

NZWWA Trade Waste Training Survey - Summary of Results

The 35 survey responses of the Trade Wastes Training Survey showed some clear trends – some of which have been summarised below. For further detail refer to the collated results that follow.

The survey responses showed clear trends in looking at the importance placed on 16 specified training options. The courses that were collectively viewed as being of high value and relevant to the work of the surveyed participants were:

- 'Sampling'
- 'Principles & Trends Waste Water Treatment'
- 'Understanding Lab Analysis'
- 'Grease Traps / Oil Interceptors'
- 'Pre-treatment Options'

The survey responses showed that only the 'Confined Space Entry' course had been attended by more than half of those surveyed. However all of the 16 specified courses had been attended by at least two of the thirty-five people surveyed.

There were three courses that 25 percent or more of the surveyed participants noted they would like to attend, as below:

- 'Principles & Trends Waste Water Treatment'
- 'Knowledge of Resource Management Act and Local Government Act'
- 'Pre-treatment Options'

It can also be noted that all of the 16 specified courses were selected as options that at least two of the surveyed participants would like to attend.

In looking at the background of the survey participants, more than half had worked in their current Trade Waste job for three years or less, which might account for the positive response of people interested in participating in a consolidated trade waste qualification (46% of those people surveyed). A high proportion (40%) of participants had previously come from an 'Environmental' background, prior to entering the Trade Waste industry.

In addition to the training options specified in the survey there were suggestions for IT and equipment training, consideration of the science perspective of trade waste, law requirements – in particular knowledge of the Building Act 2004, as well as a training perspective that would give an overview of the Trade Waste Officers' role.

The 'Other Comments' section of the survey expanded on these ideas, with suggestions for specific areas of trade waste training, a consideration of communication and relationship building skills, and further exploration of the role of Trade Waste Officers.

Overall the results of the training surveys have shown some useful trends and a good starting point for identifying opportunities to expand training options in the trade waste industry.

The collated results of the surveys follow:

A: Importance that surveyed participants placed on various training options – page 2

B: Attendance of training options – page 4

C: Background of surveyed participants – page 6

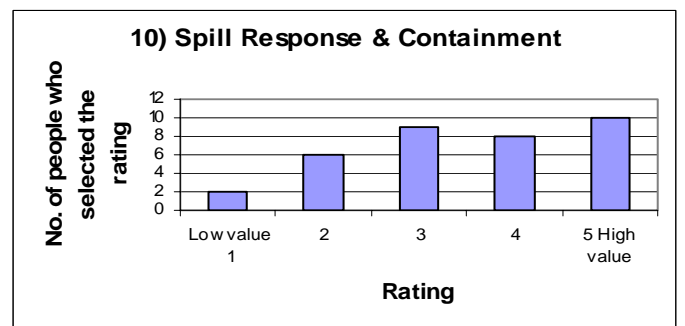
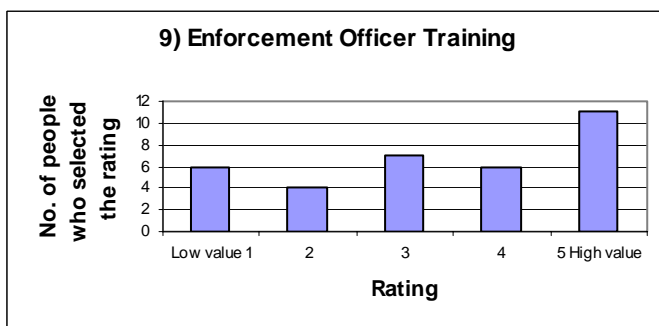
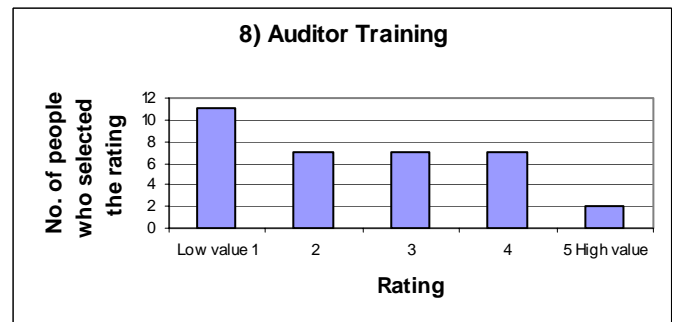
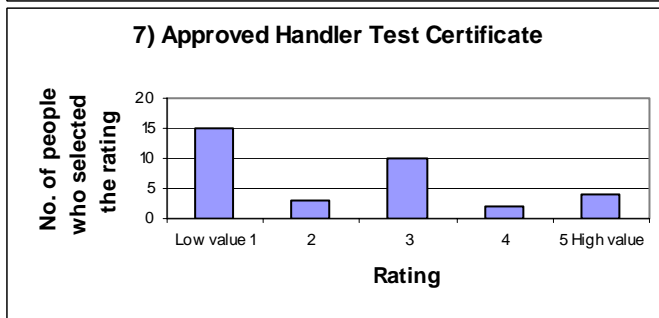
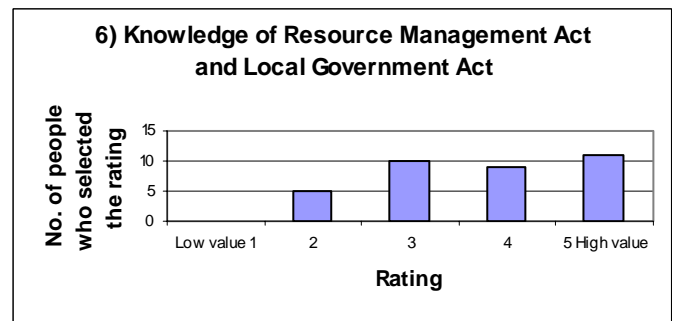
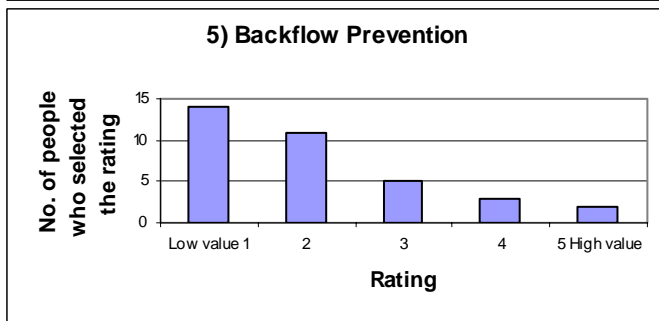
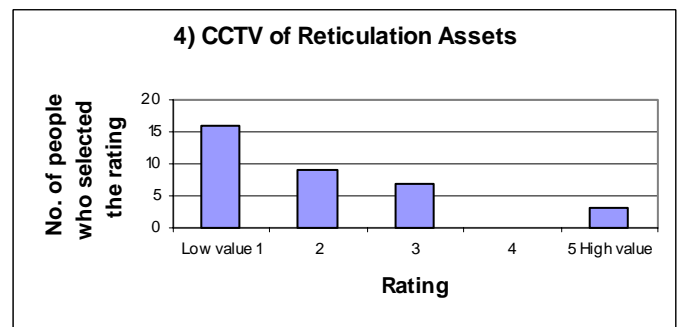
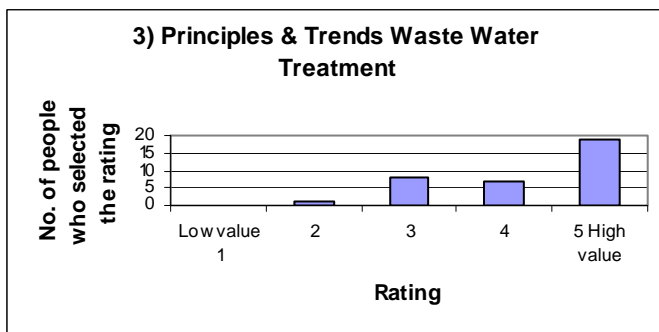
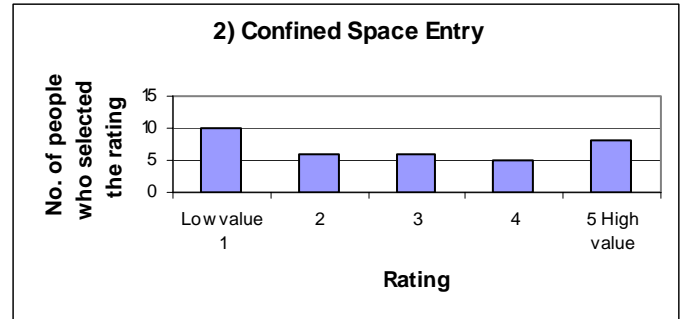
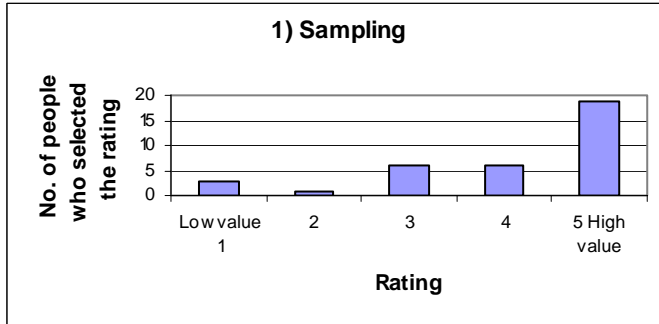
D: Written comments: suggestions for additional courses – page 8

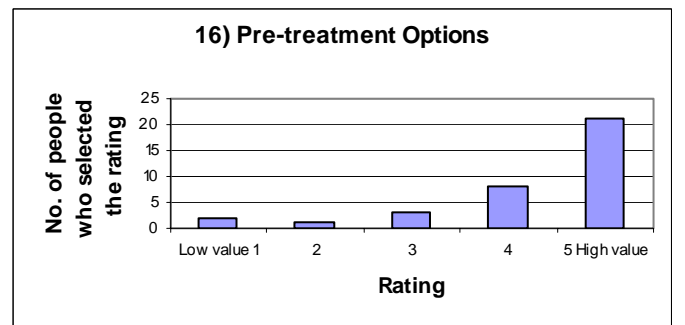
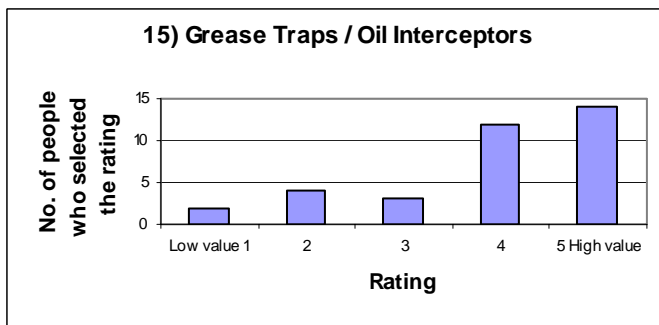
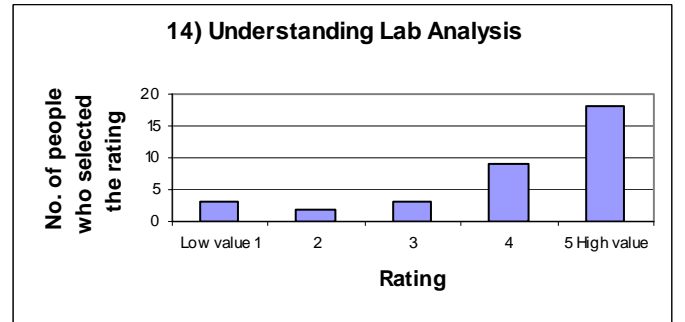
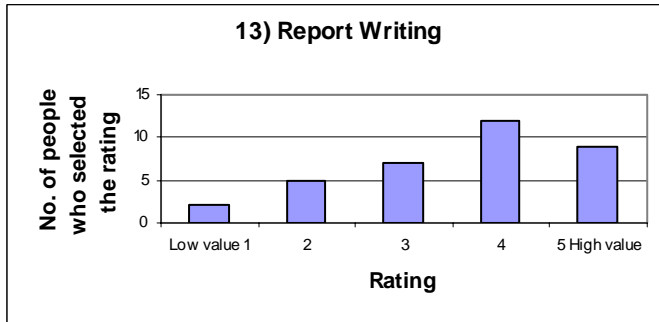
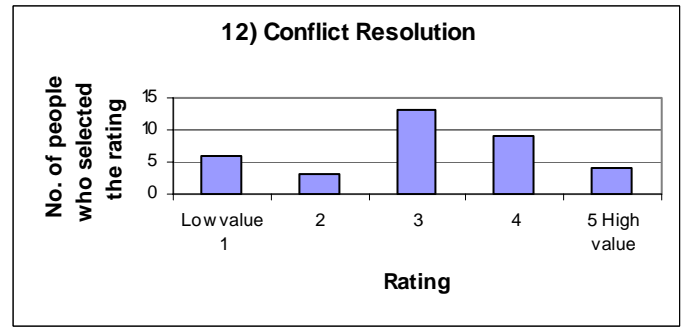
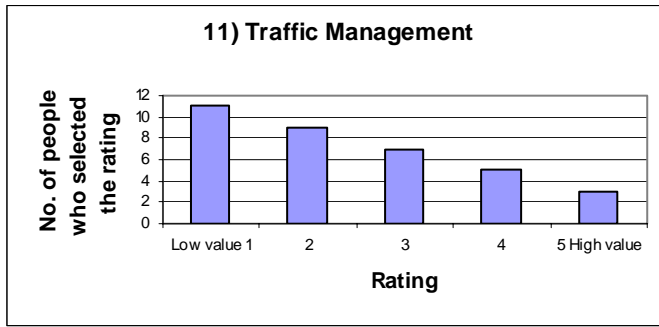
E: Other comments – page 9

Results: Collation of Trade Waste Training Surveys completed by 35 participants

A: Importance that surveyed participants placed on various training options

NB: For each option, participants were asked to select a rating between 1 and 5 to illustrate the importance of the training option as relevant to their work.





Summary:

Training Options of High Value

- 1) Sampling
- 3) Principles & Trends Waste Water Treatment
- 14) Understanding Lab Analysis
- 15) Grease Traps / Oil Interceptors
- 16) Pre-treatment Options

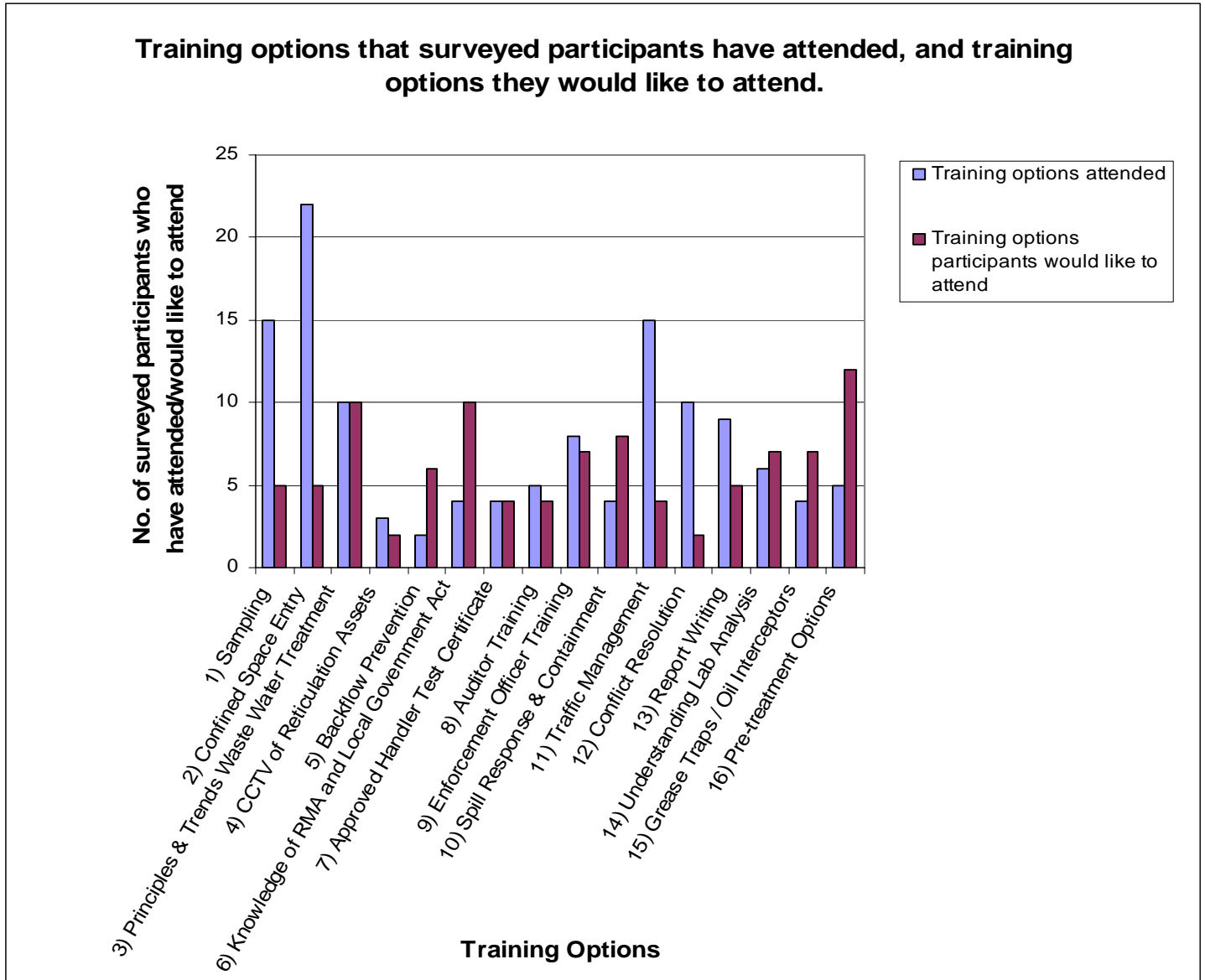
Mid Value / Range of Perspectives

- 2) Confined Space Entry
- 6) Knowledge of Resource Management Act and Local Government Act
- 9) Enforcement Officer Training
- 10) Spill Response & Containment
- 12) Conflict Resolution
- 13) Report Writing

Training options of Lower Value

- 4) CCTW of Reticulation Assets
- 5) Backflow Prevention
- 7) Approved Handler Test Certificate
- 8) Auditor Training
- 11) Traffic Management

B: Attendance of Training Options



Training Options that at least 50% of the surveyed participants have attended:

- 2) Confined Space Entry

Training Options that at least 25% of the surveyed participants have attended:

- 1) Sampling
- 3) Principles & Trends Waste Water Treatment
- 11) Traffic Management
- 12) Conflict Resolution
- 13) Report Writing

Training Options that 1-25% of the surveyed participants have attended:

- 4) CCTV of Reticulation Assets
- 5) Backflow Prevention
- 6) Knowledge of Resource Management Act and Local Government Act
- 7) Approved Handler Test Certificate
- 8) Auditor Training
- 9) Enforcement Officer Training
- 10) Spill Response & Containment
- 14) Understanding Lab Analysis
- 15) Grease Traps/Oil Interceptors
- 16) Pre-treatment Options

Training Options that 25% or more of the surveyed participants would like to attend:

- 3) Principles & Trends Waste Water Treatment
- 6) Knowledge of Resource Management Act and Local Government Act
- 16) Pre-treatment Options

Training Options that 10-25% of the surveyed participants would like to attend:

- 1) Sampling
- 2) Confined Space Entry
- 5) Backflow Prevention
- 7) Approved Handler Test Certificate
- 8) Auditor Training
- 9) Enforcement Officer Training
- 10) Spill Response & Containment
- 11) Traffic Management
- 13) Report Writing
- 14) Understanding Lab Analysis
- 15) Grease Traps/Oil Interceptors

Training Options that 1-10% of the surveyed participants would like to attend:

- 4) CCTV of Reticulation Assets
- 12) Conflict Resolution

If the above Training Options were consolidated into a trade waste qualification, how many of those people surveyed would participate?

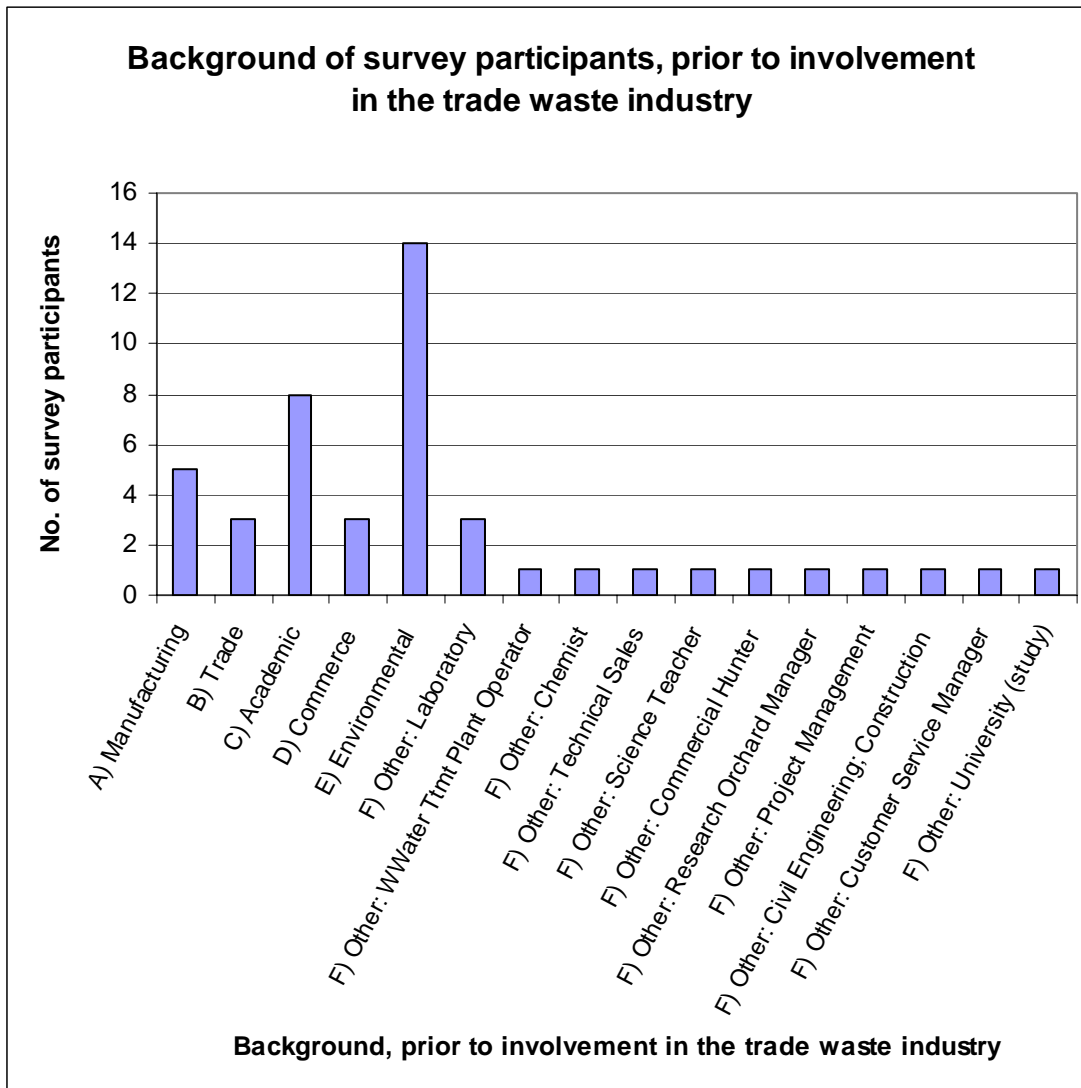
Yes, would participate : 16 = 46% of total participants

No, wouldn't participate : 5 = 14% of total participants

Maybe, might participate : 13 = 37% of total participants

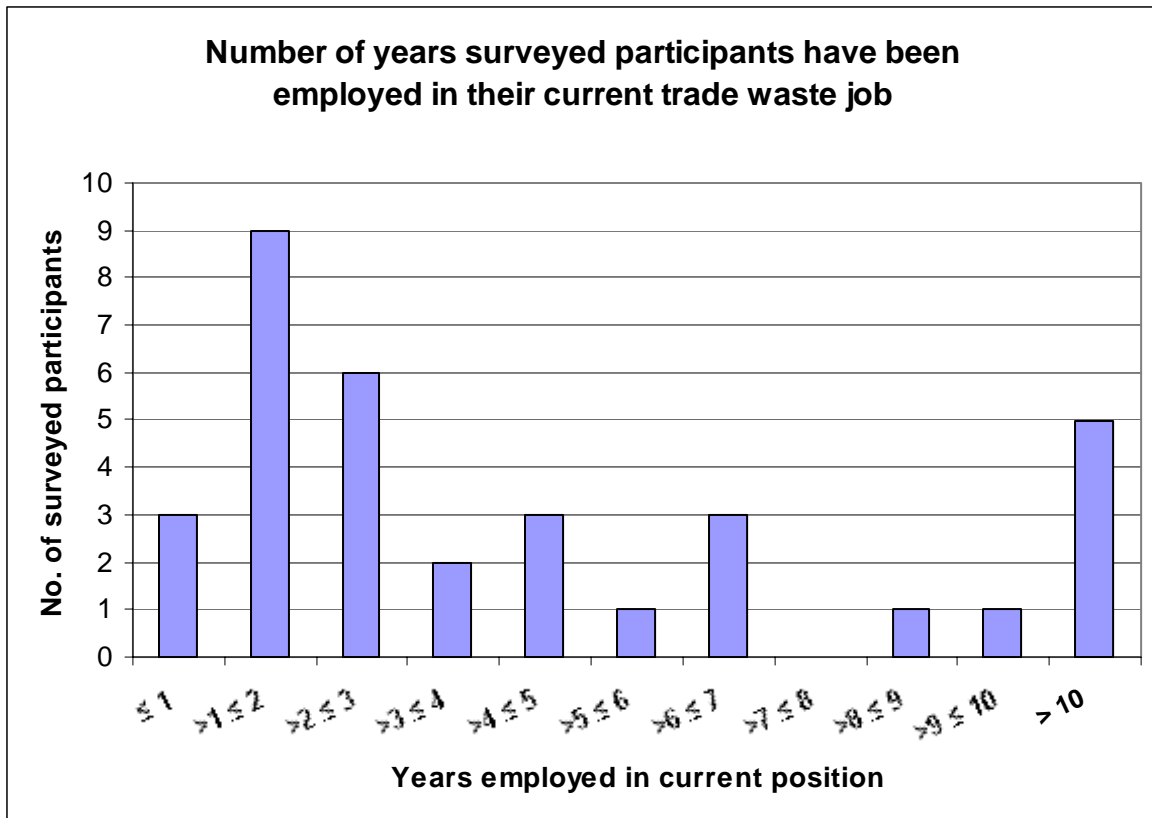
No comment : 1 = 3% of total participants

C: Background of Surveyed Participants



- 40% of participants came from an Environmental background prior to involvement in the trade waste industry.
- 22% noted an Academic background.
- 14% a Manufacturing background.
- 8% a Commerce background.
- And 8% a Trade background.
- 40% of surveyed participants noted they had a background in areas other than those options listed.

NB: Some people had a background in multiple areas.



- More than half of the surveyed participants had been in their current trade waste job for 3 years or less.
- One fifth of the surveyed participants had been in their current trade waste job for more than 8 years.

Job titles included:

- Business Manager
- Director
- Engineering Officer
- Environmental Management Officer
- Environmental Resource Officer
- Hydro Field Technician
- Hydro Manager
- Laboratory Services Coordinator
- Manager of Operations & Maintenance for Wastewater Treatment Plants
- Monitoring & Enforcement Officer
- Pollution Control Technician
- Pollution Prevention Officer
- Principal Environmental Engineer
- Resource Engineering Consultant
- Research Manager
- Safety Health & Environmental Advisor
- Trade Waste Officer / (or Engineer, or Technician)
- Waste Management Officer
- Wastewater Engineer
- Wastewater Treatment Supervisor

D: Written Comments - Suggestions for additional training options

Other training attended (in addition to the training options suggested in the survey):

- Breathing Apparatus
- Customer Services - Dealing with Difficult Customers
- Customer Services - Making a Difference
- Customer Services - Putting 'ME' into Customer
- Introduction to Investigation Workshop
- Introduction to Hazardous Substances
- Chemistry course and Lab practice

Other ideas for training:

IT / Equipment

- Database Management or other relevant computer software awareness
- MS Access and Excel
- Different training methods such as web CT or online training should be explored as well.
- Flow meter technology and application
- Familiarity with water metering and flow metering
- Open Channel Flow Measurement

Science

- Basic chemistry courses
- Process engineering (chemistry of processes)
- A general course on the principles of chemistry and engineering as applicable to waste water systems.
- Introduction to hazardous substances
- Interaction of chemicals in sewers
- Cause and effects of sulfide production in sewers
- Background training for chemistry and pipeline (network pump station)
- Chemical Storage and Compatability

Law and Building Act

- ITSNO
- Business relationships and the law in the regulatory context of administering a bylaw
- Trade Waste bylaw - legal aspects relating to powers, controls, regulations and enforcement
- Contract Management
- Knowledge of the Building Act 2004 – specifically as it applies to relevant approved documents including the plumbing standard G13 (x 3 similar comments)

Other / General

- Risk Assessment
- Communication
- Setting fees for trade waste generators
- First Aid
- Environmental education
- Plumbing courses - inspector training
- Charging mechanism for trade wastes effluent
- Basis to form special arrangements for non-compliance
- The range of skills required depends on the officers set of core functions.
- Evaluating function priorities
- A general overview of the Trade Waste Officers role
- Need to coordinate what is needed with what is already available

E: Other comments

Specifics on training options

- Keep it modular to allow selection of relevant subjects.
- The sampling course mentioned must include information on how to determine when to sample and an appreciation of the chemistry/biology involved with ensuring the samples taken do not degrade before lab testing. Also it would be worth including a comprehensive understanding of the potential and appropriateness of getting continuous data for certain parameters, with sampling being to validate the on line data. Experience is that most discharges to sewer of damaging components to the sewer and WWTP involve short term events which traditional sampling normally misses and composite sampling hides.
- Some uniformity in the material taught and the standards of training is needed if more than one organisation teaches the individual course.
- Practical side of the discipline should be part of the course, not just theoretical (x 2 similar comments).
- Site visits
- A course of 14) Understanding Lab Analysis, 15) Grease Traps/Oil Interceptors and 16) Pre-treatment Options, could be worth registering.
- I would like to find out what happens inside a sewer pipe such as how the oxygen level changes; what can make H₂S form.
- I am also interested in research of grease traps and converters in terms of their performance and operating conditions.
- We need to get the training committee going and gain advice/a coordinator and start putting a format through to the guys.
- It would be good if there was some sort of recognised qualification resulting from this sort of training.

Communication / Relationship building skills

- The most valuable skills brought to the job have been communication-based - particularly sales and education training.
- Commerce/business acumen is essential as we are dealing with the business community and their representatives, significant financial outlay at times, so negotiation and relationship building skills are important.

Roles of Trade Waste Officers

- The trade waste officer is a specialised function involving few people and a high turnover in TA's. They are only part of a broader function so it may be hard to support comprehensive training.
- It appears each City/District has different roles for the Trade Waste Officers. Some of the options shown above are not part of my role and would be of little use for me other than as curiosity value.

- It is important to understand the big picture of waste treatment and management and then how trade waste fits into it rather than learning trade waste on its own.
- There is a need for a general training qualification for Trade Waste as there is presently not and people come to the field from a variety of backgrounds. The requirements upon a Trade Waste Officer are increasing all the time in terms of required expertise and coverage of varying subject matter.
- We need to be providing information and data to trade waste people rather than being on the receiving end of training. We see some significant gaps in knowledge and also a lack of appreciation by the trade waste people of the impact they can have and their importance to planning and operation of the entire system. The system needs to be changed to have them central to planning and design of sewer systems and to resource consent etc. processes.

General comments

- Aspects of TW discharge regulation have developed in a very ad hoc way. Many of the old hands have developed their own style of doing things and it seems to work well for them. I do wonder if some of the TW specialists have been bogged down in science and are not paying enough attention to making the bylaw and the reasons for it accessible and reasonable to the general user. Many industries are not up to speed on TW regulation and there needs to be a way of up-skilling the people in industry more on why they are being asked to pre-treat their wastewater.
- The LGA has required TLA's to become more consistent in their approach to the implementation of a TW bylaw, so it is very important that the LGA process is spelled out well. I suspect that because of the way the LGA has been written, it is probably a bit late to implement this.
- Having some form of formal training is a good idea. For someone coming straight from uni into the position of Waste Management Officer (solid waste and trade waste), which especially in councils is often a stand alone position, it is difficult to get the skills required from others in the same organisation. So opportunities for training would have a lot of value.
- The current courses run by Opus and providers like Safety 'N Action don't seem to be offered often enough – I find it hard to schedule people to attend.
- Training providers could also make better use of remote learning. In some parts of NZ it takes longer to travel to and from a main centre for training than the length of the training itself.