

# Sewage Spill Procedure

Procedure Ref: **WW-GEN-GEN-OPS-2**

**Approved by:**

## 1 Background

Whangarei District Council (Council) owns and operates reticulated sewerage systems in 9 of its communities, including:

- Whangarei
- Ruakaka
- Waipu
- Ngunguru
- Oakura
- Hikurangi
- Portland
- Waiotira
- Tutukaka

This includes:

- 585 km of trunk and local sewers
- 141 pump stations
- 21,982 household connections.
- A sewerage system typically consists of:
  - Privately owned plumbing fixtures that collect household, or commercial, wastewater and discharge it to Council's sewer pipe.
  - A Council sewer pipe that collects wastewater from a number of houses and conveys it to a sewage pump station or treatment plant.
  - A Council owned and operated pump station that lifts the collected wastewater up to another gravity sewer, pump station, or treatment plant.
  - A Council owned and operated wastewater treatment plant that removes contaminants from the raw wastewater prior to discharging the cleaner effluent to land or water.
- Occasionally the conveyance of sewage within the sewer network is stopped or restricted, causing it to spill out. This happens for a variety of reasons including:
  - 1) Household blockages. These are managed by the owner of the property.
  - 2) Blockages within the gravity pipeline. This may be via plant roots or material within the sewer restricting flow causing wastewater to back-up in the pipe and discharge at its lowest point.

Pump station failure. Pump stations can fail for a number of reasons, including blockages, power loss or mechanical breakdowns. The loss of a pump station causes wastewater to back-up in the gravity system. Pump stations generally have warning systems that alert the operators of failure.

Pipe breaks may occur for a number of reasons such as slips, excavation, and pipe wear and tear. This will generally result in an immediate spill of sewage at the point of the break.

Storm water infiltration and inflow. During wet weather water can get in to the sewer system greatly increasing the volume of wastewater within the sewer pipe. If the capacity of the sewers, pump stations or wastewater treatment plant are exceeded the wastewater can back-up and overflow from low points within the system. Sometimes these low points are specifically constructed (*e.g. Okara Park overflow*).

## 2 Effects of sewage spills

The effects of sewage spills differ depending on where and when the spill happens.

The main risk associated with sewage spills is that it can adversely affect public health. Sewage contains pathogens that can be harmful to humans and direct contact with sewage should be avoided. Although the majority of pathogens quickly die-off in the environment some organisms can survive for some time and can accumulate in shellfish.

Sewage also contains contaminants that can have an adverse effect on the environment. Most immediate harm is from reduced oxygen levels in water or from direct toxicity – such as ammonia. Adverse effects from long term spills may also include nutrient enrichment.

The Resource Management Act prohibits the discharge of untreated sewage to water or to land where the sewage may enter water, unless allowed for by a consent or policy. Without specific permission sewage spills are an offence under the Act, although the Act does provide statutory defences in some circumstances.

## 3 The principles of managing spills

While designers of wastewater systems take steps to minimise the occurrence of wastewater spills, they are almost impossible to avoid completely.

The main principles of Council's sewage spill management system include:

- Ensuring that the safety of those working in or around the sewage spill is not compromised. Council staff shall comply with Council's Health and Safety Policy at all times.
- Minimise the risk the sewage spill poses to Public Health. This includes notification of Northland Health.
- Minimise the risk the sewage spill poses to the environment. This includes notification of the Northland Regional Council.

Assess and record the sewage spill to help determine its risk to public health and the environment and aid reducing future occurrences.

Council's sewage spill procedure has been set up to manage the risks posed by sewage spills.

## 4 Scope

This document describes the procedure for responding to and notifying sewage spills in the Whangarei District. This procedure does not cover consented Treated Wastewater Bypasses from the Whangarei Wastewater treatment plant.

When managing sewage spills all staff shall undertake their role with the following order of priority:

- 1 Ensure the Health and Safety of staff, contractors and personnel involved in the sewage spill
- 2 Minimise the public health risk associated with the sewage spill
- 3 Minimise the adverse environmental health risk associated with the sewage spill.

## 5 Procedure

This procedure outlines the following:

- Receipt of Sewage Spill Notification – Customer Services
- Contactor Notification by Customer Services
- Council Staff Notification by Customer Services
- On-site assessment of spill

- Council Notification
- Notification of NH and NRC (and Parua Bay oyster farmer if in Parua Bay catchment)
- Notification of DOC should spill affect areas administered by DOC in the Whangarei Heads Area (NB
- no clean up operations shall proceed without prior consultation with DOC)
- Reporting

***The procedure is summarised in the attached Flow Chart (Appendix A)***

## **5.1 Receipt of sewage spill call by customer services**

All sewage spills are to be notified through Council's Customer Services desk. This includes those found by Council staff or contractors.

Council's Contact Centre contact number is 09 430 4200 or 0800 932 463.

Upon receipt of a Sewage Spill call by Council's Customer Services the following information needs to be collated as part of raising a CRM:

- Time and date the call is received
- Caller's name and telephone number (*for follow up purposes*)
- Location of the spillage
- Estimated time that the spillage was noticed by the caller along with any general observations, for

Example:

- 1) Sewage has entered...?
- 2) Sewage is leaking, seeping or flowing from...?
- 3) Sewage is discharging to....?
- 4) Etc.

Any other relevant information that will enable Council's maintenance personnel to quickly locate, assess and stop the spillage, such as directions that link to a feature easily observed from the road (*i.e. particular letterbox/house style/colour, down a driveway to the rear property, etc*)

Once the call has been logged, the Customer Services representative contacts the appropriate contractor as set out in Section 3.2.

### ***Sewage Spill Procedure Contact Guide (Appendix C)***

## **5.2 Transfer of sewage spill call by Customer Services to relevant contractor**

On closure of the call by Customer Services the details obtained are to be immediately telephoned through to one of three parties subject to the following criteria:

## **5.3 Wastewater reticulation network**

Sewage leaking, seeping or flowing out of a house gully trap or from a manhole/pipe within public or private property, or is observed as pooling on the ground surface; then contact Council's maintenance personnel through its Stormwater and Wastewater Maintenance Contractor, namely:

## **5.4 Hydrotech Drainage and Plumbing Ltd (Hydrotech)**

1<sup>st</sup> Call to mobile 021 730 709

2<sup>nd</sup> call to mobile 021 730 635

3<sup>rd</sup> call to mobile 021 730 673

## 5.5 Wastewater pump stations

Sewage leaking, seeping or flowing from or within the near vicinity of a pump station (*either a purpose built building or an underground concrete structure generally identifiable by a standalone electrical cabinet and/or the existence of large galvanised or aluminium lids at the ground surface*) or, sewage literally “squirting” out of the ground under pressure; then contact Council’s maintenance personnel through its Pump Station Maintenance Contractor, namely:

## 5.6 Hydrotech Drainage and Plumbing Ltd (Hydrotech)

1<sup>st</sup> Call to telepager 026 244 9692

2<sup>nd</sup> Call to mobile 021 730 349 (Greg Palmer)

3<sup>rd</sup> Call to mobile 021 730 673 (*Lincoln Armosa*)

## 5.7 Wastewater Treatment Plants

Sewage leaking, seeping or flowing from or within the near vicinity of a Wastewater Treatment Plant (*i.e. plants located in Oakura, Tutukaka, Ngunguru, Hikurangi, Whangarei, Portland, Waitira, Ruakaka, and Waipu*); then contact WDC’s personnel, namely:

- 1 Wastewater and Stormwater Operations Manager – 027 475 9940
- 2 Wastewater On-Call Operator – Call telepager 026 353 1171 & leave your reply number
- 3 Operations Engineer – appointment pending

The call to the relevant contractor is to be referenced with the CRM number to be issued to allow the personnel involved to follow up closure after dealing with the event.

**The above numbers are summarised in Table 1.**

**Table 1 Contractor Contact List**

System	Contractor		Phone
Reticulation	Hydrotech	1 <sup>st</sup>	021 730 709
		2 <sup>nd</sup>	021 730 635
		3 <sup>rd</sup>	021 730 673
Pump station	Hydrotech	1 <sup>st</sup>	026 244 9692 ( <i>pager</i> )
		2 <sup>nd</sup>	021 730 349 ( <i>Greg Palmer</i> )
		3 <sup>rd</sup>	021 730 673 ( <i>Lincoln Armosa</i> )
WDC Plant ( <i>or if in doubt</i> )	WDC	1 <sup>st</sup>	027 475 9940
		2 <sup>nd</sup>	telepager 026 353 1171

## 5.8 Completion of CRM by Customer Services

Once details have been transferred to the relevant maintenance personnel, Customer Services are to finalise call details in CRM, noting the time the call details were transferred to the contractor, and then assign the CRM accordingly.

A copy of the assigned CRM is to be forwarded to Council’s Wastewater and Storm Water Operations Manager (*Operations Manager*) for information and subsequent follow up purposes as deemed to be required.

This position is currently held by:

Andy Keith Email: andyk@wdc.govt.nz ..... Phone: 027 475 9940

## 5.9 On-site assessment of spill

The contractor, or WDC staff member, who receives the call from the call centre notes information provided on the Sewage Spill and immediately arranges for mobilisation of personnel and equipment. Attendance on site is required to occur within one hour if local and 1.5 hrs if spill is at Oakura from confirmation of the call. The time that the call was received from Customer Services and subsequent arrival time on site is to be noted.

Upon the contractor's arrival at the location, health and safety requirements need to be determined along with an assessment of the sewage spill situation noting in particular the reporting level (*refer below*) plus an indication of estimated volume, whether it is small, medium or large.

The Contractor (*or WDC Staff*) shall then contact WDC's Wastewater and Storm Water Operations Manager, or if unavailable, the Operations Engineer, or if unavailable the Waste and Drainage Manager, as indicated in Table 2, and advise them of the event.

**Table 2 WDC Wastewater Management Staff Contact Details**

Contact	Position	Phone
First	Wastewater Operations Manager	Andy Keith 027 475 9940
Second	Operations Engineer	Appointment Pending
Third	Waste and Drainage Manager	Andrew Carvell 027 430 4054

WDC's Wastewater and Storm Water Operations Manager shall instruct the contractor to place signage associated with the sewage spill if required.

If the spill is into the Parua Bay catchment, phone the oyster farmer (Barry Jessop ph 09 4365634) as soon as possible.

If spill is in the Whangarei Heads Area and affects areas administered by DOC they must be contacted.

Once all appropriate health and safety requirements are implemented, follow up action to mitigate/stop the sewage spill is to be initiated along with clean up inclusive of site sanitisation as appropriate.

No clean up operation in the Whangarei Heads Area which has affected areas administered by DOC are to proceed without prior consultation with DOC.

Upon completion of cleanup work, the contractor shall review information gathered along with details of any property damage and the extent of impact of the sewage spill is to be made. Where contact has been made with local residents and/or business proprietors then communication in closure of the work undertaken needs also to be undertaken, with the person's name, contact telephone number and brief description of the communication noted for record purposes.

Before leaving site, the contractor shall forward a text to the Wastewater and Stormwater Operations Manager; "*Sewage spill at (McLeod's Bay or Hatea PS or Okara Park, etc) clean up completed*", with a copy forwarded to the Operations Engineer for information and subsequent follow up purposes as deemed to be required.

It is noted that in all cases photographs reflecting the situation during the course of the assessment through corrective action and clean up shall be taken for record purposes. Photographs should show the context within which the subject matter is being photographed, that is; a photograph of flowing sewage is not useful, it needs to be taken in relation to a site feature (*e.g. letterbox, a tree, etc*) and be presented for reporting purposes in chronological order of events that occurred on site. Where a sewage spill has impacted on a habitable area (*i.e. within a dwelling or business*) then wherever possible photographs should be taken during and immediately after the event, with photos taken used as evidence should litigation arise.

## 5.10 Sewage spill assessment

In order to account for public health risk/environmental an assessment shall be undertaken for all sewage spills and the assessment then categorised into one of “four” levels as follows.

### Level 1

A spill that has directly impacted on any stream, river or harbour within the jurisdiction of the Whangarei District Council or, on the ocean along the District’s coastline.

### Level 2

Level 3 or 4 but the extent of the sewage spill has impacted on an area greater than a single property, or directly on a passive or active park/reserve, or is **contained** within Council’s public stormwater system (*i.e. reticulated pipe and/or open drain networks*) and has the potential to be a risk to public health and/or impact on the environment.

### Level 3

Single property with habitable area directly affected by a sewage spill and has the potential to be a risk to public health.

### Level 4

Localised sewage spill, contained and is easily addressed without being a risk to public health and/or impact on the environment.

When assessing a sewage spill on site from a quality and estimated volume perspective the following descriptors apply to this protocol:

#### Sewage spill quality

- Raw Sewage
- Storm Diluted Raw Sewage
- Screened Raw Sewage
- Screened Storm Diluted Raw Sewage
- Septic Tank Effluent

#### Sewage spill estimated volume

- Small (*i.e. up to 10m<sup>3</sup>*)
- Medium (*i.e: 10m<sup>3</sup> to 100m<sup>3</sup>*)
- Large (*i.e: greater than 100m<sup>3</sup>*)

#### Notification of Council’s Communications Personnel

To assist in public notification of the spill it is important that Council’s communications team is informed.

Once spill has been assessed, Council’s Wastewater and Storm Water Operations Manager shall notify the Operations Engineer, and shall contact personnel as detailed in Table 3.

**Table 3 Contact details for Council’s Communication Staff**

Position	Person	Phone	Method
Group Manager Infrastructure & Services	Simon Weston	027 446 4965	Text
Media Relations Adviser	Ann Midson	027 561 5454	Text
Senior Communications Adviser	Rachel Pascoe	0274885651	Text
Senior Waste and Drainage Staff	Andrew Carvell	027 430 4504	Text

### Notification of Northland Health, Northland Regional Council, DOC and Parua Bay Oyster farmer (if applicable)

Council's Senior Waste and Drainage staff or Wastewater and Stormwater Operations Manager, within 15 minutes of being aware of a level 1, 2 spill, shall advise Northland Health and Northland Regional Council of the spill on the contact numbers provided in Table 4. The Parua Bay oyster farmer is to be notified if the spillage is inside the Parua Bay catchment. DOC to be notified if spill is located in an area administered by DOC in Whangarei Heads.

**Table 4: Contact Details for Northland Health, NRC, DO C and Parua Bay Oyster Farm**

Contact	Position	Phone
Northland Health	On-call Health Protection Officer	09 430 4100
Northland Regional Council	Pollution Hotline	0800 504 639
DOC	Hotline	0800 362 468
Parua Bay Oyster Farm	Owner Barry Jessop	09 436 5634

Council's Wastewater and Storm Water Operations Manager is to advise the above personnel of:

- Location of the sewage spill and receiving environment
- Time and date spill started
- Estimated volume and duration of spill
- Quality of sewage being discharged.

#### 5.11 Incident reporting and closure

Once all parties are notified Council's Wastewater and Storm Water Operations Manager is to review status of spill and determine if any further action is required to mitigate the effects of the spill.

Within 24 hours of the spill Council's Wastewater and Storm Water Operations Manager is to prepare and issue a Sewage Spill Notification form (*Appendix B*) to NRC, Northland Health and WDC's Waste and Drainage Customer Services Technician. In the event of spills exceeding 24 hours, such as during extreme wet weather events, a summary form shall also be provided at the end of the event.

**Sewage Spill Notification Forms should also be saved into TRIM and e-mailed to the following WDC staff:**

Position	Currently filling this role
Group Manager Infrastructure and Services	Simon Weston
Media Relations Adviser	Ann Midson
Senior Communications Adviser	Rachel Pascoe
Waste and Drainage Manager	Andrew Carvell
W & D Operations Engineer	
Infrastructure Customer Services Co-ordinator	Chris Smith
I & S Support group e-mail	

Council's Wastewater and Storm Water Operations Manager shall maintain a record of the sewage spill in hard copy and electronically, while the Waste and Drainage Customer Services Technician will ensure that an updated copy of the sewage spill register is available on Council's website (*Appendix D*).

## 6 Quality Management

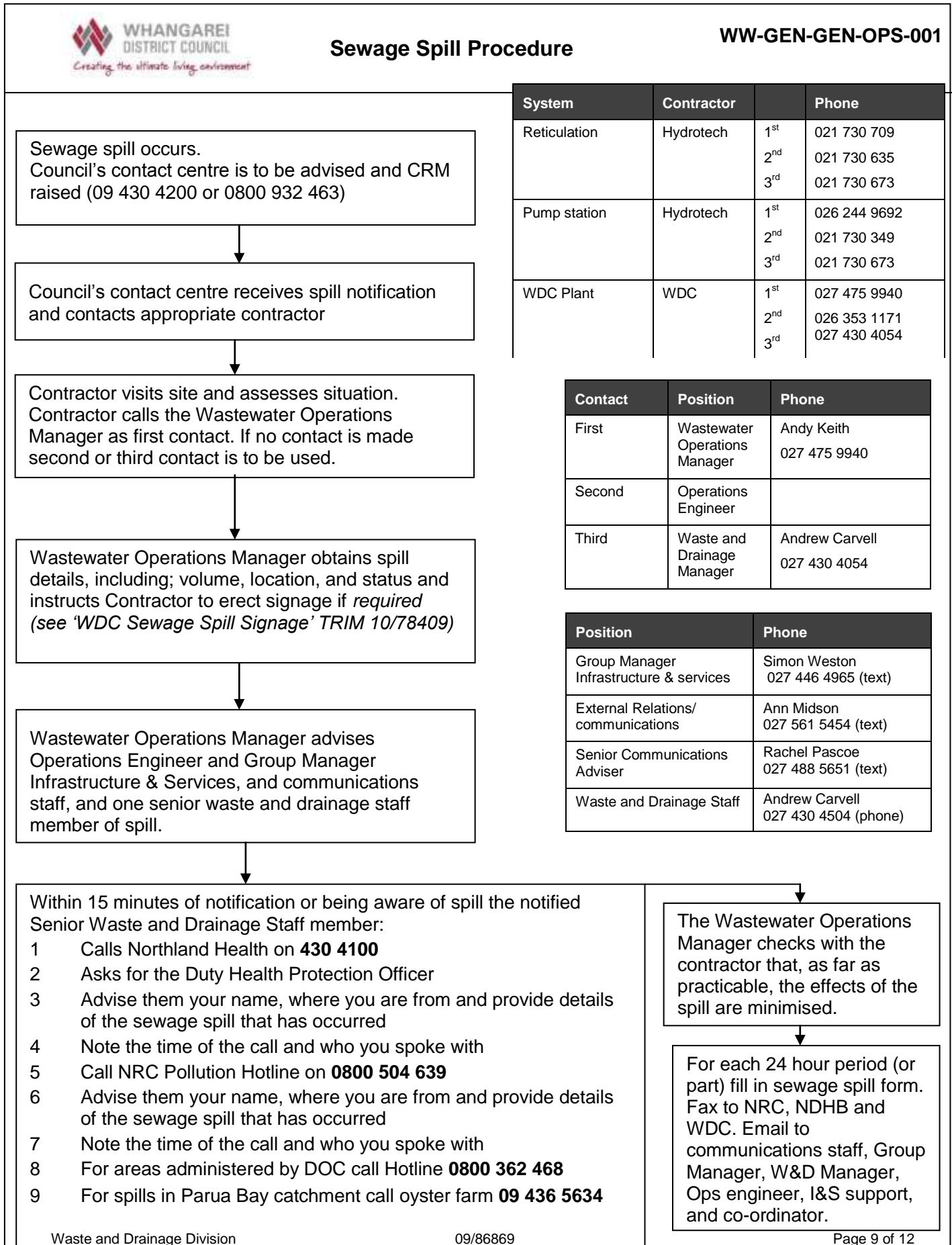
Version	Reason	Date	By	Designation	Checked & Approved	Staff Notified
006	Final	21 September 2009	A Carvell	Wastewater Asset Engineer		
007	Phone Numbers modified	28 September 2009	A Carvell	Wastewater Asset Engineer		
008	TPI Phone Numbers modified	30 September 2009	A Carvell	Wastewater Asset Engineer		
009	Communication Team numbers updated	6 October 2009	A Carvell	Wastewater Asset Engineer		
010	Sewage Spill Procedure Contact Guide – Appendix C	20 January 2010	J Bransby	Customer Services Technician		
011	Update SS Form and add Website Procedure	22 October	R Mannion	Grad Engineer		
012	Update Pump Station Contact Details	30 November	R Mannion	Grad Engineer		
013	Update all Contact Details	30 August 2011	F Pratt	Waste & Drainage Projects Engineer	A Carvell 1 Sep 2011	Ranjit 1 Sep 2011
014	Update all Contact Details.	April 2012	G Rule	Waste & Drainage Operations Engineer		
015	Add Rachel Pascoe to communication list. Add text options.	July 2012	G Rule	Waste & Drainage Operations Engineer		
016	Add oyster farmer details (Parua Bay catchment events)	Aug 2012	G Rule	Waste & Drainage Operations Engineer		
017	Add DOC (Whangarei Heads Spills)	August 2012	F Pratt	Waste & Drainage Projects Engineer		
018	Update Contact Details - Hydrotech.	1 Dec 2012	F Pratt	Waste & Drainage Projects Engineer		
019	Update Contact details	June 2013	F Pratt	Waste & Drainage Projects Engineer		

### Note

*Council's Document Management Policy is that the official Document is the electronic version held on Council's Database (TRIM). Hard copies (printed versions) are uncontrolled and may be out of date. Please contact Council's Waste and Drainage Department to obtain a copy of the most current document.*



## 7 Appendix A - Sewage Spill Procedure Flow Chart



## 8 Appendix B - Sewage Spill Notification Form

### Fax to

- NRC 09 438 0012 Attn Monitoring Manager  
 Northland Health 09 470 0570 Attn On Call Health Protection Officer  
 WDC 09 438 7632 Attn Environmental Health Officer  
 Other \_\_\_\_\_ Attn \_\_\_\_\_

### Location

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Start	Detected	Stop	Volume (m <sup>3</sup> )	Greater than 24 hrs (Y/N)
Date _____ Time _____	Date _____ Time _____	Date _____ Time _____	<input type="checkbox"/> Estimate <input type="checkbox"/> Measured	

### Type of Sewage

- Raw/unscreened   
  Raw/screened   
  Raw/storm water content   
  Treated

### Cause of Overflow

- Heavy rain   
  Other (*detail below*)

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### Other Details (e.g. Influent flow rate at time of event)

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### Action Taken

- Monitor only   
  Samples taken   
  Public notices placed (*state location & duration*)

Other \_\_\_\_\_

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### For further details contact

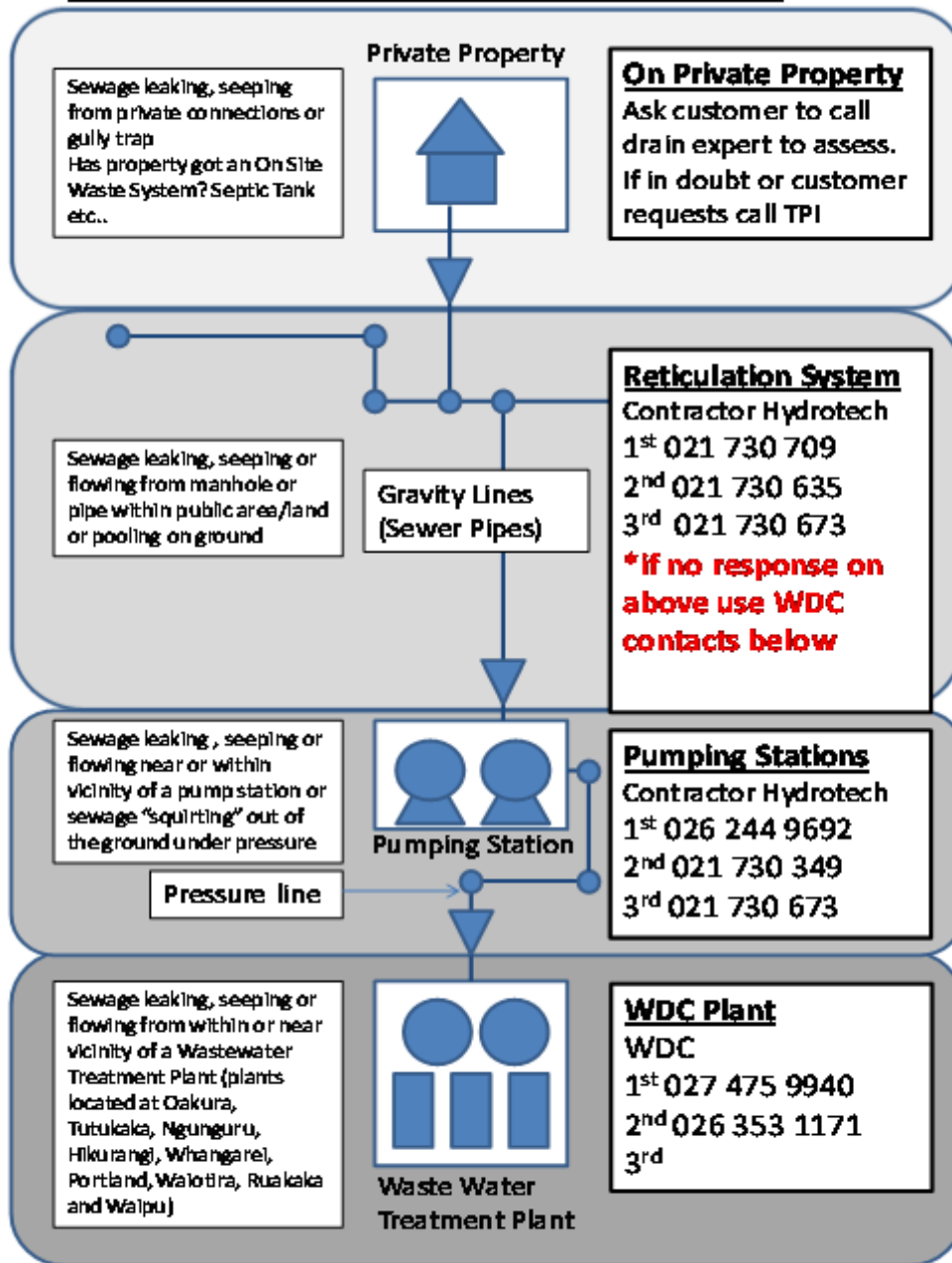
- WWTP Operations 027 475 9940 or WDC 0800 932 463

Other \_\_\_\_\_

## 9 Appendix C - Sewage Spill Procedure Contact Guide

TRIM 10/3450 Sewage Spill Procedure Contact Guide

### Sewage Spill Procedure Contact Guide



❖ If raising CRM, jobs must also be phoned through as urgent

## 10 Appendix D .... Updating of Sewage Spill Register and WDC Website

