



## **BIBLIOGRAPHIC REFERENCE**

Reese, R.; Becker, J. S.; Johnston, D. M.; Coomer, M. A. and Tuohy, R. 2011. Flood perceptions, preparedness and response to warnings in Kaitaia, Northland, New Zealand: Results from surveys in 2006 and 2009, *GNS Science Report* 2011/10. 90 p.

S. Reese, National Institute of Water and Atmosphere, PO Box 14-901, Wellington  
J. S. Becker, Joint Centre for Disaster Research (JCDR), GNS Science and Massey University, PO Box 756, Wellington  
D. M. Johnston, Joint Centre for Disaster Research (JCDR), GNS Science and Massey University, PO Box 756, Wellington  
M. A. Coomer, GNS Science, PO Box 30368, Lower Hutt  
R. Tuohy, Massey University, PO Box 756, Wellington

## CONTENTS

|  |            |
|--|------------|
| <b>ABSTRACT.....</b>                               | <b>III</b> |
| <b>KEYWORDS .....</b>                              | <b>III</b> |
| <b>1.0 INTRODUCTION .....</b>                      | <b>1</b>   |
| 1.1 Flooding in Kaitaia .....                      | 1          |
| <b>2.0 METHOD .....</b>                            | <b>2</b>   |
| <b>3.0 SUMMARY OF RESULTS .....</b>                | <b>3</b>   |
| 3.1 Risk perception .....                          | 3          |
| 3.2 Personal Experience.....                       | 3          |
| 3.3 Roles and responsibilities .....               | 3          |
| 3.4 Flood information .....                        | 4          |
| 3.4.1 Information about preparing for floods ..... | 4          |
| 3.4.1 Information during a flood event .....       | 4          |
| 3.5 Preparedness .....                             | 5          |
| 3.6 Warnings.....                                  | 5          |
| 3.7 Evacuation .....                               | 6          |
| 3.8 Demographics.....                              | 7          |
| <b>4.0 DISCUSSION .....</b>                        | <b>8</b>   |
| <b>5.0 REFERENCES .....</b>                        | <b>9</b>   |

## TABLES

|                |   |   |
|----------------|---|---|
| <b>Table 1</b> | Recorded annual flood extremes at School Cut site on Awanui River between 1958 and 2004 (Henderson & Wild, 2005)..... | 1 |
|----------------|---|---|

## APPENDICES

|                   |                           |    |
|-------------------|---------------------------|----|
| <b>Appendix 1</b> | Questionnaires used ..... | 10 |
| <b>Appendix 2</b> | Data tables .....         | 47 |

## **ABSTRACT**

Kaitaia is situated in the valley of the Awanui River in Northland, New Zealand. The Awanui River and Tarawhataroa Stream both flow through Kaitaia, and cause regular flooding. This report outlines the results of two surveys undertaken in Kaitaia, Northland, New Zealand to investigate people's perceptions of and preparedness for flood hazards. The surveys were undertaken in 2006 and 2009, with one minor and one major flood event occurring in between the surveys, in 2007. This report outlines the surveys and the nature of the flood hazard in Kaitaia. Finally it presents the results of the surveys in a summary format.

## **KEYWORDS**

Flood, hazard, community, response, plan, education, emergency management, Kaitaia, Northland, New Zealand.

## 1.0 INTRODUCTION

This report outlines the results of two surveys undertaken in Kaitaia in Northland, New Zealand to investigate people's perceptions of and preparedness for flood hazards. The report outlines the nature of the flood hazard in Kaitaia, discusses the methodology used and presents the results of the surveys in a summary format. The appendices contain questionnaires that were used for the research (Appendix 1) and data tables of the results (Appendix 2).

### 1.1 Flooding in Kaitaia

Kaitaia, the northernmost town in New Zealand and the principal centre in the northern part of Northland, is situated in the valley of the Awanui River. The Awanui River and Tarawhataroa Stream both flow through Kaitaia, and cause regular flooding. The town was built on a floodplain where the valley narrows, increasing the river and stream velocities and flood depths. Since the last major flood in 1958, a flood control scheme has protected the town. The scheme involves stopbanks, ponding areas and diversion of some of the flood flow through overflow channels (Northland Regional Council, 2006).

Table 1 shows the worst floods to the year 2004 recorded by the only currently operating flood gauge in Kaitaia, at the School Cut site on the Awanui River. This gauge has been operating since the site was opened in 1958. Another gauge existed between 1972 and 1980 at the Tarawhataroa Stream site. As this gauge operated for only 9 years it does not provide statistically representative data.

**Table 1** Recorded annual flood extremes at School Cut site on Awanui River between 1958 and 2004 (Henderson & Wild, 2005)

| Date                 | Maximum measured flow [m <sup>3</sup> /s] | Return period [yr.] |
|----------------------|---|---------------------|
| Mar. 2003            | 232.0                                     | 84                  |
| Jun. 2002            | 222.5                                     | 30                  |
| Feb. 2004            | 221.8                                     | 18                  |
| Feb. 1958            | 221.4                                     | 13                  |
| Dec. 2001            | 215.3                                     | 10                  |
| Jan. 1976            | 214.0                                     | 8                   |
| Apr. 1968            | 197.2                                     | 7                   |
| May. 1969            | 193.7                                     | 6                   |
| Aug. 1979            | 193.5                                     | 6                   |
| Jun. 1997            | 192.8                                     | 5                   |
| Feb. 1980            | 189.7                                     | 4                   |
| Feb. 1971            | 185.8                                     | 4                   |
| Feb. 1967            | 182.3                                     | 4                   |
| Jun. 2000            | 180.0                                     | 3                   |
| <sup>1</sup><br>.... |   |                     |

<sup>1</sup> 33 other flood events since  
Awanui site was opened in 1958

Recent flooding also occurred in Kaitaia in March 2007 and on 10 July 2007. The March floods were minor only affecting some properties in town. The July floods were larger resulting in southern parts of Kaitaia being inundated by floodwater, damage to buildings, and the evacuation of residents from their homes.

According to the Regional Council (MacDonald, 2006) the design level of the stopbanks in Kaitaia is for a 1 in 25 year- flood. However, there is some uncertainty about the exact design level for the scheme due to modifications and changes over time. Additionally, there are other problems such as stream bank erosion which could produce debris and cause blockages or reduce the channel size and increase flood frequency and flood depth due to sediment deposition. The flood control scheme also needs maintenance and this has recently been under review (Northland Regional Council, 2006).

An emergency preparedness community response plan was developed in conjunction with the Northland Regional Council, Far North District Council and the local community in 2006-2007 (Northland Civil Defence Emergency Management Group and Far North District Council, 2007). This plan addresses response to a range of natural hazards including flooding. Mitchell et al., (2010) outline the development of the community response plan. Elements of the community response plan were tested during the 2007 floods.

## **2.0 METHOD**

In August 2006 a postal survey was undertaken in Kaitaia to collect data about flood perceptions, preparedness, and warnings. The questionnaire asked respondents about awareness, risk perception, previous exposure to flooding, information received concerning preparedness activities, information sought for preparedness purposes, the extent to which people engaged or plan to engage in preparedness activities, warning systems, and response to warnings. Questionnaires were mailed to a random sample of 1,000 householders in Kaitaia. The return rate was 25%. The margin of error in the results is +/- 5.4% at the 95% confidence level.

A follow-up survey was undertaken in June 2009 in the same community, and using the same 1,000 household addresses. Those who had filled out the questionnaire the previous time were asked, if possible, to again fill out the survey. The return rate for the second survey was lower than the first at 11%. The margin of error of for this data is +/-8.5% at the 95% confidence level.

Between the surveys several events took place which may have had a bearing on responses, including the development of a community response plan, and flooding within Kaitaia Township during March and July 2007. The majority of questions were identical in both surveys, with additional questions in the 2009 questionnaire asking respondents about the 2007 flood.

This report presents a summary of the results of both surveys. Changes in people's perception or preparedness between the two surveys are noted where they exist. Where no specific reference to either one of the surveys was made, there was no difference between the 2006 and 2009 survey.

## **3.0 SUMMARY OF RESULTS**

### **3.1 Risk perception**

Both the 2006 and 2009 surveys show that people in Kaitaia see flooding as the most likely hazard to affect their community, with almost 80% rating flooding as most likely to occur. The second most likely hazard in both surveys was wind / storm with close to a 50% rating. A number of other hazards were ranked by only a minority of respondents. The only significant change between the two surveys was landslide hazard, with only 5% in the first survey thinking landslides most likely, and 27% in the second survey.

Residents of Kaitaia township perceive flooding to be a high risk for the town itself. However, fewer respondents see flooding as a risk for their own property. Risk perception of flooding has increased by about 10 percent between the two surveys, which is most likely due to experience of the 2007 flood event. The 2007 flood events have also resulted in a higher percentage of respondents expecting a flood to happen in their lifetime (50% up from 28%).

### **3.2 Personal Experience**

In both the 2006 and 2009 surveys, nearly half of respondents (46%) reported having been affected by flooding in the past. A range of other damaging events were reported as being experienced by respondents but with smaller percentages. About a quarter of respondents had not been affected by any hazard in the past.

About a third of the people who completed the survey reported being affected by the 2007 floods. This includes people directly (51%) and indirectly affected (61%) by floodwaters. The survey showed that 31% of those affected have improved their preparedness since the 2006 floods.

### **3.3 Roles and responsibilities**

Both surveys showed that more than 80% of the respondents feel that both the Regional and District Council have the responsibility for flood protection in Kaitaia. The central government is also seen as responsible by 69% of respondents. However, almost 50% of respondents believe that they also have a responsibility to protect themselves.

In 2006 participants were asked if they knew whether Kaitaia had flood protection - 72% reported knowing that Kaitaia had stopbanks. In the 2009 survey participants were asked whether they thought Kaitaia's level of flood protection was adequate. Only 11% thought that the current level of protection was adequate, with approximately half of the respondents believing that flood protection is not adequate and 34% not specifying either way. Common recommendations by respondents for flood protection improvement include improving maintenance work (50%), raising stopbanks (41%), and providing more information on how to protect against flooding (12%).

Kaitaia respondents show a high degree of self-reliance in case of an emergency, with only 16% expecting assistance from local authorities or emergency services.

Survey participants voiced strong support in both the 2006 and 2009 surveys for having a Kaitaia community response plan. Despite the high level of support for having a plan, the

2009 survey revealed that only 17% were aware of the current plan, only 4% had seen it, and only 2% actually used the plan. When asked about improvements for the community response plan most respondents recommended making the plan more widely available, and in particular would like to see a summary version.

### **3.4 Flood information**

#### **3.4.1 Information about preparing for floods**

Nearly half of respondents in both the 2006 and 2009 surveys (45% / 47.5%) reported not receiving any information about preparing for floods. Those who had received some information reported receiving it from either neighbours / friends (17% / 7%) or from the media (TV, radio, print, or telephone book; all less than 20%). There is a perceived lack of information with more than 60% of the respondents feeling that they are not getting enough information about how to prepare for floods. The perceived lack of information increased between the two surveys.

Most respondents (66%) have not actively sought information from other people, groups or organisations on how to get ready for floods. They reported obtaining much of their flood-related information from unofficial sources, such as relatives (17%), friends (14%) or neighbours (12%). Overall, only small proportions (between 4% and 20%) of the respondents have become active or intend to seek information about flood risk or preparedness as a consequence of the 2007 floods.

The majority of respondents prefer receiving information on how to prepare their household / business for floods via written material, such as brochures (73%), fridge magnets (35%), and newspapers (31%). In terms of more interactive types of information delivery, 20% were supportive of home visits by CDEM, while 15% were interested in community displays and public meetings or hui.

Despite the recent flood event the number of participants who had seen flood hazard maps for Kaitaia township (e.g. Far North District Council, 2007) had decreased between the two surveys from 10% in 2006, down to 4% in 2009.

Given the variety of information respondents referred to in both the 2006 and 2009 surveys, future information campaigns about flood hazard and preparedness should consist of a mix of tools.

#### **3.4.1 Information during a flood event**

Just over half of respondents (52%) mentioned neighbours as the first point of contact for getting more information about an ongoing flood, which highlights the importance of informal information sources. This was followed by a number of other sources of information, most often radio (47%). Local residents were more likely to contact the District Council (15%) than the Regional Council (7%) when seeking information about a flood event.

When asked about their preferred source of information during a flood, 61% chose radio, followed by door knocking (54%), sirens (53%), telephone (46%), TV (36%) and mobile public address (32%). Preference for receiving information via door-knocking increased between the 2006 and 2009 surveys from 41% to 54%. This might be due to the fact that



door-knocking was a method used to inform people about the impending July 2007 flood. More people in the second survey than in the first survey (35% compared to 19%) also voted for text messages as a source of information delivery.

### **3.5 Preparedness**

A high proportion (60%) of participants think that it is worth preparing for floods. In general, people reported moderate levels of preparedness in both the 2006 and 2009 surveys with people more likely to have common items such as radios, torches, or spare batteries (40-50%), rather than having undertaken more in depth planning or preparedness (e.g. prepare an emergency kit -15%). On a positive note, the level of in-depth planning appears to have increased slightly since the 2007 floods, with more people preparing a home flood plan (6% to 14%) and more people having thought about how to lift precious items off the ground in a flood (17% to 21%).

About a third (33%) of the respondents in the 2009 survey reported that the 2007 floods had an impact on getting prepared at a household level. However, as mentioned earlier, personal experience is not the only factor that plays a role in preparedness. Personal characteristics and social context are also important factors in whether people prepare or not (e.g. demographics such as higher income, length and time in the community – see section 3.8).

Costs (31%), other things to think about (30%) and lack of knowledge or information (40%) are also significant reasons that prevent people becoming prepared.

When asked about flood insurance, 64% reported in the 2009 survey they had house insurance and 57% reported their contents were insured against flooding. About 14% of respondents do not have flood insurance and 24% are not sure about whether they are covered. The majority of people who stated they did not have any insurance or were unsure about it were in the age group 40-64 years (44%) and one third of those were 65 or older. Only 23% of the 18-39 year old had no insurance.

Almost 60% of the participants felt that the Kaitaia community flood emergency equipment is insufficient.

### **3.6 Warnings**

Sixty percent of the respondents were not aware of any flood warnings during the July 2007 flood. Of those who received a warning, Civil Defence (& door knocking), media and family/neighbours were the most mentioned ways of warning. Based on respondent's comments, unofficial warnings were heavily utilised during the July 2007 floods. Therefore they should be factored into any future warning arrangements as part of a multi-faceted approach.

Approximately 60% of respondents in both the 2006 and 2009 surveys were aware of elements that make up the Kaitaia flood warning system. The most cited elements included Radio & TV (40%), sirens (37%), and neighbours (33%). Compared to the first survey, "CDEM door-knocking" has gained in importance (28% compared to 19%), possibly due to the door-knocking that occurred during the July 2007 flood. The items mentioned as being part of the warning system already were also the preferred options cited for future warning systems in Kaitaia. As several warning options received equal weighting, this again

highlights the importance of a multi-faceted approach to warnings.

The vast majority reported that they would seek additional information before they respond to warnings. The most common sources of information were radio (62%), neighbours (51%) and TV (38%) or they would stay inside until being told what to do. Other studies have also shown that most people confirm information from a variety of sources before making decisions on how to respond to a warning. The majority tend to be passive and want to receive information as confirmation (e.g. be told what to do), rather than actively try to get information.

### **3.7 Evacuation**

The number of respondents who said they would immediately evacuate on hearing a warning decreased from 75% in the 2006 survey to 61% in 2009. This is consistent with other data that shows that future evacuation compliance is often lowered after a flood event (e.g. Pfister, 2002). Some of the reasons include: belief that their homes or the buildings in which they planned to stay offer sufficient protection, lack of financial resources or access to transportation, feeling of obligation to protect their property, waiting for confirmation or additional information, and needing assistance to evacuate (Tuohy, 2009). Whether people evacuate can also often be a group decision with family members or neighbours. Fewer than 5% said that they would not evacuate.

If evacuated, the majority (47%) said they would go either to a designated evacuation centre, or to a family or friends house (26%), the rest would evacuate to another location (10%) or did not know (8%). The 2009 survey showed a high percentage (30%) of respondents would need assistance to evacuate. This was confirmed in work by Tuohy (2009) in her work on the elderly and their experiences during the July 2007 Kaitia Floods. Pre-registration or advance identification of those requiring special assistance in an event is useful to assist with response when an event actually occurs. The primary agencies that respondents said they would contact if they needed help in a flood included 111 Emergency services (58%) and the District Council (20%). Fewer than 1% suggested that they would contact the Regional Council.

Over three quarters of the respondents in the 2009 survey were not able to identify their nearest evacuation centre. Similar results were seen in the 2006 survey with 92% of respondents unaware of evacuation procedures for their area, and 90% not knowing the location of evacuation routes.

The 2009 survey also shows that the majority of respondents need between 10 and 30 minutes (67%) to gather essential items. Warning time was raised as an issue in the 2007 floods, as people were often required to evacuate immediately on receiving a door-knock warning.

As with the Community Response Plan respondents were highly supportive of having an evacuation plan (87%). In terms of managing emergencies nearly 60% of the respondents thought that street wardens could provide an important co-ordination role in the response phase.

### 3.8 Demographics

Almost half of the survey respondents (47.5% in 2006) have lived in the community for more than 20 years, and 21% for more than 40 years. This is reflected in the majority of respondents reporting a strong sense of community (60%).

More women (62%) than men completed the questionnaire in 2009, slightly higher than in 2006 (57%). The survey results show that men think more about floods than women do (40% of men in 2006 and 35% of men in 2009). However, women are more concerned that floods could pose a threat to their personal safety (38% and 30%). More men (31%) than women (16%) are also of the opinion that preparing for floods is of no use as one can't do much about it. Also more men (31% compared to 23% of the women) think that there is a lack of flood information.

Respondents above 65 years of age think about floods more than people under 40 (38% versus 20%), as well as receive more information (17% vs. 5%). While 45% of the respondents under 40 have done nothing to prepare for an emergency, only 19% of those over 65 have taken no preparedness action. The percentage of those who think about floods is higher among Māori (45%) than amongst NZ European (32%) and Maori also receive more information on floods (23% vs 14%).

Forty percent of the respondents are older than 65 which is also reflected in the number of retirees (37%). Only 9% of those who completed the questionnaires were under 30 years.

The percentage of Māori amongst the Kaitiaia population is high (27%) compared to 15% at a national level. Approximately 26% of the respondents had no school qualification. The majority either have a secondary or trade certificate / diploma (46%). Those with no school qualifications reported thinking more about floods (72%) than those with university degrees (14%).

Household make-up included couples without children (27%), one person households (37%), families with one or more children (22%), one parent with children (5%) and others (9%). The majority of respondents (74%) own the home they live in. One third of the respondents have an income below \$25,000, 27% have an income between \$25,000 and \$50,000 and 11% earn more than \$70,000, the remainder did not answer the question.

Overall, the results confirm that personal characteristics and social context are important contributing factors for preparedness, as respondents who did prepare after the 2007 flood have lived on average much longer in the community (average 26 years) and are in the higher income groups. They also feel slightly more included in the community, are more interested in what's going on locally and know their neighbours well.

## 4.0 DISCUSSION

The following set of key findings and suggestions is based on a combined analysis of the 2006 and 2009 survey data:

- Risk perception and experience of flooding is currently at a high level. Therefore, it is important to continue to maintain this awareness. However, belief that people will be *personally* affected by floods is not as strong - messages should stress that it “can happen to you”, and that people should prepare.
- Personal experience of flooding in Kaitia has contributed to a two-prong effect – some have become more prepared in the wake of the 2007 floods while others have become normalised (e.g. they felt they were okay in the last flood so they may be less likely to evacuate). There is a need to continue to build on the preparedness people are undertaking in response to recent events, while also countering normalisation bias.
- While nearly half of people perceive preparing for floods as a personal responsibility, there is still significant reliance placed on local government to deal with the effects of flooding. It is necessary to continue to reinforce the message that personal preparedness is required, with residents needing to take responsibility for individuals, families and neighbours/communities.
- Continue to provide the community with information about risks, preparedness, evacuation, roles and responsibilities. Information should be provided in a variety of formats and be available through a variety of sources to meet people’s differing preferences. As there is a strong reliance on receiving information through social sources, ensure that this is accounted for in any educational strategy.
- Try to build people’s desire to seek further information, discuss hazard-related problems, and participate in activities related to hazards and preparing for emergencies, as such activities are currently at lower levels. These are shown to be predictors of preparedness and will aid people in getting prepared.
- Build on the strong support for the Community Response Plan and the creation of an evacuation plan, and look for ways in which the community can become more informed about planning, and involved in the process.
- Pre-identify vulnerable people who need assistance during evacuation.

## 5.0 REFERENCES

- Far North District Council. 2007. Far North District Plan – NRC Potential Flooding Maps. Far North District Plan. Far North District Council.  
<http://www.fndc.govt.nz/services/environmental-policy-and-forward-planning/the-far-north-district-plan/district-plan-electronic-version/flooding2.pdf>
- Henderson, R & Wild, M. 2005. Awanui and Tarawhataroa Design Floods. NIWA Client Report: CHC2005-014
- MacDonald, G. 2006. Flood defence design in Kaitaia. Personal comment, December 2006.
- Mitchell, A., Glavovic, B.C., Hutchinson, B., MacDonald, G., Roberts, M., Goodland, J., 2010. Community-based Civil Defence Emergency Management Planning in Northland, New Zealand. The Australasian Journal of Disaster and Trauma Studies, 2010-1, <http://www.massey.ac.nz/~trauma/issues/2010-1/mitchell.htm>. Access date 16/08/2010.
- Northland Civil Defence Emergency Management Group and Far North District Council, 2007. Kaitaia Community Response Plan. January 2007.
- Northland Regional Council 2006. Awanui River.  
[www.nrc.govt.nz/fresh.water/drainage\\_and\\_river\\_management.shtml](http://www.nrc.govt.nz/fresh.water/drainage_and_river_management.shtml). Access date: 19 December 2006.
- Pfister, N., 2002. Community response to flood warnings: the case of an evacuation from Grafton, March 2001. Australian Journal of Emergency Management, 17(2): 19-29.
- Tuohy, R. J. 2010. Improving disaster preparedness of older adults living in the community, GNS Science Report 2010/07 21 p.

## APPENDIX 1 QUESTIONNAIRES USED

### A1.1 2006 Questionnaire

# Kaitaia Flood Survey: Involving the community in emergency preparedness



## Questionnaire



## FLOOD SURVEY RESEARCH INFORMATION SHEET

This research is intended to assess factors that influence how and why people make decisions about preparing, or not preparing, for natural disaster consequences such as floods. Preparing is seen as an important factor in assisting communities to safeguard their well-being and to minimise disruption (e.g., damage to homes, loss of work) should a flood occur. This research is being undertaken to assess levels of preparedness and the household and community factors that influence levels of preparedness.

The outcomes of this research will be used by Northland Regional Council to enhance household preparedness for floods, and help ensure that the needs of the community are met, with respect to emergency management for flooding. The research will also be used in the completion of a civil defence and emergency management community response plan for Kaitiaia.

To collect information on understanding and preparedness for flooding, surveys are being distributed to a random sample of 1000 households in Kaitiaia. A report summarising the findings of this survey will be available through GNS Science and the Northland Regional Council.

Your participation in this study is entirely voluntary, and you may elect to refuse to answer any question on the survey or choose to withdraw from the study at any time (i.e., not fill out and/or choose not to return the survey). The survey does not ask for any identifying information; the researchers will not know your identity. As a result, there is no way in which your responses will be identifiable in any research output including conference presentations and published research reports.

Should you wish to find out any additional information regarding this study, please contact any of the research team below:-

**Julia Becker**, GNS Science ([j.becker@gns.cri.nz](mailto:j.becker@gns.cri.nz)) Ph: (04) 570 1444

**David Johnston**, GNS Science ([david.johnston@gns.cri.nz](mailto:david.johnston@gns.cri.nz)) Ph: (04) 570 1444

**Stefan Reese**, NIWA ([s.reese@niwa.co.nz](mailto:s.reese@niwa.co.nz)) Ph: (04) 386 0564

Your return of the enclosed survey will be taken as indicative of your having read the information sheet, and of your agreement to participate in this study.

**The first section of this questionnaire asks about which hazards you think are important.**

**1. Which do you believe are the two most likely hazards that could affect your community? (Tick only two)**

- ☐<sub>1</sub> Chemical spill or gas leak
- ☐<sub>2</sub> Climate change
- ☐<sub>3</sub> Earthquake
- ☐<sub>4</sub> Fire
- ☐<sub>5</sub> Flood
- ☐<sub>6</sub> Infrastructural failure (e.g. electricity failure)
- ☐<sub>7</sub> Landslides
- ☐<sub>8</sub> Pandemic
- ☐<sub>9</sub> Storm with high winds (e.g. cyclone)
- ☐<sub>10</sub> Tornadoes
- ☐<sub>11</sub> Volcanic eruption

**2. Have you ever been affected by any of the following events? (Tick all that apply)**

- ☐<sub>1</sub> Chemical spill or gas leak
- ☐<sub>2</sub> Climate change
- ☐<sub>3</sub> Earthquake
- ☐<sub>4</sub> Fire
- ☐<sub>5</sub> Flood
- ☐<sub>6</sub> Infrastructural failure
- ☐<sub>7</sub> Landslides
- ☐<sub>8</sub> Pandemic
- ☐<sub>9</sub> Storm with high winds (e.g. cyclone)
- ☐<sub>10</sub> Tornadoes
- ☐<sub>11</sub> Volcanic eruption
- ☐<sub>12</sub> No events have affected me **(If “No events”, go to Question 3)**



**2a. If you have been affected, to what extent were you affected? (considering property damage, injuries and financial impact). Please tick the one number you feel best represents this damage in each row, on the scale from 1 to 10.**

|                                      | Little impact              |                            |                            | ←————→                     |                            |                            |                            | Severe impact              |                            |                             |
|--------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
|                                      | 1                          | 2                          | 3                          | 4                          | 5                          | 6                          | 7                          | 8                          | 9                          | 10                          |
| Chemical spill or gas leak           | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Climate change                       | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Earthquake                           | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Fire                                 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Flood                                | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Infrastructural failure              | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Landslides                           | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Pandemic                             | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Storm with high winds (e.g. cyclone) | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Tornadoes                            | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |
| Volcanic eruption                    | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 6 | <input type="checkbox"/> 7 | <input type="checkbox"/> 8 | <input type="checkbox"/> 9 | <input type="checkbox"/> 10 |

**3. When do you think that each of these hazard events could adversely affect your community? (Tick one for each hazard)**

*Chemical spill or gas leak*

- ☐1 Within the next year  
☐2 Within the next 5 years  
☐3 Within the next 10 years  
☐4 Within the next 50 years  
☐5 In over 50 years  
☐6 Never

*Climate change*

- ☐1 Within the next year  
☐2 Within the next 5 years  
☐3 Within the next 10 years  
☐4 Within the next 50 years  
☐5 In over 50 years  
☐6 Never

**Earthquake**

- ☐1 Within the next year  
☐2 Within the next 5 years  
☐3 Within the next 10 years  
☐4 Within the next 50 years  
☐5 In over 50 years  
☐6 Never

**Fire**

- ☐1 Within the next year  
☐2 Within the next 5 years  
☐3 Within the next 10 years  
☐4 Within the next 50 years  
☐5 In over 50 years  
☐6 Never

Flood

Infrastructural failure

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

Landslides

Pandemic

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

Storm with high winds (cyclone)    Tornadoes

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

Volcanic eruption

- ☐<sub>1</sub> Within the next year
- ☐<sub>2</sub> Within the next 5 years
- ☐<sub>3</sub> Within the next 10 years
- ☐<sub>4</sub> Within the next 50 years
- ☐<sub>5</sub> In over 50 years
- ☐<sub>6</sub> Never

The following questions are included to help us find out what you think about floods.

**4. When was the last time your community was flooded (i.e. some houses or businesses in Kaitaia township were flooded)? (Tick only one)**

- ☐<sub>1</sub> Never  
☐<sub>2</sub> In the last year  
☐<sub>3</sub> In the last 2 years  
☐<sub>4</sub> In the last 10 years  
☐<sub>5</sub> In the last 50 years  
☐<sub>6</sub> More than 50 years ago  
☐<sub>7</sub> Don't know

**5. When was the last time that the house where you live now was flooded? (Tick only one)**

- ☐<sub>1</sub> Never  
☐<sub>2</sub> In the last year  
☐<sub>3</sub> In the last 2 years  
☐<sub>4</sub> In the last 10 years  
☐<sub>5</sub> In the last 50 years  
☐<sub>6</sub> More than 50 years ago  
☐<sub>7</sub> Don't know

**6. How concerned are you about the risk of floods? (Tick one in each row)**

|   | <div> Not at all <div> ← Scale → </div> A great deal </div> |                                       |                                       |                                       |                                       |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| I think about floods                                      | <input type="checkbox"/> <sub>1</sub>                       | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I talk about floods                                       | <input type="checkbox"/> <sub>1</sub>                       | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I get information on floods                               | <input type="checkbox"/> <sub>1</sub>                       | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to my personal safety | <input type="checkbox"/> <sub>1</sub>                       | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to my property        | <input type="checkbox"/> <sub>1</sub>                       | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to Kaitaia township   |   |                                       |                                       |                                       |                                       |

**7. Have you seen any flood hazard maps for Kaitaia Township? (Tick only one)**

- ☐<sub>1</sub> No  
☐<sub>2</sub> Not sure  
☐<sub>3</sub> Yes

**7a. If “Yes”, what was this information?**

---

---

**8. In the next month or so, do you intend to: (Tick one in each row)**

|  | No                                    | Possibly                              | Definitely                            |
|--|---------------------------------------|---------------------------------------|---------------------------------------|
| Seek information on flood risk to your community   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on things to do to prepare for a possible flood                         | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on being prepared on my own for three days                              | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on community planning regarding flood protection and response           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on evacuation planning  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Become involved with a local group to discuss how to reduce flood risk to your community | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |

**The following set of questions asks about flood protection and flood warnings.**

**9. Does Kaitaia have flood protection provided by a stopbank or other protection works? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> Not sure  
☐<sub>3</sub> No **(If ‘No’, go to Question 10)**

**9a. If “Yes”, what level of protection do you think is provided by the stopbank? (Tick only one)**

- ☐<sub>1</sub> Protection against small floods  
☐<sub>2</sub> Protection against big floods  
☐<sub>3</sub> Protection against all floods  
☐<sub>4</sub> Don’t know

**10. Which of the following elements make up Kaitaia Township's current public flood warning system? (Tick all that apply)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> Sirens
- ☐<sub>3</sub> Mobile public address systems
- ☐<sub>4</sub> Flashing lights
- ☐<sub>5</sub> Radio and TV announcements
- ☐<sub>6</sub> Information on the internet
- ☐<sub>7</sub> Door-knocking by Civil Defence and Emergency Management staff or local emergency services
- ☐<sub>8</sub> Warning from neighbours, friends or family
- ☐<sub>9</sub> Flood Alert Scale
- ☐<sub>10</sub> There is no warning system
- ☐<sub>11</sub> Other (please specify \_\_\_\_\_)

**11. What elements would you prefer to see making up a flood warning system for Kaitaia?**

---

---

---

---

**12. If you heard a flood warning for your community what would you do? (Tick all that apply)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> Stay inside and wait to be told what to do
- ☐<sub>3</sub> Listen to the radio
- ☐<sub>4</sub> Listen to the TV
- ☐<sub>5</sub> Evacuate at once
- ☐<sub>6</sub> Evacuate at a later stage
- ☐<sub>7</sub> Meet at a designated evacuation centre or assembly point
- ☐<sub>8</sub> Stay at home
- ☐<sub>9</sub> Go and check the river
- ☐<sub>10</sub> Contact your neighbours
- ☐<sub>11</sub> Contact the District Council (includes local Civil Defence and Emergency Management)

- ☐<sub>12</sub> Contact Central Government (Ministry of Civil Defence and Emergency Management)
- ☐<sub>13</sub> Contact another emergency service
- ☐<sub>14</sub> Contact MetService
- ☐<sub>15</sub> Check the internet
- ☐<sub>16</sub> Other (please specify\_\_\_\_\_)

**13. Who would you contact for help in a flood? (Tick only one)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> 111 emergency services
- ☐<sub>3</sub> District Council (includes local Civil Defence and Emergency Management)
- ☐<sub>4</sub> Central Government (Ministry of Civil Defence and Emergency Management)
- ☐<sub>5</sub> Regional Council
- ☐<sub>6</sub> Earthquake Commission
- ☐<sub>7</sub> MetService
- ☐<sub>8</sub> NIWA
- ☐<sub>9</sub> Other (please specify\_\_\_\_\_)

**14. If you were told to evacuate your property during a flood, would you: (Tick one)**

- ☐<sub>1</sub> Do nothing – stay put / at home
- ☐<sub>2</sub> Wait until the water reaches my house and then decide
- ☐<sub>3</sub> Evacuate everyone immediately when told
- ☐<sub>4</sub> Evacuate most of the household immediately, but leave someone at home
- ☐<sub>5</sub> Wait for the council / emergency services to 'door-knock' my house
- ☐<sub>6</sub> Call for additional assistance to help evacuate
- ☐<sub>7</sub> Don't know
- ☐<sub>8</sub> Other (please specify\_\_\_\_\_)

**15. If you decided to evacuate, where would you go? (Tick one)**

- ☐<sub>1</sub> To a designated evacuation centre
- ☐<sub>2</sub> To family or a friend's house
- ☐<sub>3</sub> To another location (please specify\_\_\_\_\_)
- ☐<sub>4</sub> Don't know
- ☐<sub>5</sub> I would not evacuate

**16. Are you aware of the evacuation procedures for your area?**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No

**17. Do you know where your local evacuation routes are?**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No

**18. In a flood, how would you prefer to receive general information about that flood? (Tick all that apply)**

- ☐<sub>1</sub> Radio
- ☐<sub>2</sub> TV
- ☐<sub>3</sub> Door-knocking
- ☐<sub>4</sub> Mobile public address
- ☐<sub>5</sub> Internet
- ☐<sub>6</sub> Email
- ☐<sub>7</sub> Siren
- ☐<sub>8</sub> Emergency services announcement
- ☐<sub>9</sub> Telephone
- ☐<sub>10</sub> Cellphone Text message
- ☐<sub>11</sub> Flood Alert Scale
- ☐<sub>12</sub> Don't know
- ☐<sub>13</sub> Other (please specify\_\_\_\_\_)

**The following set of questions asks about floods and what to do to get ready for them.**

**19. Have you heard or received any information about preparing for floods from any of the following places? (Tick all that apply)**

- ☐<sub>1</sub> I haven't heard or received any information about floods
- ☐<sub>2</sub> District Council (including local Civil Defence and Emergency Management)
- ☐<sub>3</sub> Regional Council
- ☐<sub>4</sub> Central Government (Ministry of Civil Defence and Emergency Management)
- ☐<sub>5</sub> Police or Fire service
- ☐<sub>6</sub> Earthquake Commission
- ☐<sub>7</sub> MetService
- ☐<sub>8</sub> NIWA
- ☐<sub>9</sub> Television and radio
- ☐<sub>10</sub> Newspapers or magazines
- ☐<sub>11</sub> Meetings, hui, seminars or workshops
- ☐<sub>12</sub> Businesses (e.g., pamphlets in power or phone accounts)
- ☐<sub>13</sub> School hand-outs (e.g., brochures, homework)
- ☐<sub>14</sub> Friends or relatives
- ☐<sub>15</sub> Service organisations (e.g., the Red Cross)
- ☐<sub>16</sub> Neighbourhood Watch groups
- ☐<sub>17</sub> Marae
- ☐<sub>18</sub> Where you work
- ☐<sub>19</sub> Posters or postcards
- ☐<sub>20</sub> Telephone book / street directory
- ☐<sub>20</sub> My insurance company / agent
- ☐<sub>21</sub> Internet
- ☐<sub>22</sub> Email
- ☐<sub>23</sub> Cellphone Text messages
- ☐<sub>24</sub> Other, please specify \_\_\_\_\_

**20. Did you attend the public meeting on the community response plan for Kaitia at the Far North Community Centre (9 August 2006)?**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No



**21. Have you asked any of the following people, groups or organisations for information on how to get ready for floods? (Tick all that apply)**

- ☐<sub>1</sub> No, I haven't asked anyone
- ☐<sub>2</sub> Friends
- ☐<sub>3</sub> Neighbours
- ☐<sub>4</sub> Relatives
- ☐<sub>5</sub> District Council (including local Civil Defence and Emergency Management)
- ☐<sub>6</sub> Regional Council
- ☐<sub>7</sub> Central Government (Ministry for Civil Defence and Emergency Management)
- ☐<sub>8</sub> Police or Fire Service
- ☐<sub>9</sub> Earthquake Commission
- ☐<sub>10</sub> MetService
- ☐<sub>11</sub> NIWA
- ☐<sub>12</sub> Business establishments
- ☐<sub>13</sub> My workplace
- ☐<sub>14</sub> Marae
- ☐<sub>15</sub> My child's school
- ☐<sub>16</sub> Other, (please specify

\_\_\_\_\_)

**22. How would you prefer to get information on how to prepare your household / business for floods? (Tick all that apply)**

- ☐<sub>1</sub> Brochure received in the mail
- ☐<sub>2</sub> Brochure picked up from an organisation
- ☐<sub>3</sub> Radio advertisement
- ☐<sub>4</sub> TV advertisement
- ☐<sub>5</sub> Fridge magnet received in the mail
- ☐<sub>6</sub> Home visit by Civil Defence and Emergency Management
- ☐<sub>7</sub> Newspaper or magazine advertisement
- ☐<sub>8</sub> Community display
- ☐<sub>9</sub> Internet
- ☐<sub>10</sub> Public meeting or hui
- ☐<sub>11</sub> Other (please

specify\_\_\_\_\_)

**23. Please indicate on the scale whose responsibility you believe it is to protect us from floods. (Tick one in each row)**

|   | Not at all <i>(Scale)</i> A great deal<br>←.....→ |                                       |                                       |                                       |                                       |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Central Government (Ministry for Civil Defence and Emergency Management)  | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Regional Council  | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| District Council (including local Civil Defence and Emergency Management) | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Individual households (mine)  | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

**24. Please indicate on the scale how much you agree with the following statement: (Tick only one)**

|   | Not at all <i>(Scale)</i> A great deal<br>←.....→ |                                       |                                       |                                       |                                       |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| There is no use preparing for floods as we can't do much anyway   | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| There is a lack of information about flood issues   | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Street wardens can provide an important co-ordination role in responding to emergencies                                 | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| The community currently has sufficient equipment to respond to a flood emergency (e.g. heavy machinery, sandbags, etc.) | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| The Regional Council rates for flood protection are acceptable  | <input type="checkbox"/> <sub>1</sub>             | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

**25. Which of the following have you or your family done to prepare for an emergency? (Tick all that apply)**

- ☐<sub>1</sub> I / we have done nothing to prepare for an emergency
- ☐<sub>2</sub> Made sure I/we have a portable radio
- ☐<sub>3</sub> Made sure I/we have a torch
- ☐<sub>4</sub> Made sure I/we have spare batteries
- ☐<sub>5</sub> Made sure I/we have a first aid kit
- ☐<sub>6</sub> Made sure I/we have rubber gloves
- ☐<sub>7</sub> Made sure I/we have candles and waterproof matches
- ☐<sub>8</sub> Made sure I/we have a waterproof bag for valuables
- ☐<sub>9</sub> Made a list of emergency contact numbers
- ☐<sub>10</sub> Stockpiled water and food for three days
- ☐<sub>11</sub> Picked an emergency contact person outside of the district
- ☐<sub>12</sub> Arranged for someone in the family to learn first aid

- ☐<sub>13</sub> Found out if we are in an area particularly vulnerable to flooding
- ☐<sub>14</sub> Had home inspected for preparedness
- ☐<sub>15</sub> Talked to family members about what to do if a flood warning is heard
- ☐<sub>16</sub> Thought about how to lift precious items off the ground in a flood
- ☐<sub>17</sub> Considered how to access the roof in a flood
- ☐<sub>18</sub> Considered access to essential items needed in a flood (e.g. rope for securing items so they do not float away)
- ☐<sub>19</sub> Prepared a home flood plan
- ☐<sub>20</sub> Prepared an emergency kit
- ☐<sub>21</sub> Other (Please specify \_\_\_\_\_)

**26. To what extent might each of the following prevent you from preparing for floods: (Tick one in each row)**

|                                   | Not at all <span style="float: right;">(Scale)</span> <span style="float: right;">A great deal</span> |                                       |                                       |                                       |                                       |
|-----------------------------------|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Cost                              | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Skill required to prepare         | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Time to prepare                   | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Other things to think about       | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Need for co-operation with others | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Lack of knowledge or information  | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

**27. To what extent do you believe that: (Tick one in each row)**

|   | Not at all <span style="float: right;">(Scale)</span> <span style="float: right;">A great deal</span> |                                       |                                       |                                       |                                       |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Floods are too destructive to bother preparing for  | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Current flood protection schemes (e.g. stopbanks) provide adequate protection for Kaitaia                                   | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| A serious flood is unlikely to occur during my lifetime   | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| It is unnecessary to prepare for floods as assistance will be provided by the local authority and/or the emergency services | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Floods are not of concern   | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Developing a community response plan will improve the safety of the community   | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

People respond in different ways to natural disasters. The next few questions are designed to help us better understand how your community may respond to a future event. Remember all information given will remain confidential.

**28. Below is a list of statements on how you feel about living in your community. Please use the scale below to show how much each statement applies to you, or doesn't apply to you. (Tick one in each row)**

|   | Doesn't apply<br>←.....(Scale).....→<br>Applies strongly |                            |                            |                            |                            |
|---|--|----------------------------|----------------------------|----------------------------|----------------------------|
| I feel a part of this community                           | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am satisfied living in this community                   | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am a useful member of this community                    | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I have the same values and beliefs as my neighbours       | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I feel I don't belong in this community                   | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am interested in knowing what goes on in this community | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I would be happy to leave this community                  | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I know my neighbours and/or other community members       | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I have no active involvement in this community            | <input type="checkbox"/> 1                               | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

**Please think about your life in your community at present. Choose a number from the scale below that shows how much you agree or disagree with each of the following statements. (Tick one in each row)**

|   | Disagree Strongly<br>←.....(Scale).....→<br>Agree Strongly |                            |                            |                            |                            |
|---|--|----------------------------|----------------------------|----------------------------|----------------------------|
| I feel I have control over the things that happen in my life and in the community | <input type="checkbox"/> 1                                 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| There is no way I can solve some of the problems I have by myself                 | <input type="checkbox"/> 1                                 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I can't do much to change what happens in my life or in the community             | <input type="checkbox"/> 1                                 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| Somehow problems in my life usually solve themselves                              | <input type="checkbox"/> 1                                 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

The next set of questions concerns information about you and your household. We will only use this information to improve emergency preparedness in your community. Please remember that the information is anonymous.

**29. Do you, or someone in your house, own or rent the home you live in?**  
(Tick only one)

- ☐<sub>1</sub> Own or buying, to live in it  
☐<sub>2</sub> Own or buying, but only for use as a holiday home  
☐<sub>3</sub> Rent, to live in it  
☐<sub>4</sub> Rent as a holiday home  
☐<sub>5</sub> Other (please specify

\_\_\_\_\_)

**30. How long have you lived in your community?**

\_\_\_\_\_ years

**31. How long have you lived in your current home?**

\_\_\_\_\_ years

**32. How many storeys does your house have?**

Number of storeys excluding basement and loft/attic: \_\_\_\_\_

**33. Is your house raised above ground level? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> Not sure  
☐<sub>3</sub> No ( If “No” go to Question 35)

**34a. If “Yes”, please estimate in centimetres how high it is raised up**

\_\_\_\_\_

**34. Is your house insured against floods? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> No  
☐<sub>3</sub> Not sure

**35. Are your contents insured against floods? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> No  
☐<sub>3</sub> Not sure

**36. What is your gender? (Tick only one)**

- ☐<sub>1</sub> Male  
☐<sub>2</sub> Female

**37. Which best describes the situation you are living in now? (Tick only one)**

- ☐<sub>1</sub> Couple family with children  
☐<sub>2</sub> Couple family without children  
☐<sub>3</sub> One parent family  
☐<sub>4</sub> Other family  
☐<sub>5</sub> Alone  
☐<sub>6</sub> With other people, not family  
☐<sub>7</sub> Other, please specify \_\_\_\_\_

**38. What is your ethnic background? (Tick all that apply)**

- ☐<sub>1</sub> Māori  
☐<sub>2</sub> Pacific Islander  
☐<sub>3</sub> Pākehā/European  
☐<sub>4</sub> Asian  
☐<sub>5</sub> Other, please specify \_\_\_\_\_

**39. How old are you? (Tick only one)**

- ☐<sub>1</sub> Under 20 years  
☐<sub>2</sub> 21-30  
☐<sub>3</sub> 31-40  
☐<sub>4</sub> 41-50  
☐<sub>5</sub> 51-60  
☐<sub>6</sub> Over 60

**40. Are you? (Tick only one)**

- ☐<sub>1</sub> Employed full-time  
☐<sub>2</sub> Employed part-time (but not studying)  
☐<sub>3</sub> Studying part- or full-time at any education level  
☐<sub>4</sub> Not in paid employment and not studying

**41. What was your household's total 2005 income (before tax)? (Tick only one)**

- ☐<sub>1</sub> Under \$5 000
- ☐<sub>2</sub> \$5000 to \$15 000
- ☐<sub>3</sub> \$15 001 to \$20 000
- ☐<sub>4</sub> \$20 001 to \$30 000
- ☐<sub>5</sub> \$30 001 to \$40 000
- ☐<sub>6</sub> \$40 001 to \$50 000
- ☐<sub>7</sub> \$50 001 to \$60 000
- ☐<sub>8</sub> \$60 001 to \$70 000
- ☐<sub>9</sub> \$70 001 to \$80 000
- ☐<sub>10</sub> \$80 001 to \$90 000
- ☐<sub>11</sub> Over \$90 000

**42. What is your highest educational qualification? (Tick only one)**

- ☐<sub>1</sub> No school qualifications
- ☐<sub>2</sub> Secondary school qualifications
- ☐<sub>3</sub> Trade certificate or professional certificate or diploma
- ☐<sub>4</sub> University undergraduate degree (e.g., diploma or bachelor's degree)
- ☐<sub>5</sub> University postgraduate degree (e.g., Master's, Ph.D.)
- ☐<sub>5</sub> Other (please specify \_\_\_\_\_)

**43. If you have any additional comments please write them in the space below**

---

---

---

---

---

**Thank you for filling in this questionnaire. The information will help us make your community more prepared for floods.**

**PLEASE RETURN THIS QUESTIONNAIRE IN THE SUPPLIED POSTAGE PAID ENVELOPE.**

## Kaitaia Flood Survey: Involving the community in emergency preparedness



## Questionnaire





## FLOOD SURVEY RESEARCH INFORMATION SHEET

This research is intended to assess factors that influence how and why people make decisions about preparing, or not preparing, for natural disaster consequences such as floods. Preparing is seen as an important factor in assisting communities to safeguard their well-being and to minimise disruption (e.g., damage to homes, loss of work) should a flood occur. This research is being undertaken to assess levels of preparedness, and the household and community factors that influence levels of preparedness.

The outcomes of this research will be used by Northland Regional Council to enhance household preparedness for floods, and help ensure that the needs of the community are met, with respect to emergency management for flooding.

As this study is part of an on-going research programme, it is possible that you may have received and filled out a similar survey before. If you, or another member of your household, filled out the previous questionnaire, we once again invite the **same person** to fill out and return this questionnaire if possible.

If the person who filled out the previous questionnaire is not available or not known to you, we would still like to hear from you. In this case, the person who should complete the questionnaire is **the adult (age 18 or older) who most recently had a birthday**.

Your participation in this study is entirely voluntary, and you may elect to refuse to answer any question on the survey or choose to withdraw from the study at any time (i.e., not fill out and/or choose not to return the survey). The survey does not ask for any identifying information; the researchers will not know your identity. As a result, there is no way in which your responses will be identifiable in any research output, which may include conference presentations and published research reports.

Should you wish to find out any additional information regarding this study, please contact any of the research team below:-

**Julia Becker**, GNS Science ([j.becker@gns.cri.nz](mailto:j.becker@gns.cri.nz)) Ph: (04) 570 1444

**David Johnston**, GNS Science ([david.johnston@gns.cri.nz](mailto:david.johnston@gns.cri.nz)) Ph: (04) 570 1444

**Stefan Reese**, NIWA ([s.reese@niwa.co.nz](mailto:s.reese@niwa.co.nz)) Ph: (04) 386 0564

Your return of the enclosed survey will be taken as indicative of your having read the information sheet, and of your agreement to participate in this study.

## Section A.1      *What are your thoughts about the following hazards?*

**1. Which do you believe are the two most likely hazards that could affect your community? (Tick only two)**

- |  |  |
|--|--|
| <input type="checkbox"/> <sub>1</sub> Chemical spill or gas leak                         | <input type="checkbox"/> <sub>2</sub> Climate change |
| <input type="checkbox"/> <sub>3</sub> Earthquake   | <input type="checkbox"/> <sub>4</sub> Fire           |
| <input type="checkbox"/> <sub>5</sub> Infrastructural failure (e.g. electricity failure) | <input type="checkbox"/> <sub>6</sub> Flood          |
| <input type="checkbox"/> <sub>7</sub> Landslides   | <input type="checkbox"/> <sub>8</sub> Pandemic       |
| <input type="checkbox"/> <sub>9</sub> Storm with high winds (e.g. cyclone)               | <input type="checkbox"/> <sub>10</sub> Tornadoes     |
| <input type="checkbox"/> <sub>11</sub> Volcanic eruption                                 |  |

**2. Have you ever been affected by any of the following events? (Tick all that apply)**

- |  |  |
|--|--|
| <input type="checkbox"/> <sub>1</sub> Chemical spill or gas leak                                     | <input type="checkbox"/> <sub>2</sub> Climate change |
| <input type="checkbox"/> <sub>3</sub> Earthquake   | <input type="checkbox"/> <sub>4</sub> Fire           |
| <input type="checkbox"/> <sub>5</sub> Infrastructural failure (e.g. electricity failure)             | <input type="checkbox"/> <sub>6</sub> Flood          |
| <input type="checkbox"/> <sub>7</sub> Landslides   | <input type="checkbox"/> <sub>8</sub> Pandemic       |
| <input type="checkbox"/> <sub>9</sub> Storm with high winds (e.g. cyclone)                           | <input type="checkbox"/> <sub>10</sub> Tornadoes     |
| <input type="checkbox"/> <sub>11</sub> Volcanic eruption   |  |
| <input type="checkbox"/> <sub>12</sub> No events have affected me (If “No events”, go to Question 3) |  |

**2a. If you have been affected, to what extent were you affected? (considering property damage, injuries and financial impact). Please tick the one number you feel best represents this damage in each row, on the scale from 1 to 10.**

|                                      | Little impact                         |                                       |                                       | ←————→                                |                                       |                                       |                                       | Severe impact                         |                                       |  |
|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|
|                                      | 1                                     | 2                                     | 3                                     | 4                                     | 5                                     | 6                                     | 7                                     | 8                                     | 9                                     | 10                                     |
| Chemical spill or gas leak           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Climate change                       | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Earthquake                           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Fire                                 | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Flood                                | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Infrastructural failure              | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Landslides                           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Pandemic                             | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Storm with high winds (e.g. cyclone) | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Tornadoes                            | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |
| Volcanic eruption                    | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> | <input type="checkbox"/> <sub>7</sub> | <input type="checkbox"/> <sub>8</sub> | <input type="checkbox"/> <sub>9</sub> | <input type="checkbox"/> <sub>10</sub> |

3. When do you think that each of these hazard events could adversely affect your community on the following six-point time-scale? (Tick one for each hazard)

| Hazard                               | 1. Within the next year               | 2. Within the next 5 years            | 3. Within the next 10 years           | 4. Within the next 50 years           | 5. In over 50 years                   | 6. Never                              |
|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Chemical spill or gas leak           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Climate change                       | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Earthquake                           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Fire                                 | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Flood                                | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Infrastructural failure              | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Landslides                           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Pandemic                             | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Storm with high winds (e.g. cyclone) | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Tornadoes                            | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |
| Volcanic eruption                    | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> | <input type="checkbox"/> <sub>6</sub> |

## Section A.2 What are your thoughts about flooding?

4. How concerned are you about the risk of floods? (Tick one in each row)

|   | Not at all                            | (Scale)                               |                                       |                                       | A great deal                          |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|   |                                       | ←                                     |                                       | →                                     |                                       |
| I think about floods                                      | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I talk about floods                                       | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I get information on floods                               | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to my personal safety | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to my property        | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| I think a flood could pose a threat to Kaitaia township   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

5. Please indicate on the scale how much you agree with each of the following statements: (Tick one in each row)

|   | Not at all                            | (Scale)                               |                                       |                                       | A great deal                          |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|   |                                       | ←                                     |                                       | →                                     |                                       |
| There is no use preparing for floods as we can't do much anyway   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| There is a lack of information about flood issues   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Street wardens can provide an important co-ordination role in responding to emergencies                                 | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| The community currently has sufficient equipment to respond to a flood emergency (e.g. heavy machinery, sandbags, etc.) | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| The Regional Council rates for flood protection are acceptable  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

6. To what extent do you believe the following statements: (Tick one in each row)

|   | Not at all                            | (Scale)                               |                                       |                                       | A great deal                          |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|   |                                       | ←                                     |                                       | →                                     |                                       |
| Floods are too destructive to bother preparing for  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Current flood protection schemes provide adequate protection for Kaitaia  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| A serious flood is unlikely to occur during my lifetime   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| It is unnecessary to prepare for floods as assistance will be provided by the local authority and/or the emergency services | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Floods are not of concern   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Developing a community response plan will improve the safety of the community   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

### Section A.3 What are your recent experiences with flooding?

7. Have you been affected by any recent flood events (since August 2006)? This could include direct physical damage or any indirect effects (Tick only one).

☐<sub>1</sub> Yes If yes, when? (month/s and year/s): \_\_\_\_\_  
☐<sub>2</sub> No (If "No", go to Question 11)

8. If yes, how were you affected? (Tick all that apply):

☐<sub>1</sub> Directly (e.g. damage caused to property, injury, illness) (Go to Question 8a)  
☐<sub>2</sub> Indirectly (e.g. received warnings, had to evacuate, couldn't travel places, couldn't get to work, lost money because business couldn't open, volunteered to help out, etc.) (Go to Question 8a)

8a. Please describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Did your house, contents, vehicles, or any of your household's other possessions suffer from damage during the last flooding event? (Tick all that apply)

- ☐<sub>1</sub> Flood damage  
☐<sub>2</sub> No damage  
☐<sub>3</sub> Other damage (Please specify): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Was the last flood event the worst (i.e., biggest impact) flooding your household has experienced at this property? (Tick only one)

- ☐<sub>1</sub> Yes (If "Yes", go to Question 11)  
☐<sub>2</sub> No (If "No", go to Question 10a)

10a. If "No", when was the worst flooding experienced? (Please give details):  
\_\_\_\_\_  
\_\_\_\_\_

11. During the last flood event, were you aware of (or did you receive) any warnings about rising floodwaters (e.g. from civil defence emergency management, emergency services, radio or TV, neighbours, etc.)? (Tick only one)

- ☐<sub>1</sub> Yes (If "Yes", go to Question 11a)  
☐<sub>2</sub> No (If "No" go to Question 12)

11a. If "Yes", please describe in detail what it was, how it was delivered and who it was from:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11b. On becoming aware of, or receiving the warning, what did you do?  
\_\_\_\_\_  
\_\_\_\_\_

## Section B.1 What are your thoughts about flood management?

12. Please indicate on the scale whose responsibility you believe it is to protect us from floods. (Tick one in each row)

|   | <div> <div>Not at all</div> <div>(Scale)</div> <div>A great deal</div> </div> |                                       |                                       |                                       |                                       |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Central Government (Ministry for Civil Defence and Emergency Management)  | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Regional Council  | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| District Council (including local Civil Defence and Emergency Management) | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Individual households (mine)  | <input type="checkbox"/> <sub>1</sub>   | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

13. Does a stopbank provide Kaitaia with flood protection? (Tick only one)

- ☐<sub>1</sub> Yes (If "Yes", go to Question 14)  
☐<sub>2</sub> No (If "No", go to Question 15)  
☐<sub>3</sub> Not sure (If "Not sure", go to Question 15)

14. Do you think that the current level of flood protection is adequate? (Tick one)

- ☐<sub>1</sub> Yes (If "Yes", go to Question 15)  
☐<sub>2</sub> No (If "No", go to Question 14a)

14a. If "No", what could be improved? (Tick all that apply)

- ☐<sub>1</sub> Raise stopbanks  
☐<sub>2</sub> Improve maintenance work  
☐<sub>3</sub> More information on how to protect myself against floods  
☐<sub>4</sub> Other. Please specify: \_\_\_\_\_

## Section B.2 What are your thoughts about flood warnings in Kaitaia?

15. Which of the following elements make up Kaitaia Township's current public flood warning system? (Tick all that apply)

- ☐<sub>1</sub> Don't know (Go to Question 16)  
☐<sub>2</sub> There is no warning system (Go to Question 16)  
☐<sub>5</sub> Flashing lights ☐<sub>6</sub> Radio and TV announcements  
☐<sub>7</sub> Flood Alert Scale ☐<sub>8</sub> Neighbourhood Watch network  
☐<sub>9</sub> Text messaging ☐<sub>10</sub> Telephone contact  
☐<sub>11</sub> Warning from neighbours, friends or family  
☐<sub>12</sub> Information on the internet (including email)

☐<sub>13</sub> Door-knocking by Emergency Management staff or local emergency services

☐<sub>14</sub> Other **(Please specify):** \_\_\_\_\_

**16. What elements would you prefer to see making up a flood warning system for Kaitaia?**

---

---

---

**17. Have you seen any flood hazard maps for Kaitaia Township? (Tick only one)**

☐<sub>1</sub> Yes **(If “Yes”, go to Question 17a)**

☐<sub>2</sub> No

☐<sub>3</sub> Not Sure

**17a. If “Yes”, what was this information?** \_\_\_\_\_

### **Section B.3      *The Kaitaia Community Response Plan***

**18. Are you aware of the Kaitaia Community Response Plan? (Tick one)**

☐<sub>1</sub> Yes, I am aware of the plan but have not seen the plan

☐<sub>2</sub> Yes, I have seen the plan

☐<sub>3</sub> No **(If “No” go to Question 21)**

**19. If you know about, or have seen the plan, have you used it? (Tick one)**

☐<sub>1</sub> Yes **(If “Yes” go to Question 19a)**

☐<sub>2</sub> No **(If “No” go to Question 20)**

**19a. If “Yes”, how have you used the plan?** \_\_\_\_\_

**20. What improvements (if any) might you suggest for the plan?**

---

---

**Section C.1**      ***After receiving a flood warning how would you respond?***

**21. If you heard a flood warning for your community what would you do? (Tick all that apply)**

- ☐<sub>1</sub> Don't know      **(Go to Question 22)**
- |   |   |
|---|---|
| <input type="checkbox"/> <sub>2</sub> Listen to the radio   | <input type="checkbox"/> <sub>3</sub> Listen to the TV              |
| <input type="checkbox"/> <sub>4</sub> Evacuate at once  | <input type="checkbox"/> <sub>5</sub> Evacuate at a later stage     |
| <input type="checkbox"/> <sub>6</sub> Contact MetService  | <input type="checkbox"/> <sub>7</sub> Check the internet            |
| <input type="checkbox"/> <sub>8</sub> Stay at home  | <input type="checkbox"/> <sub>9</sub> Go and check the river        |
| <input type="checkbox"/> <sub>10</sub> Contact your neighbours  | <input type="checkbox"/> <sub>11</sub> Contact an emergency service |
| <input type="checkbox"/> <sub>12</sub> Stay inside and wait to be told what to do   |   |
| <input type="checkbox"/> <sub>13</sub> Meet at a designated evacuation centre or assembly point                             |   |
| <input type="checkbox"/> <sub>14</sub> Contact the District Council (includes local Civil Defence and Emergency Management) |   |
| <input type="checkbox"/> <sub>15</sub> Contact Central Government (Ministry of Civil Defence and Emergency Management)      |   |
| <input type="checkbox"/> <sub>16</sub> Other <b>(Please specify):</b>   |   |

**22. Who would you contact for help in a flood? (Tick one)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> 111 emergency services
- ☐<sub>3</sub> District Council (includes local Civil Defence and Emergency Management)
- ☐<sub>4</sub> Central Government (Ministry of Civil Defence and Emergency Management)
- ☐<sub>5</sub> Regional Council
- ☐<sub>6</sub> Earthquake Commission
- ☐<sub>7</sub> MetService
- ☐<sub>8</sub> NIWA
- ☐<sub>9</sub> Other **(Please specify):**

**23. If you were told to evacuate your property during a flood, would you: (Tick one)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> Do nothing – stay put / at home
- ☐<sub>3</sub> Wait until the water reaches my house and then decide
- ☐<sub>4</sub> Evacuate everyone immediately when told



- ☐<sub>5</sub> Evacuate most of the household immediately, but leave someone at home
- ☐<sub>6</sub> Wait for the council / emergency services to 'door-knock' my house
- ☐<sub>7</sub> Call for additional assistance to help evacuate
- ☐<sub>8</sub> Other **(Please specify):** \_\_\_\_\_

**24. If you decided to evacuate, where would you go? (Tick one)**

- ☐<sub>1</sub> Don't know
- ☐<sub>2</sub> To a designated evacuation centre
- ☐<sub>3</sub> To family or a friend's house
- ☐<sub>4</sub> To another location **(Please specify):** \_\_\_\_\_
- ☐<sub>5</sub> I would not evacuate

**25. How much time would you need to gather essential items (medication, documents) before evacuating? Please specify:**

\_\_\_\_\_ minutes

**26. Would you need assistance to evacuate (e.g., transport)? (Tick one)**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No

**27. If there were an existing evacuation plan, indicating exactly where and when to go, would you make use of it? (Tick one)**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No

**28. Do you know where the nearest evacuation centre is? (Tick one)**

- ☐<sub>1</sub> Yes **(Please specify):** \_\_\_\_\_
- ☐<sub>2</sub> No

**29. Who in the past have you contacted to get information about an ongoing flood (e.g. severity, possible evacuation, etc.)? (Tick all that apply)**

- ☐<sub>1</sub> Neighbours/friends
- ☐<sub>2</sub> Local Council
- ☐<sub>3</sub> Regional Council
- ☐<sub>4</sub> Others (e.g., radio, TV, local newspapers, internet) **(Please specify):** \_\_\_\_\_

**30. During a flood, how would you PREFER to receive general information about that flood? (Tick all that apply)**

- |   |                            |  |
|---|----------------------------|--|
| <input type="checkbox"/> <sub>1</sub> Don't know                            | <b>(Go to Question 31)</b> | <input type="checkbox"/> <sub>3</sub> TV                 |
| <input type="checkbox"/> <sub>2</sub> Radio                                 |                            | <input type="checkbox"/> <sub>5</sub> Door-knocking      |
| <input type="checkbox"/> <sub>4</sub> Telephone                             |                            | <input type="checkbox"/> <sub>7</sub> Internet           |
| <input type="checkbox"/> <sub>6</sub> Mobile public address                 |                            | <input type="checkbox"/> <sub>9</sub> Siren              |
| <input type="checkbox"/> <sub>8</sub> Email                                 |                            | <input type="checkbox"/> <sub>11</sub> Flood Alert Scale |
| <input type="checkbox"/> <sub>10</sub> Cellular phone text message          |                            |  |
| <input type="checkbox"/> <sub>12</sub> Emergency services announcement      |                            |  |
| <input type="checkbox"/> <sub>13</sub> Other <b>(Please specify):</b> _____ |                            |  |

**Section C.2      *Flooding information***

**31. Have you heard or received any information about preparing for floods from any of the following places? (Tick all that apply)**

- |  |  |
|--|--|
| <input type="checkbox"/> <sub>1</sub> I haven't heard or received any information about floods                   | <b>(Go to Question 32)</b>   |
| <input type="checkbox"/> <sub>2</sub> Regional Council   | <input type="checkbox"/> <sub>3</sub> Police or Fire Service           |
| <input type="checkbox"/> <sub>4</sub> Earthquake Commission  | <input type="checkbox"/> <sub>5</sub> MetService                       |
| <input type="checkbox"/> <sub>6</sub> Television and radio   | <input type="checkbox"/> <sub>7</sub> Newspapers/magazines             |
| <input type="checkbox"/> <sub>8</sub> Friends or relatives   | <input type="checkbox"/> <sub>9</sub> Neighbourhood Watch groups       |
| <input type="checkbox"/> <sub>10</sub> Marae   | <input type="checkbox"/> <sub>11</sub> Where you work                  |
| <input type="checkbox"/> <sub>12</sub> Posters or postcards  | <input type="checkbox"/> <sub>13</sub> Telephone book/street directory |
| <input type="checkbox"/> <sub>14</sub> My insurance company / agent  | <input type="checkbox"/> <sub>15</sub> Internet                        |
| <input type="checkbox"/> <sub>16</sub> Email   | <input type="checkbox"/> <sub>17</sub> Cellular phone text messages    |
| <input type="checkbox"/> <sub>18</sub> Central Government (Ministry of Civil Defence and Emergency Management)   |  |
| <input type="checkbox"/> <sub>19</sub> District Council (including local Civil Defence and Emergency Management) |  |
| <input type="checkbox"/> <sub>20</sub> School hand-outs (e.g., brochures, homework)                              |  |
| <input type="checkbox"/> <sub>21</sub> Meetings, hui, seminars or workshops                                      |  |
| <input type="checkbox"/> <sub>22</sub> Businesses (e.g., pamphlets in power or phone accounts)                   |  |
| <input type="checkbox"/> <sub>23</sub> Service organisations (e.g., Red Cross)                                   |  |
| <input type="checkbox"/> <sub>24</sub> NIWA (National Institute of Weather and Atmospheric Research)             |  |
| <input type="checkbox"/> <sub>25</sub> Other <b>(Please specify):</b> _____                                      |  |

**32. Have you asked any of the following people, groups or organisations for information on how to get ready for floods? (Tick all that apply)**

- ☐<sub>1</sub> No, I haven't asked anyone **(Go to Question 33)**
- |  |   |
|--|---|
| <input type="checkbox"/> <sub>2</sub> Friends  | <input type="checkbox"/> <sub>3</sub> Neighbours            |
| <input type="checkbox"/> <sub>4</sub> Relatives  | <input type="checkbox"/> <sub>5</sub> Regional Council      |
| <input type="checkbox"/> <sub>6</sub> Police or Fire Service   | <input type="checkbox"/> <sub>7</sub> Earthquake Commission |
| <input type="checkbox"/> <sub>8</sub> MetService   | <input type="checkbox"/> <sub>9</sub> NIWA                  |
| <input type="checkbox"/> <sub>10</sub> Business establishments   | <input type="checkbox"/> <sub>11</sub> My workplace         |
| <input type="checkbox"/> <sub>12</sub> Marae   | <input type="checkbox"/> <sub>13</sub> My child's school    |
| <input type="checkbox"/> <sub>14</sub> Central Government (Ministry for Civil Defence and Emergency Management)  |   |
| <input type="checkbox"/> <sub>15</sub> District Council (including local Civil Defence and Emergency Management) |   |
| <input type="checkbox"/> <sub>16</sub> Other <b>(Please specify):</b> _____                                      |   |

**33. How would you PREFER to get information on how to prepare your household / business for floods? (Tick all that apply)**

- |  |   |
|--|---|
| <input type="checkbox"/> <sub>1</sub> Brochure received in the mail                        | <input type="checkbox"/> <sub>2</sub> Radio advertisement   |
| <input type="checkbox"/> <sub>3</sub> TV advertisement                                     | <input type="checkbox"/> <sub>4</sub> Community display     |
| <input type="checkbox"/> <sub>5</sub> Internet   | <input type="checkbox"/> <sub>6</sub> Public meeting or hui |
| <input type="checkbox"/> <sub>7</sub> Fridge magnet received in the mail                   |   |
| <input type="checkbox"/> <sub>8</sub> Brochure picked up from an organisation              |   |
| <input type="checkbox"/> <sub>9</sub> Home visit by Civil Defence and Emergency Management |   |
| <input type="checkbox"/> <sub>10</sub> Newspaper or magazine advertisement                 |   |
| <input type="checkbox"/> <sub>11</sub> Other <b>(Please specify):</b> _____                |   |

### **Section C.3      *Preparing for natural disasters***

**34. Which of the following have you or your family done to prepare for an emergency? (Tick all that apply)**

- ☐<sub>1</sub> I / we have done nothing to prepare for an emergency **(Go to Question 35)**
- |  |
|--|
| <input type="checkbox"/> <sub>2</sub> Made sure I/we have a portable radio               |
| <input type="checkbox"/> <sub>3</sub> Made sure I/we have a torch                        |
| <input type="checkbox"/> <sub>4</sub> Made sure I/we have spare batteries                |
| <input type="checkbox"/> <sub>5</sub> Made sure I/we have a first aid kit                |
| <input type="checkbox"/> <sub>6</sub> Made sure I/we have rubber gloves                  |
| <input type="checkbox"/> <sub>7</sub> Made sure I/we have candles and waterproof matches |

- ☐<sub>8</sub> Made sure I/we have a waterproof bag for valuables
- ☐<sub>9</sub> Made a list of emergency contact numbers
- ☐<sub>10</sub> Stockpiled water and food for three days
- ☐<sub>11</sub> Picked an emergency contact person outside of the district
- ☐<sub>12</sub> Arranged for someone in the family to learn first aid
- ☐<sub>13</sub> Found out if we are in an area particularly vulnerable to flooding
- ☐<sub>14</sub> Had home inspected for preparedness
- ☐<sub>15</sub> Talked to family members about what to do if a flood warning is heard
- ☐<sub>16</sub> Thought about how to lift precious items off the ground in a flood
- ☐<sub>17</sub> Considered how to access the roof in a flood
- ☐<sub>18</sub> Considered access to essential items needed in a flood (e.g. rope for securing items so they do not float away)
- ☐<sub>19</sub> Prepared a home flood plan
- ☐<sub>20</sub> Prepared an emergency kit
- ☐<sub>21</sub> Other **(Please specify)**: \_\_\_\_\_

**35. Since August 2006 have you done any of the following (Tick one in each row)**

|  | Yes                                   | No                                    | Intend to                             |
|--|---------------------------------------|---------------------------------------|---------------------------------------|
| Seek information on flood risk to your community   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on things to do to prepare for a possible flood                         | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on being prepared on my own for three days                              | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on community planning regarding flood protection and response           | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Seek information on evacuation planning  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |
| Become involved with a local group to discuss how to reduce flood risk to your community | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> |

**36. Did the 2007 floods have any impact on your getting prepared at a household level? (Tick one)**

- ☐<sub>1</sub> Yes
- ☐<sub>2</sub> No

**37. To what extent might each of the following factors prevent you from preparing for floods: (Tick one in each row)**

|                                   | Not at all                            | <i>(Scale)</i>                        |                                       |                                       | A great deal                          |
|-----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|                                   |                                       | ←                                     |                                       | →                                     |                                       |
| Cost                              | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Skill required to prepare         | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Time to prepare                   | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Other things to think about       | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Need for co-operation with others | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |
| Lack of knowledge or information  | <input type="checkbox"/> <sub>1</sub> | <input type="checkbox"/> <sub>2</sub> | <input type="checkbox"/> <sub>3</sub> | <input type="checkbox"/> <sub>4</sub> | <input type="checkbox"/> <sub>5</sub> |

**38. Is your house insured against floods? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> No  
☐<sub>3</sub> Not sure

**39. Are your contents insured against floods? (Tick only one)**

- ☐<sub>1</sub> Yes  
☐<sub>2</sub> No  
☐<sub>3</sub> Not sure

## Section C.4 Your views about your community

People respond to disasters differently. The next few questions are designed to help us better understand how your community may respond to a future event. Remember all information given will remain confidential.

### 40. How long have you lived in your community?

year/s \_\_\_\_\_

### 41. Below is a list of statements on how you feel about living in your community. Please use the scale below to show how much each statement applies to you, or doesn't apply to you. (Tick one in each row)

|   | Doesn't apply <span style="margin: 0 10px;">←----- (Scale) -----→</span> Applies strongly |                            |                            |                            |                            |
|---|---|----------------------------|----------------------------|----------------------------|----------------------------|
| I feel a part of this community                           | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am satisfied living in this community                   | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am a useful member of this community                    | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I have the same values and beliefs as my neighbours       | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I feel I don't belong in this community                   | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I am interested in knowing what goes on in this community | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I would be happy to leave this community                  | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I know my neighbours and/or other community members       | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I have no active involvement in this community            | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

### 42. Please think about your life in your community at present. Choose a number from the scale below that shows how much you agree or disagree with each of the following statements. (Tick one in each row)

|   | Disagree Strongly <span style="margin: 0 10px;">←----- (Scale) -----→</span> Agree Strongly |                            |                            |                            |                            |
|---|---|----------------------------|----------------------------|----------------------------|----------------------------|
| I feel I have control over the things that happen in my life and in the community | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| There is no way I can solve some of the problems I have by myself                 | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| I can't do much to change what happens in my life or in the community             | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| Somehow problems in my life usually solve themselves                              | <input type="checkbox"/> 1  | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |

## Section D.1      *Information about yourself*

Please be aware that all the information you provide us with is anonymous and we will only use this information to improve emergency preparedness in your community.

### 43. What is your gender? (Tick only one)

☐<sub>1</sub>    Male

☐<sub>2</sub>    Female

### 44. Into which age bracket do you fall? (Tick only one)

☐<sub>1</sub>    18-19 yrs

☐<sub>2</sub>    20-24 yrs

☐<sub>3</sub>    25-29 yrs

☐<sub>4</sub>    30-34 yrs

☐<sub>5</sub>    35-39 yrs

☐<sub>6</sub>    40-44 yrs

☐<sub>7</sub>    45-49 yrs

☐<sub>8</sub>    50-54 yrs

☐<sub>9</sub>    55-59 yrs

☐<sub>10</sub>    60-64 yrs

☐<sub>11</sub>    65-69 yrs

☐<sub>12</sub>    70-74 yrs

☐<sub>13</sub>    75-79 yrs

☐<sub>14</sub>    80-84 yrs

☐<sub>15</sub>    85 years +

### 45. Which ethnic group do you belong to? (Tick the box or boxes that apply to you)

☐<sub>1</sub>    New Zealand European

☐<sub>2</sub>    Māori

☐<sub>3</sub>    Samoan

☐<sub>4</sub>    Cook Island Maori

☐<sub>5</sub>    Tongan

☐<sub>6</sub>    Niuean

☐<sub>7</sub>    Chinese

☐<sub>8</sub>    Indian

☐<sub>9</sub>    Other (e.g., Dutch, Japanese) **(Please specify):** \_\_\_\_\_

### 46. What is your main occupation? (Tick only one)

☐<sub>1</sub>    Employed: What is your job? \_\_\_\_\_

☐<sub>2</sub>    Unemployed

☐<sub>3</sub>    Retired

☐<sub>4</sub>    House person

☐<sub>5</sub>    Student: What are you studying? \_\_\_\_\_

☐<sub>6</sub>    Other **(Please specify):** \_\_\_\_\_

### 47. What is your highest educational qualification? (Tick only one)

☐<sub>1</sub>    No school qualifications

☐<sub>2</sub>    Secondary school qualifications

☐<sub>3</sub>    Trade certificate or professional certificate or diploma

☐<sub>4</sub> University undergraduate degree (e.g., diploma or bachelor's degree)

☐<sub>5</sub> University postgraduate degree (e.g., Master's, Ph.D.)

☐<sub>6</sub> Other (**Please specify**): \_\_\_\_\_



## Section D.2      *Information about your household*

**48. How long have you lived in your current house?**

year/s \_\_\_\_\_

**49. Which of the following best describes your household now? (Tick only one)**

- ☐<sub>1</sub>    A couple without children  
☐<sub>2</sub>    One person household  
☐<sub>3</sub>    Two parent family with one child or more  
☐<sub>4</sub>    One parent family with one child or more  
☐<sub>5</sub>    Non family household (e.g. flatting)  
☐<sub>6</sub>    Other. Please state: \_\_\_\_\_

**50. Do you, or someone in your house, own or rent the home you live in? (Tick only one)**

- ☐<sub>1</sub>    Own or buying, to live in it  
☐<sub>2</sub>    Own or buying, but only for use as a holiday home  
☐<sub>3</sub>    Rent, to live in it  
☐<sub>4</sub>    Rent as a holiday home  
☐<sub>5</sub>    Other **(Please specify)**: \_\_\_\_\_

**51. What was your household's total income (before tax) for the 2007 financial year (April 1 2007-March 2008)? (Tick only one)**

- |  |  |
|--|--|
| <input type="checkbox"/> <sub>1</sub> Loss                   | <input type="checkbox"/> <sub>2</sub> Zero Income          |
| <input type="checkbox"/> <sub>3</sub> \$1 – \$5,000          | <input type="checkbox"/> <sub>4</sub> \$5,001 – \$10,000   |
| <input type="checkbox"/> <sub>5</sub> \$10,001 – \$15,000    | <input type="checkbox"/> <sub>6</sub> \$15,001 – \$20,000  |
| <input type="checkbox"/> <sub>7</sub> \$20,001 – \$25,000    | <input type="checkbox"/> <sub>8</sub> \$25,001 – \$30,000  |
| <input type="checkbox"/> <sub>9</sub> \$30,001 – \$35,000    | <input type="checkbox"/> <sub>10</sub> \$35,001 – \$40,000 |
| <input type="checkbox"/> <sub>11</sub> \$40,001 – \$50,000   | <input type="checkbox"/> <sub>12</sub> \$50,001 – \$70,000 |
| <input type="checkbox"/> <sub>13</sub> \$70,001 – \$100, 000 | <input type="checkbox"/> <sub>14</sub> \$100,001 or more   |

**52. If you have any additional comments please write them in the space below**

---

---

---

**Thank you for filling in this questionnaire. The information will help us make your community more prepared for floods. Please return in the postage paid envelope.**

More detailed information about Civil Defence is available at the following website: <http://www.nrc.govt.nz/civildefence/>

## APPENDIX 2 DATA TABLES

Q1. Which do you believe are the two most likely hazards that could affect your community? (Tick only two)

| Two most likely hazards                            | 2006  |                  | 2009  |                  |
|--|-------|------------------|-------|------------------|
|  | Count | Column Total N % | Count | Column Total N % |
| Chemical spill or gas leak                         | 12    | 5.0%             | 0     | 0%               |
| Climate change                                     | 15    | 6.2%             | 2     | 1.8%             |
| Earthquake   | 9     | 3.7%             | 3     | 2.7%             |
| Fire   | 22    | 9.1%             | 4     | 3.5%             |
| Infrastructural failure (e.g. electricity failure) | 67    | 27.8%            | 21    | 18.6%            |
| Flood  | 188   | 78.0%            | 90    | 79.7%            |
| Landslides   | 11    | 4.6%             | 30    | 26.6%            |
| Pandemic   | 10    | 4.1%             | 9     | 8.0%             |
| Storm with high winds (e.g. cyclone)               | 120   | 49.8%            | 53    | 46.9%            |
| Tornadoes  | 10    | 4.1%             | 5     | 4.4%             |
| Volcanic eruption                                  | 2     | .8%              | 0     | 0%               |

Q2. Have you ever been affected by any of the following events? (Tick all that apply)

|  | 2006  |                  | 2009  |                  |
|--|-------|------------------|-------|------------------|
|  | Count | Column Total N % | Count | Column Total N % |
| Chemical spill or gas leak                         | 2     | .8%              | 1     | 0.9%             |
| Climate change                                     | 12    | 5.0%             | 5     | 4.4%             |
| Earthquake   | 20    | 8.3%             | 4     | 3.5%             |
| Fire   | 17    | 7.1%             | 6     | 5.3%             |
| Infrastructural failure (e.g. electricity failure) | 51    | 21.2%            | 29    | 25.7%            |
| Flood  | 109   | 45.2%            | 53    | 46.9%            |
| Landslides   | 11    | 4.6%             | 13    | 11.5%            |
| Pandemic   | 3     | 1.2%             | 2     | 1.8%             |
| Storm with high winds (e.g. cyclone)               | 77    | 32.0%            | 37    | 32.7%            |
| Tornadoes  | 11    | 4.6%             | 3     | 2.7%             |
| Volcanic eruption                                  | 2     | .8%              | 1     | 0.9%             |
| No events have affected me                         | 62    | 25.7%            | 31    | 27.4%            |

Q2a. . If you have been affected, to what extent were you affected? (Considering property damage, injuries and financial impact). Please tick the one number you feel best represents this damage in each row, on the scale from 1 to 10.

|  | 2006 |      |       |         | 2009 |      |       |         |
|--|------|------|-------|---------|------|------|-------|---------|
|  | Mean | Min  | Max   | Std Dev | Mean | Min  | Max   | Std Dev |
| Chemical spill or gas leak                         | 2.88 | 1.00 | 10.00 | 3.14    | 3.30 | 1.00 | 10.00 | 3.65    |
| Climate change                                     | 3.67 | 1.00 | 10.00 | 2.88    | 2.87 | 1.00 | 10.00 | 2.20    |
| Earthquake   | 2.21 | 1.00 | 10.00 | 2.13    | 2.57 | 1.00 | 10.00 | 2.47    |
| Fire   | 4.03 | 1.00 | 10.00 | 2.95    | 2.98 | 1.00 | 10.00 | 2.91    |
| Flood  | 4.77 | 1.00 | 10.00 | 2.71    | 5.65 | 1.00 | 10.00 | 2.97    |
| Infrastructural failure (e.g. electricity failure) | 4.29 | 1.00 | 10.00 | 2.37    | 4.03 | 1.00 | 10.00 | 2.60    |
| Landslides   | 3.62 | 1.00 | 10.00 | 2.93    | 4.70 | 1.00 | 10.00 | 3.29    |
| Pandemic   | 3.12 | 1.00 | 10.00 | 2.98    | 3.46 | 1.00 | 10.00 | 2.44    |
| Storm with high winds (e.g. cyclone)               | 4.56 | 1.00 | 10.00 | 2.49    | 4.79 | 1.00 | 10.00 | 2.83    |
| Tornadoes  | 3.05 | 1.00 | 10.00 | 3.06    | 2.33 | 1.00 | 10.00 | 1.72    |
| Volcanic eruption                                  | 1.94 | 1.00 | 10.00 | 2.26    | 1.50 | 1.00 | 10.00 | 0.85    |

Q3. When do you think that each of these hazard events could adversely affect your community? (Tick one for each hazard)

|                            |                          | 2006  |                  | 2009  |                  |
|----------------------------|--------------------------|-------|------------------|-------|------------------|
|                            |                          | Count | Column Total N % | Count | Column Total N % |
| Chemical spill or gas leak | Within the next year     | 11    | 4.5%             | 5     | 4.4%             |
|                            | Within the next 5 years  | 33    | 13.6%            | 7     | 6.2%             |
|                            | Within the next 10 years | 33    | 13.6%            | 12    | 10.6%            |
|                            | Within the next 50 years | 38    | 15.7%            | 9     | 8.0%             |
|                            | In over 50 years         | 13    | 5.4%             | 6     | 5.3%             |
|                            | Never                    | 46    | 19.0%            | 20    | 17.7%            |
| Climate change             | Within the next year     | 20    | 8.3%             | 5     | 4.4%             |
|                            | Within the next 5 years  | 53    | 21.9%            | 11    | 9.7%             |
|                            | Within the next 10 years | 47    | 19.4%            | 24    | 21.2%            |
|                            | Within the next 50 years | 43    | 17.8%            | 12    | 10.6%            |
|                            | In over 50 years         | 20    | 8.3%             | 9     | 8.0%             |
|                            | Never                    | 14    | 5.8%             | 3     | 2.7%             |
| Earthquake                 | Within the next year     | 8     | 3.3%             | 2     | 1.8%             |
|                            | Within the next 5 years  | 16    | 6.6%             | 4     | 3.5%             |
|                            | Within the next 10 years | 23    | 9.5%             | 9     | 8.0%             |
|                            | Within the next 50 years | 43    | 17.8%            | 9     | 8.0%             |
|                            | In over 50 years         | 40    | 16.5%            | 20    | 17.7%            |
|                            | Never                    | 58    | 24.0%            | 21    | 18.6%            |
| Fire                       | Within the next year     | 31    | 12.8%            | 15    | 13.3%            |
|                            | Within the next 5 years  | 44    | 18.2%            | 9     | 8.0%             |
|                            | Within the next 10 years | 31    | 12.8%            | 7     | 6.2%             |
|                            | Within the next 50 years | 36    | 14.9%            | 16    | 14.2%            |
|                            | In over 50 years         | 11    | 4.5%             | 7     | 6.2%             |
|                            | Never                    | 28    | 11.6%            | 6     | 5.3%             |
| Flood                      | Within the next year     | 66    | 27.3%            | 36    | 31.9%            |
|                            | Within the next 5 years  | 83    | 34.3%            | 30    | 26.5%            |
|                            | Within the next 10 years | 38    | 15.7%            | 15    | 13.3%            |
|                            | Within the next 50 years | 27    | 11.2%            | 10    | 8.8%             |
|                            | In over 50 years         | 2     | .8%              | 4     | 3.5%             |
|                            | Never                    | 5     | 2.1%             | 2     | 1.8%             |
| Infrastructural failure    | Within the next year     | 49    | 20.2%            | 18    | 15.9%            |
|                            | Within the next 5 years  | 51    | 21.1%            | 22    | 19.5%            |
|                            | Within the next 10 years | 33    | 13.6%            | 14    | 12.4%            |
|                            | Within the next 50 years | 21    | 8.7%             | 5     | 4.4%             |
|                            | In over 50 years         | 11    | 4.5%             | 6     | 5.3%             |
|                            | Never                    | 20    | 8.3%             | 4     | 3.5%             |

|                                      |                          |     |       |    |       |
|--------------------------------------|--------------------------|-----|-------|----|-------|
| Landslides                           | Within the next year     | 23  | 9.5%  | 10 | 8.8%  |
|                                      | Within the next 5 years  | 49  | 20.2% | 28 | 24.8% |
|                                      | Within the next 10 years | 36  | 14.9% | 20 | 17.7% |
|                                      | Within the next 50 years | 17  | 7.0%  | 6  | 5.3%  |
|                                      | In over 50 years         | 15  | 6.2%  | 3  | 2.7%  |
|                                      | Never                    | 48  | 19.8% | 9  | 8.0%  |
| Pandemic                             | Within the next year     | 10  | 4.1%  | 20 | 17.7% |
|                                      | Within the next 5 years  | 52  | 21.5% | 12 | 10.6% |
|                                      | Within the next 10 years | 32  | 13.2% | 10 | 8.8%  |
|                                      | Within the next 50 years | 44  | 18.2% | 11 | 9.7%  |
|                                      | In over 50 years         | 15  | 6.2%  | 6  | 5.3%  |
|                                      | Never                    | 28  | 11.6% | 5  | 4.4%  |
| Storm with high winds (e.g. cyclone) | Within the next year     | 44  | 18.2% | 32 | 28.3% |
|                                      | Within the next 5 years  | 94  | 38.8% | 29 | 25.7% |
|                                      | Within the next 10 years | 35  | 14.5% | 15 | 13.3% |
|                                      | Within the next 50 years | 23  | 9.5%  | 8  | 7.1%  |
|                                      | In over 50 years         | 4   | 1.7%  | 3  | 2.7%  |
|                                      | Never                    | 6   | 2.5%  | 3  | 2.7%  |
| Tornadoes                            | Within the next year     | 16  | 6.6%  | 9  | 8.0%  |
|                                      | Within the next 5 years  | 45  | 18.6% | 17 | 15.0% |
|                                      | Within the next 10 years | 37  | 15.3% | 16 | 14.2% |
|                                      | Within the next 50 years | 42  | 17.4% | 10 | 8.8%  |
|                                      | In over 50 years         | 17  | 7.0%  | 7  | 6.2%  |
|                                      | Never                    | 28  | 11.6% | 7  | 6.2%  |
| Volcanic eruption                    | Within the next year     | 2   | .8%   | 1  | .9%   |
|                                      | Within the next 5 years  | 6   | 2.5%  | 2  | 1.8%  |
|                                      | Within the next 10 years | 11  | 4.5%  | 2  | 1.8%  |
|                                      | Within the next 50 years | 24  | 9.9%  | 7  | 6.2%  |
|                                      | In over 50 years         | 33  | 13.6% | 14 | 12.4% |
|                                      | Never                    | 113 | 46.7% | 37 | 32.7% |

2009. Q4. How concerned are you about the risk of floods? (Tick one in each row)

2006. Q6. How concerned are you about the risk of floods? (Tick one in each row)

|   |   | 2006  |                     | 2009  |                     |
|---|---|-------|---------------------|-------|---------------------|
|   |   | Count | Column Total N<br>% | Count | Column Total N<br>% |
| I think about floods                                      | 1 | 31    | 12.8%               | 8     | 7.1%                |
|   | 2 | 44    | 18.2%               | 22    | 19.5%               |
|   | 3 | 55    | 22.7%               | 32    | 28.3%               |
|   | 4 | 32    | 13.2%               | 19    | 16.8%               |
|   | 5 | 29    | 12.0%               | 17    | 15.0%               |
| I talk about floods                                       | 1 | 44    | 18.2%               | 11    | 9.7%                |
|   | 2 | 47    | 19.4%               | 25    | 22.1%               |
|   | 3 | 45    | 18.6%               | 34    | 30.1%               |
|   | 4 | 26    | 10.7%               | 13    | 11.5%               |
|   | 5 | 17    | 7.0%                | 9     | 8.0%                |
| I get information on floods                               | 1 | 93    | 38.4%               | 39    | 34.5%               |
|   | 2 | 29    | 12.0%               | 16    | 14.2%               |
|   | 3 | 29    | 12.0%               | 20    | 17.7%               |
|   | 4 | 19    | 7.9%                | 7     | 6.2%                |
|   | 5 | 5     | 2.1%                | 9     | 8.0%                |
| I think a flood could pose a threat to my personal safety | 1 | 64    | 26.4%               | 22    | 19.5%               |
|   | 2 | 43    | 17.8%               | 21    | 18.6%               |
|   | 3 | 34    | 14.0%               | 22    | 19.5%               |
|   | 4 | 16    | 6.6%                | 12    | 10.6%               |
|   | 5 | 30    | 12.4%               | 22    | 19.5%               |
| I think a flood could pose a threat to my property        | 1 | 58    | 24.0%               | 19    | 16.8%               |
|   | 2 | 38    | 15.7%               | 19    | 16.8%               |
|   | 3 | 37    | 15.3%               | 21    | 18.6%               |
|   | 4 | 21    | 8.7%                | 17    | 15.0%               |
|   | 5 | 49    | 20.2%               | 24    | 21.2%               |
| I think a flood could pose a threat to Kaitaia township   | 1 | 2     | .8%                 | 4     | 3.5%                |
|   | 2 | 14    | 5.8%                | 4     | 3.5%                |
|   | 3 | 42    | 17.4%               | 18    | 15.9%               |
|   | 4 | 48    | 19.8%               | 28    | 24.8%               |
|   | 5 | 73    | 30.2%               | 54    | 47.8%               |

| How concerned are you about the risk of floods?           | 2006 |                    | 2009 |                    |
|---|------|--------------------|------|--------------------|
|   | Mean | Standard Deviation | Mean | Standard Deviation |
| I think about floods                                      | 3.15 | 1.20               | 2.92 | 1.29               |
| I talk about floods                                       | 2.83 | 1.13               | 2.58 | 1.27               |
| I get information on floods                               | 2.24 | 1.34               | 1.94 | 1.18               |
| I think a flood could pose a threat to my personal safety | 2.91 | 1.46               | 2.49 | 1.44               |
| I think a flood could pose a threat to my property        | 3.08 | 1.45               | 2.83 | 1.54               |
| I think a flood could pose a threat to Kaitaia township   | 4.15 | 1.07               | 3.98 | 1.03               |

2006. Q4 When was the last time your community was flooded (i.e. some houses or businesses in Kaitaia township were flooded)? (Tick only one)

| When was the last time your community was flooded? | Count | Column Valid N % |
|--|-------|------------------|
| Never  | 1     | .4%              |
| In the last year                                   | 30    | 12.9%            |
| In the last 2 years                                | 74    | 31.8%            |
| In the last 10 years                               | 50    | 21.5%            |
| In the last 50 years                               | 39    | 16.7%            |
| More than 50 years ago                             | 7     | 3.0%             |
| Don't know   | 32    | 13.7%            |

|  | Mean | Minimum | Maximum | Standard Deviation |
|--|------|---------|---------|--------------------|
| When was the last time your community was flooded? | 4.05 | 1.00    | 7.00    | 1.55               |

2009. Q5. Please indicate on the scale how much you agree with the following statement: (tick only one)

2006. Q24. Please indicate on the scale how much you agree with the following statement: (tick only one)

|   |   | 2006  |                  | 2009  |                  |
|---|---|-------|------------------|-------|------------------|
|   |   | Count | Column Valid N % | Count | Column Valid N % |
| There is no use preparing for floods as we can't do much anyway                         | 1 | 86    | 51.2%            | 46    | 46.9%            |
|   | 2 | 23    | 13.7%            | 11    | 11.2%            |
|   | 3 | 30    | 17.9%            | 17    | 17.3%            |
|   | 4 | 17    | 10.1%            | 9     | 9.2%             |
|   | 5 | 12    | 7.1%             | 15    | 15.3%            |
| There is a lack of information about flood issues                                       | 1 | 25    | 13.7%            | 13    | 12.9%            |
|   | 2 | 27    | 14.8%            | 24    | 23.8%            |
|   | 3 | 47    | 25.7%            | 34    | 33.7%            |
|   | 4 | 38    | 20.8%            | 12    | 11.9%            |
|   | 5 | 46    | 25.1%            | 18    | 17.8%            |
| Street wardens can provide an important co-ordination role in responding to emergencies | 1 | 16    | 9.8%             | 7     | 7.0%             |
|   | 2 | 17    | 10.4%            | 10    | 10.0%            |
|   | 3 | 53    | 32.5%            | 24    | 24.0%            |
|   | 4 | 40    | 24.5%            | 25    | 25.0%            |
|   | 5 | 37    | 22.7%            | 34    | 34.0%            |



|   |   |    |       |    |       |
|---|---|----|-------|----|-------|
| The community currently has sufficient equipment to respond to a flood emergency (e.g. heavy machinery, sandbags, etc.) | 1 | 34 | 22.4% | 21 | 22.3% |
|   | 2 | 50 | 32.9% | 35 | 37.2% |
|   | 3 | 43 | 28.3% | 27 | 28.7% |
|   | 4 | 19 | 12.5% | 6  | 6.4%  |
|   | 5 | 6  | 3.9%  | 5  | 5.3%  |
| The Regional Council rates for flood protection are acceptable  | 1 | 44 | 26.7% | 16 | 16.7% |
|   | 2 | 26 | 15.8% | 26 | 27.1% |
|   | 3 | 60 | 36.4% | 29 | 30.2% |
|   | 4 | 18 | 10.9% | 7  | 7.3%  |
|   | 5 | 17 | 10.3% | 18 | 18.8% |

2006. Q5. When was the last time that the house where you live now was flooded?

| When was the last time that the house where you live now was flooded? | Count | Column Valid N % |
|---|-------|------------------|
| Never   | 150   | 64.4%            |
| In the last year  | 11    | 4.7%             |
| In the last 2 years   | 2     | .9%              |
| In the last 10 years  | 16    | 6.9%             |
| In the last 50 years  | 13    | 5.6%             |
| More than 50 years ago  | 2     | .9%              |
| Don't know  | 39    | 16.7%            |

|   | Mean | Minimum | Maximum | Standard Deviation |
|---|------|---------|---------|--------------------|
| When was the last time that the house where you live now was flooded? | 2.54 | 1.00    | 7.00    | 2.34               |

2009. Q6. To what extent do you believe that: (Tick one in each row)

2006. Q27. To what extent do you believe that: (Tick one in each row)

|   |   | 2006  |                  | 2009  |                  |
|---|---|-------|------------------|-------|------------------|
|   |   | Count | Column Valid N % | Count | Column Valid N % |
| Floods are too destructive to bother preparing for  | 1 | 110   | 59.1%            | 53    | 55.2%            |
|   | 2 | 32    | 17.2%            | 11    | 11.5%            |
|   | 3 | 25    | 13.4%            | 16    | 16.7%            |
|   | 4 | 8     | 4.3%             | 5     | 5.2%             |
|   | 5 | 11    | 5.9%             | 11    | 11.5%            |
| Current flood protection schemes (e.g. stopbanks) provide adequate protection for Kaitaia | 1 | 46    | 22.5%            | 23    | 22.5%            |
|   | 2 | 51    | 25.0%            | 29    | 28.4%            |
|   | 3 | 76    | 37.3%            | 35    | 34.3%            |
|   | 4 | 21    | 10.3%            | 6     | 5.9%             |
|   | 5 | 10    | 4.9%             | 9     | 8.8%             |
| A serious flood is unlikely to occur during my lifetime                                   | 1 | 76    | 36.5%            | 41    | 41.8%            |
|   | 2 | 28    | 13.5%            | 8     | 8.2%             |
|   | 3 | 46    | 22.1%            | 18    | 18.4%            |
|   | 4 | 28    | 13.5%            | 11    | 11.2%            |
|   | 5 | 30    | 14.4%            | 20    | 20.4%            |
| It is unnecessary to prepare for floods as  | 1 | 103   | 51.5%            | 44    | 44.9%            |
|   | 2 | 35    | 17.5%            | 16    | 16.3%            |

|  |   |     |       |    |       |
|--|---|-----|-------|----|-------|
| assistance will be provided by the local authority and/or the emergency services | 3 | 42  | 21.0% | 22 | 22.4% |
|  | 4 | 11  | 5.5%  | 6  | 6.1%  |
|  | 5 | 9   | 4.5%  | 10 | 10.2% |
| Floods are not of concern  | 1 | 98  | 48.5% | 49 | 51.0% |
|  | 2 | 24  | 11.9% | 9  | 9.4%  |
|  | 3 | 27  | 13.4% | 15 | 15.6% |
|  | 4 | 23  | 11.4% | 8  | 8.3%  |
|  | 5 | 30  | 14.9% | 15 | 15.6% |
| Developing a community response plan will improve the safety of the community    | 1 | 10  | 4.7%  | 5  | 4.9%  |
|  | 2 | 8   | 3.8%  | 4  | 3.9%  |
|  | 3 | 35  | 16.4% | 18 | 17.6% |
|  | 4 | 47  | 22.1% | 19 | 18.6% |
|  | 5 | 113 | 53.1% | 56 | 54.9% |

2009. Q7. Have you been affected by any recent flood events (since August 2006)? This could include direct physical damage or any indirect effects (Tick one).

|     | Count | Column Valid % |
|-----|-------|----------------|
| yes | 39    | 34.5%          |
| no  | 63    | 55.8%          |

2009. Q7. If yes, when? (month/s and year/s):

- 09 Street flooding
- 10the July 2007
- 12 months
- 2 1/2 years
- 2 years
- 2006 August
- 2007 June, 2008 May, 2009 June winter months
- 2007, 2008
- 2007/2008
- 2007-2008
- 2yrs
- 2yrs July 2007
- 3 months
- Don't remember dates
- Every winter since
- July 2007 or around then
- Last year, 1958
- Years

1/07/2007  
10/07/2007  
1/05/2009  
1/06/2009  
7/07/2009

2009. Q8. If yes, how were you affected? (Tick all that apply):

|            | Count | Column Valid % |
|------------|-------|----------------|
| Directly   | 20    | 51.3%          |
| Indirectly | 24    | 61.5%          |
| Both       | 5     | 12.8%          |

2009. Q8a. Please describe:

- 6ft of flood water through bottom storey of home
- After Regional Council bulldozed away trees and made a track along waterways our property has been sliding away and continues to slide into the river
- All electric plugs points to be replaced when you can get a electrician. Fridge & freezers all failed, interesting. Moving everything out of house. Cannot hire or buy things to dry your house. Rained for weeks after flood, keeping things wet. Can't even fix
- Couldn't go out
- Couldn't travel out - road damage
- Damage to garage, car, freezer & fridge
- Damage to one wall in main bedroom, with water seeping in, 4 walls ballooning out. Fortunately I had insurance with AHLERS, which I have continued with, to cover emergencies
- Drains on roadside overflowed onto property & driveway fortunately rain stopped within a few hrs water subsided
- Evacuated overnight
- Flood entered garage took time off work to lift property - sewage waster on property. Impact services came into to decontaminate
- Flood in Oxford Street, Kaitaia
- FNDC drains are non existent where they should be on Bonnetts Rd from the ambulance station which they said would be installed this year by the end of the financial year. We are still waiting, wet & slowly sinking with our houses
- Had to cancel meetings in Whangarei and Auckland because travel from Kaitaia was disrupted by floods at Kaeo and Rangiahua and flights cancelled from Kerikeri
- Have to move animals, make sure enough feed, couldn't get to all parts of farm
- Helped out at Oxford St, Kaitaia
- I work at the hospital & we have Switzer residents evacuated to hospital
- Live in Bank St, Kaitaia - evacuated twice due to rising water
- Loss of 7/8 of clothes, all furniture and whiteware and tools most stolen after flood
- Lost work & hours could not get to client, her house & street was flooded
- Member NZFS Kaitaia brigade
- My friends house was flooded last year in Kaitaia. They were absolutely devastated, lost animals who were valued pets & possessions, had to be relocated & I tried to be the one who lifted their spirits. I lost my friend for a time & her depression
- My property used to flood every time we had heavy rain, but since a pump was installed to remove floodwater my only concern now is if Whangatane Channel banks break or erode with water
- My unit was flooded inside and I was evacuated. Had to make insurance claim on damage to unit. Had no content insurance so lose some content
- Provided counselling for traumatised flood survivors
- Severe property damage, 2 containers containing personal goods & chattels severely damaged & car write off
- Street was flooded and I walk with four children under the age of 7, children missed school for the day
- Streets were all under water lake road - William Street, Miro Place, Bonnetts Road end of road
- Travel dangerous, had to use alt routes. Damage to car & towed boat/trailer
- Vehicle damage, waterlogged paddocks, overflow via septic tank, access to anything/anywhere during tangihanga
- Was in flats in Oxford Street, Kaitaia, lost everything in flood
- Water & sewage damage to floor coverings and stored items in garage and sleepout (NOT covered by insurance). Council supplied rubbish skips for damaged "stuff". We all had to evacuate i.e. neighbours at the same level at the bottom end of our street
- Water level rise - car moved to higher ground. Water few millimetres from house floor any higher would have meant inside flooding
- Water overflowed the stopbank down stream from where we live, and back flowed along the stop bank
- Went thru bottom storey of house had no power for approx 12hrs

2006. Q8. In the next month or so, do you intend to: (Tick one in each row)

|  | Mean | Minimum | Maximum | Standard Deviation |
|--|------|---------|---------|--------------------|
| Seek information on flood risk to your community   | 1.58 | 1.00    | 3.00    | .65                |
| Seek information on things to do to prepare for a possible flood                         | 1.70 | 1.00    | 3.00    | .72                |
| Seek information on being prepared on my own for three days                              | 1.77 | 1.00    | 3.00    | .74                |
| Seek information on community planning regarding flood protection and response           | 1.68 | 1.00    | 3.00    | .72                |
| Seek information on evacuation planning  | 1.70 | 1.00    | 3.00    | .75                |
| Become involved with a local group to discuss how to reduce flood risk to your community | 1.44 | 1.00    | 3.00    | .63                |

|  |            | Count | Column Valid N % |
|--|------------|-------|------------------|
| Seek information on flood risk to your community   | No         | 111   | 51.2%            |
|  | Possibly   | 87    | 40.1%            |
|  | Definitely | 19    | 8.8%             |
| Seek information on things to do to prepare for a possible flood                         | No         | 93    | 44.9%            |
|  | Possibly   | 83    | 40.1%            |
|  | Definitely | 31    | 15.0%            |
| Seek information on being prepared on my own for three days                              | No         | 81    | 41.5%            |
|  | Possibly   | 78    | 40.0%            |
|  | Definitely | 36    | 18.5%            |
| Seek information on community planning regarding flood protection and response           | No         | 95    | 46.6%            |
|  | Possibly   | 79    | 38.7%            |
|  | Definitely | 30    | 14.7%            |
| Seek information on evacuation planning  | No         | 94    | 47.2%            |
|  | Possibly   | 70    | 35.2%            |
|  | Definitely | 35    | 17.6%            |
| Become involved with a local group to discuss how to reduce flood risk to your community | No         | 129   | 63.2%            |
|  | Possibly   | 60    | 29.4%            |
|  | Definitely | 15    | 7.4%             |

2009. Q9. Did your house, contents, vehicles, or any of your household's other possessions suffer from damage during the last flooding event? (Tick all that apply)

|              | Count | Column Valid N113 % |
|--------------|-------|---------------------|
| Flood damage | 20    | 17.7%               |
| No damage    | 29    | 25.7%               |
| Other damage | 11    | 9.7%                |

2009. Q9. Other damage (Please specify):

- Damage to equipment kept under the house e.g. lawn mowers and chainsaws etc.
- Garden destroyed
- Garden ornaments washed away. Potted plants destroyed. Mulch washed off gardens, gravel washed off drive
- Got vehicles out in time
- Our shade house and seed house have been undermined and our property continues to fall into the track bulldozed by Regional Council
- Section flooded
- Some property in garage & sheds damaged
- The flood rose 6ft in 30 min at the back of my house. 600mls right threw my house. Lucky to get vehicles out. N
- Vehicle
- Wife's car was damaged driving thru flood waters
- Windows blew out in the storm & heavy rain

2009. Q10. Was the last flood event the worst (i.e., biggest impact) flooding your household has experienced at this property?

|               | Count | Column Valid N113 % |
|---------------|-------|---------------------|
| yes           | 29    | 25.7%               |
| no            | 20    | 17.7%               |
| Not specified | 64    | 56.6%               |

2009. Q10a. If "No", when was the worst flooding experienced? (Please give details):

- 2007
- 10 July 2007: refer 8A
- 1958, last year
- 1970 Bridge got taken out
- 2001 Streets were closed off because of excess water and blocked drains
- 2005 in Pawarenga flooded our garage
- Both the same - narrowly missing flooding my house
- Cannot remember - been absent for a number of years
- During cyclone Bola
- Haven't lived here long enough to know that
- In 20yrs no flooding
- When I lived in Pakiri
- Not experienced
- Ten years ago out at Ahipara
- The big one in 2008
- Weren't adversely affected
- 1/07/2007

2009. Q11. During the last flood event, were you aware of (or did you receive) any warnings about rising floodwaters (e.g. from the civil defence emergency management, emergency services, radio or TV, neighbours, etc.)?

|               | Count | Column<br>Valid N113<br>% |
|---------------|-------|---------------------------|
| yes           | 32    | 28.3%                     |
| no            | 67    | 59.3%                     |
| Not specified | 14    | 12.4%                     |

2009. Q11a. If "yes", please describe in detail what it was, how it was delivered and who it was from:

- A warning from Civil Defence over the local radio station
- By e-mails though council - I work for them, media releases in N. Age
- CD offices - came to door - told to evacuate
- Civil Defence advised me that the rising floodwaters were lapping the stopbank top - I live beside Whangatane channel
- Civil Defence were parked outside my house, my street was flooded (Puriri Place)
- Could hear the flood waters rushing
- Family member are part of the Salvation Army. We were offered transport but wasn't needed
- Flood/heavy rain warnings from MetService
- From family members - over the radio
- From fire brigade
- From neighbours
- From people I work with, they were directly affected by flooding also news reports i.e. TV, radio
- I live next to the river and heard it coming over the stopbank next to my house before anyone even knew what was happening
- I wasn't at home at the time but neighbours kept a vigil
- local radio
- My grandson rushed in and asked to borrow our dinghy to rescue families out of their houses
- Neighbour
- Neighbours - delivered on foot (in full blown panic!)
- Neighbours, TV & radio
- Neighbours. We are flood bound elsewhere
- No direct warning
- Over radio
- Pager, radio, news, weather forecasts
- Panguru
- Personal observation Police car public address
- Radio
- Radio, local station
- Regional Council came with bulldozers chopped down all our trees and completely destabilised our land - that was the warning we got that we were doomed!
- Sky weather, national TV news reports, local radio
- Told to evacuate
- TV & radio weather reports
- TV & radio, neighbours
- Was told of raising floodwaters & evacuation of Switzer residential home over radio & by family member
- We went actually home but I know the neighbours were warned (I think via radio?)

Q11b. On becoming aware of, or receiving the warning, what did you do?

- As I live on a hill I didn't do anything
- Be wary & if travel is needed take the safest route
- Brought elderly home to get warm and dry and have a cuppa till they went back home
- Could see what was happening so made preparations
- Did nothing. Did not think I would be affected as I lived on a hill
- Evacuate
- Evacuated
- Evacuated to relatives
- Grabbed clothes, bedding, dog, rang a friend with a car to take us to his house
- Helped others in the street
- Inform members of my extended whanau
- Just watch the water flood around our house and under it
- Kept a watch on rising flood waters in our area
- Kept in contact with neighbours and phoned family
- Lifted what I could upstairs
- Moved animals, put out extra feed
- Moved boxes of stored books and clothes into house. Later discarded the worst damaged goods
- Moved to higher position
- Never had time to pack bag or anything, left my flat and my daughter came and got me
- Not in the affected area
- Not much
- Nothing. Stay home
- Packed survival kits e.g. first aid, bottled water, tinned foods, batteries. Told others
- Prepared as best as possible
- Prepared to vacate property
- Rang my son, as I did not know how to proceed
- Sent staff home if they lived in flood zone
- Started gathering spare clothing and my medication
- Stayed home - as not able to get out. At that time staying in Peria
- Stayed home streets were flooded but not my property
- Stayed put
- Taken to family members home on high ground
- The more severe flooding was out of town
- Told neighbours to switch power off and get to safety fast. 6 foot and over in 30 min at my house. A lot where worse
- Vacated
- Waited for further developments
- Watch from my gate, was told to stay on property - there was enough volunteers on hand to help
- We evacuated our home
- Went to my business location (Matthews Ave - Motor repair workshop) and lifted electrical equipment and office items etc. (live in Redan Road - area not affected by flooding)

2009. Q12. Please indicate on the scale whose responsibility you believe it is to protect us from floods. (Tick one in each row)

2006. Q23. Please indicate on the scale whose responsibility you believe it is to protect us from floods. (Tick one in each row)

|   |   | 2006  |                  | 2009  |                  |
|---|---|-------|------------------|-------|------------------|
|   |   | Count | Column Valid N % | Count | Column Valid N % |
| Central Government<br>(Ministry for Civil Defence and Emergency Management) | 1 | 15    | 8.5%             | 5     | 5.6%             |
|   | 2 | 18    | 10.2%            | 5     | 5.6%             |
|   | 3 | 37    | 21.0%            | 18    | 20%              |
|   | 4 | 29    | 16.5%            | 19    | 21.1%            |
|   | 5 | 77    | 43.8%            | 43    | 47.8%            |
| Regional Council  | 1 | 7     | 3.5%             | 3     | 3.2%             |
|   | 2 | 4     | 2.0%             | 3     | 3.2%             |
|   | 3 | 42    | 21.0%            | 13    | 13.8%            |
|   | 4 | 36    | 18.0%            | 19    | 20.2%            |
|   | 5 | 111   | 55.5%            | 56    | 59.6%            |
| District Council (including local Civil Defence and Emergency Management)   | 1 | 4     | 1.9%             | 1     | 1.0%             |
|   | 2 | 6     | 2.8%             | 3     | 3.0%             |
|   | 3 | 33    | 15.3%            | 12    | 11.9%            |
|   | 4 | 36    | 16.7%            | 18    | 17.8%            |
|   | 5 | 137   | 63.4%            | 67    | 66.3%            |
| Individual households (mine)  | 1 | 27    | 15.5%            | 12    | 13.3%            |
|   | 2 | 30    | 17.2%            | 14    | 15.6%            |
|   | 3 | 43    | 24.7%            | 22    | 24.4%            |
|   | 4 | 19    | 10.9%            | 13    | 14.4%            |
|   | 5 | 55    | 31.6%            | 29    | 32.2%            |

2009. Q13. Does a stopbank provide Kaitia with flood protection? (Tick only one)

2006. Q9. Does Kaitia have flood protection provided by a stopbank or other protection works?

|          | 2006  |                | 2009  |                |
|----------|-------|----------------|-------|----------------|
|          | Count | Column Valid % | Count | Column Valid % |
| yes      | 169   | 71.9%          | 55    | 48.7%          |
| no       | 8     | 3.4%           | 18    | 15.3%          |
| Not sure | 58    | 24.7%          | 25    | 22.1%          |

2006. Q9. does Kaitia have flood protection provided by a stopbank or other protection works?

|   | Mean | Minimum | Maximum | Standard Deviation |
|---|------|---------|---------|--------------------|
| Does Kaitia have flood protection provided by a stopbank or other protection works? | 1.31 | 1.00    | 3.00    | .53                |



2006. 9a. If "Yes", what level of protection do you think is provided by the stopbank? (Tick only one)

|                                 | Count | Column N % |
|---------------------------------|-------|------------|
| Protection against small floods | 107   | 56.9%      |
| Protection against big floods   | 51    | 27.1%      |
| Protection against all floods   | 7     | 3.7%       |
| Don't know                      | 23    | 12.2%      |

2009. Q14. Do you think that the current level of flood protection is adequate?

|               | Count | Column Valid % |
|---------------|-------|----------------|
| yes           | 13    | 11.5%          |
| no            | 62    | 54.9%          |
| Not specified | 38    | 33.6%          |

2009. Q14a. If "No", what could be improved?

|  | Count | Column Valid N113 % |
|--|-------|---------------------|
| Raise stop banks   | 46    | 40.7%               |
| Improve maintenance work                                 | 57    | 50.4%               |
| More information on how to protect myself against floods | 14    | 12.4%               |
| Other  | 17    | 15.0%               |

2009. Q14a. Other. Please specify:

- Alleviate restriction to natural overflow paths, etc.
- Beels Hill
- Clean river out dredge river outlets e.g. harbour, redirect river
- Clean rivers properly
- Clear the streams further up
- Clear water ways
- Council only takes money no work
- FNDC get their ass & fix the drain problems or sack them for someone who will
- Get some people who have some idea about what they are doing on board
- Have a person with a boat in every street (Civil Defence)
- Improve spill way (Whangatane) - how
- Keep river clean of debris
- Maintain the maintenance
- Practical information on what to do in the event of a major flood
- Repair badly surfaced roads & clean out rivers
- River outlets cleared
- The flood June 2007? Saw water come over behind mobile garage some remedial work (stopbank) was partly completed - this stop bank needs extending westwards
- Water catchment

2009. Q15. Which of the following elements make up Kaitaia Township's current public flood warning system?  
(Tick all that apply)

2006. Q10. . Which of the following elements make up Kaitaia Township's current public flood warning system?  
(Tick all that apply)

|   | 2006  |                | 2009  |                |
|---|-------|----------------|-------|----------------|
|   | Count | Column Total % | Count | Column Total % |
| Don't know  | 86    | 35.7%          | 38    | 33.6%          |
| There is no warning system  | 19    | 7.9%           | 7     | 6.2%           |
| Sirens  | 95    | 39.4%          | 39    | 34.5%          |
| Mobile public address systems   | 13    | 5.4%           | 10    | 8.8%           |
| Flashing lights   | 12    | 5.0%           | 9     | 8.0%           |
| Radio and TV announcements  | 99    | 41.1%          | 44    | 38.9%          |
| Flood Alert Scale   | 9     | 3.7%           | 9     | 8.0%           |
| Neighbourhood Watch network   | -     | -              | 15    | 13.3%          |
| Text messaging  | -     | -              | 5     | 4.4%           |
| Telephone contact   | -     | -              | 23    | 20.4%          |
| Warning from neighbours, friends or family  | 79    | 32.8%          | 37    | 32.7%          |
| Information on the internet   | 8     | 3.3%           | 2     | 1.8%           |
| Door-knocking by Civil Defence and Emergency Management staff or local emergency services | 46    | 19.1%          | 32    | 28.3%          |
| Others  | -     | -              | 5     | 4.4%           |

- = question not asked in 2006 survey

2009. Q15 Others

- Civil Defence (Council)
- Emails
- Fire
- Next time Council come with bulldozers out the back of our property we should lie down in their path and resort to Greenpeace tactics to stop them!
- Use the fire siren. Have a flood emergency signal & inform everyone what it is/what to do if we hear it

2006 Q10. Others

- Aware that consideration around drains is currently being explored by FNDC
- Flood level checks
- Haven't heard of any
- Look out window
- Not a readily known system
- River height sensors

2009. Q16. What elements would you prefer to see making up a flood warning system for Kaitaia?

2006. Q11. What elements would you prefer to see making up a flood warning system for Kaitaia?

2009 preferred elements

- Siren
- CDEM door knocking
- TC & radio

2006 preferred elements

- Flood level checks
- River height sensors
- Physical checks

2006. Q16. Are you aware of the evacuation procedures for your area?

|   |     | Count | Column N % |
|---|-----|-------|------------|
| Are you aware of the evacuation procedures for your area? | Yes | 18    | 7.7%       |
|   | No  | 217   | 92.3%      |

2006. Q17. Do you know where your local evacuation routes are?

|   |     | Count | Column N % |
|---|-----|-------|------------|
| Do you know where your local evacuation routes are? | Yes | 24    | 10.3%      |
|   | No  | 209   | 89.7%      |

2009. Q17. Have you seen any flood hazard maps for Kaitaia Township?

2006. Q7. Have you seen any flood hazard maps for Kaitaia Township?

|  |          | 2006  |               | 2009  |               |
|--|----------|-------|---------------|-------|---------------|
|  |          | Count | Table Valid % | Count | Table Valid % |
| Have you seen any flood hazards maps for Kaitaia township? | Yes      | 22    | 9.5%          | 5     | 4.4%          |
|  | No       | 183   | 78.9%         | 99    | 87.6%         |
|  | Not sure | 27    | 11.6%         | 4     | 3.5%          |

2009. Q17. If :Yes", what was this information?

- FNDC Flood Hazard Areas
- Low lying regions previous flood levels etc.
- Map of possible flooding, if landslide happens near Allen Bell Road
- Something from Regional Council showing flood plain

2006. Q7. .If :Yes", what was this information?

- 1:200.000 A4 photocopy. Requested hazard map for Kaitaia Township.
- Experienced the flood of 1958 when Kaitaia's main street became a raging river
- Council LIM report
- Council, Awanui flood plain rates adjustment
- District Scheme
- Houses evacuated at Rongopai Place
- I'm aware there are flood plans in and around Kaitaia and know where to go to view at FNDC Service Centre if need to
- In the LIM
- Kaitaia Borough District Scheme 1985
- Limited protection in place re: Awanui R and associated streams, but main risk is localized flood thru poor storm water control measures
- Local Council
- Maps denoting drainage ditches and channels from drainage advisory committee
- N.R.A
- Newspaper reports of flooding
- Newspaper. Shaded map
- Not particularly informative
- Regional Council flood plan
- Regional Council Flood Protection
- Risk areas
- Some years ago the Main Road was flooded, some gardens too.
- Stormwater Management Plan GHD, Far North District revised proposed plan
- Telephone book-skim read
- We are surrounded by areas that could flood - but work is been done on it
- Years ago when we had a down pour can't remember the document also some documents around the river running east side of Kaitaia

2009. Q18. Are you aware of the Kaitaia Community Response Plan?

|   |  | Count | Table Valid<br>N113 % |
|---|--|-------|-----------------------|
| Are you aware of the Kaitaia Community Response Plan? | Yes, I am aware of the plan but have not seen the plan | 19    | 16.8%                 |
|   | Yes, I have seen the plan                              | 4     | 3.5%                  |
|   | No   | 84    | 74.3%                 |

2009. Q19. If you know about, or have seen the plan, have you used it?

|   |     | Count | Table Valid<br>N113 % |
|---|-----|-------|-----------------------|
| If you know about, or have seen the plan, have you used it? | Yes | 2     | 1.8%                  |
|   | No  | 24    | 21.2%                 |

2009. Q19a. If "Yes", how have you used the plan?

Implemented at last flooding by incident control

2009. Q20. What improvements (if any) might you suggest for the plan?

- A mail drop
- Copy to every household
- Each household in flood prone areas should be provided with a basic 'to do' and contacts list on A4 card type which could be attached to inside kitchen cupboard for quick and easy reference
- Get a decent one
- I haven't seen it 18-1
- Inject it into each household, make it visible to public e.g. schools, shops
- Make it more clean and accessible to the public etc., in shops, garages & centres
- Not sure
- Pass!
- Plan available

2006. Q20. Did you attend the public meeting on the community response plan for Kaitia at the Far North Community Centre (9 August 2006)?

|   |     | Count | Column Valid N % |
|---|-----|-------|------------------|
| Did you attend the public meeting on the community response for Kaitia at the Far North Community Centre (9 August 2006)? | Yes | 5     | 2.2%             |
|   | No  | 225   | 97.8%            |

2009. Q21. If you heard a flood warning for your community what would you do?  
(Tick all that apply)

2006. Q12. If you heard a flood warning for your community what would you do?  
(Tick all that apply)

|  | 2006  |                | 2009  |                |
|--|-------|----------------|-------|----------------|
|  | Count | Column Total % | Count | Column Total % |
| Don't know   | 10    | 4.1%           | 9     | 8.0%           |
| Listen to radio  | 170   | 70.5%          | 70    | 61.9%          |
| Listen to TV   | 101   | 41.9%          | 43    | 38.1%          |
| Evacuate at once   | 33    | 13.7%          | 17    | 15.0%          |
| Evacuate at a later stage  | 33    | 13.7%          | 15    | 13.3%          |
| Contact MetService   | 3     | 1.2%           | 1     | 0.9%           |
| Check the internet   | 14    | 5.8%           | 11    | 9.7%           |
| Stay at home   | 40    | 16.6%          | 41    | 36.3%          |
| Go and check the river   | 38    | 15.8%          | 30    | 26.5%          |
| Contact your neighbours  | 119   | 49.4%          | 58    | 51.3%          |
| Contact an emergency service   | 27    | 11.2%          | 18    | 15.9           |
| Stay inside and wait to be told what to do   | 74    | 30.7%          | 44    | 38.9%          |
| Meet at a designated evacuation centre or assembly point                             | 57    | 23.7%          | 27    | 23.9%          |
| Contact you District Council (includes local Civil Defence and Emergency Management) | 76    | 31.5%          | 26    | 23.0%          |
| Contact Central Government (Ministry of Civil Defence and Emergency Management)      | 19    | 7.9%           | 6     | 5.3%           |
| Other  |       |                | 12    | 10.6%          |

2009. Q21. Other (Please specify):

- Contact friends/whanau
- Don't know which radio station if local, don't know the frequency for immediate location
- Evacuate immediately if told to
- Get on the roof
- Most nearest
- Panic
- Phone friends & people affected by last flood
- Phone my daughter
- Pray
- Save ourselves
- See how it pans out. Prepares

2006. Q12. Other (Please specify):

- Act on assessment of situations
- Contact relatives
- Depends on the location of the flooding
- Evacuate if prove needed and if possible
- Fire Alarm
- Hard to answer - our area does not flood
- Have a feed
- I live on a hill
- If I am safe on a hill I would see if my place can be used for refuge
- Make sure the children, friends, and family are ok
- My common sense
- Panic!
- Phone my daughter
- Possibly alert friends and family at risk
- Prepare for the worst
- Prepare to leave when instructed
- Ring daughter 1/2 mile away
- Ring family
- Use my common sense
- Wait for help to arrive (I am disabled)
- We live on a hill. If I lived on the flat my reaction would be No.5

2009. Q22. Who would you contact for help in a flood? (Tick only one)

2006. Q13. Who would you contact for help in a flood? (Tick only one)

|  | 2006  |                | 2009  |                |
|--|-------|----------------|-------|----------------|
|  | Count | Column Total % | Count | Column Total % |
| Don't know                             | 25    | 11.5%          | 13    | 11.5%          |
| 111 emergency services                 | 123   | 56.7%          | 65    | 57.5%          |
| District Council (includes local CDEM) | 58    | 26.7%          | 23    | 20.4%          |
| Central Government (MCDEM)             | 2     | .9%            | 0     | 0%             |
| Regional Council                       | 4     | 1.8%           | 1     | 0.9%           |
| Earthquake Commission                  | 0     | .0%            | 0     | 0%             |
| MetService                             | 0     | .0%            | 0     | 0%             |
| NIWA                                   | 0     | .0%            | 0     | 0%             |
| Other                                  | 5     | 2.3%           | 6     | 5.3%           |

2009. Q22. Other (Please specify):

- Family
- Family/no faith in councils
- God!
- My daughter
- Whanau/friends

2006. Q13. Other (Please specify):

Other (please specify)

- Be self-sufficient
- Church members
- Coast Guard
- Family
- Family on the outskirts of Kaitaia
- It's unlikely I'd be affected
- Kitten
- My daughter
- My family
- Not applicable
- Our area does not flood
- Pray to god!
- Toss kitchen
- Use my own devices

2009. Q23. If you were told to evacuate your property during a flood, would you: (Tick one)

2006. Q14. If you were told to evacuate your property during a flood, would you: (Tick one)

|   | 2006  |                | 2009  |                |
|---|-------|----------------|-------|----------------|
|   | Count | Column Total % | Count | Column Total % |
| Don't know  | 0     | .0%            | 8     | 7.1%           |
| Do nothing-stay put/at home                                       | 11    | 4.9%           | 5     | 4.4%           |
| Wait until the water reaches my house and then decide             | 14    | 6.2%           | 5     | 4.4%           |
| Evacuate everyone immediately when told                           | 169   | 75.1%          | 69    | 61.1%          |
| Evacuate most of the household immediately, but leave someone     | 11    | 4.9%           | 2     | 1.8%           |
| Wait for the Council /emergency services to 'door-knock' my house | 7     | 3.1%           | 8     | 7.1%           |
| Call for additional assistance to help evacuate                   | 7     | 3.1%           | 6     | 5.3%           |
| Other   | 6     | 2.6%           | 5     | 4.4%           |

2009. Q23. Other (Please specify):

- Depends on situation
- Evacuate all - remain myself with plan to evacuate if situation possible to worsen quickly. Assts with info coming thru from Q22
- I am above the river
- I can't tick one
- I would decide if who ever was telling me to leave could be trusted
- My house won't flood as its up too high

2006. Q14. Other (Please specify):

- A flood would not affect our house live on a hill
- As in 9 above
- Check river to see if water is rising or falling
- Gather up a few things and leave
- Get drunk
- Help myself
- If it floods at my house, Kaitaia is in deep s\*\*t!
- It won't happen, we live on a hill

- It would depend upon the circumstances
- Not applicable
- Our area does not flood
- Panic
- Put valuables in the car and drive up to high ground
- Use my common sense

2009. Q24. If you decided to evacuate, where would you go? (Tick one)

2006. Q15. If you decided to evacuate, where would you go? (Tick one)

|                                      | Count | Column<br>N107 % | Column<br>Total N113<br>% | Count | Column<br>N107 % | Column<br>Total N113<br>% |
|--------------------------------------|-------|------------------|---------------------------|-------|------------------|---------------------------|
| Don't know                           | 10    | 4.5%             | 4.1%                      | 9     | 8.4%             | 8.0%                      |
| To a designated<br>evacuation centre | 119   | 53.4%            | 49.4%                     | 53    | 49.5%            | 46.9%                     |
| To family or a<br>friend's house     | 63    | 28.3%            | 26.1%                     | 30    | 28.0%            | 26.5%                     |
| To another location                  | 15    | 6.7%             | 6.2%                      | 11    | 10.3%            | 9.7%                      |
| I would not<br>evacuate              | 16    | 7.2%             | 6.6%                      | 4     | 3.7%             | 3.5%                      |

2009. Q24. To another location (Please specify):

- 2 x son's homes - high ground
- Friends Kaingaroa
- High ground
- Higher ground
- Kaitaia College
- Okahu Road anywhere with high elevation
- Somewhere high
- The pub (HaHa!!!)
- Top of the hill
- Up on Hill Road

2006. Q15. To another location (please specify):

- Another town or city
- Daughter's home
- Depending on type of emergency
- Do not know where in Kaitaia
- Family
- Higher ground
- Hill top property out of town
- Hopefully Mangamuka's
- If I could not get to designated area I would get to the highest point available
- If there was one?
- Not applicable
- Our area does not flood
- Outside flood area
- Own house
- Police station work place
- Same property up hill
- Somewhere where you won't get flooded
- The hills
- The lookout -Okahu Rd
- To high ground
- To top of Donalds Road (if not, to top of my section)
- Top of Okahu Rd
- Vegar Street
- We have a batch, but coastal???
- Work/office



2009. Q25. How much time would you need to gather essential items (medication, documents) before evacuating? Please specify:

|         |        | Count | Column Valid % |
|---------|--------|-------|----------------|
| Minutes | 1.00   | 1     | 0.9%           |
|         | 2.00   | 1     | 0.9%           |
|         | 3.00   | 1     | 0.9%           |
|         | 4.00   | 0     | 0%             |
|         | 5.00   | 8     | 7.1%           |
|         | 6.00   | 0     | 0%             |
|         | 7.00   | 0     | 0%             |
|         | 8.00   | 1     | 0.9%           |
|         | 9.00   | 0     | 0%             |
|         | 10.00  | 21    | 18.6%          |
|         | 15.00  | 25    | 22.1%          |
|         | 20.00  | 12    | 10.6%          |
|         | 30.00  | 17    | 15.0%          |
|         | 40.00  | 1     | 0.9%           |
|         | 50.00  | 0     | 0%             |
|         | 60.00  | 3     | 2.7%           |
|         | 70.00  | 0     | 0%             |
|         | 80.00  | 0     | 0%             |
|         | 90.00  | 2     | 1.8%           |
|         | 120.00 | 1     | 0.9%           |

2009. Q26. Would you need assistance to evacuate (e.g., transport)?

|  |     | Count | Table Valid N113 % |
|--|-----|-------|--------------------|
| Would you need assistance to evacuate (e.g., transport)? | Yes | 33    | 29.2%              |
|  | No  | 72    | 63.7%              |

2009. Q27. If there were an existing evacuation plan, indicating exactly where and when to go, would you make use of it?

|   |     | Count | Table Valid N113 % |
|---|-----|-------|--------------------|
| If there were an existing evacuation plan, indicating exactly where and when to go, would you make use of it? | Yes | 98    | 86.7%              |
|   | No  | 5     | 4.4%               |

2009. Q28. Do you know where the nearest evacuation centre is?

|   |     | Count | Table Valid N113 % |
|---|-----|-------|--------------------|
| Do you know where the nearest evacuation centre is? | Yes | 19    | 16.8%              |
|   | No  | 88    | 77.9%              |

2009. Q28. Yes (Please specify):

- College
- Community Hall
- Hospital, Kaitaia college
- Kaitaia college
- KTA Primary school
- Son's homes are in very high areas
- St Saviours church?

2009. Q29. Who in the past have you contacted to get information about an ongoing flood (e.g. severity, possible evacuation, etc.)?

|                    | Count | Column<br>Valid N113<br>% |
|--------------------|-------|---------------------------|
| Neighbours/friends | 59    | 52.2%                     |
| Local Council      | 17    | 15.0%                     |
| Regional Council   | 8     | 7.1%                      |
| Others             | 47    | 41.6%                     |

2009. Q29. Others

- Fire Brigade
- Internet
- Internet, Metservice, 0800 number
- Local radio
- MetService
- No one
- No one because I haven't needed to
- None apply
- Radio
- Radio (local)
- Radio, Metservice
- Radio, newspapers
- Radio, TV
- TV - radio
- Whanau

2009. Q30. In a flood, how would you prefer to receive general information about that flood? (Tick all that apply)

2006. Q18. In a flood, how would you prefer to receive general information about that flood? (Tick all that apply)

|                                 | 2006  |              | 2009  |              |
|---------------------------------|-------|--------------|-------|--------------|
|                                 | Count | Column Total | Count | Column Total |
|                                 |       | N %          |       | N %          |
| Radio                           | 189   | 78.1%        | 69    | 61.1%        |
| TV                              | 105   | 43.4%        | 41    | 36.3%        |
| Door-knocking                   | 98    | 40.5%        | 61    | 54%          |
| Mobile public address           | 86    | 35.5%        | 36    | 31.9%        |
| Internet                        | 13    | 5.4%         | 13    | 11.5%        |
| Email                           | 9     | 3.7%         | 13    | 11.5%        |
| Siren                           | 118   | 48.8%        | 60    | 53.1%        |
| Emergency services announcement | 95    | 39.3%        | 40    | 35.4%        |
| Telephone                       | 88    | 36.4%        | 52    | 46.0%        |
| Cellphone text message          | 48    | 19.8%        | 40    | 35.4%        |
| Flood Alert Scale               | 38    | 15.7%        | 19    | 16.8%        |
| Don't know                      | 3     | 1.2%         | 3     | 2.7%         |
| Other                           | 1     | .4%          | 3     | 2.7%         |

2009. Q30. Other (Please specify):

- Any of the 3 above
- Fire siren
- P.A system at netball courts South Road - can be heard over half of the town

2006. Q18. Other (Please specify):

- Do cellphones still work? If so this would reach many people, quickly
- I don't often listen to radio and TV. Never listen to local radio only National Radio and Concert programme
- Letter
- Our area does not flood
- There may not be a choice at the time. Depends on severity of conditions as to which service is still functioning

2009. Q31. Have you heard or received any information about preparing for floods from any of the following places? (tick all that apply)

2006. Q19. Have you heard or received any information about preparing for floods from any of the following places? (tick all that apply)

|   | 2006  |                | 2009  |                |
|---|-------|----------------|-------|----------------|
|   | Count | Column Total % | Count | Column Total % |
| I haven't heard or received any information about floods                  | 115   | 47.5%          | 51    | 45.1%          |
| Regional Council  | 19    | 7.9%           | 14    | 12.4%          |
| Police or Fire service  | 15    | 6.2%           | 12    | 10.6%          |
| Earthquake Commission   | 8     | 3.3%           | 3     | 2.7%           |
| MetService  | 6     | 2.5%           | 7     | 6.2%           |
| Television and radio  | 48    | 19.8%          | 20    | 17.7%          |
| Newspaper or magazines  | 35    | 14.5%          | 20    | 17.7%          |
| Friends or relatives  | 17    | 7.0%           | 19    | 16.8%          |
| Neighbourhood Watch groups  | 8     | 3.3%           | 8     | 7.1%           |
| Marae   | 4     | 1.7%           | 4     | 3.5%           |
| Where you work  | 16    | 6.6%           | 7     | 6.2%           |
| Posters or postcards  | 12    | 5.0%           | 8     | 7.1%           |
| Telephone book/street directory   | 64    | 26.4%          | 23    | 20.4%          |
| My insurance company/agent  | 8     | 3.3%           | 4     | 3.5%           |
| Internet  | 7     | 2.9%           | 1     | 0.9%           |
| Email   | 4     | 1.7%           | 1     | 0.9%           |
| Cellular phone Text messages  | 3     | 1.2%           | 2     | 1.8%           |
| Central Government (Ministry of Civil Defence and Emergency Management)   | 13    | 5.4%           | 5     | 4.4%           |
| District Council (including local Civil Defence and Emergency Management) | 53    | 21.9%          | 16    | 14.2%          |
| School hand-outs (e.g. brochures, homework)                               | 6     | 2.5%           | 1     | 0.9%           |
| Meetings. hui. seminars or workshops                                      | 10    | 4.1%           | 5     | 4.4%           |
| Businesses (e.g. pamphlets in power or phone accounts)                    | 8     | 3.3%           | 2     | 1.8%           |
| Service organisations (e.g., Red Cross)                                   | 5     | 2.1%           | 4     | 3.5%           |
| NIWA  | 3     | 1.2%           | 2     | 1.8%           |
| Other   | 3     | 1.2%           | 0     | 0%             |

2009. Q31. Other (please specify) No answers

2006. Q19. Other (please specify)

- By word of mouth
- Can't recall
- Church
- Far North District Council
- Fax at work
- Maybe but not sure
- Satan
- Yes put on my title by FNDC. They would of known this when they subdivided and put it on the title then not 20yrs later

2009. Q32. Have you asked any of the following people, groups or organisations for information on how to get ready for floods? (Tick all that apply)

2006. Q21. Have you asked any of the following people, groups or organisations for information on how to get ready for floods? (Tick all that apply)

|   | 2006  |                | 2009  |                |
|---|-------|----------------|-------|----------------|
|   | Count | Column Total % | Count | Column Total % |
| No, I haven't asked anyone  | 194   | 80.2%          | 75    | 66.4%          |
| Friends   | 16    | 6.6%           | 16    | 14.2%          |
| Neighbours  | 14    | 5.8%           | 14    | 12.4%          |
| Relatives   | 20    | 8.3%           | 19    | 16.8%          |
| Regional Council  | 3     | 1.2%           | 3     | 2.7%           |
| Police or Fire Service  | 6     | 2.5%           | 6     | 5.3%           |
| Earthquake Commission   | 2     | .8%            | 0     | 0%             |
| MetService  | 1     | .4%            | 1     | 0.9%           |
| NIWA  | 1     | .4%            | 0     | 0%             |
| Business establishments   | 2     | .8%            | 0     | 0%             |
| My workplace  | 7     | 2.9%           | 2     | 1.8%           |
| Marae   | 2     | .8%            | 2     | 1.8%           |
| My child's school   | 3     | 1.2%           | 1     | 0.9%           |
| Central Government (Ministry for Civil Defence and Emergency Management)  | 3     | 1.2%           | 1     | 0.9%           |
| District Council (including local Civil Defence and Emergency Management) | 9     | 3.7%           | 4     | 3.5%           |
| Other   | 2     | .8%            | 2     | 1.8%           |

2009. Q32. Other (please specify)

- My house is on an elevated section it would take a tsunami to flood it
- No not really I work day & night shifts, when not at work I tend to want to just kick back fishing & relaxing - getting information about floods & what to do is not a major priority. But I will try to get the information

2006. Q21. Other (please specify)

- Common sense
- Don't live in flood area of township
- I do not bother with that
- I haven't asked-I've been told!
- I would imagine you would take care of your own. We always have.
- My religion Jehovah Witnesses
- Nothing at all

2009. Q33. How would you PREFER to get information on how to prepare your household / business for floods?  
(Tick all that apply)

2006. Q.22. How would you PREFER to get information on how to prepare your household / business for floods?  
(Tick all that apply)

|  | 2006  |                | 2009  |                |
|--|-------|----------------|-------|----------------|
|  | Count | Column Total % | Count | Column Total % |
| Brochure received in the mail                        | 194   | 80.2%          | 83    | 73.5%          |
| Radio Advertisement                                  | 65    | 26.9%          | 20    | 17.7%          |
| TV advertisement                                     | 62    | 25.6%          | 23    | 20.4%          |
| Community display                                    | 45    | 18.6%          | 17    | 15.0%          |
| Internet   | 15    | 6.2%           | 5     | 4.4%           |
| Public meeting or hui                                | 25    | 10.3%          | 17    | 15.0%          |
| Fridge magnet received in the mail                   | 98    | 40.5%          | 40    | 35.4%          |
| Brochure picked up from an organisation              | 9     | 3.7%           | 7     | 6.2%           |
| Home visit by Civil Defence and Emergency Management | 41    | 16.9%          | 23    | 20.4%          |
| Newspaper or magazine advertisement                  | 72    | 29.8%          | 35    | 31.0%          |
| Other  | 3     | 1.2%           | 4     | 3.5%           |

2009. Q33. Other (Please specify):

- 0800 flood plan
- No preference
- Thru existing health/community workers

2006. Q33. How many storeys does your house have?  
Number of storeys excluding basement and loft/attic

|  |      | Count | Column Valid N % |
|--|------|-------|------------------|
| How many storeys does your house have? (Number of storeys excluding basement and loft/attic) | 0.00 | 2     | 1.0%             |
|  | 1.00 | 178   | 86.0%            |
|  | 2.00 | 25    | 12.1%            |
|  | 3.00 | 2     | 1.0%             |

2006. Q34. Is your house raised above ground level? (Tick only one)

|  |          | Count | Column Valid N % |
|--|----------|-------|------------------|
| Is your house raised above ground level? | Yes      | 138   | 61.1%            |
|  | Not sure | 15    | 6.6%             |
|  | No       | 73    | 32.3%            |

2006. Q22. Other (Please specify):

- CD Training Course
- Detailed info pack in mail
- Full Civil Defence organised plan
- Letter
- Planned for myself
- A letter sent to every mail box
- Seek info and advice from IRD and G.W. Bush & then ignore it!!
- School newsletters

2009. Q34. Which of the following have you or your family done to prepare for an emergency? (Tick all that apply)

2006. Q25. Which of the following have you or your family done to prepare for an emergency? (Tick all that apply)

|   | 2006  |                | 2009  |                |
|---|-------|----------------|-------|----------------|
|   | Count | Column Total % | Count | Column Total % |
| I/we have done nothing to prepare for an emergency  | 71    | 29.3%          | 35    | 31.0%          |
| Made sure I/we have a portable radio  | 111   | 45.9%          | 46    | 40.7%          |
| Made sure I/we have a torch   | 160   | 66.1%          | 65    | 57.5%          |
| Made sure I/we have spare batteries   | 111   | 45.9%          | 51    | 45.1%          |
| Made sure I/we have a first aid kit   | 132   | 54.5%          | 49    | 43.4%          |
| Made sure I/we have rubber gloves   | 83    | 34.3%          | 29    | 25.7%          |
| Made sure I/we have candles and waterproof matches  | 116   | 47.9%          | 41    | 36.3%          |
| Made sure I/we have a waterproof bag for valuables  | 55    | 22.7%          | 24    | 21.2%          |
| Made a list of emergency contact numbers  | 50    | 20.7%          | 23    | 20.4%          |
| Stockpiled water and food for three days  | 75    | 31.0%          | 36    | 31.9%          |
| Picked an emergency contact person outside of the district  | 24    | 9.9%           | 10    | 8.8%           |
| Arranged for someone in the family to learn first aid   | 56    | 23.1%          | 22    | 19.5%          |
| Found out if we are in an area particularly vulnerable to flooding  | 73    | 30.2%          | 33    | 29.2%          |
| Had home inspected for preparedness   | 1     | .4%            | 6     | 5.3%           |
| Talked to family members about what to do if a flood warning is heard   | 33    | 13.6%          | 23    | 20.4%          |
| Thought about how to lift precious items off the ground in a flood  | 41    | 16.9%          | 24    | 21.2%          |
| Considered how to access the roof in a flood  | 35    | 14.5%          | 13    | 11.5%          |
| Considered access to essential items needed in a flood (e.g. rope for securing items so they do not float away) | 18    | 7.4%           | 9     | 8.0%           |
| Prepared a home flood plan  | 14    | 5.8%           | 16    | 14.2%          |
| Prepared an emergency kit   | 30    | 12.4%          | 17    | 15.0%          |
| Other   | 2     | .8%            | 5     | 4.4%           |

2009. Q34 Other (Please specify):

- Have some emergency supplies at a higher building on our property
- I will be seeking more information on this topic I will strive to be more prepared - as a whole whanau also
- No
- Not required where I live. If my house was under water half of NZ would be!
- Showed our children how to act when in need due to flooding where to go and what exit to use if need be

2006. Q25 Other (Please specify):

- A flood would not affect us
- Arranged with friends to evacuate to
- But we do have a lot of the items above!!
- Does not apply to me
- Evacuation route
- Evacuation to boat
- Gas lights (portable) and cylinders
- Hope
- Last big flood in Kaitaia - no time to prepare
- LPG cooking equipment on hand, tarpaulin, ropes, etc.
- Made sure all family members have their own Emergency Survival Kit
- None
- Pray
- Printed a cell-phone contact for all extended family
- We are collecting things together
- We live on a hill
- We live on high ground
- Would use our camping gas cooker and lantern as we do when we have a power outage

2009. Q35. Since August 2006 did you do any of the following (Tick one in each row)

|  |           | Count | Column Valid N113 % |
|--|-----------|-------|---------------------|
| Seek information on flood risk to your community   | Yes       | 16    | 14.2%               |
|  | No        | 66    | 58.4%               |
|  | Intend to | 8     | 7.1%                |
| Seek information on things to do to prepare for a possible flood                         | Yes       | 22    | 19.5%               |
|  | No        | 59    | 52.2%               |
|  | Intend to | 9     | 8.0%                |
| Seek information on being prepared on my own for three days                              | Yes       | 21    | 18.6%               |
|  | No        | 58    | 51.3%               |
|  | Intend to | 11    | 9.7%                |
| Seek information on community planning regarding flood protection and response           | Yes       | 5     | 4.4%                |
|  | No        | 71    | 62.8%               |
|  | Intend to | 9     | 8.0%                |
| Seek information on evacuation planning  | Yes       | 8     | 7.1%                |
|  | No        | 69    | 61.1%               |
|  | Intend to | 12    | 10.6%               |
| Become involved with a local group to discuss how to reduce flood risk to your community | Yes       | 4     | 3.5%                |
|  | No        | 76    | 67.3%               |
|  | Intend to | 7     | 6.2%                |

2009. Q36. Did the 2007 floods have any impact on getting prepared at a household level?

|   |     | Count | Table Valid N113 % |
|---|-----|-------|--------------------|
| Did the 2007 floods have any impact on getting prepared at a household level? | Yes | 37    | 32.7%              |
|   | No  | 63    | 55.8%              |



2009. Q37. To what extent might each of the following prevent you from preparing for floods: (Tick one in each row)

2006. Q26. To what extent might each of the following prevent you from preparing for floods: (Tick one in each row)

|                                   |   | 2006  |                  | 2009  |                  |
|-----------------------------------|---|-------|------------------|-------|------------------|
|                                   |   | Count | Column Valid N % | Count | Column Valid N % |
| Cost                              | 1 | 62    | 33.0%            | 34    | 39.1%            |
|                                   | 2 | 24    | 12.8%            | 9     | 10.3%            |
|                                   | 3 | 41    | 21.8%            | 14    | 16.1%            |
|                                   | 4 | 26    | 13.8%            | 14    | 16.1%            |
|                                   | 5 | 35    | 18.6%            | 13    | 14.9%            |
| Skill required to prepare         | 1 | 68    | 37.2%            | 33    | 41.3%            |
|                                   | 2 | 35    | 19.1%            | 20    | 25.0%            |
|                                   | 3 | 36    | 19.7%            | 19    | 23.8%            |
|                                   | 4 | 22    | 12.0%            | 2     | 2.5%             |
|                                   | 5 | 22    | 12.0%            | 6     | 7.5%             |
| Time to prepare                   | 1 | 47    | 26.0%            | 24    | 28.6%            |
|                                   | 2 | 42    | 23.2%            | 14    | 16.7%            |
|                                   | 3 | 42    | 23.2%            | 25    | 29.8%            |
|                                   | 4 | 25    | 13.8%            | 7     | 8.3%             |
|                                   | 5 | 25    | 13.8%            | 14    | 16.7%            |
| Other things to think about       | 1 | 53    | 30.6%            | 22    | 27.5%            |
|                                   | 2 | 29    | 16.8%            | 13    | 16.3%            |
|                                   | 3 | 39    | 22.5%            | 22    | 27.5%            |
|                                   | 4 | 31    | 17.9%            | 9     | 11.3%            |
|                                   | 5 | 21    | 12.1%            | 14    | 17.5%            |
| Need for co-operation with others | 1 | 54    | 30.3%            | 26    | 33.8%            |
|                                   | 2 | 31    | 17.4%            | 11    | 14.3%            |
|                                   | 3 | 40    | 22.5%            | 23    | 29.9%            |
|                                   | 4 | 29    | 16.3%            | 5     | 6.5%             |
|                                   | 5 | 24    | 13.5%            | 12    | 15.6%            |
| Lack of knowledge or information  | 1 | 44    | 21.9%            | 25    | 28.7%            |
|                                   | 2 | 27    | 13.4%            | 9     | 10.3%            |
|                                   | 3 | 46    | 22.9%            | 18    | 20.7%            |
|                                   | 4 | 36    | 17.9%            | 13    | 14.9%            |
|                                   | 5 | 48    | 23.9%            | 22    | 25.3%            |

2009. Q38. Is your house insured against floods? (Tick only one)

2006. Q35. Is your house insured against floods? (Tick only one)

|   |          | 2006  |                | 2009  |                |
|---|----------|-------|----------------|-------|----------------|
|   |          | Count | Column Total % | Count | Column Total % |
| Is your house insured against floods? (Tick only one) | Yes      | 126   | 55.8%          | 68    | 60.2%          |
|   | No       | 21    | 9.3%           | 15    | 13.3%          |
|   | Not sure | 79    | 35.0%          | 24    | 21.2%          |

2009. Q39. Are your contents insured against floods? (Tick only one)

2006. Q36. Are your contents insured against floods? (Tick only one)

|   |          | 2006  |                | 2009  |                |
|---|----------|-------|----------------|-------|----------------|
|   |          | Count | Column Total % | Count | Column Total % |
| Are your contents insured against floods? | Yes      | 133   | 58.8%          | 64    | 56.6%          |
|   | No       | 56    | 24.8%          | 25    | 22.1%          |
|   | Not sure | 37    | 16.4%          | 18    | 15.9%          |

2009. Q40. How long have you lived in your community?

2006. Q31. How long have you lived in your community?

|       |       | 2006  |                | 2009  |                |
|-------|-------|-------|----------------|-------|----------------|
|       |       | Count | Column Total % | Count | Column Total % |
| Years | 1.00  | 10    | 4.5%           | 2     | 1.8%           |
|       | 1.50  | 5     | 2.3%           | 0     | 0%             |
|       | 2.00  | 11    | 5.0%           | 6     | 5.3%           |
|       | 2.50  | 2     | .9%            | 0     | 0%             |
|       | 3.00  | 10    | 4.5%           | 4     | 3.5%           |
|       | 4.00  | 6     | 2.7%           | 7     | 6.2%           |
|       | 5.00  | 6     | 2.7%           | 5     | 4.4%           |
|       | 5.50  | 2     | .9%            | 0     | 0%             |
|       | 6.00  | 5     | 2.3%           | 3     | 2.7%           |
|       | 6.50  | 1     | .5%            | 0     | 0%             |
|       | 7.00  | 4     | 1.8%           | 4     | 3.5%           |
|       | 8.00  | 4     | 1.8%           | 2     | 1.8%           |
|       | 9.00  | 2     | .9%            | 4     | 3.5%           |
|       | 10.00 | 12    | 5.4%           | 2     | 1.8%           |
|       | 11.00 | 2     | .9%            | 2     | 1.8%           |
|       | 12.00 | 5     | 2.3%           | 2     | 1.8%           |
|       | 13.00 | 1     | .5%            | 1     | 0.9%           |
|       | 14.00 | 4     | 1.8%           | 3     | 2.7%           |
|       | 15.00 | 5     | 2.3%           | 3     | 2.7%           |
|       | 16.00 | 6     | 2.7%           | 2     | 1.8%           |
|       | 17.00 | 4     | 1.8%           | 1     | 0.9%           |
|       | 18.00 | 2     | .9%            | 0     | 0%             |
|       | 19.00 | 3     | 1.4%           | 2     | 1.8%           |
|       | 20.00 | 9     | 4.1%           | 9     | 8.0%           |
|       | 21.00 | 3     | 1.4%           | 0     | 0%             |
|       | 22.00 | 2     | .9%            | 0     | 0%             |
|       | 23.00 | 1     | .5%            | 3     | 2.7%           |
|       | 24.00 | 2     | .9%            | 3     | 2.7%           |
|       | 25.00 | 8     | 3.6%           | 2     | 1.8%           |
|       | 26.00 | 2     | .9%            | 2     | 1.8%           |
|       | 27.00 | 5     | 2.3%           | 3     | 2.7%           |
|       | 28.00 | 1     | .5%            | 1     | 0.9%           |
|       | 29.00 | 1     | .5%            | 1     | 0.9%           |
|       | 30.00 | 9     | 4.1%           | 1     | 0.9%           |
|       | 31.00 | 1     | .5%            | 0     | 0%             |
|       | 32.00 | 1     | .5%            | 1     | 0.9%           |

|       | 2006  |                   | 2009  |                   |
|-------|-------|-------------------|-------|-------------------|
|       | Count | Column<br>Total % | Count | Column<br>Total % |
| 34.00 | 2     | .9%               | 3     | 2.7%              |
| 35.00 | 3     | 1.4%              | 0     | 0%                |
| 36.00 | 1     | .5%               | 0     | 0%                |
| 38.00 | 3     | 1.4%              | 0     | 0%                |
| 39.00 | 1     | .5%               | 1     | 0.9%              |
| 40.00 | 7     | 3.2%              | 6     | 5.3%              |
| 41.00 | 2     | .9%               | 0     | 0%                |
| 42.00 | 2     | .9%               | 3     | 2.7%              |
| 43.00 | 1     | .5%               | 1     | 0.9%              |
| 44.00 | 3     | 1.4%              | 1     | 0.9%              |
| 45.00 | 4     | 1.8%              | 2     | 1.8%              |
| 46.00 | 0     | 0                 | 2     | 1.8%              |
| 47.00 | 1     | .5%               | 0     | 0%                |
| 48.00 | 2     | .9%               | 0     | 0%                |
| 49.00 | 1     | .5%               | 1     | 0.9%              |
| 50.00 | 4     | 1.8%              | 0     | 0%                |
| 52.00 | 1     | .5%               | 0     | 0%                |
| 53.00 | 2     | .9%               | 0     | 0%                |
| 55.00 | 2     | .9%               | 0     | 0%                |
| 56.00 | 2     | .9%               | 0     | 0%                |
| 57.00 | 1     | .5%               | 0     | 0%                |
| 58.00 | 1     | .5%               | 1     | 0.9%              |
| 59.00 | 1     | .5%               | 1     | 0.9%              |
| 60.00 | 3     | 1.4%              | 2     | 1.8%              |
| 65.00 | 4     | 1.8%              | 0     | 0%                |
| 68.50 | 1     | .5%               | 0     | 0%                |
| 70.00 | 1     | .5%               | 1     | 0.9%              |
| 71.00 | 1     | .5%               | 0     | 0%                |
| 72.00 | 1     | .5%               | 0     | 0%                |
| 75.00 | 2     | .9%               | 0     | 0%                |
| 78.00 | 1     | .5%               | 0     | 0%                |
| 80.00 | 2     | .9%               | 2     | 1.8%              |
| 86.00 | 1     | .5%               | 0     | 0%                |
| 93.00 | 1     | .5%               | 0     | 0%                |

2009. Q41. Below is a list of statements on how you feel about living in your community. Please use the scale below to show how much each statement applies to you, or doesn't apply to you. (Tick one in each row)  
 2006. Q.28 Below is a list of statements on how you feel about living in your community. Please use the scale below to show how much each statement applies to you, or doesn't apply to you. (Tick one in each row)

|   |   | 2006  |                  | 2009  |                  |
|---|---|-------|------------------|-------|------------------|
|   |   | Count | Column Valid N % | Count | Column Valid N % |
| I feel a part of this community                           | 1 | 11    | 5.0%             | 6     | 6.0%             |
|   | 2 | 19    | 8.6%             | 8     | 8.0%             |
|   | 3 | 52    | 23.6%            | 25    | 25.0%            |
|   | 4 | 62    | 28.2%            | 20    | 20.0%            |
|   | 5 | 76    | 34.5%            | 41    | 41.0%            |
| I am satisfied living in this community                   | 1 | 11    | 5.0%             | 7     | 6.8%             |
|   | 2 | 15    | 6.8%             | 6     | 5.8%             |
|   | 3 | 56    | 25.2%            | 26    | 25.2%            |
|   | 4 | 61    | 27.5%            | 23    | 22.3%            |
|   | 5 | 79    | 35.6%            | 41    | 39.8%            |
| I am a useful member of this community                    | 1 | 18    | 8.6%             | 12    | 12.0%            |
|   | 2 | 20    | 9.6%             | 14    | 14.0%            |
|   | 3 | 60    | 28.7%            | 21    | 21.0%            |
|   | 4 | 58    | 27.8%            | 22    | 22.0%            |
|   | 5 | 53    | 25.4%            | 31    | 31.0%            |
| I have the same values and beliefs as my neighbours       | 1 | 30    | 14.5%            | 19    | 19.6%            |
|   | 2 | 26    | 12.6%            | 14    | 14.4%            |
|   | 3 | 65    | 31.4%            | 24    | 24.7%            |
|   | 4 | 47    | 22.7%            | 16    | 16.5%            |
|   | 5 | 39    | 18.8%            | 24    | 24.7%            |
| I feel I don't belong in this community                   | 1 | 146   | 75.3%            | 69    | 72.6%            |
|   | 2 | 17    | 8.8%             | 3     | 3.2%             |
|   | 3 | 17    | 8.8%             | 12    | 12.6%            |
|   | 4 | 10    | 5.2%             | 5     | 5.3%             |
|   | 5 | 4     | 2.1%             | 6     | 6.3%             |
| I am interested in knowing what goes on in this community | 1 | 11    | 5.1%             | 6     | 6.1%             |
|   | 2 | 13    | 6.0%             | 4     | 4.0%             |
|   | 3 | 43    | 20.0%            | 31    | 31.3%            |
|   | 4 | 79    | 36.7%            | 28    | 28.3%            |
|   | 5 | 69    | 32.1%            | 30    | 30.3%            |
| I would be happy to leave this community                  | 1 | 113   | 55.9%            | 52    | 53.6%            |
|   | 2 | 28    | 13.9%            | 14    | 14.4%            |
|   | 3 | 30    | 14.9%            | 14    | 14.4%            |
|   | 4 | 14    | 6.9%             | 8     | 8.2%             |
|   | 5 | 17    | 8.4%             | 9     | 9.3%             |
| I know my neighbours and/or other community members       | 1 | 20    | 9.4%             | 4     | 4.0%             |
|   | 2 | 25    | 11.7%            | 8     | 8.0%             |
|   | 3 | 36    | 16.9%            | 25    | 25.0%            |
|   | 4 | 57    | 26.8%            | 30    | 30.0%            |
|   | 5 | 75    | 35.2%            | 33    | 33.0%            |

|  |   |    |       |    |       |
|--|---|----|-------|----|-------|
| I have no active involvement in this community | 1 | 90 | 42.9% | 47 | 47.5% |
|  | 2 | 34 | 16.2% | 14 | 14.1% |
|  | 3 | 50 | 23.8% | 22 | 22.2% |
|  | 4 | 22 | 10.5% | 7  | 7.1%  |
|  | 5 | 14 | 6.7%  | 9  | 9.1%  |

2009. Q42. Please think about your life in your community at present. Choose a number from the scale below that shows how much you agree or disagree with each of the following statements. (Tick one in each row)

2006. Q.29 Please think about your life in your community at present. Choose a number from the scale below that shows how much you agree or disagree with each of the following statements. (Tick one in each row)

|   |   | 2006  |                  | 2009  |                  |
|---|---|-------|------------------|-------|------------------|
|   |   | Count | Column Valid N % | Count | Column Valid N % |
| I feel I have control over the things that happen in my life and in the community | 1 | 18    | 8.5%             | 5     | 4.9%             |
|   | 2 | 32    | 15.1%            | 14    | 13.7%            |
|   | 3 | 74    | 34.9%            | 43    | 42.2%            |
|   | 4 | 60    | 28.3%            | 25    | 24.5%            |
|   | 5 | 28    | 13.2%            | 15    | 14.7%            |
| There is no way I can solve some of the problems I have by myself                 | 1 | 41    | 19.2%            | 17    | 17.2%            |
|   | 2 | 48    | 22.4%            | 20    | 20.2%            |
|   | 3 | 58    | 27.1%            | 23    | 23.2%            |
|   | 4 | 38    | 17.8%            | 27    | 27.3%            |
|   | 5 | 29    | 13.6%            | 12    | 12.1%            |
| I can't do much to change what happens in my life or in the community             | 1 | 47    | 21.8%            | 20    | 19.8%            |
|   | 2 | 47    | 21.8%            | 17    | 16.8%            |
|   | 3 | 61    | 28.2%            | 37    | 36.6%            |
|   | 4 | 41    | 19.0%            | 20    | 19.8%            |
|   | 5 | 20    | 9.3%             | 7     | 6.9%             |
| Somehow problems in my life usually solve themselves                              | 1 | 46    | 21.6%            | 15    | 15.2%            |
|   | 2 | 32    | 15.0%            | 19    | 19.2%            |
|   | 3 | 63    | 29.6%            | 31    | 31.3%            |
|   | 4 | 47    | 22.1%            | 27    | 27.3%            |
|   | 5 | 25    | 11.7%            | 7     | 7.1%             |

2009. Q43. What is your gender?

2006. Q37. What is your gender?

|                      |        | 2006  |                  | 2009  |                  |
|----------------------|--------|-------|------------------|-------|------------------|
|                      |        | Count | Column Valid N % | Count | Column Valid N % |
| What is your gender? | Male   | 96    | 42.5%            | 42    | 38.2%            |
|                      | Female | 130   | 57.5%            | 68    | 61.8%            |

2009. Q44. Into which age bracket do you fall? (Tick only one)

2006. Q40. How old are you?

|                | 2006  |                  | 2009  |                  |
|----------------|-------|------------------|-------|------------------|
|                | Count | Column Valid N % | Count | Column Valid N % |
| Under 20 years | 0     | .0%              | 1     | 0.9%             |
| 21-30          | 13    | 5.7%             | 9     | 8.1%             |
| 31-40          | 30    | 13.1%            | 11    | 9.9%             |
| 41-50          | 40    | 17.5%            | 15    | 13.5%            |
| 51-60          | 36    | 15.7%            | 23    | 20.7%            |
| Over 60        | 110   | 48.0%            | 52    | 46.9%            |

2009. Q45. Which ethnic group do you belong to? (Tick the box or boxes that apply to you)

2006. Q39. What is your ethnic background? (Tick all that apply)

|                  | 2006  |                  | 2009  |                  |
|------------------|-------|------------------|-------|------------------|
|                  | Count | Column Total N % | Count | Column Total N % |
| Maori            | 65    | 26.7%            | 31    | 25.1%            |
| Pacific Islander | 4     | 1.7%             | 2     | 1.6%             |
| Pakeha/European  | 171   | 70.4%            | 89    | 71.7%            |
| Asian            | 3     | 1.2%             | 2     | 1.6%             |

2009. Q46. What is your main occupation? (Tick only one)

2006. Q41. Are you? (Tick only one)

|            | 2006  |                  | 2009  |                  |
|------------|-------|------------------|-------|------------------|
|            | Count | Column Valid N % | Count | Column Valid N % |
| Employed   | 99    | 44.4%            | 47    | 41.6%            |
| Unemployed | 117   | 52.5%            | 56    | 56.6%            |
| Student    | 7     | 3.1%             | 2     | 1.8%             |

2009. Q47. What is your highest educational qualification?

2006. Q43. What is your highest educational qualification?

|  | 2006  |                  | 2009  |                  |
|--|-------|------------------|-------|------------------|
|  | Count | Column Valid N % | Count | Column Valid N % |
| No school qualifications                                     | 60    | 27.8%            | 29    | 25.7%            |
| Secondary school qualifications                              | 66    | 30.6%            | 24    | 21.2%            |
| Trade certificate or professional certificate or diploma     | 60    | 27.8%            | 28    | 24.8%            |
| University undergraduate degree (e.g. diploma or bachelor's) | 18    | 8.3%             | 10    | 8.8%             |
| University postgraduate degree (e.g. Master's, Ph.D.)        | 11    | 5.1%             | 6     | 5.3%             |
| Other  | 1     | .5%              | 9     | 8.0%             |

2009. Q48. How long have you lived in your current house?

2006. Q32. How long have you lived in your current home?

|       |       | 2006  |                   | 2009  |                   |
|-------|-------|-------|-------------------|-------|-------------------|
|       |       | Count | Column<br>Total % | Count | Column<br>Total % |
| Years | 1.00  | 32    | 15%               | 11    | 9.7%              |
|       | 2.00  | 27    | 12.6%             | 14    | 12.4%             |
|       | 3.00  | 21    | 9.8%              | 6     | 5.3%              |
|       | 4.00  | 16    | 7.5%              | 6     | 5.3%              |
|       | 5.00  | 6     | 2.8%              | 12    | 10.6%             |
|       | 6.00  | 4     | 1.9%              | 3     | 2.7%              |
|       | 7.00  | 5     | 2.3%              | 9     | 8.0%              |
|       | 8.00  | 5     | 2.3%              | 3     | 2.7%              |
|       | 9.00  | 5     | 2.3%              | 3     | 2.7%              |
|       | 10.00 | 15    | 7.0%              | 2     | 1.8%              |
|       | 11.00 | 8     | 3.8%              | 1     | 0.9%              |
|       | 12.00 | 3     | 1.4%              | 5     | 4.4%              |
|       | 13.00 | 1     | .5%               | 1     | 0.9%              |
|       | 14.00 | 3     | 1.4%              | 0     | 0%                |
|       | 15.00 | 3     | 1.4%              | 3     | 2.7%              |
|       | 16.00 | 5     | 2.3%              | 2     | 1.8%              |
|       | 17.00 | 2     | .9%               | 0     | 0%                |
|       | 18.00 | 2     | .9%               | 1     | 0.9%              |
|       | 19.00 | 4     | 1.9%              | 0     | 0%                |
|       | 20.00 | 5     | 2.3%              | 8     | 7.1%              |
|       | 21.00 | 2     | .9%               | 0     | 0                 |
|       | 23.00 | 0     | 0                 | 1     | 0.9%              |
|       | 24.00 | 0     | 0                 | 1     | 0.9%              |
|       | 25.00 | 5     | 2.3%              | 2     | 1.8%              |
|       | 26.00 | 2     | .9%               | 2     | 1.8%              |
|       | 27.00 | 1     | .5%               | 0     | 0%                |
|       | 28.00 | 2     | .9%               | 3     | 2.7%              |
|       | 29.00 | 0     | 0                 | 1     | 0.9%              |
|       | 30.00 | 4     | 1.9%              | 0     | 0%                |
|       | 31.00 | 1     | .5%               | 1     | 0.9%              |
|       | 33.00 | 2     | .9%               | 1     | 0.9%              |
|       | 34.00 | 0     | 0                 | 1     | 0.9%              |
|       | 35.00 | 2     | .9%               | 1     | 0.9%              |
|       | 37.00 | 0     | 0                 | 1     | 0.9%              |
|       | 38.00 | 2     | .9%               | 0     | 0                 |
|       | 40.00 | 2     | .9%               | 1     | 0.9%              |
|       | 41.00 | 1     | .5%               | 0     | 0                 |
|       | 42.00 | 0     | 0                 | 1     | 0.9%              |
|       | 43.00 | 0     | 0                 | 0     | 0                 |
|       | 44.00 | 2     | .9%               | 0     | 0                 |
|       | 46.00 | 1     | .5%               | 1     | 0.9%              |
|       | 47.00 | 2     | .9%               | 0     | 0                 |
|       | 48.00 | 1     | .5%               | 0     | 0                 |
|       | 49.00 | 1     | .5%               | 0     | 0                 |
|       | 50.00 | 1     | .5%               | 1     | 0.9%              |

|       |   |     |   |      |
|-------|---|-----|---|------|
| 57.00 | 1 | .5% | 0 | 0    |
| 58.00 | 1 | .5% | 0 | 0    |
| 60.00 | 1 | .5% | 1 | 0.9% |

2009. Q49. Which of the following best describe your household now? (Tick only one)

2006. Q38. Which best describes the situation you are living in now? (Tick only one)

|  | 2006  |                  | 2009  |                  |
|--|-------|------------------|-------|------------------|
|  | Count | Column Valid N % | Count | Column Valid N % |
| A couple without children                | 52    | 22.4%            | 30    | 26.5%            |
| One person household                     | 81    | 35.1%            | 42    | 37.2%            |
| Two parent family with one child or more | 62    | 26.8%            | 25    | 22.1%            |
| One parent family with one child or more | 20    | 8.3%             | 6     | 5.3%             |
| Non family household (e.g. flatting)     | 9     | 2.6%             | 2     | 1.8%             |
| Other                                    | 4     | 1.8%             | 4     | 3.5%             |

2009. Q50. Do you, or someone in your house, own or rent the home you live in?

(Tick only one)

2006. Q30. Do you, or someone in your house, own or rent the home you live in?

(Tick only one)

|   | 2006  |                  | 2009  |                  |
|---|-------|------------------|-------|------------------|
|   | Count | Column Valid N % | Count | Column Valid N % |
| Own or buying, to live in it                      | 159   | 72.6%            | 83    | 73.5%            |
| Own or buying, but only for use as a holiday home | 0     | .0%              | 0     | 0%               |
| Rent, to live in it                               | 57    | 26.0%            | 23    | 20.4%            |
| Rent as a holiday home                            | 0     | .0%              | 0     | 0%               |
| Other   | 3     | 1.4%             | 2     | 1.8%             |

2009. Q51. What was your household's total 2007 income (before tax)? (Tick only one)

2006. Q42. What was your household's total 2005 income (before tax)? (Tick only one)

|                      | 2006                |                  | 2009                |                  |
|----------------------|---------------------|------------------|---------------------|------------------|
|                      | 2005 financial year |                  | 2007 financial year |                  |
|                      | Count               | Column Valid N % | Count               | Column Valid N % |
| Under \$5 000        | 4                   | 1.9%             | 3                   | 2.7%             |
| \$5 000 to \$15 000  | 37                  | 17.2%            | 14                  | 12.4%            |
| \$15 001 to \$20 000 | 40                  | 18.6%            | 12                  | 10.6%            |
| \$20 001 to \$30 000 | 36                  | 16.7%            | 22                  | 19.5%            |
| \$30 001 to \$40 000 | 30                  | 14.0%            | 14                  | 12.4%            |
| \$40 001 to \$50 000 | 19                  | 8.8%             | 8                   | 7.1%             |
| \$50 001 to \$70 000 | 28                  | 13.0%            | 12                  | 10.6%            |
| Over \$70 001        | 21                  | 9.7%             | 13                  | 11.5%            |



2009. Q52. If you have any additional comments please write them in the space below

- Being 92 years old some of my answers are of no interest to anyone
- Bells hill is a big worry to the people of Kaitaia, as we don't want it to slip
- Climate changes are having a huge impact around the world we need to be ready
- Do not feel like taking these questions on - sorry. An emergency in Kaitaia recently showed that the community has preparedness in hand
- Great survey - hope it helps Kaitaia - KaiOra
- I don't live at the address where this brochure was left. No one lives at this address - its a work place. I live east of Mangonui and have answered the questions accordingly
- I don't see what Q51 has to do with anything
- I hope this is of some value - my apologies, as I have been far from well
- I live on a hill & am not prone to flooding
- I look forward to seeing the published results of your survey
- I think I've been a slacker & this could inspire me to be more responsible
- I think Kaitaia's flood protection system is foundationally sound - it only needs monitoring for maintenance & some refinement. In the past there has been a huge amount of information gathered of levels i.e. peak levels and peak times, this taken into account
- I think the Regional Council screwed up last time. Our back yard used to be beautiful there doesn't seem to be any care shown, we pay rates you know! Our property has been stable and not flooded for 40 years - since Regional Council did their thing it now f
- If only the council would fill in the deep drain's in Donald Lane, I've lived here 50yrs & nothing has changed
- Major flooding is done by man playing against nature - altering river ways
- Many options for getting information of a flood used in this questionnaire are not hugely useful due to high likelihood of power failure/patchy cellphone coverage/lack of computers in many homes. You need to consult with local emergency services. They know
- More information need maybe fridge magnet for the different sounds of the siren maybe even schools to be informed as well
- My HNZ seems like its falling in half the house is leaning, I say due to excess water in the ground surrounding the house. Would love to fill in future surveying.
- My income is none of your business. This is what your survey is all about/not about fixing the drains at all. You blood suckers take our rates money and do f/a with it other than to pay your wages
- Pass!
- People or persons telling you about flooding when they do not know what they are talking about but think their position makes them an expert
- Stupid questionnaire - get off your butt, stop asking questions, set up Civil Defence flood response etc.
- Thank you for giving me/us the opportunity to 'voice' my opinions via this questionnaire
- The apathy of the majority of the immediate community would make it hard to co-ordinate Civil Defence
- The far north district council put an extra charge on our rates for flood protection, did 5 minutes work on cleaning banks that all covered, collapsed into the river which to me is a waste of time and money that we are paying for
- The first question - climate change of course could lead in increase in number & severity of tornadoes & floods.
- Unless the massive slip in Bell's Hill & is threatening to block the Kaitaia river is the centre of town is permanently controlled & removed, this survey is a complete waste of time. If this slip comes down during a storm Kaitaia will be completely inundated
- Until we had a flood thru our house I never new they could do so much damage & my experience is probably my best tool for preparing for another one
- Very little questions relating to Maori community or strategies to address issue - why is that?

- Would like to know if any provision in the case of an emergency has been made for the elderly and disabled

#### 2006. Q44. Comments

- 80 years old - getting past worrying about what's to come
- A mail drop to every letter box with a preparedness pack for all possible scenarios (likely to occur in our community) would be helpful
- Although money may be a great issue, it would be great to see the council or other put together a smaller basic survival kit to send to each house hold containing torch, batteries, food packaged like in the army. Most households would really appreciate it.
- Flood rates are too high and this is now due to lack of work by council in the past - no real maintenance done for many years!
- Floods do not last long in Kaitaia - water gets away in hours
- Found a lot of these questions not applicable to our property. We live on a hill and certainly not prone to flooding. Have lived in Kaitaia since 1936 and for the last 40 plus years in this property-never any flooding or landslides in this area
- Home not likely to be affected other than storm water (on hill) but have business premises likely to be affected (low area)
- Hope this helps!
- I am looking forward to receive information about flood and others, where to go, what to do etc. Thank you.
- I bought this little house knowing it had flooded 5-6 years ago because the creek had a log or stump jammed in it. The neighbour and I watch the creek in every rain
- I disagree with Q39 onwards, they do not affect flooding
- I feel strongly from past experience that local experience and expertise from affected farmers and townspeople should be utilised rather than consultants who don't understand the area and charge big fees.
- I feel that the Far North District Council does not perform the way a district council should so I feel that this is a waste of time
- I find it very annoying that you want info on flood matters and end up asking what our income is, NO I CANNOT AFFORD TO PAY MORE RATES OR WATER RATES.
- I found this questionnaire extremely confusing the scale 'not at all' a great deal ambiguous and would imagine many people will tick the boxes which do not correspond with their answers!
- I live in a pole house on a hill. I drive a 4 wheel drive vehicle. I am actively involved in caring for the health of the elderly in my community
- I lived in Rongopai Place for 8 years, got flooded 3 times, the first my car went under, the second my house, then I borrowed \$\$ and had it raised 600ml. Just enough to be clear of the third flood. I sold it this year with a big sigh of relief. I was also part of the group that sued the FNDC for damages. We settled out of court.
- I regret that I am unable to complete this as I have only lived in Kaitaia for a short time. I have not seen any floods here as yet
- I think overall the flood protection system in Kaitaia is over all very, very good. All it needs is to be well maintained and improved. However there are 'pockets' of areas on the flats that are troublesome. This is because the internal stormwater infrastructure is poorly designed not because of the main rivers - (Auranui & Tara Whaturoa Stream)
- I wish to decline participating in this survey
- I would definitely like to receive more information about flooding in my specific area and about preparing for evacuation.
- I would like info pack on evacuation plans and safe rule maps in the local area so we can plan to get out safe if required. In the mail would be good
- I would like more info on floods and it's good to see enquiries about the knowledge our community has to do with floods.
- I would like to be a helper in a flood and/or emergency and be equipped with a emergencies lite pack for myself and neighbours
- If a preparedness plan and a evacuation plan was delivered to me, I would follow them! Otherwise I would follow information in yellow pages and rely on neighbours for help!
- If I need information I can always find an answer otherwise, think for myself
- It beggars my engineering skills to see river clearance etc. commencing at source rather than at estuary/harbour
- Kaitaia is not high enough above sea level
- Kaitaia needs more one way streets, pedestrian crossings, roundabouts, clearing signs from pavements also dogs and cycles
- No I don't

- Ko au, Ko te whenua, Ko the Whenua, KO au. Greater Maori participation in councils, as partners, under the Treaty Tikanga Maori Teachings
- Letter attached
- Live on a rather large hill. If we flood, man we are in deep deep deep water!
- Live on hillside so unlikely to be flooded though recognise that we may be peripherally affected e.g. loss of services, road access curtailed
- May need assistance with Mum
- More concerned about the fluoridation of our water supply than floods! Don't like fluoridation - don't think it should happen
- More information about
- New to this community, has home, new neighbours
- Noah built an ark, I would settle for sea kayak
- None
- Normal phones would "flood out"-a cell phone (+preferably one on each network) is probably a "must" for readiness - charged and loaded. Is there preparation for safety for our fire engines in flood? This was the big mistake in our previous experience
- Not worried about flooding, live high up, overlooking Kaitaia
- Provided the Tarawhataroa stream and the main river areas are kept clear of debris I have no problem with flooding on my lower ground.
- Pump stations e.g.3
- Some items I haven't answered as I do not know how to.
- Spent 20 minutes at local council office to obtain a contact plan number when a flood map could be accessed them 16 min with music entertainment on hold at 0800 number until reach the Duty planner
- Thanks for the wake up call, I will prepare my home and family now.
- The area from Fairburn, Maungamuka and Takahue all drains thru Kaitaia. If rain falls in all these places at the same time Kaitaia will flood
- The cost of preparing an emergency kit is making it hard to have all the items suggested and I think they (Govt) ought to subsidise items or sell pre made packs
- The owner of this property is 95yrs old. This was filled in by her son-in-law
- The Takahua, Maungamuka and Fairburn areas all drain through a very narrow area in Kaitaia. Heavy rain in all these areas at once would flood Kaitaia
- The Whangatane spill way should be deeper and wider
- There has been unnecessary flooding here in the past because of lack of maintenance of river banks and flood gates
- There is a high likelihood of power failure which limits cellphone/TV/radio/internet as sources for warning/informing public.
- This lady is well into her 80's and is only part sighted so I'm returning these on her behalf
- This should have come with the flood info available at the time plus the contact numbers of Civil D etc. and any other info that could have been practical
- Very good initiative, should ensure community is better prepared for floods
- We have only been in Kaitaia for 18mths and live in an area that is not affected by flooding so therefore have not thought about it much
- We live in a 2 storey house on a hill so floods should not affect our house but parts of Kaitaia are low lying and depend on stopbanks to protect them. Likely floods are always a concern to our town and district
- We sold our previous residence due to concerns with flood protection issues. The river behind Kitchener St continues to rise each year and I believe will flood eventually
- With changes in climatic conditions each year there is a likelihood of floods occurring, thus each of us must be aware of it and be well informed of what to do and be prepared
- You didn't ask if my place floods, the answer is it ponds here when the flood gates shut



[www.gns.cri.nz](http://www.gns.cri.nz)

#### Principal Location

1 Fairway Drive  
Avalon  
PO Box 30368  
Lower Hutt  
New Zealand  
T +64-4-570 1444  
F +64-4-570 4600

#### Other Locations

Dunedin Research Centre  
764 Cumberland Street  
Private Bag 1930  
Dunedin  
New Zealand  
T +64-3-477 4050  
F +64-3-477 5232

Wairakei Research Centre  
114 Karetoto Road  
Wairakei  
Private Bag 2000, Taupo  
New Zealand  
T +64-7-374 8211  
F +64-7-374 8199

National Isotope Centre  
30 Gracefield Road  
PO Box 31312  
Lower Hutt  
New Zealand  
T +64-4-570 1444  
F +64-4-570 4657