the South Island.

In the Waikato region and beyond, 75 per cent of stock transported is bound for meat processing plants. The remaining 25 per cent is spread evenly between the sale yards or farm to farm.

Of the 29 livestock carriers in the Waikato region, there are 24 (83 per cent) that state they have their own truck wash. The effluent collected from the truck yards is transported away to be spread on pasture.

2.1.4 Stock truck effluent on roads

There are a number of ways effluent from stock trucks finds its way onto the roads. The failure to stand livestock prior to transport significantly increases the likelihood of spillages.

1 **In-transit spills**
This generally occurs where the stock truck effluent holding tank is full, or the stock truck has no effluent holding tank. These types of spills may be relatively low in volume, but higher in frequency. In cases where the effluent tank is full, spills are more frequent on steeper gradients and bends. Apart from impacting on the receiving environments, in terms of entering waterways, spills can pose a significant nuisance for car drivers following behind and for cyclists or pedestrians, especially in rural settlements. Urban environments are also affected by unpleasant smells, and health concerns from residents with houses close to the road or patrons at cafés and shopping centres.

2 **Deliberate dumping**
This occurs when a driver deliberately releases effluent from the tanks while driving or parked, such as on the side of the road or in a roadside reserve. This occurs primarily because the effluent tanks are full and the effluent has not been able to be discharged at the destination or there are insufficient in-transit facilities located on their route. Deliberate dumping can have significant environmental impacts because of the concentrated release of untreated effluent into the environment.

3 **'Gypsy Day'**
The numbers of stock being transported around the region escalates on 'Gypsy Day' (early June), when farmers and sharemilkers relocate to other farms and thousands of dairy cows are transported in trucks or on the roads. A

[2] This table estimates a possible number of trips made every year to and from sale yards in the Waikato region. The number of trucks arriving and departing to each sale yard has been derived from anecdotal evidence provided by each sale yard.

number of smaller stock trucks and trailers may be used, and many of these do not have effluent holding tanks.

2.1.5 Key influences behind spills

Key influences contributing to stock truck effluent spillages include:

- the ability of the trucking industry to collect and dispose of effluent (the volume of effluent deposited in the truck depends on the time stock is stood off green feed prior to transportation, the type of pasture/feed stock have been on prior to transportation and the distance of travel; wet weather increases the problem)
- a lack of stock effluent disposal facilities across the region at stockyards, meat processors, and in-transit
- not every stock truck has an effluent tank
- a lack of adequate notice from stock purchasers to enable farmers to stand their stock off grass prior to transportation
- some destination stock effluent disposal facilities are not open for use
- more forestry being converted to dairy and dry stock farms, more intensification of dairy farms
- a lack of enforcement because of anomalies in the legislation
- 'Not in my back yard' (NIMBY) syndrome where there is resistance to a stock effluent disposal facility, especially if location is near food shops or public parking areas
- a lack of commitment or ownership to fund facilities
- a lack of leadership.

2.2 Effects of stock truck effluent spillage

The effects of stock truck effluent spillages include:

- contamination of waterways and soils (if the effluent contains viruses, bacteria or high nitrogen levels) and the distribution of pest plant seeds
- road safety hazards for cyclists, motorcyclists and motor vehicles
- health hazards to cyclists, motorcyclists, pedestrians and road works teams
- nuisance odours, especially if effluent is spilled in urban areas
- negative public perceptions
- damage to road surfaces
- culturally offensive.

2.2.1 Scale of the problem

Data from the previous census shows that the Waikato region has 11,000 farms, of which 4,500 are dairy. The remaining 6,500 are made up of sheep, beef, deer and goats. The region contains approximately 1,700,000 dairy stock. Dairy farming is expected to increase over the next few years as forestry land is converted. Therefore stock numbers being transported in, out and within the region are expected to increase.

The stock truck effluent problem is not unique to the Waikato; it is an issue in all regions. There is a lack of empirical evidence, other than photographs of effluent dumped on the road and complaints logs recorded by territorial authorities and Environment Waikato. Feedback from the Police and the Road Transport Association has also been collected. From March 2005 to March 2010, 102 complaints were recorded, however it is widely accepted that the problem is significantly under-reported and not all territorial authorities keep records of this issue. Figure 4 shows the locations of spillages and road side dumpings in the region recorded through complaints.

The raw ingredients.

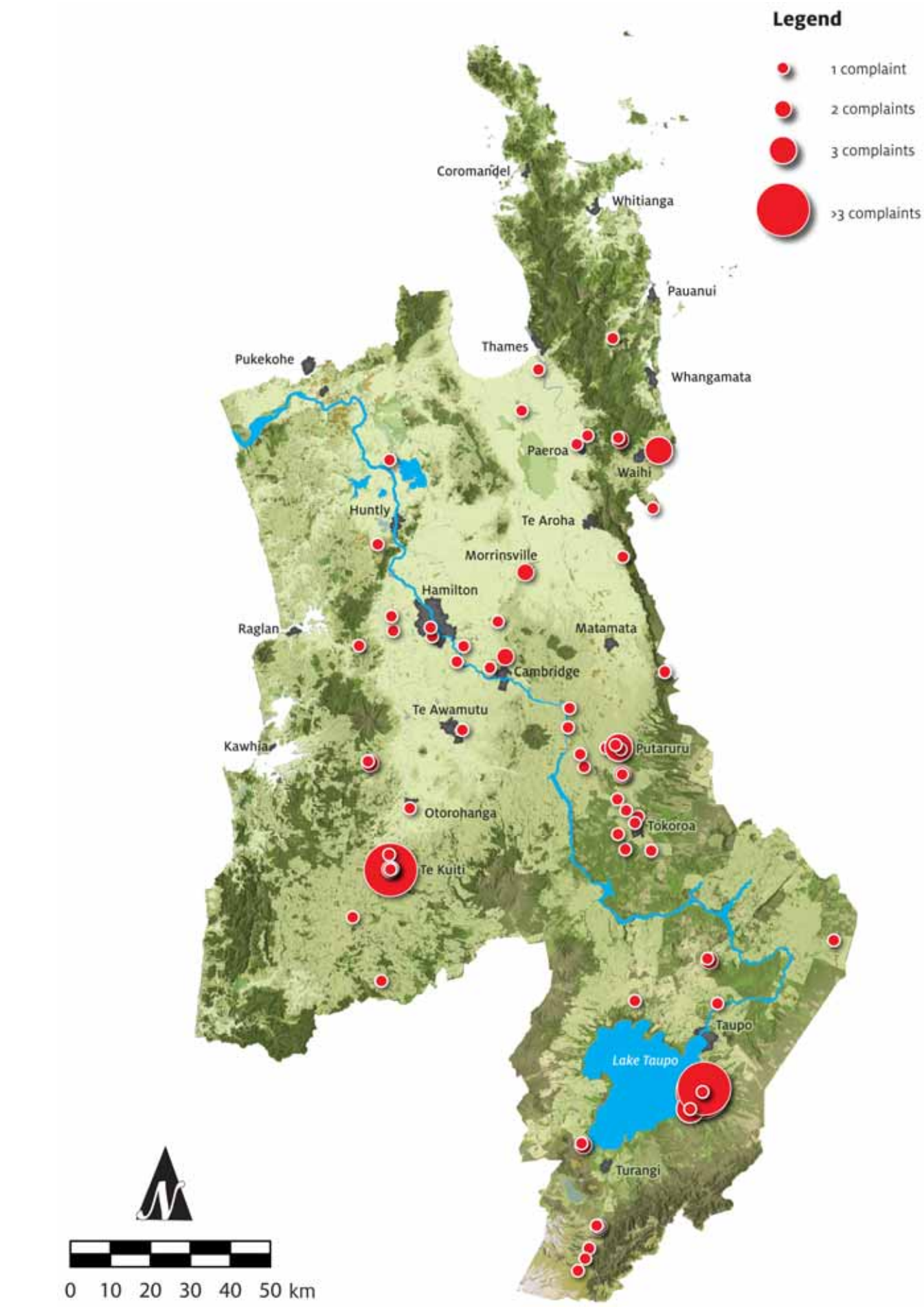

Figure 4: Stock effluent complaints logged between March 2005 – March 2010.

2.2.2 Emerging issue – trade waste and municipal sewage

A recent issue has emerged around trade waste and municipal sewage treatment that is having an impact on stock truck effluent disposal.

The Local Government Act 2002 (LGA) introduced the Trade Waste Bylaw in 2005 to control trade waste discharges. The bylaw affects businesses with a discharge to sewer, however some territorial authorities have a stormwater bylaw which designates contaminated (by a trade activity) stormwater as trade waste also.

A number of meat processing plants and sale yards in the Waikato region are within or at the edge of urban settlements and connected to the municipal sewerage system. In terms of stock truck effluent, providing a company has suitable pre-treatment, stock effluent is a permissible waste under the bylaw, although it carries a significant risk profile.

Those discharging trade waste are required to use an independent consultant to undertake compliance monitoring if the risk profile is high enough. This may be ongoing and carries significant cost. Trade waste characterisation surveys are also undertaken on potential high risk dischargers, which again incur cost.

If a company can comply with the Trade Waste Bylaw then approval can be granted with conditions. If the discharge is greater than 5m^3/day, then trade waste fees are charged on top of the annual consent fee.

Some truck wash facilities end up receiving stock effluent. The extra solids require the use of extra water, along with the testing of the solid matter which may be tested for five or more components, all of which have separate costs. Costs vary from one local council to another.

Many meat processing companies are finding the costs too high and choosing to shut off their stock truck effluent disposal facilities, leaving the truck driver no choice but to depart with a full effluent tank.

2.2.3 State highways in the Waikato region

The Waikato region has more state highways than any other region. Four major state highways intersect with Hamilton. They are state highways 1, 3, 23 and 26, effectively north, south, east and west, all hosting large numbers of stock trucks each day (see Figure 5). Eighteen other principal state highways are located in the Waikato region, all of which are used by stock trucks on a regular basis.

Figure 5: Principal road and rail network in the Waikato region.

2.3 Key issues

To achieve the outcomes of the strategy and reduce the amount of effluent being discharged from stock trucks, there are a number of key issues that need to be addressed.

2.3.1 Stock not stood off green pasture prior to cartage

It is estimated that an average dairy cow weighing 500kg, on an average day, excretes 54kg of effluent when grazing on pasture (Vanderholm, 1984). When the cow is transported, the animal is exposed to higher than normal levels of stress and naturally reacts by excreting onto the stock crate deck. With each truck and trailer unit holding on average 40 head of cattle, significant volumes of effluent can be generated by stock in-transit if the animals are allowed to feed normally prior to cartage.

In accordance with the industry code of practice it is recommended that stock should be stood off green feed prior to transport for at least four hours (NSTEWG, 1999). If stock is not stood off green feed prior to transportation then, dependant upon the weather, stock truck effluent holding tanks could fill up within 5km to 80km of travel. Once the holding tank is full, stock truck effluent is discharged or spilt onto the roads.

It is generally agreed that the farmer can influence the amount of effluent that may be deposited on a truck. The Industry Code of Practice suggests that if farmers can stand their stock off green feed for a minimum of 4 hours, preferably 12 hours, prior to being transported, the animal would leave less effluent on the truck. Standing stock off green feed, but with access to water, is recognised as the best method of reducing the amount of effluent that might otherwise be deposited on the truck.

Animals that are stood off greed feed, but with access to water for four hours or more prior to transportation will excrete less during cartage. Less effluent collected in holding tanks enables trucks to travel greater distances before the tanks need to be emptied. This leads to fewer spills on the road.

Standing stock off green feed prior to transportation reduces stress on the stock which arrive in a healthier and cleaner condition with less bruising, resulting in improved meat quality.

Surveys have shown that some farmers still believe it is financially beneficial to keep stock on green feed up to the time of departure to maintain animal weight (Taranaki Regional Council, 2001; Environment Waikato, 2008). Slight weight loss between departure and final destination can be attributed to stress, however the biggest contributing factor is dehydration. Farmers' payments from meat processors are generally based on carcass weight, as opposed to live weight. There is no financial gain to be had from keeping stock on feed until departure as any additional weight gained remains in the animals' gut. The same applies to sale yards which also weigh the animals.

Animals that arrive dirty as a result of effluent during transport are not well received by meat processing companies, as this increases their processing costs. This is another reason to stand stock prior to transport.

Other reasons for stock not being stood off green feed might include:

- insufficient notice of pick up by livestock carriers, stock buyers or meat processors
- limited space in yards, especially if there are bulls that need to remain in separate herds to reduce brawling; mixing bull herds for a few hours in stockyards could result in injuries to animals or damage to yards
- adverse weather conditions could lead a farmer to decide against standing stock off green feed, as stock yards could quickly become muddy which could soil animal hides, cause damage to yard surfaces or produce effluent or sediment run-off.

2.3.2 Lack of in-transit disposal sites in the Waikato region

Unlike some other regions in New Zealand, the Waikato has relatively few dedicated in-transit truck stock effluent disposal facilities. This lack of a full network of in-transit sites means that a large number of stock trucks will have holding tanks which are full or overflowing for part of their trip. This can occur even if all destinations do accept stock truck effluent, especially during long-haul cartage.

Stock truck effluent disposal facilities have been established at three sites in the Waikato region, all as a result of the North Island strategy. However, in effect the Waikato region only has one operative dedicated in-transit site at Tapapa, on State Highway 5 located in the south Waikato district. This is an

in-transit disposal facility with a two-pond treatment system. The following photographs show the first pond at this site is particularly deep, and there has been no need to remove the heavy waste. Any build up of solid waste would be removed by a contractor.

Figure 6: Stock effluent disposal facility located at Tapapa on State Highway 5 between Tirau and Rotorua.

Figure 7: Settling pond at the Tapapa site.

In 1998 Environment Waikato commissioned Opus International Consultants[3] to assess the feasibility of six potential stock truck effluent unloading and disposal sites which were identified in the Stock Truck Effluent Control Study for the Waikato region 1994. In 1999 this study was extended to four additional sites. The sites assessed for feasibility were:

- Otorohanga – existing truck wash facility
- Frankton sale yards
- Paeroa sale yards
- Morrinsville sale yards
- Wairakei – BP Service Station
- Turangi – Shell Service Station
- Te Kuiti sale yards
- Te Kuiti Lime Haulage
- Piopio sale yards
- Taupo sale yards.

In 2003, Transit New Zealand[4] commissioned Opus International Consultants, to undertake a comprehensive North Island assessment of stock truck disposal sites (2003). The study used livestock carrier surveys and network modelling to determine the optimum number of strategic sites for effluent dumping to reduce stock truck effluent spillage, increase road user safety and decrease environmental stress. This study recognised that there are many cross boundary stock truck trips and the network of facilities needs to be identified on a wider scale involving other regions.

This study had two key assumptions:

- that all trucks and trailers were fitted with a 300 litre capacity effluent holding tank
- that all key destinations received stock truck effluent and that stock truck holding tanks were empty when trucks left these destinations.

The study recommended the establishment of three priority in-transit sites in the Waikato region following site specific investigations. See Table 3. Appendix A descirbes criteria for selecting in-transit sites.

[3] Opus International Consultants Ltd: Investigation of Waikato region stock truck effluent disposal sites, Phase 1, 1998.

[4] NZ Transport Agency previously Transit New Zealand.

Table 3: Proposed in-transit stock effluent disposal sites.

Investigations and recommendations	Sites
'Priority 1' in-transit sites (Opus, 2003)	• Te Kuiti • Putaruru • Taupo
'Priority 3' in-transit sites (Opus, 2003)	• Ngaruawahia
Other sites under consideration by either the NZ Transport Agency or the Regional Working Group	• Mercer service centre • Te Kuiti (weighbridge south Te Kuiti) • Otorohanga (additional to the existing truck wash facility) • Morrinsville sale yards • Turangi
Other potential sites	• Matamata/Kaimai • Paeroa • Thames • Whatawhata • Frankton • Mangatawhiri • Hikuai

While many of the other sites currently under consideration are not identified in the North Island strategy they are all considered necessary by the Regional Working Group. Following investigations there may be amendments to the list of sites recommended by the North Island strategy. For example a facility is recommended at Bombay, however following site specific investigation, a site at Mercer is being favoured by the the NZ Transport Agency, which may mean a site on State Highway 2 may also be required. Initial investigations of a potential site at Mangatawhiri are also being undertaken. Figure 8 shows existing meat processing plants and sale yards with and without facilities. Figure 9 shows existing and potential sites within and outside the region.

In the first instance the Waikato region should aim to install as a minimum the Priority 1 in-transit sites identified in the North Island strategy. Additional sites are also required for a more comprehensive network of stock truck effluent disposal facilities in the region.

There are a number of proposed road network improvements, including town bypasses, which should be considered for potential stock truck effluent disposal facilities in future planning. Figure 10 shows the proposed road network improvements.

What goes in, must come out.

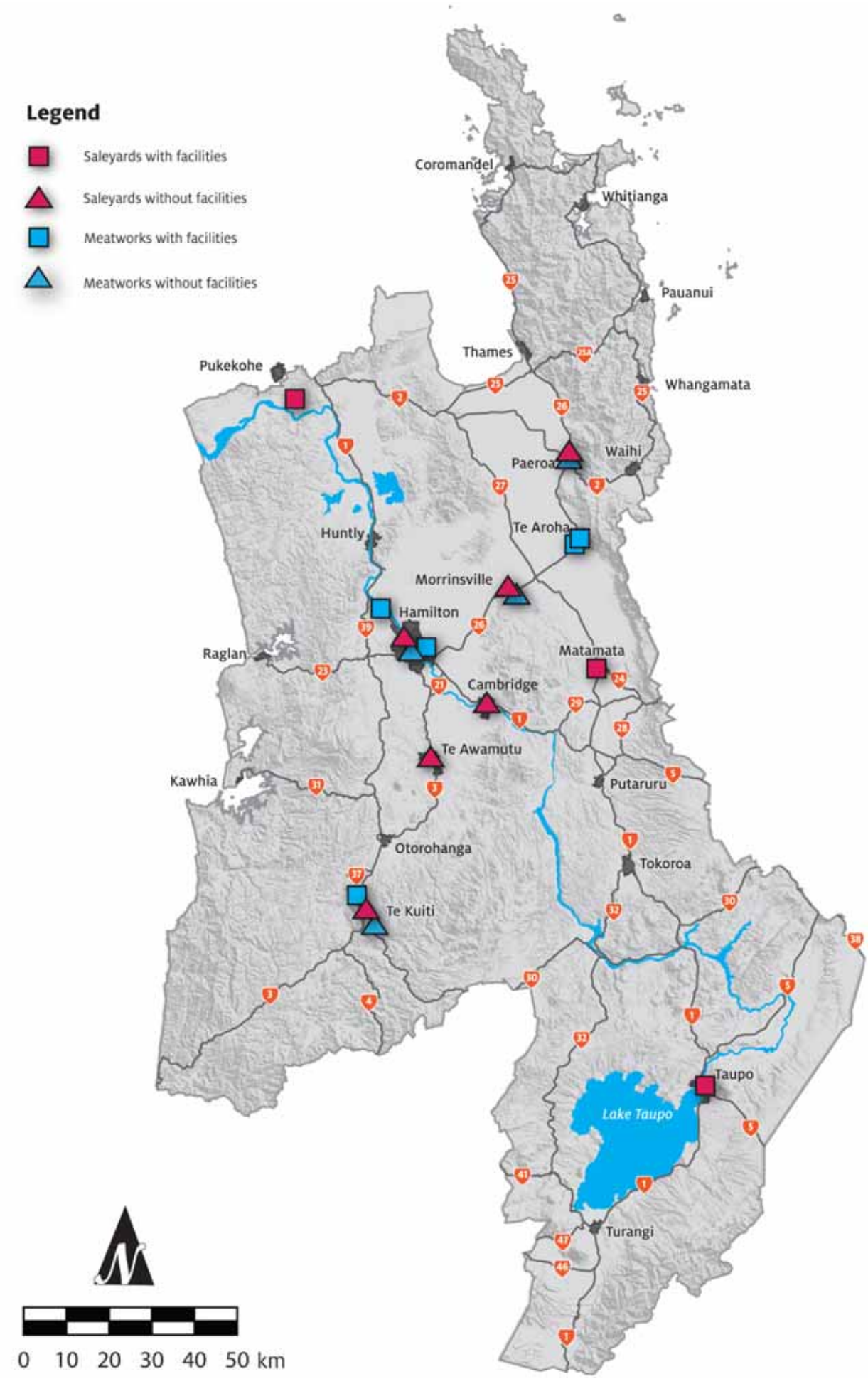

Figure 8: Saleyards and meatworks with and without stock effluent disposal facilities.

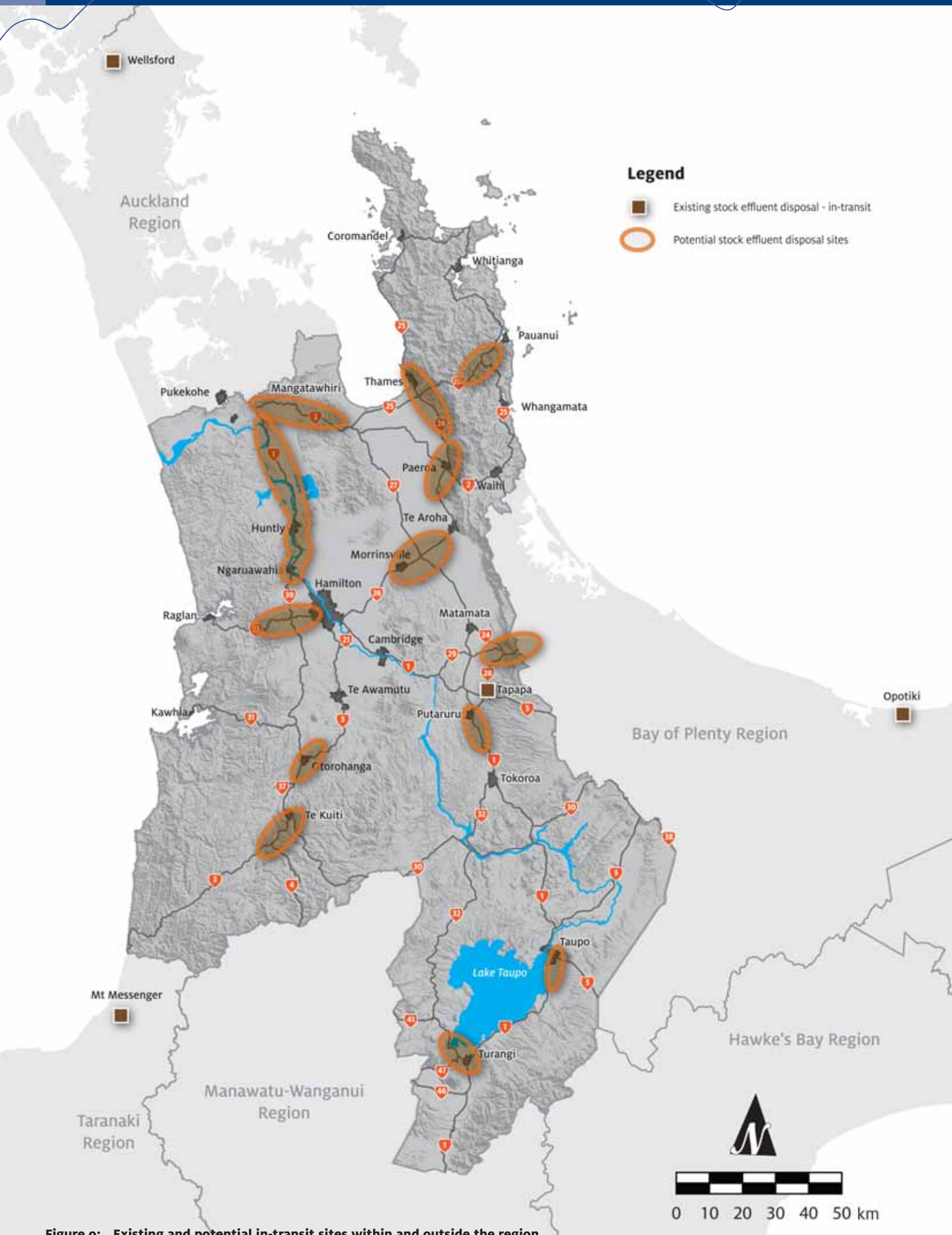

Figure 9: Existing and potential in-transit sites within and outside the region.

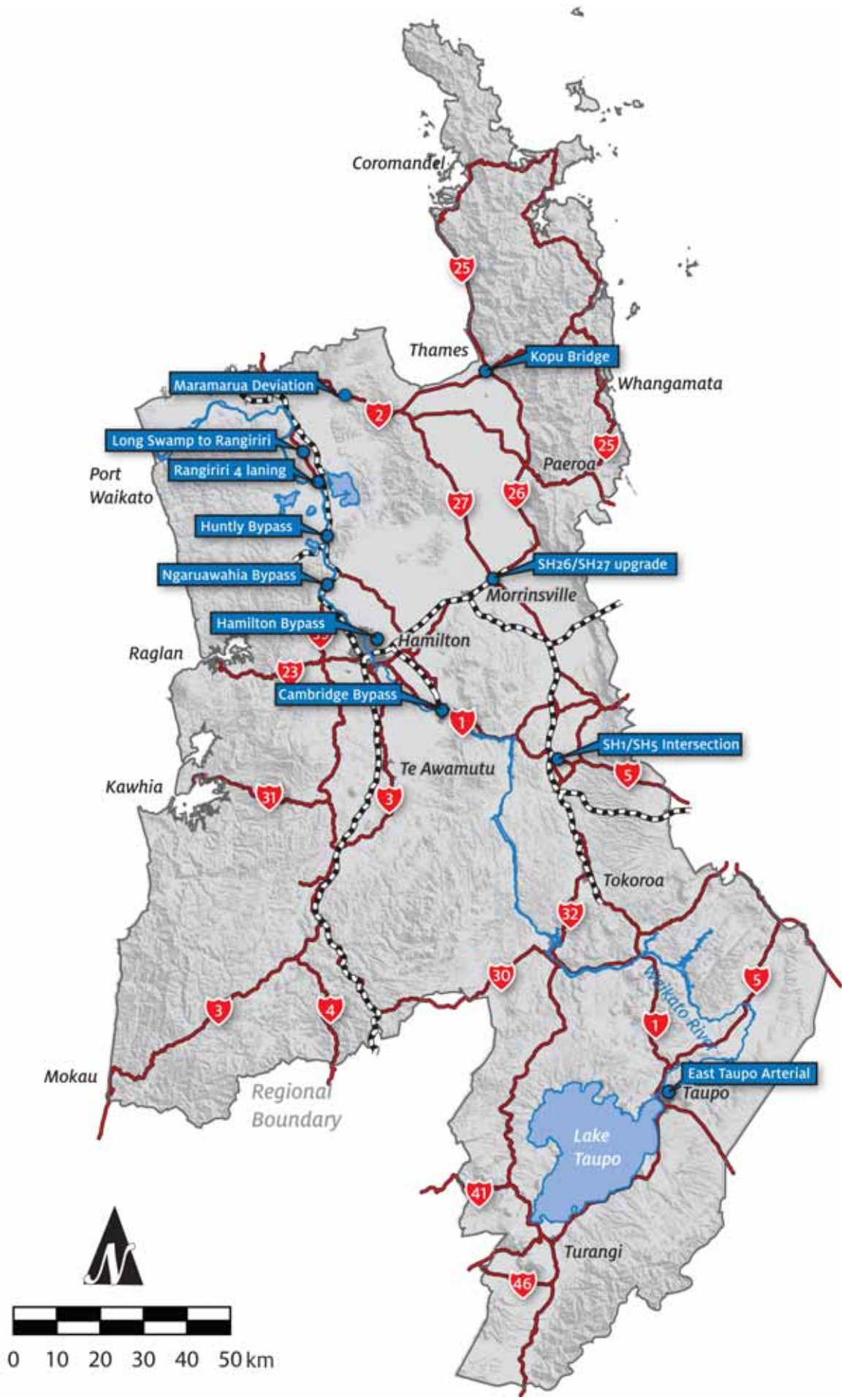

Figure 10: Proposed road network improvements.

2.3.3 Lack of operative disposal facilities at key destinations

There are currently nine meat processing facilities operating in the Waikato. Of these, eight have either truck wash or stock truck effluent disposal facilities. Of the eight with facilities, three are closed off to visiting stock trucks and used for storage. See Appendix C for full list of meat processors.

Currently there are nine major sale yards in the Waikato and several minor sale yards that are used on an irregular basis. Only Taupo, Matamata and Tuakau sale yards have stock truck effluent disposal facilities available for visiting trucks. All sale yards have effluent disposal systems for the disposal of effluent from stock held within the sale yards. These systems generally have the potential to be upgraded to treat stock truck effluent.

The North Island strategy bases one of its recommendations (of developing a network of in-transit facilities) on the premise that key destinations, notably sale yards and meat processing plants take effluent from trucks delivering stock to them. It is crucial to the operation of the entire network that this occurs or else it is likely that the public will have to wear the cost of continued stock truck effluent discharges on the road or of funding numerous additional in-transit disposal facilities.

Figure 8 shows the location of all meat processing agencies and sale yards in the Waikato region.

2.3.4 Stock truck holding tanks

In 1991 the Road Transport Forum introduced a voluntary programme for fitting effluent holding tanks to stock truck and trailer units. In 1997, the Road Transport Forum introduced a quality assurance scheme for livestock carriers whereby effluent holding tanks are mandatory equipment. Livestock carriers involved in the quality assurance programme fitted effluent tanks to all their stock truck and trailer units (generally 300 litre effluent tanks).

The Road Transport Association has worked collaboratively with the stock truck industry in the Waikato, resulting in a large percentage of stock trucks having holding tanks fitted, with capacities ranging from 200 litres to 400 litres. Although not legally required, all new trucks are usually fitted with stock effluent holding tanks. Holding tanks have a finite capacity though, and once full, effluent overflows onto the road.

In addition to the many larger and often articulated stock trucks operating on Waikato roads, many farmers use their own smaller stock trucks for transporting stock. These trucks do not have stock effluent holding tanks.

While the strategy encourages the fitting of effluent holding tanks to all stock trucks, it should be noted that approximately 95 per cent of stock trucks in the Waikato have purchased and fitted, or are waiting to fit, effluent holding tanks.

Figure 11: Stock effluent holding tank.

Figure 12: Emptying of the tank.

2.3.5 Farmers/reluctant to accept effluent from stock delivered

Farmers can receive stock from farm-to-farm relocations or from deliveries of new stock from sale yards. In this respect farms are also important destinations for stock, yet often farmers are reluctant or unable to also take the effluent collected on the stock truck from that stock.

Farmers have significant ability to minimise the amount of stock truck effluent spillage by accepting the effluent that has been collected by the truck enroute to their farms. The amount of effluent will be relatively small – at most 400 litres and if the stock has originated from sale yards, or has been stood beforehand, it is likely to be significantly less than 400 litres. In most cases it is relatively easy for the farmer to manage this amount of effluent. The task is made more difficult when there are mixed loads of stock for more than one farm. The industry code of practice states that farmers, and the transport operators, should negotiate how this will be managed.

The discharge of stock truck effluent to land is a permitted activity subject to the conditions under Rule 3.5.5.1 of the Waikato Regional Plan. Effluent disposal can be achieved without needing a receiving facility as long as the stock truck is able to drive into a designated paddock and discharge from the holding tanks while in motion and as long as the activity complies with the conditions of Rule 3.5.5.1. Spreading 400 litres of effluent would require approximately 16 square metres of paddock to comply with the 25 millimetres of depth per application as described in 3.5.5.1 (e).

Some factors have been identified which make on-farm effluent dumping from stock trucks complicated.

- Farmers sometimes have concerns about biosecurity issues with seeds being transported in animal waste or when there are mixed loads it is unfair to expect one farmer to receive the waste from another farmer's stock.
- Meat and fibre farmers do not necessarily have effluent disposal systems.
- Dairy effluent disposal systems may not be within easy access of stock trucks.
- Wet weather or high antecedent soil moisture conditions could preclude stock truck effluent being disposed into a soak pit, or onto pasture because of run-off concerns.
- Farmers may have concerns about diseased stock effluent contaminating pasture.

2.3.6 Development, operation and maintenance of facilities

Not all territorial authorities have in-transit stock truck effluent disposal facilities, yet stock trucks use road corridors in all districts. Currently the NZ Transport Agency fully funds road access and egress at in-transit disposal sites, and contributes 50 per cent to the construction of in-transit disposal facilities (the territorial authority pays the other 50 per cent). Funding of the operation and maintenance of the facility is currently similarly split between territorial authorities and the NZ Transport Agency. A full description of the NZ Transport Agency's, Planning, Programming and Funding Manual policy is provided in Appendix D.

Some territorial authorities will need to develop more than one in-transit facility while other territorial authorities may not be required to develop any, even though stock trucks picking up from and delivering to farms in all territorial authorities will benefit from the regional (and inter-regional) network of facilities. While construction costs for an in-transit facility will vary (for example $30,000-$400,000) the cost of the ongoing operation and maintenance of the facility is also significant.

There is no national policy guidance on the funding of operation and maintenance of in-transit sites, especially if there is more than one facility sited in a district. However, there are examples available of how other regions manage the intra-regional funding of in-transit sites between local authorities. For example, in the Canterbury region, all territorial authorities with in-transit sites submit their annual operation and maintenance costs to Environment Canterbury who, using an agreed formula, pro rata the costs (or credits) by invoice to the territorial authority within the region. The pro rata concept can be based on a number of factors including population, kilometres of state highway or head of stock within each district.

A regionally acceptable funding programme in the Waikato region will ensure a more equitable distribution and advance the delivery of in-transit facilities. Regional coordination of funding could also extend to the construction of the facilities, with Environment Waikato submitting applications on behalf of the territorial authorities.

Discussions on funding are yet to be effectively debated by the region's local authorities.

The strategy assumes that all destination stock truck facilities and their related operation and maintenance costs will be borne by the private operators of those facilities. In some cases a territorial authority may also wish to contribute to these costs although they should not feel obligated to do so unless these facilities are also made available to all stock trucks passing through.

2.3.7 Regional/district strategies and plans

To date very few regional or territorial authority strategies and plans have had regard to the issues discussed in the strategy. Stock truck effluent spillage has clear adverse environmental effects and this should be reflected more explicitly in resource management documents, namely regional and district plans.

The WRP and district plans contain rules which control activities such as land use and discharges.

Further direction could also be provided to those issuing discharge consents for sale yards and meat processing plants to ensure that the need to take responsibility for stock truck effluent is also integrated into consents.

The RPS is undergoing a review in 2010/11 and will contain relevant directions for regional and district plans around soil and water contamination. Both regional and district plans must give effect to the RPS.

The RLTS is also undergoing review and could elevate the issue and provide further policy guidance on stock truck effluent issues.

2.3.8 Enforcing current legislation

If there were more stock truck effluent disposal facilities in the region, there would be less need to take enforcement actions against those livestock carriers that spill or dump stock effluent. While enforcement is not the whole solution, there is a need to ensure that aspects such as environmental sustainability, road safety and human health are considered.

A full description of the legislative and policy framework for the strategy is outlined in section 2 and Appendix B.

There is only one act that can be used to control stock truck effluent spills on the road – the RMA, through regional and district plans.

The RMA, (section 15), restricts discharges of contaminants to the environment. The WRP contains rules about discharges of effluent, however, does not explicitly address discharges from stock trucks onto roads. Another complication is the high burden of proof to prove a breach of this nature.

Environment Waikato has issued one infringement notice under the RMA (15) (2A) for discharge of effluent onto roads.

A suggested recommendation is to include rules in the WRP prohibiting or restricting discharge of stock truck effluent onto roads.

The only other applicable legislation is the LTA 1998, which has a loophole. While Section 42 describes an insecure load as an offence, the definition of "load" 42(c) states: "*Does not include animal wastes discharged from animals being carried on a vehicle at the time*". Until this section of the act is repealed, no action can be taken.

Vision, objectives, policies, implementation actions and outcomes

3 Vision, objectives, policies, implementation actions and outcomes

This chapter outlines the vision, the objectives, policies and corresponding actions of the strategy.

The strategy is intended to support and implement the RLTS. Section 4 is set out in the same manner as policies and actions in the RLTS. For each of the nine key RLTS outcome areas, specific policy has been developed for stock truck effluent. The RLTS outcome areas are:

- economic development
- safety and personal security
- access and mobility
- public health
- environmental sustainability
- integration
- responsiveness
- energy efficiency
- funding.

Implementation actions (including responsibilities and timing) and the expected results are then noted.

The Regional Working Group assisted with the development of the vision and outcomes of the strategy. Policy has been developed using information gained in meetings and workshops held across the region since 2007 and from national, regional and local studies.

It is important to consider the policies and actions as a whole. Note that many policies will relate to more than one outcome area, however they are placed in the strategy where most logical.

3.1 Vision

The vision for the strategy is:

Working towards zero discharge of stock effluent from trucks onto Waikato roads by 2020.

3.2 Objectives

This section sets out objectives for each of the RLTS outcome areas.

3.2.1 Economic development

The RLTS's desired outcome for economic development is:

"A transport system that promotes continued growth and economic development of the region and provides for the efficient, affordable movement of people and goods in and through the region".

The strategy will contribute to this desired outcome by way of the following objectives:

O1 To improve the image of stock transportation for all road users including tourists/visitors.

O2 To establish facilities which enable the efficient and sustainable transportation of animal stock within the region and inter-regionally.

O3 To promote practices in the transportation of livestock which improve the quality, reputation and value of meat and dairy products.

O4 To reduce road damage caused by stock truck effluent discharge[5].

3.2.2 Safety and personal security

The RLTS's desired outcome for safety and personal security is:

"Substantial improvement of safety and personal security within all modes of transport".

The Waikato Regional Road Safety Strategy details policies and actions to achieve improved safety for all road users, including those most vulnerable.

The strategy will contribute to this desired outcome by way of the following objective:

O5 To establish facilities and good practice for stock truck transportation which contributes to the safe and efficient operation of the region's roads for all road users.

[5] For the purpose of this strategy 'discharge' means any incidents of stock truck effluent discharge or spillage, whether intentional or unintentional, onto public roads.

3.2.3 Access and mobility

The RLTS's desired outcome for access and mobility is:

"A transport system that is inclusive, accessible and affordable".

The strategy will contribute to this desired outcome by way of the following objectives:

O6 To establish facilities for stock trucks which are readily accessible and appropriately located.

O7 To ensure that effluent spillage from stock trucks is managed to ensure that it does not reduce the usability or amenity of the environment for other users.

3.2.4 Public health

The RLTS's desired outcome for public health is:

"A transport system that promotes positive public health outcomes".

The strategy will contribute to this desired outcome by way of the following objective:

O8 To ensure that the management of stock truck effluent avoids adverse effects on the health of all road users and the wider community.

3.2.5 Environmental sustainability

The RLTS's desired outcome for environmental sustainability is:

"A sustainable transport system that minimises adverse effects on the environment".

The strategy will contribute to this desired outcome by way of the following objective:

O9 To ensure that in the process of transporting livestock that adverse effects of effluent spillage on the natural and built environment are avoided, remedied or mitigated.

3.2.6 Integration

The RLTS's desired outcomes for integration are:

"Integrated land use and transport planning"; and *"Integrated transport modes".*

The strategy will contribute to these desired outcomes by way of the following objectives:

O10 To ensure that all key stakeholders have regard to national, regional and district level strategy and policy on the management of stock truck effluent.

O11 To ensure that stock truck effluent issues are recognised in key transport and land use strategies and plans throughout the region.

3.2.7 Responsiveness

The RLTS's desired outcome for responsiveness is:

"A transport system that responds to the needs of the community".

The strategy will contribute to the desired outcome by way of the following objective:

O12 To ensure that the network of facilities for stock trucks is able to respond to industry changes, including the amount of stock being transported, changes to stock destinations and the type of livestock being transported.

3.2.8 Energy efficiency

The RLTS's desired outcome for energy efficiency is:

"A transport system that is designed, constructed and operated to improve energy efficiency".

The strategy will contribute to the desired outcome by way of the following objective:

O13 To ensure that stock truck facilities are located and designed in an energy efficient manner and that they do not unnecessarily add to the distance travelled by the stock trucks.

3.2.9 Funding

The RLTS's desired outcome for funding is:

"A transport system that is funded to fully implement local, regional and national strategies".

The strategy will contribute to the desired outcome by way of the following objective:

O14 To ensure that any stock truck facilities required are able to be fully funded and that funding is sourced in a manner that recognises the national, regional and local benefits which accrue from this investment.

3.3 Policies and actions

The strategy contains eight policies which relate directly to the issues identified and give effect to the objectives. Because of the integrated manner of which the above objectives some policies give effect to several objectives. Table 4 below details the relationship between the objectives and policies in the strategy.

Table 4: Policies that are related to the objectives.

Objectives	Policy 1	Policy 2	Policy 3	Policy 4	Policy 5	Policy 6	Policy 7	Policy 8
Economic development	✓	✓	✓	✓	✓			
Safety and personal security	✓	✓	✓	✓	✓		✓	
Access and mobility		✓			✓		✓	
Public health	✓	✓	✓	✓	✓			
Environmental sustainability	✓	✓	✓	✓	✓		✓	
Integration	✓	✓				✓	✓	✓
Responsiveness	✓	✓	✓					✓
Energy efficiency		✓	✓		✓	✓		
Funding		✓				✓		✓

The strategy has been prepared to provide a set of policies and actions to guide a number of major stakeholders, which include:

- farmers
- Federated Farmers
- livestock carriers
- agents (stock and meat processing companies)
- sale yard operators and owners
- stock and station agents
- meat processors and meat processing plants
- Environment Waikato and territorial authorities
- road controlling authorities
- the NZ Transport Agency.

Waitomo district.

Policy 1: To minimise the amount of effluent deposited by stock in-transit by having stock stood off green feed prior to transportation.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A1	**Farmers** are to stand stock off green feed (but with access to water) for at least four hours directly prior to transport.	Federated Farmers, Environment Waikato, livestock carriers, stock agents, RTA, meat processors.	Ongoing
A2	**Livestock carrier industry** to investigate the development of a stock pick up notification system to ensure that farmers are given sufficient notification time to stand stock off green feed.	Meat processing plants, sale yard operators, stock and station agents, the Regional Working Group.	2011/12
A3	**Livestock industry** sector to investigate the use of animal status declaration cards, either independently or integrated with the Meat Industry Standards, to record the time stock were taken off green feed, the time arranged for stock to be picked up and the actual time stock were picked up.	RTA, livestock carriers, Federated Farmers, Meat Industry Standards Council, the Regional Working Group.	2011/12
A4	**The Regional Working Group** to develop an education programme to raise awareness of the benefits of standing stock off green feed prior to cartage.	Federated Farmers, RTA, meat processing plants, sale yard operators, stock agents/buyers, Agriculture ITO.	2010/12

Expected results

- An increase in the amount of stock being stood prior to cartage.
- Reduced incidents of stock truck effluent discharges reported on the road network including long-haul movements.
- The arrival of healthier and cleaner animals at their destinations.

Reasons

Action 1 recognises that it is up to farmers to ensure that stock is stood properly prior to cartage. However it is also recognised that the Regional Working Group has a continual role in raising the awareness of farmers of the benefits of standing stock via **Action 4**. Such an education programme would emphasise the respective responsibilities of each party. It could include a demonstration of financial and animal health benefits to farmers and the meat industry from the standing of stock.

The road transport industry, which includes truck operators and the RTA, can exert considerable pressure on stock owners and agents to make sure stock is stood off green feed prior to transportation. It is also in the truck operator's interest to ensure that minimal effluent is generated during the trip as any effluent generated is their responsibility. The operator can be prosecuted for discharging or spilling effluent to the road, roadside or a water body under the RMA.

Action 2 addresses the need for a system to be in place to ensure that farmers are given enough notification time to stand stock off green feed. On occasion, the failure by farmers to stand stock may be attributed to the lack of notice given by either the truck operator or the stock agent.

Action 3 seeks to further investigate improved and coordinated methods for recording base data on when stock is picked up. The Meat Industry Standards Council is currently considering introducing Stock Declaration Cards as a record to confirm that standing of stock has taken place. **Action 4** recognises that ongoing education aimed at all stakeholders is key to making sure that all stakeholders are aware of their responsibilities.

Policy 2: To minimise incidents of stock truck effluent on road corridors and adjacent receiving environments through the establishment of a series of in-transit stock truck effluent disposal facilities.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A5	**Territorial authorities and the NZ Transport Agency (HNO)** to develop in-transit stock truck effluent disposal facilities at strategic locations throughout the Waikato in accordance with Figure 9 and criteria (Appendix A).	Environment Waikato, RTA, the Regional Working Group.	2010-14
A6	**The NZ Transport Agency (HNO)** to investigate the development of in-transit stock truck effluent disposal facilities when planning state highway improvements in accordance with Figure 9 and criteria (Appendix A) and/or where a bypass is likely to render an existing facility redundant or inefficient. To be carried out in partnership with local authorities.	Environment Waikato, territorial authorities.	Ongoing
A7	**The Regional Working Group** to lobby adjoining local authorities and the NZ Transport Agency to ensure that progress is being made on the provision of identified in-transit disposal sites in adjoining regions.	Environment Waikato, the NZ Transport Agency, territorial authorities and adjoining local authorities.	Ongoing
A8	**The Regional Working Group** to advocate for a 10 year review of the North Island Stock Truck Effluent Strategy Study.	Environment Waikato, the NZ Transport Agency, territorial authorities and adjoining local authorities.	2010-12

Expected results

- Improved network of in-transit stock truck disposal facilities on regional roads.
- Reduced incidents of stock truck effluent discharges reported on the road network and receiving environments.

Reasons

The increase in stock movement in the region increases the potential for effluent to be discharged onto Waikato roads. The spillage of effluent from stock trucks is identified as an environmental sustainability issue in the RLTS 2006.

Members of the Regional Working Group are the principal parties responsible for preventing and minimising effluent spillage to roads, and should therefore be responsible for identifying strategic locations for the construction of stock truck effluent disposal sites in the Waikato. However, to ensure that effective regard is given to the North Island strategy, **Action 5** should place emphasis on developing in-transit sites at Putaruru, Te Kuiti and Taupo.

The effectiveness of the in-transit disposal facilities will be reviewed with the possibility of further in-transit facilities being constructed in the future. All in-transit stock truck effluent disposal facilities will be constructed in accordance with the criteria in Appendix A and with reference to the Practical Guide to Providing Facilities for Stock Truck Effluent Disposal (National Stock Truck Effluent Working Group, 2003).

Action 6 recognises that with a number of state highway projects planned or advanced that opportunities may arise to develop a stock truck effluent facility ahead of time (in a cost effective and safer manner) as part of a highway upgrade, such as a bypass or road widening. It is important that the the NZ Transport Agency is aware of cases where a bypass may render an existing in-transit or shared disposal facility redundant. Planning in advance allows the territorial authority to apply for funding.

As emphasised in the North Island strategy in-transit sites must act as a network. It will therefore be very important that those sites identified in neighbouring regions are constructed. **Action 7** recognises the effective reduction of stock truck effluent spills on Waikato roads requires the cooperation of adjoining authorities and the completion of a North Island network of in-transit sites.

This strategy applies to the Waikato region, and while the

North Island Stock Truck Effluent Strategy has provided a comprehensive background for this strategy, **Action 8** will allow for a wider and more updated study for the North Island. With proposed new legislation around heavy vehicle productivity and the introduction of heavier vehicles, it is possible that bigger stock crates may replace the current designs, enabling stock trucks to carry a greater amount of stock effluent.

One of three settling ponds on Mt Messenger, Taranaki.

Policy 3: To minimise incidents of stock truck effluent being spilt onto roads by requiring the provision of stock truck effluent disposal facilities at all major meat processing plants and all sale yards in the Waikato.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A9	**All meat processing plants and sale yards** to provide and maintain appropriate facilities for the disposal of stock truck effluent and be responsible for stock truck tanks being empty when trucks leave their facility.	Environment Waikato, territorial authorities, RTA, the Regional Working Group, livestock carriers.	Ongoing
A10	**All meat processing plants, sale yards and cartage companies** should provide appropriate facilities for the washing down of stock trucks at their sites.	Environment Waikato, territorial authorities.	Ongoing
A11	**Road Transport Association**, on behalf of the Regional Working Group, to encourage trucking companies to wash down stock trucks immediately following stock delivery at meat processing plants and sale yards and advocate for the improvement of these facilities where not effective.	Territorial authorities, the Regional Working Group, meat processing companies, Associated Auctioneers.	Ongoing
A12	**Territorial authorities** to monitor and enforce the conditions of resource consents for meat processors and sale yards with regard to the provision of effluent disposal facilities.	Environment Waikato.	Ongoing

Expected results

- Improved network of stock truck effluent disposal facilities throughout the region.
- Reduced incidents of stock truck effluent discharge reported on the road network.
- Cleaner stock trucks.

Reasons

Action 9 recognises that all meat processing facilities and sale yards in the Waikato should make available, and continually maintain, facilities to receive and appropriately dispose of stock truck effluent from stock delivered to their premises. Effluent disposal facilities must be user friendly, and designed and located to minimise inconvenience and time loss to livestock carriers. **Action 9** also provides for Environment Waikato and district councils to assist meat processors by providing information, advice and technical assistance on disposal facilities that are appropriate and effective, in order to meet the needs of meat processors.

Action 10 recognises, stock trucks should be washed down immediately following stock delivery to a meat processing plant or sale yard, assisting to reduce the risk of disease. Key destinations should provide the appropriate facilities to enable this to occur. If washing facilities are not currently meeting the needs of truck operators due to their design or accessibility, meat processing plants and sale yards should endeavour to rectify this.

Action 11 recognises the Road Transport Industry must encourage livestock carriers to clean stock trucks prior to collecting stock for transportation and to wash down stock

trucks immediately following stock delivery. This will ensure that effluent holding tanks have maximum capacity. This is subject to meat processors and sale yards providing adequate facilities. These actions will assist to reduce any risk of disease.

Action 12 seeks to ensure that facilities are being operated and maintained in accordance with the relevant resource consent.

The potential for enforcement action provides incentive for meat processors and sale yards to ensure facilities are operated and maintained appropriately, and monitoring of this by territorial authorities helps ensure their compliance with the agreement outlined in the industry code of practice, and with the directions of this strategy.

Roadside spillage.

Policy 4: To minimise the amount of effluent being spilt on Waikato roads by requiring the provision and effective use of effluent holding tanks in all stock truck and trailer units.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A13	**Livestock carriers** to implement the stock crate code that ensures effluent holding tanks are installed in all stock truck and trailer units.	RTA, Federated Farmers, Environment Waikato, cartage companies.	Ongoing

Expected results

- Reduced incidents of stock truck effluent discharges on the road network.
- All stock truck and trailer units fitted with appropriate effluent holding tanks.

Reason

Action 13 requires that stock truck and trailer unit owners install effluent holding tanks in all stock truck and trailer units. This action requires the continuation of the Road Transport Forum's 1997 quality assurance scheme whereby the installation of effluent holding tanks in stock truck and trailer units is mandatory.

Truck wash at Morrinsville sale yards.

Policy 5: To minimise incidents of stock truck effluent being discharged onto regional roads by encouraging farmers to receive and dispose of effluent from stock being delivered to their property.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A 14	**The Regional Working Group** to encourage farmers to receive and dispose of effluent collected on trucks from stock being delivered onto their property.	RTA, Environment Waikato, Agriculture ITO.	Ongoing
A15	**The Regional Working Group** to develop a factsheet outlining good practice for the disposal of effluent from stock trucks onto farms.	Environment Waikato, Federated Farmers, Agriculture ITO.	2010/12

Expected results

- Reduced incidents of stock effluent discharges from trucks and trailers reported on the road.
- Effective and efficient disposal of stock truck effluent onto farms.

Reasons

In order to contribute to minimising the spillage of stock effluent from trucks onto roads, **Action 14** states farmers need to accept the effluent that has been collected by the truck while transporting stock to their farms. If the farm does not have existing effluent ponds, a truck with a maximum load of 400 litres of effluent needs approximately 16 square metres of pasture to spread the effluent under current WRP rules, which can be achieved by turning the tap and driving over the paddock. As long as the effluent being disposed will not enter a waterway, and other conditions set out in the WRP are met, no resource consent is necessary. This ensures that all destinations become responsible for stock truck effluent which will also reduce the risk of spills.

In cases of mixed loads, sellers of stock, transport operators and farmers can negotiate how effluent will be disposed of. There may be special circumstances where it is impractical for an individual farmer to allow the disposal of stock effluent on his/her property. In such situations, prior arrangements should be made by the farmer receiving the stock with the transport operator with regard to the appropriate disposal of effluent from that stock.

Action 15 recognises that there are a range of methods that farmers can employ to dispose of stock effluent from trucks. The methods used by farmers will largely depend on their individual situation their equipment and existing facilities, their farm management system, and the frequency and quantity of stock unloaded. Environment Waikato will provide advice on how this should be undertaken in the Waikato region.

Effluent irrigation management system.

Policy 6: **That the construction, operation and maintenance of in-transit stock truck effluent facilities be regionally coordinated and that the NZ Transport Agency and territorial authorities contribute funds on a fair and equitable basis.**

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A16	**Territorial authorities and the NZ Transport Agency (HNO)** to finalise a programme and seek approval for funding from the NZ Transport Agency (RPP) for the development and maintenance of in-transit stock truck effluent disposal sites.	Environment Waikato, the NZ Transport Agency.	Ongoing
A17	**Environment Waikato** to investigate and recommend an appropriate method for the fair allocation of construction and operation costs of agreed in-transit disposal facilities, including those privately operated but made available for general use 24 hours a day, 7 days week.	Territorial authorities, the NZ Transport Agency.	2010/12

Expected results

- A fair and equitable distribution of costs for in-transit disposal facilities regionally.
- An improved network of stock truck effluent disposal facilities throughout the region.
- Reduced incidents of stock truck effluent discharges reported on the road network.

Reasons

Action 16 commits territorial authorities and the NZ Transport Agency to working together to seek the approval of relevant road controlling authorities for funding towards in-transit facilities, as set out in the NZ Transport Agency's Planning, Programming and Funding Manual 2008. The construction of in-transit facilities must be in accordance with this manual (refer Appendix D).

Action 17 commits Environment Waikato to work with territorial authorities and the NZ Transport Agency to determine how the construction costs and the ongoing costs of operation and management of in-transit facilities can be fairly distributed to reflect the benefits which accrue from the regionwide investment. This is a priority action of the strategy.

A typical effluent holding tank arrangement – Wellsford.

Policy 7: That related regional and district strategies and plans, implement the strategy.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A18	That **Environment Waikato** seeks to implement the strategy when reviewing the RLTS, RPS, WRP and any other related plans or strategies, including the Regional Road Safety Strategy.	Territorial authorities, the NZ Transport Agency.	Ongoing
A19	That the **NZ Transport Agency (HNO)** give effect to the strategy when designing improvements to the state highway network.	Environment Waikato, territorial authorities.	Ongoing
A20	That **territorial authorities** seek to implement to the strategy in district plans and growth strategies.	Environment Waikato, the NZ Transport Agency.	Ongoing
A21	That **Environment Waikato** continues to give effect to the Industry Code of Practice and any other related legislation or national strategy when reviewing the strategy.	the NZ Transport Agency, territorial authorities.	Ongoing or via a full review by 2016
A22	**Environment Waikato** to investigate prosecution under the RMA 1991 for reported effluent discharges to road or related receiving environments.	Territorial authorities, RTA.	Ongoing
A23	**The Regional Working Group** to lobby the Ministry of Transport to review the legislative framework for preventing stock truck effluent discharges, including amending the definition of 'insecure load' within the LTA 1998 to include animal waste. The legislative framework should also include the establishment of an enforcement regime.	Federated Farmers, Environment Waikato, NZ Police, Ministry of Transport, NZ Transport Agency	2010/12

Expected results

- More effective recognition of the strategy through RMA plans and policy statements.
- The integration of stock truck effluent issues within and between agencies.
- An improved network of stock truck effluent disposal facilities throughout the region.
- Reduced incidents of stock truck effluent discharges reported on the road network.
- Improved legislation and clearer enforcement options.

Reasons

Due to the importance of managing the environmental effects of stock truck effluent discharges, it is important that key resource management documents recognise the issues and objectives raised in the strategy. While the RPS and the WRP cover these issues they need to do so more explicitly.

Action 18 commits Environment Waikato to implement the strategy when next reviewing the RPS and the WRP. In doing so, consideration can be better given to stock truck effluent disposal when discharge consents are issued or renewed for key destinations (meat processing plants and sale yards). Regard should also be given to the strategy when reviewing the Regional Road Safety Strategy.

National land transport programmes are reviewed every three years and a number of key state highway improvements are being planned. **Action 19** ensures that the NZ Transport Agency are aware of the requirements for a network of in-transit stock truck effluent disposal sites in the Waikato region and the opportunity that exists to provide such facilities, where required, as an integral part of state highway improvements.

Stock truck effluent spillage onto roads is a hazard that may compromise the safety and efficiency of a district's road transport network. Territorial authorities can advocate for the construction of stock truck effluent disposal facilities using the Building Act, Transit New Zealand Act, RMA and LGA.

Action 20 recognises that territorial authorities should, by inclusion of appropriate objectives, policies and rules in district plans, better recognise the adverse effects of stock effluent on the road, plan and require key stock truck destinations to construct stock truck effluent disposal facilities. Under section 9 (land use) of the RMA, territorial authorities can include rules in district plans relating to the construction of stock truck effluent disposal facilities or provide for the construction of facilities through issuing resource consent. Territorial authorities should also have regard to the strategy

when preparing Long Term Plans (LTPs) to ensure that adequate funding is available for the construction, operation and maintenance of required in-transit disposal facilities.

This strategy gives effect to the existing industry code of practice and the North Island strategy. This code is now ten years old and no legislation presently exists that is specific to stock truck effluent. However, should any new national code, legislation or strategy be developed, **Action 21** states that the strategy should be reviewed to reflect any significant changes.

While not preferred, if continual reports of spillage or dumping of stock truck effluent in places other than in-transit disposal facilities are received or if reports continue to be received via **Action 22** Environment Waikato may need to take action under the RMA. Such actions have occurred in other parts of New Zealand. Environment Waikato will investigate this action further.

Legislation presently in place is not specific to stock truck effluent and no one organisation is ultimately responsible for avoiding or minimising discharges of effluent from stock trucks. There are also inadequate enforcement guidelines. **Action 23** provides for Environment Waikato and the Regional Working Group to continue promoting a review of the legislative framework. To improve enforcement, stock truck effluent should be included in the definition of an insecure load, as the effluent is a component of the livestock load. The review should cover all sectors involved with the transportation of livestock, from the preparation of livestock prior to transportation through to the receiving of stock at the destination point.

Policy 8: Regional stakeholders will continue to collaborate on all issues related to stock truck effluent.

Implementation actions

Action no	Actions and lead agencies	Support agencies	Timing
A24	**Environment Waikato** will continue to convene the Regional Working Group meetings to facilitate collaboration amongst key stakeholders.	Territorial authorities, NZ Transport Authority, meat processing plants, sale yard operators, Police, Federated Farmers, RTC Agriculture ITO.	Ongoing

Reason

The regional cooperation which has occurred over the past ten years has been an important element in ensuring that stock truck effluent issues are addressed in a collaborative manner.

The continued good work of this group is essential in giving effect to the strategy and assisting organisations with their responsibilities outlined in the actions.

Action 24 commits Environment Waikato to continued convening and coordinating this group.

A two-grill disposal facility.

Effluent disposal facility at Matamata sale yards.

Targets, funding, references and appendicies

Sale day, Taupo sale yards.

4 Targets

Progress towards the strategy's vision and outcomes is underpinned by the policies and actions detailed in the strategy. Progress will be measured against the following targets, which are based on existing information and data.

Implementation actions

Target no	Targets	Monitoring source	How	Timeframe
T1	The number of reported stock truck effluent complaints reduces on an annual basis.	Environment Waikato, territorial authorities.	Complaints register.	Annually
T2	An increase in the number of meat processing plants with stock truck effluent disposal facilities.	Environment Waikato, the Regional Working Group.	Survey	Annually
T3	An increase in the number of sale yards with stock truck effluent disposal facilities.	Environment Waikato, the Regional Working Group.	Survey	Annually
T4	An increase in the number of farmers standing their stock before transporting.	RTA, cartage companies.	Survey and/or logbook data and livestock recording mechanisms.	Annually
T5	An increase in the number of farmers receiving stock effluent from incoming stock trucks.	Federated Farmers.	Survey and/or logbook data.	Annually
T6	Progressive implementation of in-transit stock effluent disposal facilities.	Environment Waikato, territorial authorities, the NZ Transport Agency.	RLTP and NLTP.	Annually

Morrinsville stock sale day.

5 Funding

Stock truck effluent disposal facilities are located either in-transit, or at destinations (sale yards or meat processing plants). In-transit disposal facilities will be funded by the Road Controlling Authorities (RCAs). Stock effluent disposal facilities at sale yards and meat processors are privately owned and operated, and funding for facilities would be paid for by the individual organisation. In a case where a privately owned and operated facility is made available to in-transit stock trucks, then consideration should be given to developing an agreement to share costs for operation and maintenance with funding assistance from the local authority.

Funding for the construction, operation and maintenance of stock effluent disposal facilities can be eligible for financial assistance through the NLTP. Details for this are provided in Section F10.7 of the NZ Transport Agency's Planning, Programming and Funding Manual and contained in Appendix D.

An issue which may arise, as it has done in the Canterbury region, is where one territorial authority has more than one in-transit stock truck effluent disposal facility, incurring extra costs for operations and maintenance. Some territorial authorities will not have any disposal facilities leaving an imbalance of construction and maintenance expenditure across the region.

The strategy contains an action for Environment Waikato to investigate and recommend an appropriate method for the fair allocation of construction and ongoing costs associated with the operation and maintenance of regionally agreed in-transit disposal facilities.

Stock effluent settling pond located on State Highway 3 near Waverly.

6 Monitoring

In order to determine the effectiveness of the strategy in meeting its objectives and policies, it is important to monitor its implementation. The strategy will be formally reviewed concurrent to future reviews of the RLTS.

Environment Waikato will work with territorial authorities who have responsibility for certain actions so that progress of these is being monitored. This information will be used to report annually on progress regionwide.

Two stakeholder groups will need to be updated on a regular basis:

- the RSTEWG. A bi-annual forum will be held to disseminate information and share successes and issues throughout the region.
- reports providing updates on stock truck effluent will be prepared for relevant Environment Waikato committees.

The following are key indicators which will assist in monitoring the effects of stock truck effluent on the region's roads and the effectiveness of the strategy.

Twin truck wash, Morrinsville saleyards.

Implementation actions

Monitoring action no	Actions and lead agencies	Support agencies	Timing
MA1	Environment Waikato to monitor stock truck effluent complaints.	Territorial authorities, the NZ Transport Agency	Ongoing
MA2	Road Transport Association to monitor and report on the effectiveness of stock truck effluent holding tanks.	Environment Waikato	Bi-annually
MA3	Environment Waikato and territorial authorities to monitor the use and effectiveness of in-transit stock truck disposal facilities.	RTA	Coordinated with other road monitoring programmes
MA4	Environment Waikato and territorial authorities to monitor the availability and effectiveness of disposal facilities at meat processing plants, sale yards and in-transit sites.	Meat processing plants and sale yards	Ongoing
MA5	Federated Farmers to monitor and report on any significant farm management changes that may impact of the regional network of in-transit sites.	Environment Waikato, Agriculture ITO	Periodically
MA6	Environment Waikato to monitor new or renewed resource consents for stock effluent disposal and new consents for meat processing plants and sale yards.	Territorial authorities	Annually
MA7	The Regional Working Group to advocate for a ten year review of the North Island Stock Truck Effluent Strategy Study.	Environment Waikato, territorial authorities, the NZ Transport Agency	2010/12

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Appendix A: Criteria for selecting in-transit sites

Several factors must be considered when looking at where disposal facilities will be located in the Waikato region. Working party members, in consideration of where to locate in-transit stock truck effluent disposal facilities, have had regard to protection matters, location factors, and cost issues.

Protection

There are two issues that must be considered when selecting sites for construction of in-transit stock truck effluent disposal facilities. The issues are stock trucks entering the Waikato region from outside the region and stock trucks travelling within the Waikato region. When selecting potential sites for in-transit stock truck effluent disposal facilities the working party must have regard to the protection of entry points into the region, townships and problem areas, such as steep inclines, blind spots and windy areas.

Location

Location of potential sites must be selected with regard to the main stock trucking routes. Sites will be located in the most strategic positions to provide a facility for stock trucks travelling from numerous routes. Sites will also be located as close as practicable to the road for ease of access. The sites must be considered in relation to each other to assess now the implementation at one site will change another site's location requirements. The sites must also be considered in relation to inter-regional issues, specifically where sites are established, proposed, or required outside of the Waikato region.

Cost

The cost of constructing and maintaining in-transit sites will depend upon site location, type of land, site access, facility design, whether the land needs to be purchased or leased by the road controlling authority, for example. The option of whether suitable land can be utilised must be explored, such as, owned by local authorities or the NZ Transport Agency.

Cross boundary considerations

When selecting the location of in-transit stock truck effluent disposal facilities, consideration has been undertaken of inter-regional requirements.

Planning requirements

Construction of in-transit stock truck effluent disposal facilities (the stock effluent capture and treatment options) will require land use consents from the district council to authorise the use of land. Depending on the treatment system, discharges, either into waterways or onto land, will require discharge permits from the regional council. The district councils and regional council will assist in the acquisition of resource consents.

Funding formula

The funding of in-transit stock truck effluent disposal facilities will be undertaken in accordance with the NZ Transport Agency's Planning, Programming and Funding Manual, 2008.

- The NZ Transport Agency, as a result of inclusion in the road controlling authority land transport programme, may pay 50 per cent of construction costs of effluent disposal infrastructure.
- The territorial authority will contribute 50 per cent of the effluent disposal facilities.
- The NZ Transport Agency may pay the total cost (100 per cent) of any roading improvement works associated with construction of the effluent facility site entrance.
- The relevant territorial authority will provide financial assistance for the maintenance of effluent disposal infrastructure, under the relevant amenity/safety maintenance work category, of the district roading programme at the base rate.
- District councils and the NZ Transport Agency will include provision for financial assistance for the maintenance of associated roading improvement works in relevant state highway or district roading programme.

Appendix B: Key legislation, strategies and plans

Land Transport Management Act 2003 (LTMA)
The LTMA articulates the legislative requirements of NZTS to achieve an integrated, safe, responsive and sustainable land transport system.

Land Transport Act 1998 (LTA)
The LTA is designed to promote safe road user behaviour and vehicle safety, to provide for a system of rules governing road user behaviour, the licensing of drivers and technical aspects of land transport, and to recognise reciprocal obligations of persons involved.

Section 9 of the LTA states that a person operating a motor vehicle on a road, and any person loading that vehicle, must ensure that any load carried in or on the vehicle (or in or on a vehicle being towed), is secured and contained in such a manner that it cannot fall or escape from the vehicle. However the LTA explicitly excludes animal waste from the definition of load.

Resource Management Act 1991 (RMA)
The RMA is New Zealand's overarching environmental legislation. Its purpose, outlined in Section 5, is to *"promote the sustainable management of natural and physical resources"*. The responsibility of implementing the RMA falls largely on New Zealand's regional authorities and territorial authorities. Therefore, all council strategies need to be written in a way that they are in accordance with the purpose and principles of the RMA. This includes the strategy. The definition of contaminant in the RMA is sufficiently wide to include organic material like stock effluent. Section 15 of the RMA is also of note as it is of relevance to discharges.

Local Government Act 2002 (LGA)
The LGA outlines what needs to be included within the Long Term Plan (LTP). LTPs provide a broad overview of what a community wishes to achieve within a ten year time-frame and how councils intend to respond and achieve these outcomes. LTPs are the instrument by which councils allocate funding to implement their community strategies. Included in these strategies are improvements in the local and regional network of stock truck effluent disposal facilities (Environment Waikato 2009).

National policy context

New Zealand Transport Strategy 2008 (NZTS)
The NZTS is a government strategy that looks forward to 2040 and sets out a plan for the transport sector. The 2008 NZTS differs from the 2002 NZTS in that it is target-led. The NZTS itself is not statutory, but it will be given statutory weight in other documents.

The NZTS sets a vision for 2040, which is: *"People and freight in New Zealand have access to an affordable, integrated, safe, responsive and sustainable transport system"*. The following specific objectives are identified:

- ensuring environmental sustainability
- assisting economic development
- assisting safety and personal security
- improving access and mobility
- protecting and promoting public health.

Seven areas of action or interventions are also outlined which will be an important area of focus in order to achieve the targets. These are:

- integrated planning
- making best use of existing networks and infrastructure
- investing in critical infrastructure and the transport sector workforce
- increasing the availability and use of public transport, cycling, walking and other shared and active modes
- considering options for charging that will generate revenue for investment in transport infrastructure and services
- using new technologies and fuels
- maintaining and improving international links.

Government Policy Statement 2009/10 – 2018/19– (GPS)
The GPS describes the government's funding priorities for the next six years, viewing infrastructure and services as an essential part of a robust economy.

B 31 – Short and medium term impacts
A number of impacts noted in the GPS. Stock truck effluent disposal is connected with some of the impacts:

- reductions in deaths and serious injuries as a result of road crashes
- reductions in adverse environmental effects from land transport
- contributions to positive health outcomes.

C 38 – Funding in the National Land Transport Programme is allocated to activity classes. The development and management of stock truck effluent disposal facilities fits into the following activity classes:

- new and improved infrastructure for state highways and local roads
- maintenance and operation of state highways
- transport planning.

C 60 – Regional Transport committees and the NZ Transport Agency should ensure that cost-effective measures to improve the efficiency of existing networks are considered as well as investment in new infrastructure.

C 62 – Most transport problems require the involvement of many government agencies and private sector stakeholders to develop solutions.

North Island Stock Truck Effluent Strategy Study 2003

The North Island Stock Truck Effluent Strategy (North Island strategy) was commissioned by Transit New Zealand to determine a strategic network of in-transit and destination stock truck effluent dumping sites.

Utilising surveys and network modelling the strategy identifies the optimum number of strategic sites for effluent dumping in such a way as to reduce stock truck effluent spillage, increase road user safety and decrease environmental stress.

The North Island strategy makes the key assumption that all destinations (such as farms, sale yards and meat processing plants) will receive stock truck effluent along with the stock delivered to these destinations. This is critical to the success of this strategy and destinations are a critical part of the stock truck effluent disposal network for the North Island.

The strategy also assumes that all trucks have 300 litre effluent holding tanks and that 75 per cent of all stock is stood off green feed prior to cartage.

Based on the busiest day of the year and the above assumption the strategy recommends that North Island in-transit dumping sites be developed as a first priority in the following locations. Those underlined are located within the Waikato region.

- Whangarei
- Wellsford
- Bombay
- Te Kuiti
- Mt Messenger
- Wellington
- Woodville
- Bayview
- Waiouru
- Taumarunui
- Opotiki
- Taupo
- Putaruru
- Katikati

In addition the North Island strategy also recommends two 'Priority 2' sites at Te Ngae and Wairoa and two 'Priority 3' sites at Fielding and Ngaruawahia. This network of in-transit sites is shown in Figure 8.

The NZ Transport Agency treats the North Island strategy as their national strategy with regards to planning and funding.

Industry Code of Practice for the Minimisation of Stock Effluent Spillage from Trucks on Roads 1999

This industry code of practice was developed and released by the National Stock Effluent Working Group to develop practices and solutions to reduce the amount of effluent falling from stock trucks onto New Zealand roads.

While this industry code of practice is voluntary it also has the support and cooperation of all stakeholders and sets a national framework for the management of stock truck effluent without the need for compulsory legislation.

The industry code of practice has three basic principles.

- Stock is stood before it is transported.
- Simple and appropriate methods to collect and dispose of effluent from trucks delivering stock are used.
- A coordinated approach is in place to control this problem by good communication between all those directly and indirectly involved with the handling and transportation of stock and the management and disposal of effluent.

The code of practice outlines the 'responsibilities and guidelines' for all stakeholders directly or indirectly involved with the handling and transportation of stock.

Those directly involved are:
- farmers
- livestock carriers
- agents (stock agents and meat processing company agents)
- sale yard operators and owners
- meat processors.

Those indirectly involved are:
- regional council and territorial authorities
- road controlling authorities.

Regional policy context

Regional Land Transport Strategy (RLTS)

The RLTS provides the regional framework for the development of the strategy. The RLTS in giving effect to the Land Transport Management Act 2003 (LTMA) contains nine outcome areas.

The outcomes relevant to stock truck effluent are:
- economic development (of the meat and dairy industry and tourism)
- safety and personal security (for all road users)
- access and mobility (a focus on ensuring accessibility by all modes)
- public health (including managing all discharges from vehicles)
- environmental sustainability (especially to marine receiving environments)
- integration (key focus on integrating transport and land use planning to achieve better integration over all outcomes)
- responsiveness (to industry changes)
- energy efficiency (including ensuring energy efficiency in road transport and any related facilities) (Ministry for the Environment 2007)
- funding (to ensure improvements are able to be fully funded).

Waikato Regional Policy Statement (RPS)

Prepared under the RMA, the RPS promotes the sustainable management of natural and physical resources. It does this by providing an overview of the resource management issues of the region along with providing objectives, policies and methods to achieve integrated management of the regions natural and physical resources (Environment Waikato 2000).

The RPS is particularly concerned with the issue of water quality and the objective of the RPS is a net improvement of water quality across the region both from point and non-point sources of discharge.

The RPS also recognises that Maori consider the disposal of contaminants to water has the potential to diminish the mauri of that water. The disposal of waste is another particular issue identified in the RPS and further states that no pollution from waste disposal is acceptable from a Maori perspective.

The RPS has adopted the international waste management hierarchy as a policy in the RPS[7] being:
- reducing the amount of waste produced
- reusing waste items
- recycling waste materials by reprocessing and using them as raw material for other products
- recovering resources from waste
- residual wastes disposed of safely.

Liquid wastes specifically include treated organic wastes from point source (such as dairy shed effluent) and non treated organic wastes from non point source (such as waste deposited from animals on pasture). The effects of these waste discharges may include:
- oxygen depletion
- nutrient enrichment
- stream siltation
- contamination of surface and ground water
- reduction in the mauri of natural resources.

The RPS states that these effects are to be avoided, remedied or mitigated by producing less wastes and of disposing of those that are generated in a responsible and careful manner.

Waikato Regional Plan (WRP)

The WRP has been developed by Environment Waikato under the RMA and is intended to provide direction regarding the use, development and protection of natural and physical resources in the region.

The WRP is specifically designed to provide direction for the processing of resource consents with regards to water, river and lake beds, land and soil, air and geothermal resources.

[7] 3.9.5 Waste Management Policy One, Waikato Regional Policy Statement.

Of particular relevance to this strategy is the issue of discharge to water both from point sources and non-point sources.

The plan states that water bodies are vitally important to the region and need to be managed in a sustainable manner. The plan also recognises that the interconnectedness of the water system means that poor resource management in one area can impact on a large downstream area.

Unless connecting into an existing town sewage system it is likely that any new in-transit effluent disposal system will need a resource consent under the WRP.

Non-point discharges which could include any thing from inappropriate farming practices to illegal discharges from stock trucks is an issue of the plan.

The objective is to avoid significant adverse effects on aquatic ecosystems, and this will be addressed through a combination of education and encouragement. However, more stringent conditions and standards may be used in regulatory methods in the future, if no improvement in water quality is detected.

Discharges to land can also contaminate soils and can lead to adverse effects on water quality and habitat.

The discharge of wastes and hazardous substances into or onto land can cause the following issues according to the plan:

- contamination of soils with pathogens, heavy metal, pesticides, hydrocarbons and other hazardous substances that can present risks to human heath, and the wider environment, and reduce the versatility and productive capacity of soil
- adverse effects on the significant character of air quality
- contamination of surface water and ground water with substances such as nutrients, and pathogens
- adverse effects on the relationship that tangata whenua as Kaitiaki have with their taonga, such as ancestral lands, water and waahi tapu.

Policy 4 on discharges to land ensures that discharge of contaminants onto or into land maximises the reuse of nutrients and water contained in the discharge.

Some in-transit facilities will discharge to land and will require a resource consent under this plan, while other discharges, for example spraying stock truck effluent onto land will likely be a permitted activity under this plan.

Where an activity breaches this plan (and this could include illegal discharges of stock truck effluent to road sides) Environment Waikato may apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA.

Regional Land Transport Programme (RLTP)

The RLTP is a statutory document prepared under the LTMA. The purpose of this document is to prioritise all of the land transport activities in the Waikato for submission to the NZ Transport Agency for funding. The RLTP for the Waikato region is prepared for the Waikato region by the RTC for approval by the regional council.

The RLTP is then submitted to the NZ Transport Agency for inclusion in the National Land Transport Programme (NLTP). The NLTP identifies government funding for transport activities. If an activity is not included in the RLTP it is ineligible for government subsidy. Combining the land transport activities for the region into a single programme, allows the region to address known transport issues in a comprehensive way, and also allows comparison to be made against national and regional targets for the transport sector. Development of the RLTP requires a collaborative effort between the territorial authorities of the region, the NZ Transport Agency and the regional council and is prepared every three years.

Environment Waikato consulted on the draft RLTP 2009-2012 in May 2009. The final programme was adopted by the Regional Transport Committee (RTC) in June 2009. The implementation methods and actions from the strategy will be reflected in the next RLTP review which is scheduled in 2011/12.

Long Term Plan (LTP)

The LTP is prepared under the LGA, by the regional council every three years, and contains planning and financial information for the next ten years. The LTP describes how the council will deliver the outcomes agreed to by the community in respect to social, economic and environmental wellbeing, and the council's intended contribution towards those outcomes. Of particular relevance to stock truck effluent strategy is the provision of in-transit projects and funding for relevant local authorities.

Other key national and regional policies and plans

Planning for stock truck effluent in the Waikato fits into the broader context of national and regional strategies. This section outlines other key national and regional policies, and local strategies and linkages with the strategy.

New Zealand Transport Agency Planning, Policy and Funding Manual 2008

The purpose of the manual is to set out in a transparent manner for all stakeholders:

- a summary of the legislative and strategic context, within which the NZ Transport Agency and approved organisations are required to operate
- how the NZ Transport Agency will assist and advise approved organisations to formulate activities and combinations of activities that meet the statutory and policy requirements placed on the NZ Transport Agency and approved organisations
- the NZ Transport Agency policies and procedures for preparing, scrutinising and assessing activities or combinations of activities, and allocating and managing land transport funds
- how the NZ Transport Agency uses the provision for combinations of activities, groups of similar lower-cost activities and programmes of ongoing activities
- the arrangements the NZ Transport Agency will use for monitoring, auditing and reporting on the land transport system, outcomes from the NLTP and implementation of approved activities.

Waikato community outcomes

Environment Waikato has developed a series of community outcomes as part of its 2006-2016 LTP. The purpose of the community outcomes is to outline what Environment Waikato seeks to achieve in the next ten years. The community outcomes are summarised below.

Sustainable environment	The Waikato region values and protects its diverse, interconnected natural environments.
Quality of life	The Waikato region is a great place to live, providing the services and opportunities we need to live well.
Sustainable economy	The Waikato region balances a thriving economy with looking after its people, places and environment.
Culture and identity	The Waikato region identifies with – and values – its land, air, rivers and waterways, mountains, flora, fauna and its people.
Participation and equity	The Waikato region builds strong informed communities and has a culture that encourages people and communities to play their part.

Appendix C: Stakeholders directly and indirectly involved in stock truck effluent

The movement of stock from farms to other destinations, or in-transit involves a number of parties directly and indirectly, suggesting a shared approach is needed to reduce effluent spillage on the roads. The Industry Code of Practice (1999) identifies a number of parties with a role to play.

Roles of the parties directly involved

Federated Farmers

Federated Farmers of NZ (Inc) have been involved in providing advocacy and advice to farmers to help eliminate and reduce stock truck effluent.

Federated Farmers are a member of the National Stock Effluent Working Group and a member of the Regional Working Group. As part of their responsibility under the code of practice, the Regional Working Group actively advocates to farmers to stand stock off green feed for a period of four to twelve hours prior to transportation.

Farmers

The farmer, or farmer's agent, is ultimately responsible for ensuring that stock is adequately prepared for transportation by standing the stock off green feed for a period of 4-12 hours prior to transporting. The code of practice (Section A1.2), states that farmers should take responsibility for the receiving of, and disposal of, effluent collected on trucks from stock being delivered onto their property. This can be achieved by either disposing the effluent directly into a farm dairy effluent treatment system, or discharge to land where the discharge does not result, or is liable to result, in any of the effluent entering nearby waterways.

Generally, farmers endeavour to stand their stock off green feed for a minimum of 4 hours. However, there are a number of reasons why this might not happen. In a survey conducted by Environment Waikato at the 2008 Fieldays, farmers offered the following reasons on why they did not stand their stock.

- Not enough notice given by the truck companies to stand stock off green feed. For example the farmer may be given notice by the truck company or livestock agent the night before for an early morning pick up.
- Not enough notice given by livestock agents.
- Some farmers think they will receive a higher price at the meat processing plants for a fresh kill, by not standing their stock off green feed.
- Some farmers noted they had no 'standing pads' or stock yards to hold the stock.
- Some are worried that if they do get their stock in to stand off pasture, that the truck may be significantly delayed the next day.
- No water troughs in the yards or 'standing pads'.

There is also farmer resistance when receiving stock effluent from an incoming truck. Not all farms have an effluent disposal system, and there is an increased concern from farmers about the potential for the introduction and spread of disease.

Stock agents

Stock agents, including meat processing company agents and stock purchasers, are responsible for communicating with clients (farmers) the requirements for standing stock, transporting stock and receiving stock.

Stock agents must ensure that arrangements for stock collection are finalised well in advance and that farmers are adequately notified, either directly or via the transport operator, of stock collection times to allow farmers to stand stock for at least four hours prior to transportation.

Another industry that is largely overlooked is that of grazing companies. As dairy farms and dry stock farms become more intensified, farm management systems are embracing the off-farm grazing concept. The notion of a self contained farm is becoming rarer, where all stock is kept and managed on the farm which includes lactating cows, weaners, yearlings, or older dry stock with no off-site grazing. More modern practices refer to the farm as the 'milking platform' and favours the milking cows only, with most other stock being transported to off-site grazing. Grazing locations are largely chosen on price and quality of the grazing, as there are variations in the quality of grazing. Many farmers transport their in-calf cows up to ten weeks prior to birth to rest grazing on the main farm.

With so much off-site grazing comes short and long haul transportation. There are approximately four million dairy cows in New Zealand, one million of which are located in the Waikato region.

Calculation for the Waikato

Farmers commonly retain 25 per cent of their heifer calves (weaners) for herd replacement, plus last year's weaners (25 per cent). With approximately 90 per cent of farms now

grazing off-site, this means large numbers of stock are being transported. It is estimated that there would be approximately 100,000 (one hundred thousand) truck movements per annum to transport only grazing stock. Grazing stock size and weight ranges from fully grown to weaner size, which will determine stock numbers for transportation.

Livestock carriers

Livestock carriers are responsible for collecting and containing effluent from stock on all trucks and trailers. This is mostly achieved with holding tanks fitted to the trucks to collect effluent to ensure that spillage is minimised. Approximately 97 per cent of commercial stock trucks and trailers in the Waikato region are fitted with holding tanks, and are automatically fitted on all new trucks. The only trucks not fitted with holding tanks are smaller privately owned trucks. Taranaki Regional Council (2001) notes in their Regional Stock Truck Effluent Disposal Strategy that all commercial trucks have been fitted with holding tanks. Willis, 2001 (cited in Taranaki Regional Council, 2001) noted that 81 per cent of stock trucks and 99 per cent of trailers are fitted with stock effluent holding tanks in the Manawatu-Wanganui region. Similarly the Bay of Plenty region has similar percentages of trucks fitted with effluent holding tanks.

Livestock carriers should ensure that they have sufficient notice of transport requirements so they can plan work and comply with planned pick-up schedules. This will ensure operators allow appropriate time for farmers to stand stock off green feed.

During transportation, any effluent generated in-transit is the responsibility of the stock truck operator. Stock trucks should be able to deliver both the stock and the effluent generated from that stock at all destinations.

A truck operator can be prosecuted for discharging or spilling effluent onto the road, roadside or into a water body, therefore it is in the best interests of the operator to ensure that sufficient notice is provided to farmers of collection times.

Stock trucks returning to cartage company yards may have full effluent holding tanks, which, if not emptied, can cause odour, aesthetic, and water quality problems on site. Such effects are addressed under the RMA and cartage companies are required to install facilities to dispose of effluent from stock trucks. All cartage companies in Taranaki have licensed effluent disposal facilities in yards.

Sale yard operators

Sale yards can contribute to reduce stock effluent spillage on the roads. It is estimated that two million stock units pass through the Waikato region each year. A proportion of these will be passing through, others transported to farms or meat processors.

It is likely that stock trucks will arrive at a sale yards with a full effluent holding tank, which if not emptied can cause odour, aesthetic and water quality problems on site. The problem is compounded if there is no stock truck effluent disposal facility at the sale yards, where the same trucks will make return trips with more stock and the truck holding tank is still full.

Sale yards should have, and make available, facilities to receive and appropriately dispose of stock effluent from stock being delivered to their premises.

Currently three sale yards operating with stock effluent disposal facilities in the Waikato are located at Tuakau in Franklin district, Taupo in Oranui Road, north of Taupo and Matamata on the edge of the town. Morrinsville sale yards has a twin truck wash only facility, and a single truck wash facility in Otorohanga at an independent site. Te Kuiti sale yards in the Waitomo district, are in the process of applying for a disposal facility.

In conjunction with stock agents, sale yard operators should ensure that arrangements are finalised well in advance and that their clients are notified, directly or via the transport operator, so that their clients are able to stand their stock for the appropriate period before transportation.

Sale yard location	Stock effluent disposal facility
Tuakau	Yes
Paeroa	No
Morrinsville	No
Frankton	No
Te Kuiti	No
Cambridge	No
Te Awamutu	No
Matamata	Yes
Taupo	Yes

Meat processors

Meat processors have a responsibility to communicate with their clients on requirements for stock effluent management, including standing stock off green feed, transporting stock and receiving stock.

Meat processors should communicate with clients the following benefits of standing stock before trucking:

- less stress
- clean stock for processing
- little carcass weight loss as long as water is available while stock is held off green feed.

Fresh clean water should be available at all processing facilities and animals are given time to rehydrate after trucking. This will minimise any suggested weight loss.

It is likely that stock trucks will arrive at a meat processors with a full effluent holding tank, which if not emptied can cause odour, aesthetic and water quality problems on site. The problem is compounded if there is no stock truck effluent disposal facility, or truck wash facility at the meat processing plant. Such effects are addressed under the RMA and meat processors may be required to provide and make available facilities to receive and appropriately dispose of stock effluent from stock being delivered to their sites.

There are nine meat processing facilities in the region.

Meat processor	Truck wash	Effluent disposal facility
AFFCO, Horotiu, north Hamilton.	Yes	Yes
Greenlea Premier Meats, Hamilton.	Yes (closed off)	No
Greenlea Premier Meats, Morrinsville.	No	No
Ruakura Abattoir, Hamilton.	No	Yes
Wallace Corporation, Waitoa.	No	Yes
Silver Fern Farms, Te Aroha.	Yes	Yes
Silver Fern Farms, Paeroa.	Yes	No
Universal Beef Packers, Te Kuiti.	Yes (closed off)	Yes (closed off)
Te Kuiti Sheep Meats or Te Kuiti Meat Processors.	Yes (closed off)	Yes (closed off)

Roles of the parties indirectly involved

No single organisation is totally responsible for addressing stock truck effluent issues in the Waikato. There is no legislation specific to stock effluent spillage, nor is it mandatory for stock trucks to have effluent holding tanks on their trucks. However, there are key parties indirectly involved with roles and responsibilities for stock truck effluent issues.

New Zealand Road Transport Forum (RTF)

The Road Transport Forum New Zealand is the authoritative voice of the road transport industry in New Zealand, created to responsibly promote and advance the interest of the road transport industry and its member road transport operators.

The forum is made up of seven constituent associations, one of which is Waikato (No 2 region). The forum has several roles, three of which are:

- represent trucking businesses on local and regional issues throughout the country
- provide practical and authoritative advice on establishing and running a transport operation, including technical services to keep their members well equipped to deal with a constantly changing business environment
- advise on complying with local bylaws and central government rules and legislation.

Local authorities

The Industry Code of Practice (1999) notes the following roles and responsibilities for district councils and regional councils.

District councils

District councils are the road controlling authorities for local roads, and as such are responsible for planning, constructing and maintenance of local roads. All 12 district councils in the Waikato region are members of the Regional Working Group.

District councils have the following roles and responsibilities:

- work with stakeholders involved with the handling and transportation of stock
- can apply for funding subsidy to operate in-transit stock effluent disposal facilities
- identify suitable in-transit sites
- issue land use consents.
- consider the effect of road design on the ability of stock cartage vehicles to contain stock effluent when building and repairing roads
- with the NZ Transport Agency (HNO), development of in-transit sites on the state highway network
- with the NZ Transport Agency (RPP), provide funding assistance for construction and maintenance in accordance with the PPFM.

Regional council – (Environment Waikato)

Environment Waikato is the facilitator of the Regional Working Group. The council also has responsibilities under the RMA and the LTA 2008. Environment Waikato has the following roles and responsibilities:

- coordinator and facilitator
- work with the industry to establish, where and if appropriate, the most suitable siting of in-transit dumps while minimising the number and cost of such in-transit dump sites, should they be required
- work with those people involved with the handling and transportation of stock and with roading authorities to help promote the basic principles of the code
- promote the code of practice
- assist with education to stakeholders
- be an authority for the RMA
- establish fair method of cost sharing
- assist territorial authorities with funding applications
- work with farmers in the development of solutions for the safe on-farm disposal of effluent from stock trucks recognising the relatively small quantities that should be involved
- in particular, regional councils should consider ways to minimise regulation when preparing policies and rules that will affect the on-farm disposal of stock effluent from trucks in their region, such disposal could be provided for as a 'permitted activity' (with conditions if necessary)
- work with the industry to establish, where and if appropriate, the most suitable siting of in-transit dumps while minimising the number and cost of such in-transit dump sites, should they be required (14.12)

Appendix D: The Policy Planning and Funding Manual – requirements for stock truck effluent facilities

F10.7 Stock-truck effluent facilities

Introduction
The following policy applies where an RCA has requested funding assistance for the provision of a stock effluent disposal site.

Note: The agreement of the co-funders of the disposal site must be confirmed in writing before an application for funding is made.

Policy principle
Stock effluent disposal sites are funded under the principle of exacerbator pays. The National Land Transport Fund (NLTF) component is recognition of the willingness to pay by the general monitoring public for the prevention of effluent spillage that is seen as a nuisance and a potential hazard. An additional benefit is the safety benefit gained from the construction of the wide sealed area, where any vehicle may safely move off the road if they need to.

The ultimate exacerbator is the original owner of the stock who benefits from the sale of that stock for processing. There is no cost-effective method of levying this from the stock carried. Therefore, local rates paid to either the relevant territorial authority or the relevant regional council, or both, is considered a fair method of raising an appropriate proportion of the construction cost.

Conditions of funding assistance
The cost of any stock effluent disposal facility is eligible for funding assistance under work category 321: traffic management for construction of a facility or under work category 221: environmental renewals for renewal of a facility, subject to:

- the facility being part of an agreed current regional or national strategy
- the relevant territorial authority agreeing to maintain the stock effluent disposal infrastructure, including disposal of any stock effluent
- the facility being situated as close as practicable to the road
- a formal lease, or an agreement to occupy, being signed where the stock effluent disposal facility is not part of the road reserve, giving access to the facility as if it were a road.

Funding assistance rate for stock effluent disposal facilities
The funding assistance that will apply to the total project, regardless of the facility being alongside a local road or a state highway, shall be calculated on the following basis:

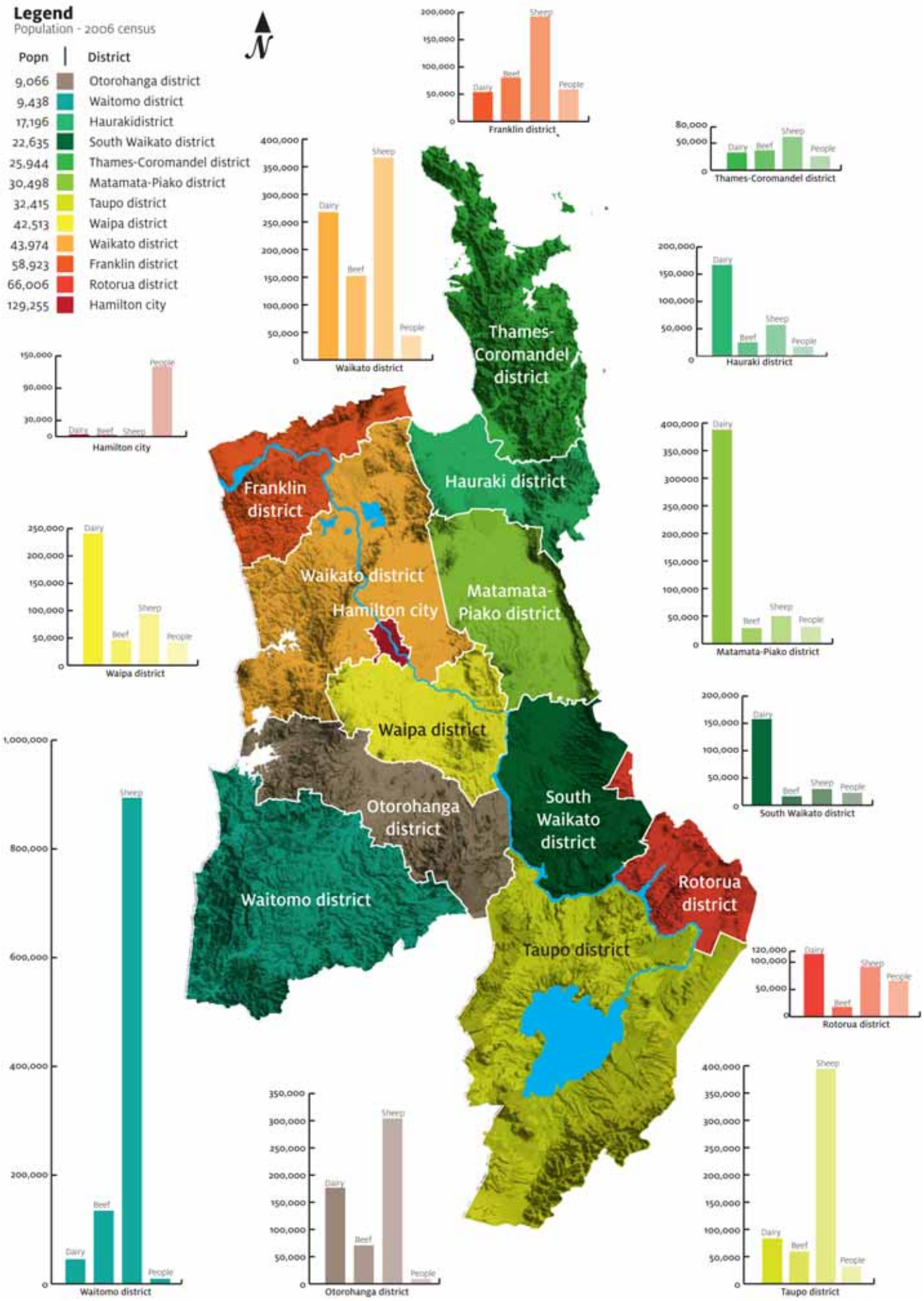
- 50 per cent of the cost of the construction or renewal of the stock effluent disposal facility
- 100 per cent of any necessary road improvement works to enable vehicles to safely enter and exit the disposal facility.

Note: If the facility is on a local road but is identified within the RLTS as being a strategic site, it will also be eligible for 100 per cent of the roading improvement costs within the RLTP.

Maintenance of stock effluent disposal facilities
Maintenance of stock effluent disposal facilities (including disposal of stock effluent from the facility) is eligible for funding assistance under work category 121: environmental maintenance, and is funded at the relevant territorial authority base rate.

Maintenance of associated roading improvement works is eligible for funding assistance under the relevant district or state highway part of the RLTP.

Appendix E: Regional population and stock numbers



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