

January 2011

Metro Vancouver Drinking Water Research



MUSTEL GROUP
MARKET RESEARCH

➤ Introduction

Mustel Group was commissioned by Metro Vancouver to repeat the 2008 *Drinking Water Survey*. The following research provides insight into residents current drinking water behaviours and attitudes as well as the effectiveness of Metro Vancouver's communication efforts to increase tap water consumption in comparison to the benchmark established in 2008. In addition, this year's measure expanded its scope to include attitudes towards drinking fountains and identifying barriers to use.

Methodology

- 803 telephone interviews conducted with randomly selected Metro Vancouver residents aged 18 years of age or older;
- Field dates: January 18-27, 2011;
- Disproportionate sampling method was utilized with approximately 200 interviews in each of the following regions :
 - Vancouver/Burnaby/New Westminster
 - North Shore (including North Vancouver City and District, West Vancouver, Lions Bay and Bowen Island)
 - North East (including Coquitlam, Maple Ridge, Pitt Meadows, Port Coquitlam and Port Moody)
 - South of Fraser (including Delta, Langley City and Township, Richmond, Surrey and White Rock)
- The final data was weighted by age within gender and region to match the actual population in Metro Vancouver according to 2006 Census data;
- Translation provided in Cantonese, Mandarin and Punjabi;
- Margin of error: +/-3.5% at the 95% level of confidence (4-5% spread required between measures for significance);
- Questionnaire appended; detailed computer tabulations presented under separate cover.

Executive Overview

- Currently 85% of Metro Vancouver residents consume tap water as their main source of drinking water, up from 74% in 2008. Cost, convenience and taste remain the most common reasons for this choice, with an increase this year in the proportion who cite environmental reasons.
- Of the 11% of residents who favour bottled water their reasons remain little changed since 2008, primarily convenience, taste and health, however mention of “safety” increases significantly in 2011.
- Almost one-quarter of Metro Vancouver residents (23%) say they drink more tap water now compared with two years ago, while 5% say they drink more bottled water.
- While Metro Vancouver residents continue to have a general idea of the source of the region’s tap water, opportunity still exists for improving awareness levels, particularly among younger residents and those living south of the Fraser or in the north east sector, potentially converting more bottled water consumers to tap.
- Even though residents may not be able to identify the exact source of Metro Vancouver's tap water, the overall quality is perceived favourably by nine-in-ten, with 47% rating it “excellent” and 43% as “good”, a significant increase from the 2008 measure (90% up from 82%).
- Currently, almost one-third of all Metro Vancouver residents uses a public drinking fountain at least once a month or more.
- While almost two-thirds of Metro Vancouver residents rarely, if ever, drink from public water fountains, the majority still consider them to be at least somewhat safe and healthy (63%). Regionally there does appear to be a difference, with faith in the safety of public drinking fountains stronger the closer one is to the City of Vancouver.

➤ Executive Summary *cont'd.*

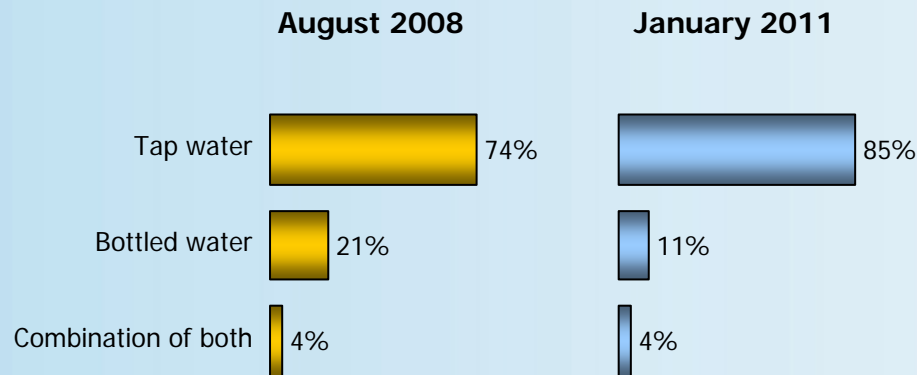
- The main concerns among residents regarding public water fountains is that of cleanliness, maintenance and upkeep of the fountains and the health and safety of the water for consumption.
- The most common suggestions for encouraging use of public water fountains are to increase their number and reassure the public of their cleanliness.
- One-third of all Metro Vancouver residents believe they would purchase less bottled water as a result of using a tap water app that provides locations of water fountains, with one-in-ten who feel it would eliminate *all* bottled water purchases.
- Furthermore, use of the app would encourage 40% of those who currently drink bottled water “most of the time” to reduce the amount of bottled water they purchase.



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Key Findings

➤ Type of Drinking Water Consumed Most Often



Base: Total January 2011 (n=803)
 Total August 2008 (n=800)

Q.1) What type of drinking water do you personally consume most often? Please think about the water that you drink in a typical day, whether this be at home, at work, or anywhere else. Would you say you most often consume tap or bottled water?

- In total, more than eight-in-ten (85%) Metro Vancouver residents consume tap water as their main source of drinking water while 11% tend to consume bottled water. The remaining 4% consume both equally.
- In comparison to the 2008 measure, these results reveal a significant increase in those who prefer tap water to bottled (85% up from 74% in 2008).

➤ Reasons for Drinking Tap Water

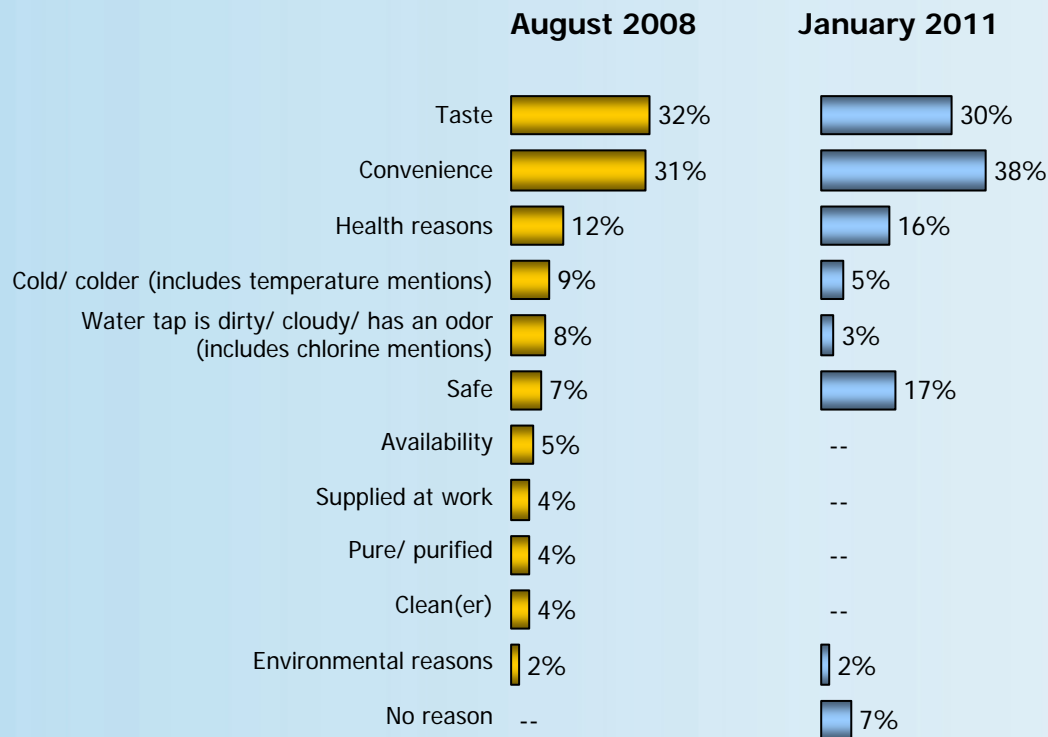


- Overall, cost (40%) continues to be the primary reason for drinking tap water over bottled, followed closely by convenience (26%), taste (20%) and more recently environmental (20%).
- Costs and convenience continue to be mentioned more often by those aged 18 to 34 years (51% and 35%).
- In comparison to the 2008 measure; factors such as environmental (20% vs 11% in 2008) and safety (16% vs 10% in 2008) have increased in importance. This is likely a result of residents becoming more aware of the dangers of plastic pollution on the environment and the quality/treatment of Metro Vancouver's tap water.

Base: Respondents who answered tap water or combination in Q1
 Total January 2011 (n=713)
 Total August 2008 (n=607)

Q.2) What is the main reason why you usually drink tap water over bottled water?

➤ Reasons for Drinking Bottled Water

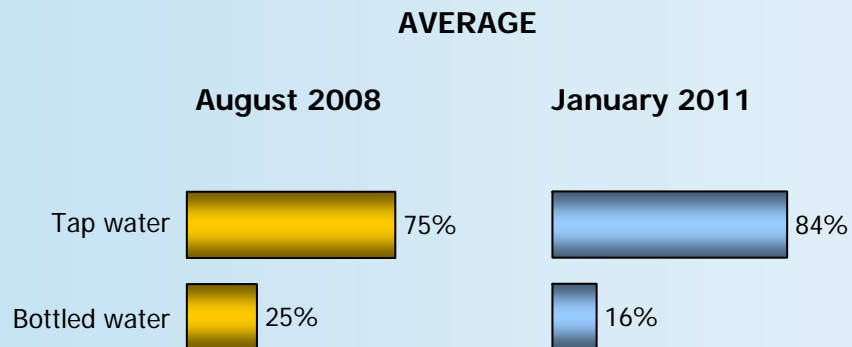


- Residents who prefer to drink bottled water over tap water (11%) continue to do so because of convenience (38%), taste (30%) and health reasons (16%), no significant changes in comparison to the 2008 measure.
- However, safety of bottled water over tap water has become a stronger motivator (17% up from 7% in 2008). Perhaps further education of the source and quality/treatment of Metro Vancouver's tap water may help minimize these concerns and encourage a switch to tap.

*Base: Respondents who answered bottled water or combination in Q1
 Total August 2008 (n=162)
 Total January 2011 (n=119)*

Q.3) What is the main reason why you usually drink bottled water over tap water?

➤ Percentage of Tap Water Versus Bottled Water

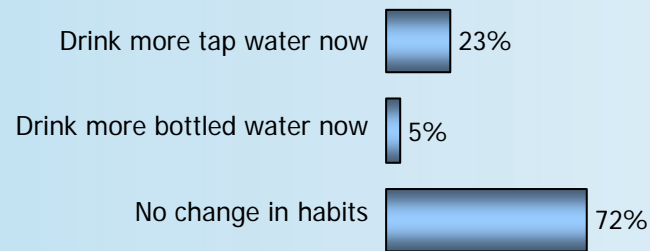


Base: Total August 2008 (n=800)
Total January 2011 (n=803)

Q.4) In a typical day, approximately what percentage of the water you drink is ...? And what percentage is ...?

- In terms of the proportion of all water consumed, in a typical day, an average of 84% is tap water, up from 75% in 2008, while just 16% is bottled, down from 25% in 2008.

➤ Usage Compared to Two Years Ago

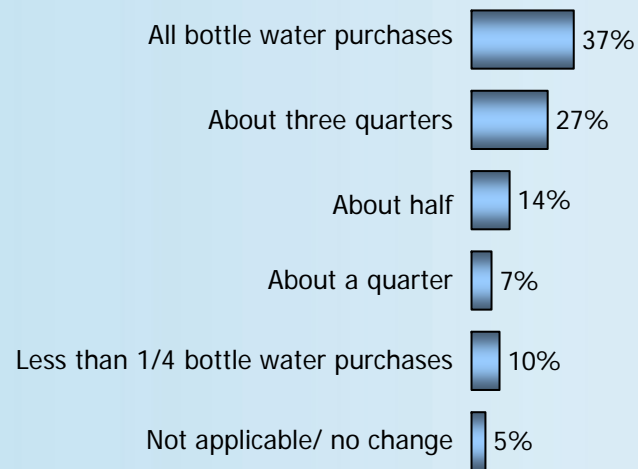


Base: Total January 2011 (n=803)

Q.5) How has this changed compared to approximately two years ago? Would you say you:

- When asked about change in habits in comparison to two years ago, the majority (72%) report to have made no changes, whereas one-in-four (23%) found themselves drinking more tap water now than they did in the past in contrast to 5% drinking more bottled water.

➤ Reduction in Bottled Water Purchases

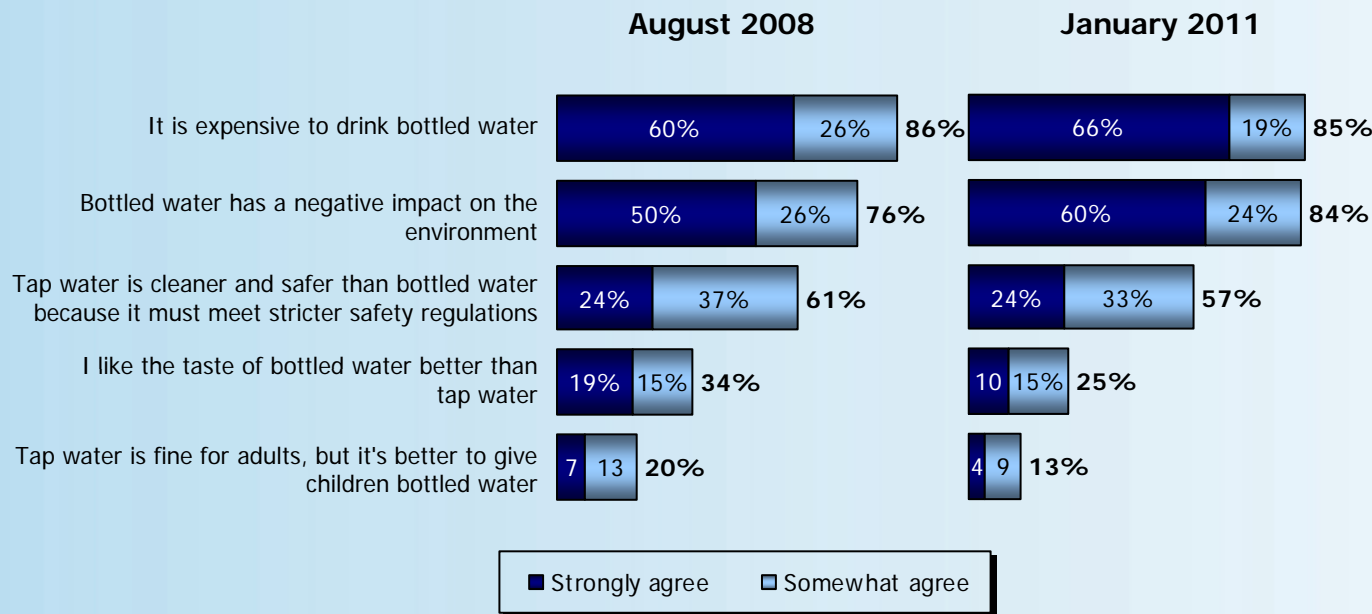


- Among the 23% of those who report drinking more tap water now, more than six-in-ten (64%) have reduced all or about three quarters of bottled water purchases in comparison to two years ago, a significant reduction.

Base: Total respondents who drink more tap water now (n=188)

Q.6) Please estimate how much you've reduced your purchases of bottled water as compared to two years ago.

Opinions About Drinking Water

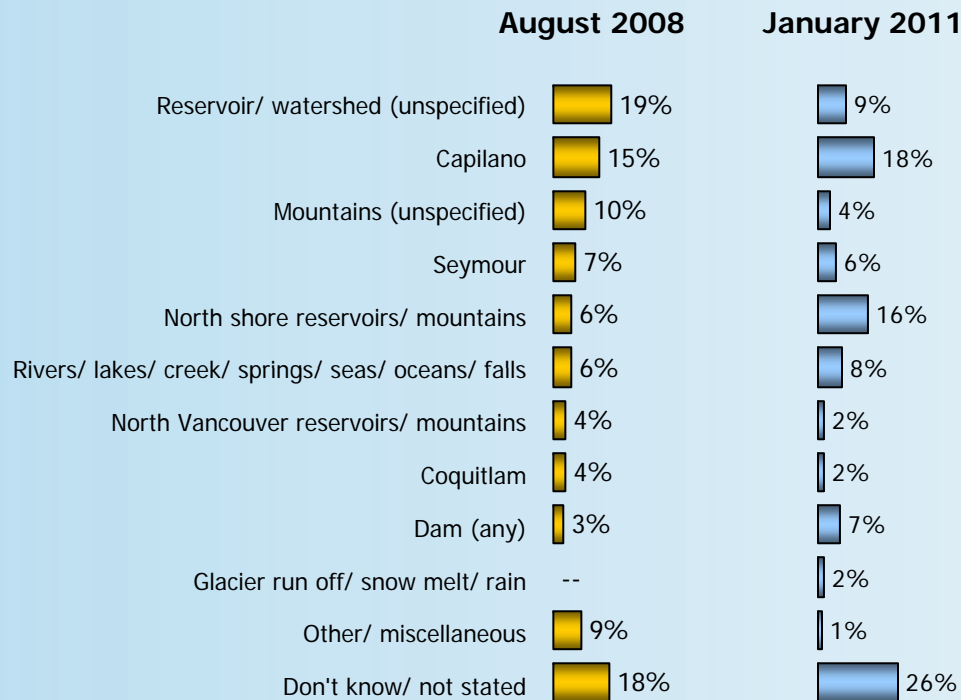


Base: Total August 2008 (n=800)
 Total January 2011 (n=803)

Q.7) Please tell me the extent to which you agree or disagree with the following statements about drinking water. The first one is... Would you say you... How about ...

- The majority (85%) of residents continue to agree that drinking bottle water is expensive with an increase in those who 'strongly agree' (66% vs 60% in 2008).
- Overall, a higher proportion of residents also agree that bottled water has a negative impact on the environment, with an increase in those who 'strongly agree' (60% vs 50% in 2008). In addition, regular bottled water consumers are reportedly more aware of the negative impact on the environment with 71% in agreement in comparison to 57% in 2008.
- Also, significantly fewer find they enjoy the taste of bottled water over tap (25% down from 34% in 2008). This is also evident among regular bottled water consumers (68% down from 81% in 2008).
- Fewer residents also agree that bottled water is preferred for children.
- But there is a no significant change in perceptions of the safety of tap water versus bottled.

➤ Source of Metro Vancouver's Tap Water (Unprompted)

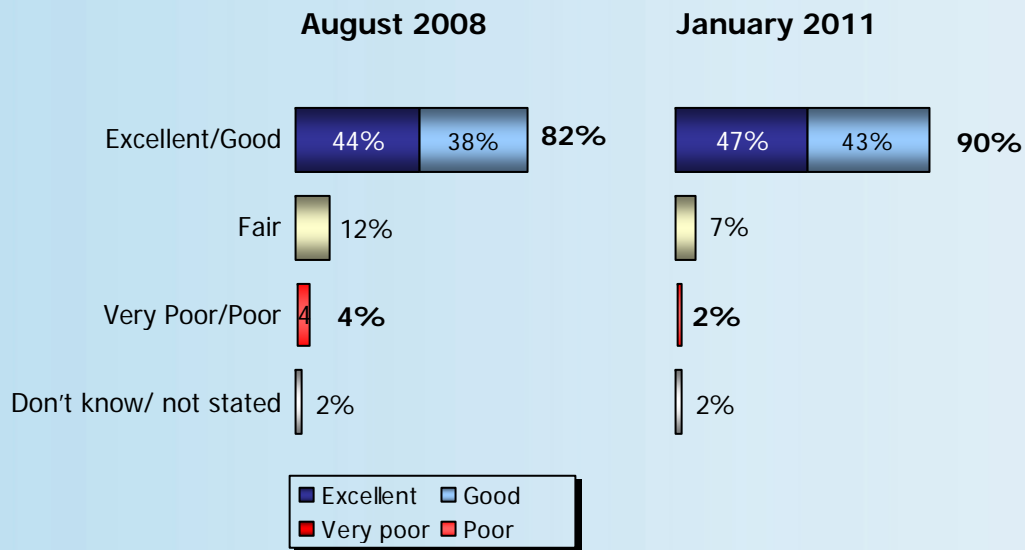


Base: Total August 2008 (n=800)
Total January 2011 (n=803)

Q.8) To the best of your knowledge, where does Metro Vancouver get its tap water?
That is, what is the source of Metro Vancouver's tap water?

- When asked where Metro Vancouver gets its tap water, top mentions include Capilano (18%) and North Shore reservoirs/mountains (16%), whereas one-quarter (26% up from 18% in 2008) are unaware of the source.
- It is apparent that Metro Vancouver residents continue to have a general idea of the source of the regions tap water but continued efforts towards public education could improve current awareness levels and potentially convert more bottled water consumers to tap.
- Residents who are more likely to be unaware of the source are those aged 18 to 34 (44%, versus 21% aged 35 to 54 and 19% aged 55+) and those residing in the North East (32%) and South of Fraser (32%) in comparison to Vancouver/Burnaby/New West (22%) and North Shore (14%).

➤ Overall Quality of Metro Vancouver's Tap Water



Base: Total August 2008 (n=800)
 Total January 2011 (n=803)

Q.9) How would you rate the overall quality of Metro Vancouver's tap water? Would you say...

- Nine-in-ten Metro Vancouver residents rate the quality of Metro Vancouver's tap water as excellent (47%) or good (43%), overall a significant increase from the 2008 measure (90% up from 82%).
- Even though residents may not be able to identify the exact source of Metro Vancouver's tap water, the overall quality is perceived as favourable.

➤ Frequency of Using Public Water Fountains

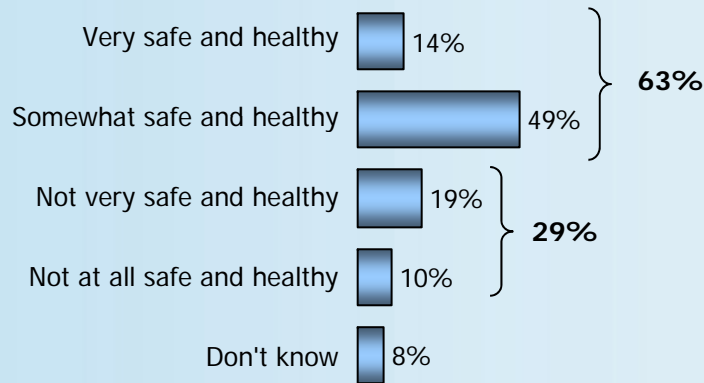


Base: Total respondents (n=803)

Q.10) Now thinking about water fountains, how often would you say you use a public water fountain?

- Currently, almost one-third of all Metro Vancouver residents uses a public drinking fountain at least once a month or more, consistent across the region.
- Residents least likely to use a public water fountain, saying “almost never”, include females (67% vs. 51% of males), those aged 35 or older (67% vs. 43% of the under 35’s), those without a post-secondary education (67% vs. 57% of those with) and those who were born in Canada (65% vs. 48% born elsewhere).

➤ Perceptions of Public Water Fountains

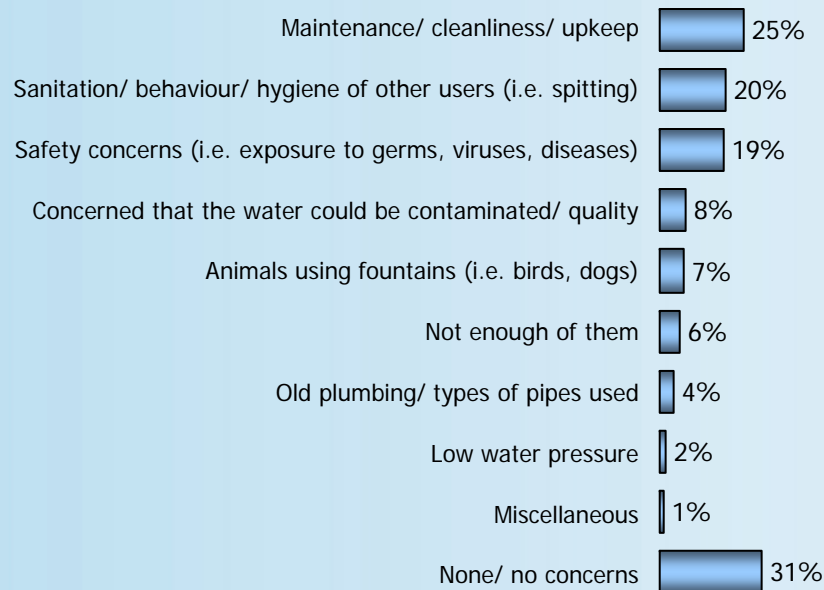


Base: Total respondents (n=803)

Q.11) In general do you perceive public water fountains in Metro Vancouver as:

- While almost two-thirds of Metro Vancouver residents rarely, if ever, drink from public water fountains, the majority still consider them to be at least somewhat safe and healthy (63%).
- It is possible that when it comes to encouraging residents to consume water from a fountain, “somewhat safe and healthy” may not be convincing enough.
- However, while most of those more likely to consider public water fountains safe and healthy are also more likely to have used them, in most cases the majority of each segment considers public fountains to be safe and healthy, including almost half of all bottled water drinkers.
- Regionally there does appear to be a difference, with faith in the safety of public drinking fountains stronger the closer you are to the City of Vancouver (70% of Vancouver, Burnaby, New West and North Shore vs. about 56% elsewhere).

➤ Concerns of Public Water Fountains

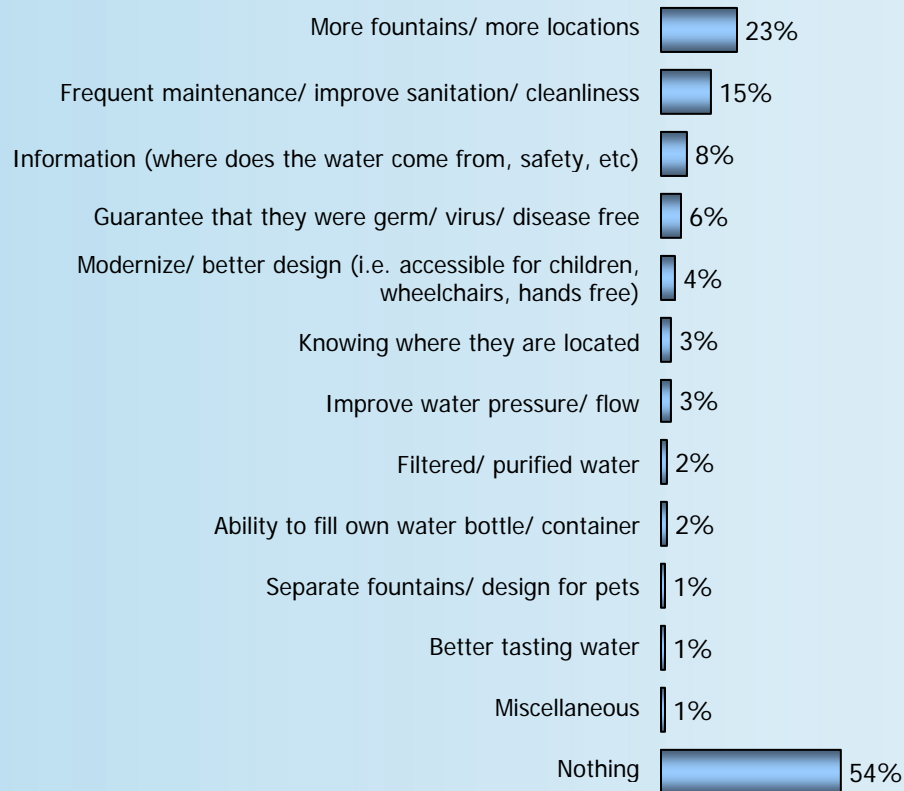


- Quite simply the main concern among residents regarding public water fountains is that of cleanliness, maintenance and upkeep of the fountains and the health and safety of the water for consumption.
- These opinions are consistent amongst most segments, including bottled water drinkers.

Base: Total respondents (n=803)

Q.12) What concerns, if any, do you have about public water fountains in Metro Vancouver?

➤ What Would Encourage Greater Use of Public Water Fountains

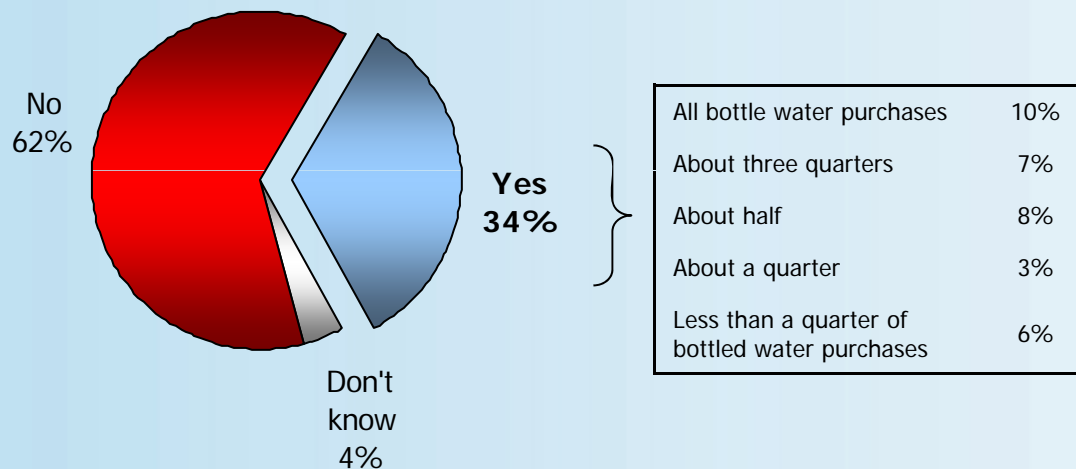


Base: Total respondents (n=803)

Q.13) What would encourage you to use public water fountains in Metro Vancouver more often?

- With a majority of residents who already drink tap water most of the time and hold a relatively positive opinion of Metro Vancouver tap water, including health and safety of public fountains, the most common suggestions for encouraging use of public water fountains are to increase the number of them and reassure the public of their cleanliness.
- The fact that more than half of all residents could not think of anything in particular that would encourage further use suggests that a great many of them simply do not regularly find themselves in a situation where they need to use a public water fountain rather than any objection to using one.

➤ Use of Mobile Phone App to Locate Water Fountains

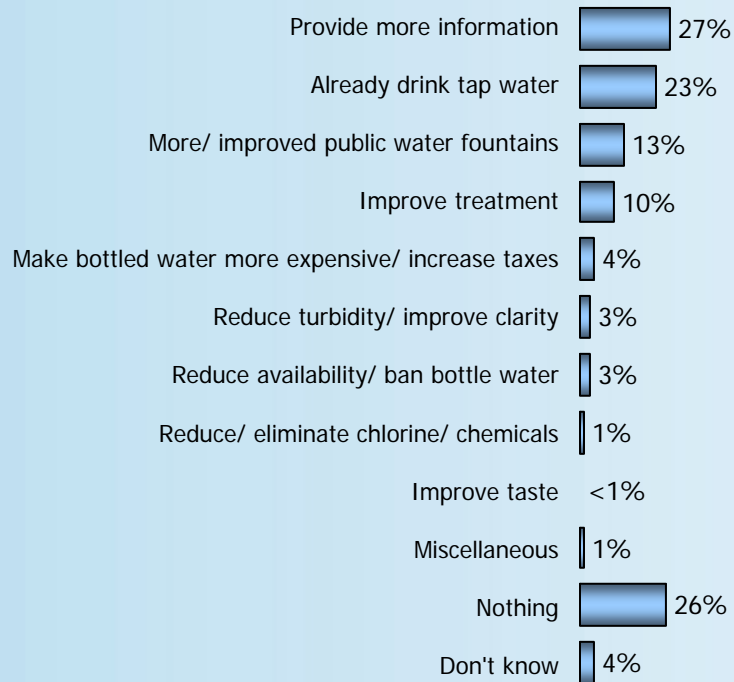


Base: Total respondents (n=803)

Q.14) Metro Vancouver created a free mobile phone application to help people find the closest public drinking fountain as well as locations to refill your water bottle. Using this app, would you buy less bottled water?

- One-third of all Metro Vancouver residents believe they would purchase less bottled water as a result of using the tap water app, with one-in-ten who feel it would eliminate *all* bottled water purchases.
- Younger residents, those under 35 years, are the most likely to be encouraged (50% vs. 32% of those 35 to 54 years and 23% of those 55+).
- Furthermore, note that use of the app would encourage 40% of those who currently drink bottled water "most of the time" to reduce the amount of bottled water they purchase.

What Metro Vancouver Could do to Encourage More Tap Water Usage



- When asked what Metro Vancouver could do to encourage more tap water usage, about half of all residents either say they already drink tap water (23%) or could think of nothing that would encourage them to drink more tap water (26%).
- Otherwise, the most common suggestion is communication with the public, providing more information about the benefits of consuming municipal tap water, the cost savings, the convenience and the safety.

Base: Total respondents (n=803)

As you may know, the term 'Metro Vancouver' is a geographic reference but also refers to a regional government body that services 22 member municipalities, one treaty first nation and one electoral area. For the next few questions, please think about Metro Vancouver as the regional government body.

Q.15) What, if anything, could Metro Vancouver do to encourage you to drink more tap water instead of bottled water?

➤ Demographic Characteristics

	<u>Total</u> (803) %	<u>Tap water</u> <u>user</u> (713) %	<u>Bottled</u> <u>water user</u> (119) %
Gender			
Male	49	48	49
Female	51	52	51
Age			
18 to 24	9	10	5
25 to 34	19	18	22
35 to 44	19	19	26
45 to 54	19	19	22
55 to 64	13	14	10
65 years and over	15	15	14
Refused	6	6	2
Years lived in Metro Vancouver			
Less than 5	7	7	8
5-10 years	16	17	12
11-15 years	10	9	14
16-20 years	12	13	12
21-25 years	10	10	10
26-30 years	10	10	10
31-35 years	7	7	6
36-40 years	6	7	6
41 or more	22	21	23
Refused	<1	1	<1
Average number of years	27	27	27

- In general there is little difference between residents who drink tap water versus those who drink bottled water "most of the time."
- As might be expected, bottled water drinkers are somewhat more likely to have a higher income, therefore the cost is less of an issue, and they are somewhat more likely to have a university education, thus leading to a higher income.

continued

➤ Demographic Characteristics (cont'd)

	<u>Total</u> (803) %	<u>Tap water</u> <u>user</u> (713) %	<u>Bottled</u> <u>water user</u> (119) %
Level of Education			
Grade school or some high school	4	4	5
Completed high school	18	18	15
Completed technical or trade school/ community college	18	19	16
Some community college or university, but did not finish	12	12	13
Completed university degree, such as a bachelor's	29	28	36
Post-graduate degree, such as a master's or PH.D	17	18	16
Other	<1	<1	--
Refused	1	1	--
Household Income			
Under \$30,000	10	10	7
\$30,000 to just under \$60,000	19	20	12
\$60,000 to just under \$90,000	19	19	25
\$90,000 to just under \$120,000	17	17	16
\$120,000 or more	15	14	21
Refused	21	21	18
Place of Birth			
Born in Canada	66	66	61
Moved here from somewhere else	34	34	39

continued

Demographic Characteristics (cont'd)

	<u>Total</u> (803) %	<u>Tap water</u> <u>user</u> (713) %	<u>Bottled</u> <u>water user</u> (119) %
Language Spoken at Home			
English	69	69	64
Punjabi	4	5	2
Cantonese	3	3	4
French	3	3	1
Mandarin	2	2	2
Tagalog	2	3	<1
German	2	2	2
Italian	2	2	2
Persian (Farsi)	2	1	2
Spanish	1	1	2
Hindi	1	1	-
Korean	1	<1	5
Dutch	1	1	1
Polish	<1	<1	--
Vietnamese	<1	--	<1
Other language	7	7	13
Refused	<1	<1	--



MUSTEL GROUP
MARKET RESEARCH

Questionnaire



Drinking Water Questionnaire
January 17, 2011

Intro/Screener

Hello, I'm ___ of Mustel Group Market Research, a professional research firm. We are conducting a survey about community needs on behalf of Metro Vancouver regional district. Please be assured we are not selling or soliciting anything and all responses are kept strictly confidential.

May I please to speak to the youngest (male/female) in this household who is 18 years of age or over?

Persuaders—only if needed:

- This is strictly an opinion survey; we are not selling or soliciting anything.
- Your number was selected at random for participation in this research.
- All responses are strictly confidential and anonymous; your identity is never revealed to anyone else, including the client.
- The survey will take approximately 12 minutes to complete depending on your responses.
- IF ASKS WHO METRO VANCOUVER IS: Metro Vancouver formerly known as the GVRD delivers regional services on behalf of Lower Mainland municipalities.

A. GENDER [**OBSERVE & RECORD**]

MALE
FEMALE

1. What type of drinking water do you personally consume most often? Please think about the water that you drink in a typical day, whether this be at home, at work, or anywhere else. Would you say you most often consume [INSERT ITEM] or [INSERT ITEM]? [RANDOMIZE]
(INTERVIEWER NOTE: If respondent says they drink filtered tap water, record as tap water.)

Tap water
Bottled water
(DO NOT READ) Combination of both

[IF 'TAP WATER' IN Q1, ASK Q2. OTHERWISE, SKIP TO Q3.]

2. What is the main reason why you usually drink tap water over bottled water? PROBE: Any other reasons? (DO NOT READ LIST) [ACCEPT 2 MENTIONS]

Cost
Taste
Convenience
Environmental reasons
Safe
Health reasons
Other [specify]

[IF 'BOTTLED WATER' IN Q1, ASK Q3. OTHERWISE, SKIP TO Q4.]



Drinking Water Questionnaire
January 17, 2011

3. What is the main reason why you usually drink bottled water over tap water? Any other reasons? (DO NOT READ LIST) [ACCEPT 2 MENTIONS]

Cost
Taste
Convenience
Environmental reasons
Safe
Health reasons
Other [specify]

[ASK ALL]

4. In a typical day, approximately what percentage of the water you drink is [INSERT ITEM]? (RECORD %) And what percentage is [INSERT ITEM]? (RECORD %)

[RANDOMIZE]
Tap water
Bottled water

[RANGE 0% TO 100%] [TOTAL MUST ADD TO 100%]
[CANNOT SAY %TO ONE OPTION AND 'DK/REF' TO ANOTHER; MUST EITHER SAY DK/REF' TO BOTH OR%TO BOTH. IF 'DK/REF' TO FIRST OPTION, DO NOT ASK ABOUT SECOND AS IT WILL ALSO BE 'DK/REF'.]

5. How has this changed compared to approximately two years ago? Would you say you:
- a) drink more tap water now; or (If (a) go to question 6)
 - b) drink more bottled water now (If (b) go to question 7)
 - c) no change in habits (go to question 7)

[IF 'DRINK MORE TAP WATER NOW' ASK Q6, OTHERWISE SKIP TO Q7]

6. Please estimate how much you've reduced your purchases of bottled water as compared to two years ago. READ SCALE. IF DK: Please just provide your best guess.

All bottle water purchases
About three quarters
About half
About a quarter
Less than a quarter of bottle water purchases



Drinking Water Questionnaire January 17, 2011

7. Please tell me the extent to which you agree or disagree with the following statements about drinking water. The first one is [INSERT ITEM]. Would you say you (READ LIST)? How about [INSERT ITEM]? [REPEAT LIST IF NECESSARY]

[RANDOMIZE]

Tap water is cleaner and safer than bottled water because it must meet stricter safety regulations

I like the taste of bottled water better than tap water

It is expensive to drink bottled water

Bottled water has a negative impact on the environment

Tap water is fine for adults, but it's better to give children bottled water

Strongly agree

Somewhat agree

Somewhat disagree

Strongly disagree

Changing topics slightly...

8. To the best of your knowledge, where does Metro Vancouver get its tap water? That is, what is the source of Metro Vancouver's tap water? [ACCEPT 1 MENTION]

9. How would you rate the overall quality of Metro Vancouver's tap water? Would you say (READ LIST)?

Excellent

Good

Fair

Poor

Very poor

Water Fountains

10. Now thinking about public water fountains, how often would you say you use a public water fountain? READ LIST

Several times a week

At least once a week

About once every two to three weeks

About once a month

Less often or

Almost never



Drinking Water Questionnaire
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11. In general do you perceive public water fountains in Metro Vancouver as:
- Very safe and healthy
 - Somewhat safe and healthy
 - Not very safe and healthy
 - Not at all safe and healthy
12. What concerns, if any, do you have about public water fountains in Metro Vancouver? PROBE: Anything else? PROBE FULLY
13. What would encourage you to use public water fountains in Metro Vancouver more often? PROBE: Anything else? PROBE FULLY
14. Metro Vancouver created a free mobile phone application to help people find the closest public drinking fountain as well as locations to refill your water bottle. Using this app, would you buy less bottled water? IF YES: How much would this reduce your bottled water purchases per month? READ SCALE. IF DK: Please just provide your best guess.
- All bottle water purchases
 - About three quarters
 - About half
 - About a quarter
 - Less than a quarter of bottle water purchases

As you may know, the term 'Metro Vancouver' is a geographic reference but also refers to a regional government body that services 22 member municipalities, one treaty first nation and one electoral area. For the next few questions, please think about Metro Vancouver as the regional government body.

15. What, if anything, could Metro Vancouver do to encourage you to drink more tap water instead of bottled water? Anything else? (DO NOT READ LIST) [ACCEPT 2 MENTIONS]
- Provide more information
 - Reduce turbidity/improve clarity
 - Improve treatment
 - Already drink tap water
 - None/nothing
 - Other [specify]



Drinking Water Questionnaire
January 17, 2011

DEMOGRAPHICS

Finally, just a few last questions for statistical purposes...

- A. In what year were you born? (RECORD YEAR)
- B. How many years have you lived in the Metro Vancouver area? (RECORD NUMBER OF YEARS) (IF LESS THAN 1YEAR, ENTER 0)
- C. What is the highest level of formal education that you have completed? Please stop me when I've reached your category. (READ LIST) [ACCEPT 1MENTION ONLY]

- Grade school or some high school
- Completed high school
- Completed technical or trade school/community college
- Some community college or university, but did not finish
- Completed university degree, such as a Bachelor's
- Post-graduate degree, such as a Master's or Ph.D
- (DO NOT READ) Other [do not specify]

- D. Were you born in Canada or did you move here from someplace else?

- Born in Canada
- Moved here from someplace else

- E. What is the language that you first learned at home in childhood and still understand?
(DO NOT READ UST) [ACCEPT 1MENTION]

- English
- French
- Cantonese
- Mandarin
- Punjabi
- Tagalog
- German
- Korean
- Spanish
- Persian (Farsi)
- Vietnamese
- Hindi
- Italian
- Japanese
- Polish
- Dutch
- Other [specify]



Drinking Water Questionnaire
January 17, 2011

F. Which of the following broad categories best describes your family income? That is the combined total income before taxes of all persons in your household. Please stop me when I've reached your category. (READ LIST)

- Under \$30,000
- \$30,000 to just under \$60,000
- \$60,000 to just under \$90,000
- \$90,000 to just under \$120,000
- \$120,000 or more

G. REGION: Which city do you live in?

- Vancouver
- New Westminster
- Burnaby
- North Vancouver (City & District)
- West Vancouver
- Lions Bay
- Bowen Island
- Anmore
- Belcarra
- Coquitlam
- Maple Ridge
- Pitt Meadows
- Port Coquitlam
- Port Moody
- Delta (including Tsawwassen)
- Langley (Fort Langley/Aldergrove)
- Richmond
- Surrey
- White Rock

Those are all the questions I have. Thanks you very much for your time.