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RBC Canadian Water Attitudes Study



Full Report

March, 2015



RBC
Blue Water
Project™

Welcome to the complete findings of the 2015 RBC Canadian Water Attitudes Study

A message from RBC

In 2007, RBC launched the RBC Blue Water Project, a 10-year, \$50 million charitable commitment to protect the world's freshwater.

We soon learned that many Canadians take water for granted. So in 2008, we started polling them about their attitudes towards water—to see if the serious water issues around the world and emerging ones at home were having an impact on how we use and think about this precious resource, and if our grants were making a difference.

I am pleased to provide the full results of our eighth annual poll, which is chock-a-block with interesting information. We repeated some of our tracking questions from past years, including a number about extreme weather. We also added some new questions. Among other things, we found that experiencing a flood in your home packs a long-lasting, significant emotional wallop, with 46% of survey respondents saying they continue to worry about flooding every time it rains. My 89-year old mother finally, thankfully, moved from her flood-prone home three years ago, and only recently stopped fretting when it rains.

This year also marks the 15th anniversary of the Walkerton water crisis. So we wanted to ask some very specific questions to gauge the importance of drinking water to Canadians. And make no mistake: it's really important! No matter how many ways we poked around the issue, the safety of drinking water was at the top of people's lists.

As in past years, we are making the full results of this poll freely available, with the hope that our findings will help inform the work of NGOs, academics, governments and other interested parties. You are welcome to refer to, reprint or redistribute this information. We only ask that you attribute the source as the "2015 RBC Canadian Water Attitudes Study."

I sincerely hope you find this information useful and that it will foster a healthy conversation about the value and vulnerability of water in Canada.

Lynn Patterson
Director, Corporate Responsibility
RBC

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Key findings (1)

- Canadians are confident in the quality of tap water in their homes (83%). Despite this, 37% say they prefer to filter their tap water because they do not trust that it is safe enough for drinking, and 30% think bottled water is safer to drink than tap water.
- Over 20% of Canadians think they live in an area that is **vulnerable to flooding**, while 10% of Canadians think they live in an area that is **vulnerable to drought**. These values vary depending on geographic location of respondents.
 - Flood: Winnipeg (57%), Calgary (33%), Vancouver, (25%), Toronto (20%).
 - Drought: Winnipeg (24%), Calgary (21%).
- Seven per cent of Canadians say they have been **personally affected by flooding in the past year**. Twenty-seven per cent of Canadians know someone who was personally affected by flooding in Canada in 2014. Over 30% of Canadians have been impacted by flooding due to extreme rain or snow events in their communities.
- Personal experience with flooding leads to behaviour change: Canadians who have personally been affected by flooding have taken more **measures, inside and outside, to protect their homes** from water damage.
- Almost 30% of respondents living in houses believe that they have a **backflow valve** in their home. However, 42% either do not know if they have one or have not heard of one, and 11% have no plans to install one at all.
- There is an **emotional impact** on those affected by flooding. Forty-six per cent say they are more likely to worry that their house might flood again every time there is a rain storm or extreme snow melt, and 36% experienced significant emotional distress that lasted well after their home was damaged.
 - Seven in ten Canadians say the emotional impact of a home robbery would be more negative than having their home damaged by flooding. However, more Canadians have made efforts to protect their home against flooding (37%) than burglary (28%).

Key findings (2)

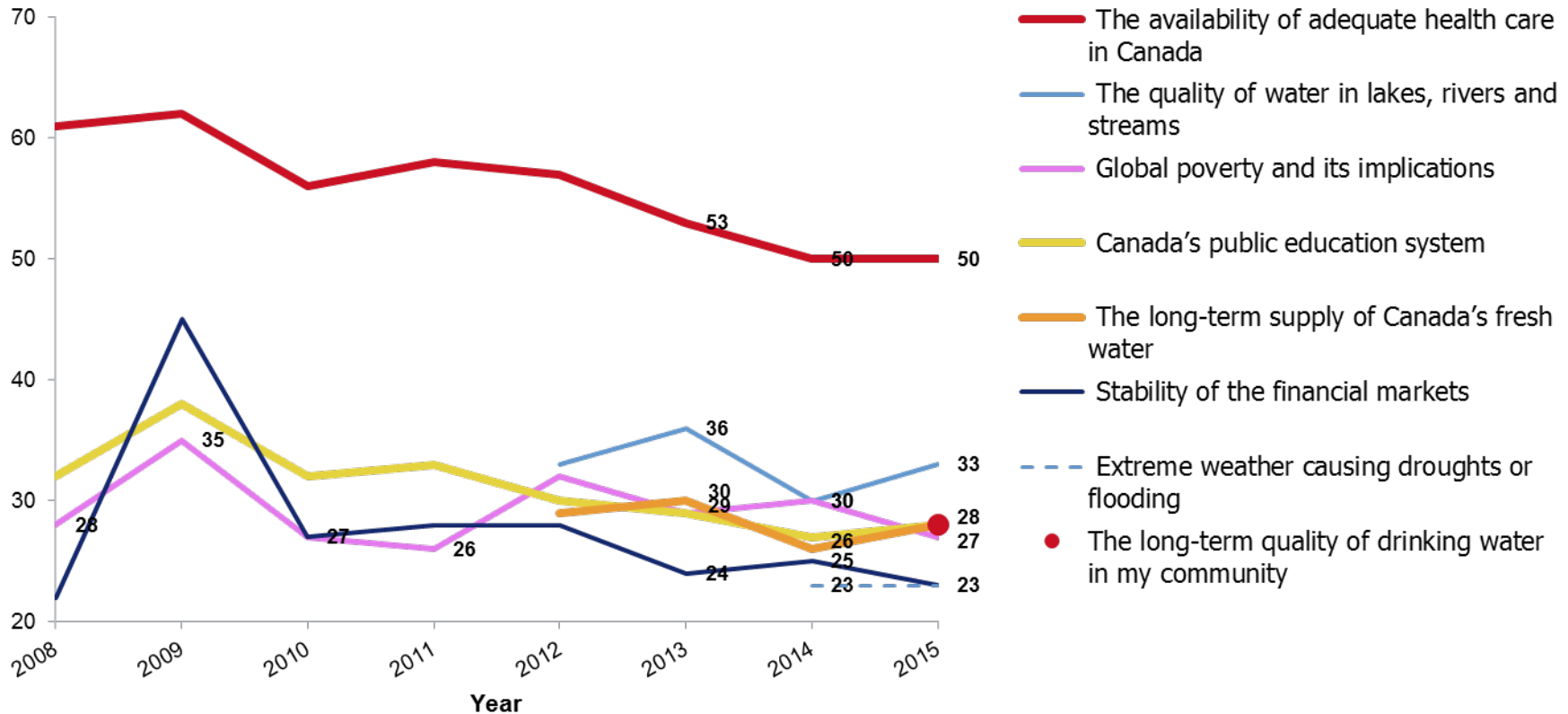
- It has been 15 years since the contamination of municipal water supplies in Walkerton, Ontario. While half of Canadians feel we now have stronger regulations to protect water as a result of the Walkerton event and 44% feel that municipalities and government are better prepared to prevent such a situation from occurring, seven in ten Canadians feel that a tragedy similar to Walkerton could happen again.
- Only one in ten Canadians think that the water treatment or storm water systems in their community require major investments. However, 46% admit to having no knowledge of the condition of water treatment systems, and 50% have no knowledge of the condition of storm water systems.
- While half of Canadians are aware of the condition of the water pipes inside their home, the majority are not aware of the condition of sewage systems, water treatment plants, storm water systems, and water mains delivering water to their homes. There is a gap in the awareness of the condition of the water systems serving Canadians.
- Over a third of Canadians are willing to pay more taxes to upgrade infrastructure for drinking water and treatment of wastewater/stormwater. Views are varied on how much it costs to maintain / improve Canada's water infrastructure and how much water is lost due to leakage through underground pipes. However, two thirds of Canadians think we should worry about repairing underground leaky pipes.



Issues Context

Healthcare remains top concern, but quality of water in lakes, rivers and streams now ranks higher than global poverty

“Very Concerned,” 2008–2015



Base: All respondents 2015 $n=2,242$ 2014 $n=2,074$, 2013 $n=2,282$, 2012 $n=2,428$, 2011 $n=2,066$, 2010 $n=2,022$, 2009 $n=2,165$, 2008 $n=2,309$

Q. (modified in 2015) Below is a list of issues that you might be concerned about. For each, please indicate the degree to which you are concerned or not concerned.

Degree of Concern for Various National Issues

“Very Concerned” and “Somewhat Concerned,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Availability of adequate health care in Canada	83	88	82	84	92	91	79	88	80	82	94	92	80	88	91	82	91	85	87	90
Quality of water in lakes, rivers and streams	77	78	79	82	83	86	75	77	88	81	85	85	79	79	87	78	85	81	81	84
Global poverty and its implications	76	77	73	79	80	79	82	80	79	78	85	78	80	77	78	74	83	79	80	74
Long-term supply of Canada's fresh water	74	71	73	72	66	77	71	70	76	69	66	75	70	69	75	66	76	69	71	77
Stability of the financial markets	76	76	73	75	68	75	76	79	69	80	73	82	73	71	78	73	73	78	69	65
Canada's public education system	77	78	72	70	74	75	76	75	74	68	76	79	74	72	75	70	77	72	73	78
Extreme weather caused by droughts or flooding	62	66	69	70	72	68	61	68	70	71	79	67	68	66	74	64	73	70	69	65
Long-term quality of drinking water in my community	65	66	67	66	69	68	64	65	67	66	73	75	65	66	70	64	70	65	69	70

Base: All respondents 2015 $n=2,242$

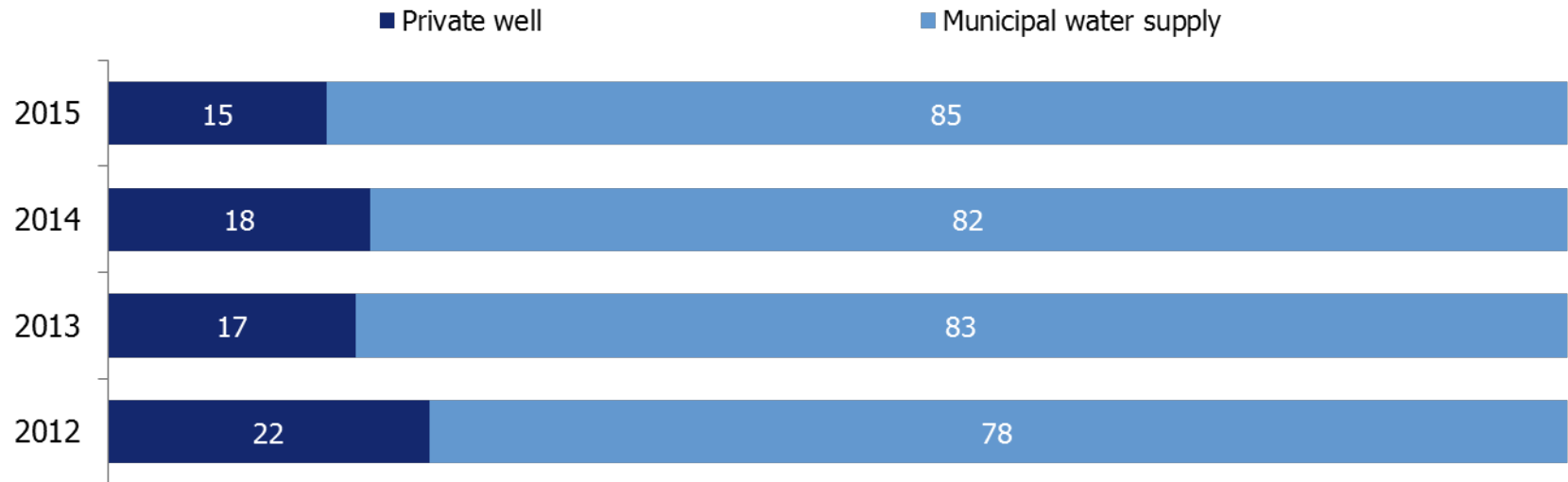
Q. (modified in 2015) Below is a list of issues that you might be concerned about. For each, please indicate the degree to which you are concerned or not concerned.



Water Quality

The majority of Canadian households continue to rely on municipal water supplies—only 15 percent rely on private wells

Main Source of Household Water, 2015



Base: All respondents 2015 $n=2,242$, 2014 $n=2,074$, 2013 $n=2,282$, 2012 $n=2,428$

Q. What is your main source of household water?

Main Source of Household Water, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Municipal water supply	89	92	92	88	87	52	96	98	96	97	91	73	90	83	84	88	83	97	85	50
Private well	11	8	8	12	13	48	4	2	4	3	9	27	10	17	16	12	17	3	15	50

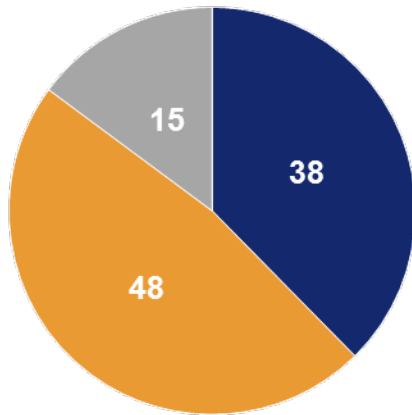
Base: All respondents 2015 $n=2,242$

Q. What is your main source of household water?

While the majority of Canadians know how much their household pays for electricity, there is less awareness of what they pay for water

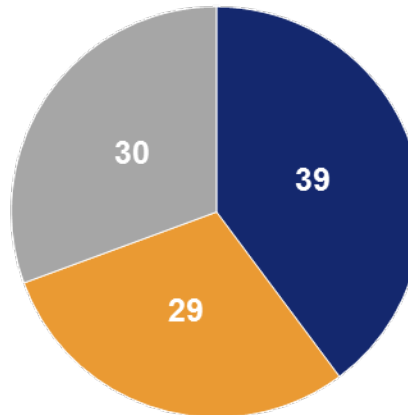
Awareness of Household Water Cost, 2015

Do you have a household water meter?



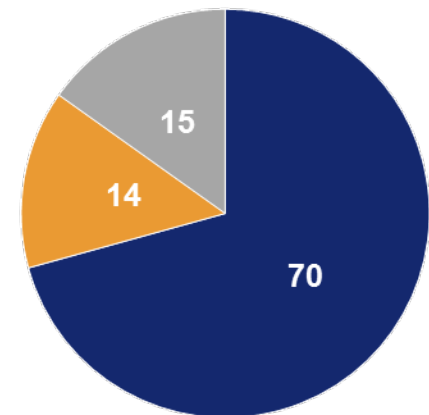
■ Yes
■ No
■ Don't Know

Do you know what your household pays per month for water?



■ Yes
■ No
■ Included in rental/condo fee

Do you know what your household pays per month for electricity?



■ Yes
■ No
■ Included in rental/condo fee

Respondents are much more likely to know how much they pay for electricity than for water. Half of respondents say they do not have a water meter compared to 4 out of 10 who say they do have one.

Base: All respondents 2015 $n=2,242$

Q. Do you have a household water meter?

Q. (modified in 2015) Do you know what your household pays per month for:

Awareness of Household Water Consumption, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)

Do you have a household water meter?

Yes	29	60	63	50	12	22	31	64	66	53	11	44	35	38	40	42	34	44	38	18
No	52	24	25	34	75	68	46	24	24	32	75	48	34	52	54	47	48	39	49	72
Don't know	20	16	12	16	13	10	23	12	9	15	14	8	31	10	5	11	18	17	13	11

Do you know what your household pays per month for water?

Yes	31	51	52	49	20	42	25	50	52	44	16	53	32	40	46	41	38	37	39	46
No	33	23	20	19	48	28	35	26	18	19	47	17	37	28	23	26	32	26	33	34
Included in rental/condo fee	36	25	28	31	31	23	40	24	29	36	36	27	31	31	27	32	28	36	27	15

Do you know what your household pays per month for electricity?

Yes	71	65	69	62	80	85	67	64	67	55	80	84	56	74	79	70	71	66	74	79
No	16	23	17	14	9	8	17	24	17	17	9	8	26	10	7	13	14	14	15	10
Included in rental/condo fee	13	12	13	22	10	6	16	11	15	27	10	6	17	14	13	15	14	19	10	7

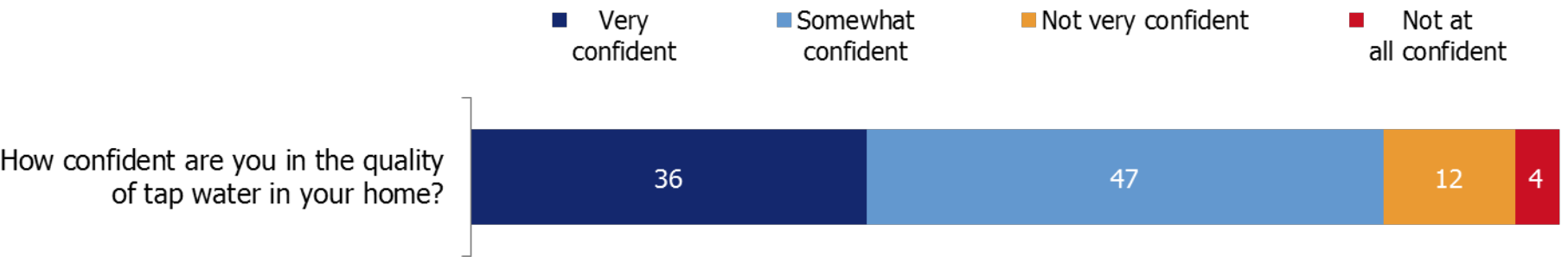
Base: All respondents 2015 $n=2,242$

Q. Do you have a household water meter?

Q. (modified in 2015) Do you know what your household pays per month for:

A strong majority (83%) of Canadians have confidence in the quality of the tap water in their homes

Confidence in Tap Water Quality at Home, 2015

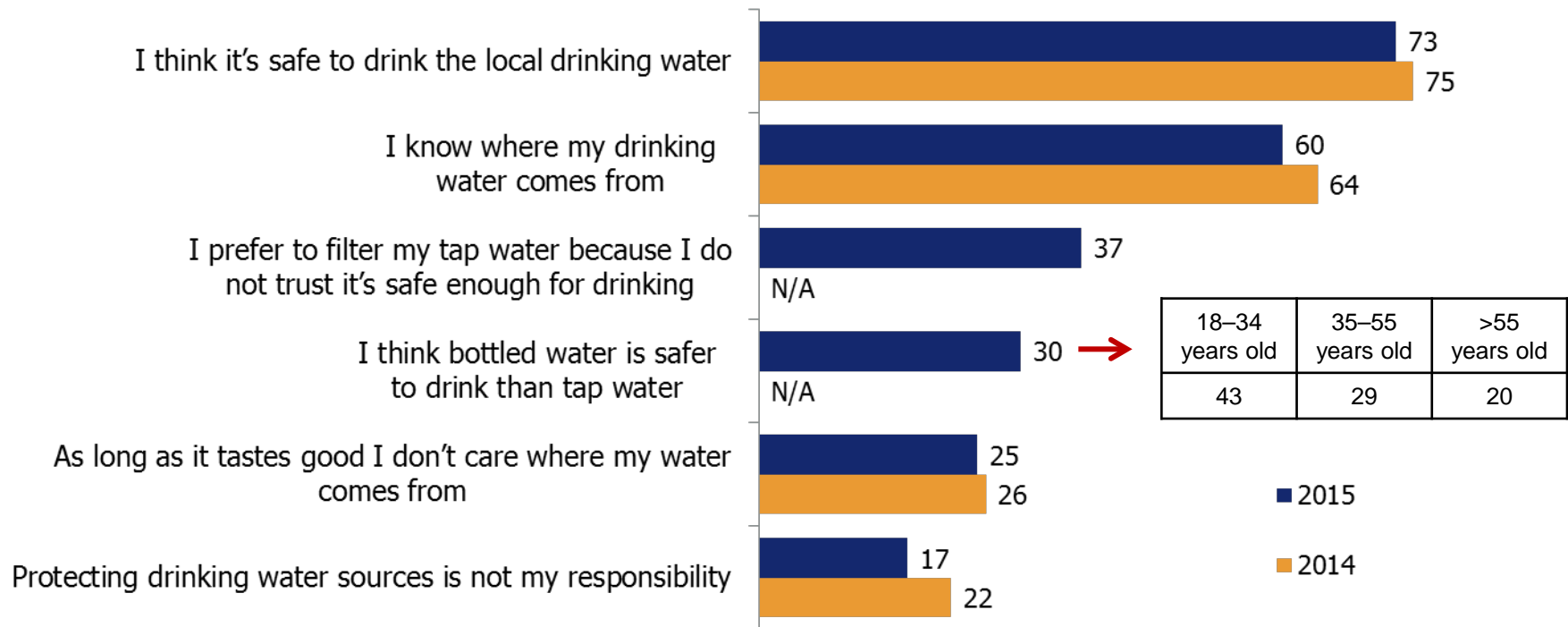


	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
“Very confident” + “Somewhat confident”	89	89	80	83	79	83	88	89	76	82	81	89	78	83	88	87	79	85	81	79

Base: All respondents 2015 n=2,242
Q. (new in 2015) How confident are you in the quality of tap water in your home?

While most Canadians are confident in the safety of their local drinking water, some prefer to filter their tap water and drink bottled water

Opinions of Local Drinking Water Sources “Strongly Agree” and “Somewhat Agree,” 2015



Although seven out of ten Canadians think it is safe to drink local drinking water, 37% prefer to filter their tap water and 30% think bottled water is safer than tap water (much higher among 18- to 34-year-olds at 43%).

Base: All respondents 2015 $n=2,242$, 2014 $n=2,074$

Q. (modified in 2015) Based on your knowledge about your local drinking water sources, would you agree or disagree with the following statements?

Opinions of Local Drinking Water Sources

“Strongly Agree” and “Somewhat Agree,” Demographics, 2015

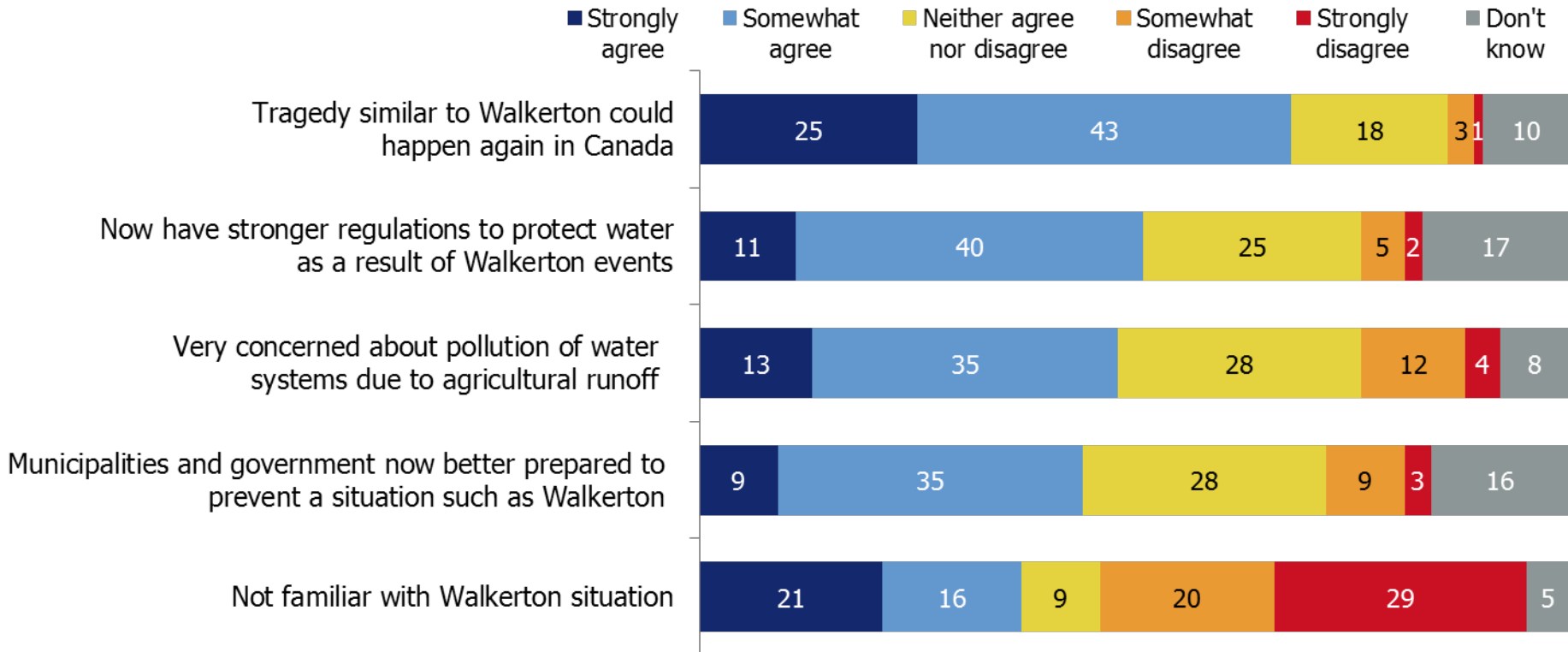
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
I think it's safe to drink the local drinking water	76	79	72	75	68	68	75	78	68	75	67	79	67	72	81	77	69	76	69	69
I know where my drinking water comes from	64	64	69	54	57	77	59	63	65	49	51	77	44	59	78	65	55	55	61	72
I prefer to filter my tap water because I do not trust it's safe enough for drinking	41	35	38	44	26	35	43	38	36	46	33	29	44	36	31	35	39	38	40	32
I think bottled water is safer to drink than tap water	27	34	35	33	28	21	31	37	38	39	35	23	43	29	20	33	27	33	32	22
As long as it tastes good I don't care where my water comes from	28	31	29	23	26	21	29	28	26	24	23	23	26	26	22	28	23	25	24	26
Protecting drinking water sources is not my responsibility	17	17	18	19	13	17	18	16	16	24	11	19	22	16	14	21	13	18	16	14

Base: All respondents 2015 $n=2,242$

Q. (modified in 2014) Based on your knowledge about your local drinking water sources, would you agree or disagree with the following statements?

Although Canadians believe there are strong regulations to protect against water contamination, there is still concern that a tragedy similar to Walkerton could happen again

Concern About Possibility of Drinking Water Contamination, 2015



Although the majority think we now have stronger regulations to protect water, nearly seven out of ten believe a tragedy similar to Walkerton could happen again in Canada.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) It has been 15 years since municipal water supplies in Walkerton, Ontario were contaminated by *E. coli* bacteria from agricultural runoff, causing 7 deaths and more than 2,300 people to become sick. To what extent do you agree or disagree with each of the following statements?

Concern about Possibility of Drinking Water Contamination

“Strongly Agree” and “Agree,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100,000)	Mid-size towns/cities	Rural (<1000)
Tragedy similar to Walkerton could happen again in Canada	64	67	68	70	65	76	61	65	69	66	68	80	56	68	81	70	66	69	66	68
Now have stronger regulations to protect water as a result of Walkerton events	42	41	45	60	46	48	44	42	41	56	50	49	44	49	60	55	47	51	47	54
Very concerned about pollution of water systems due to agricultural runoff	45	47	52	53	39	53	49	47	50	54	42	58	46	44	56	48	48	49	48	45
Municipalities and government now better prepared to prevent a situation such as Walkerton	40	40	37	53	35	47	41	40	33	53	36	49	39	43	51	46	42	45	40	46
Not familiar with Walkerton situation	47	42	40	23	53	31	50	39	39	26	50	30	55	32	26	34	39	36	41	36

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) It has been 15 years since municipal water supplies in Walkerton, Ontario were contaminated by *E. coli* bacteria from agricultural runoff, causing 7 deaths and more than 2,300 people to become sick. To what extent do you agree or disagree with each of the following statements?

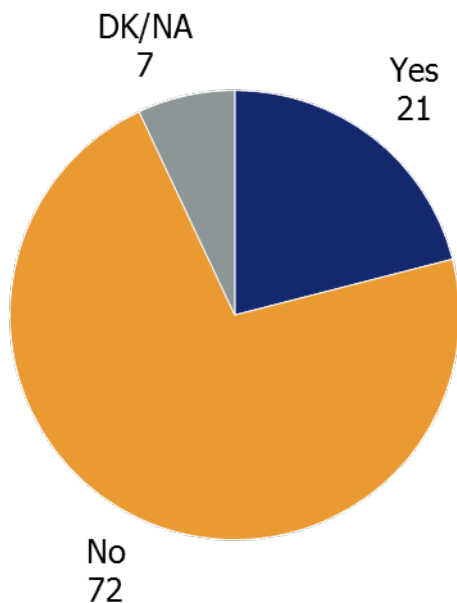


Extreme Weather and Preparedness

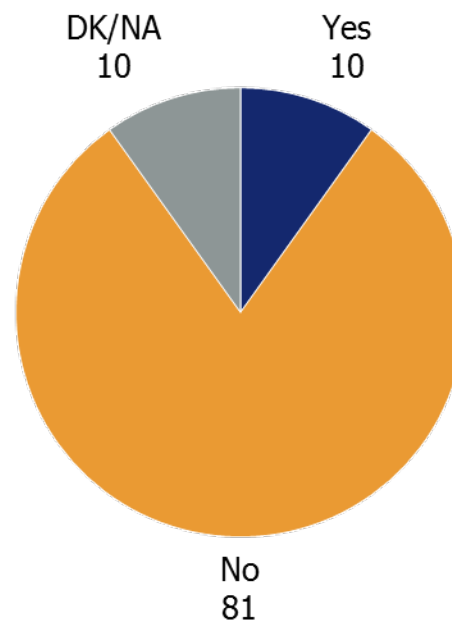
Most Canadians think they live in areas that are not vulnerable to floods and drought

Vulnerability to Flooding and Drought, 2015

Live in an area that you think is vulnerable to flooding?



Live in an area that you think is vulnerable to drought?



More Canadians think they live in areas vulnerable to flooding than in areas that are vulnerable to drought. Residents of Alberta and the Prairies feel significantly more vulnerable to both types of events than in other parts of Canada.

Base: All respondents 2015 $n=2,242$

Q. Do you currently live in an area that you think is vulnerable to flooding?

Q. (added in 2015) Do you currently live in an area that you think is vulnerable to drought?

Perceived Vulnerability to Flooding and Drought, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Live in an area that you think is vulnerable to flooding	27	26	50	19	10	22	25	33	57	20	9	17	25	21	16	20	22	22	18	22
Live in an area that you think is vulnerable to drought	12	24	30	7	2	7	6	21	24	6	2	1	9	9	11	9	10	9	7	14

Base: All respondents 2015 $n=2,242$

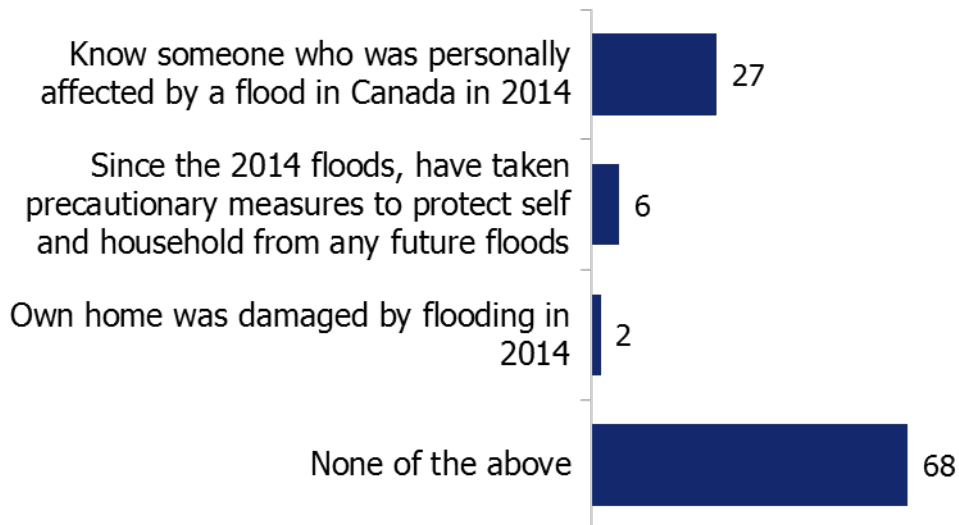
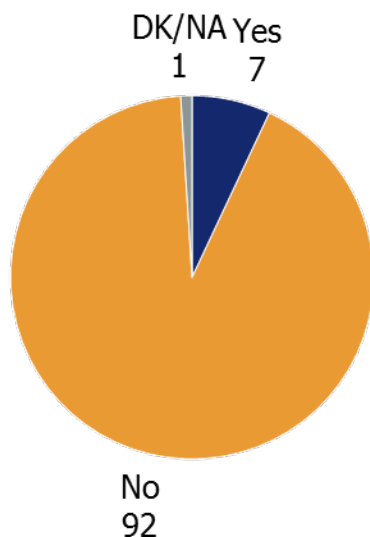
Q. Do you currently live in an area that you think is vulnerable to flooding?

Q. (added in 2015) Do you currently live in an area that you think is vulnerable to drought?

Seven per cent of Canadians have experienced flooding, and over a quarter know someone who was affected by flooding in 2014

Experience with Flooding in the Last 12 Months, 2015

Personally affected by flooding in last 12 months?



Besides the 7% of Canadians personally affected by flooding, 27% know someone who was affected by flooding in 2014.

Base: All respondents 2015 $n=2,242$

Q. Several Canadian cities, towns and communities experienced some kind of serious flooding in 2014. Have you personally been affected by flooding in the last 12 months?

Q. (modified in 2015) Which of the following, if any, apply to you in relation to floods in 2014? *Please select all that apply.*

Experience with Flooding in the Last 12 Months, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Personally affected by flooding in last 12 months	4	10	12	10	2	9	4	12	5	13	3	7	10	8	4	8	7	8	6	7
Know someone who was personally affected by a flood in Canada in 2014	28	42	33	28	16	24	29	49	26	33	20	27	34	26	20	27	26	29	21	25
Own home was damaged by flooding in 2014	1	2	2	3	0	2	1	1	2	4	0	1	2	2	1	2	2	2	1	0
Since the 2014 floods, have taken precautionary measures to protect self and household from any future floods	4	8	12	9	1	6	6	9	6	12	1	8	8	8	3	7	6	7	6	5
None of the above	68	51	60	65	81	71	68	44	69	60	77	68	60	68	77	69	68	66	74	69

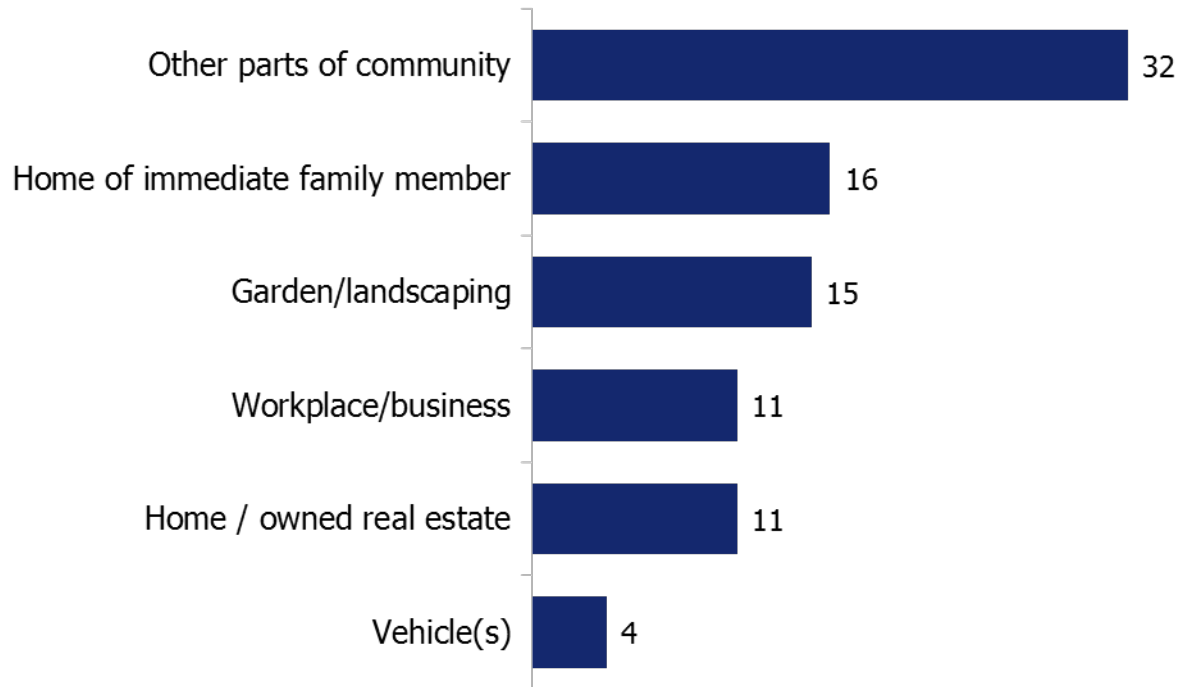
Base: All respondents 2015 $n=2,242$

Q. Several Canadian cities, towns and communities experienced some kind of serious flooding in 2014. Have you personally been affected by flooding in the last 12 months?

Q. (modified in 2015) Which of the following, if any, apply to you in relation to floods in 2014? *Please select all that apply.*

One in three Canadians have experienced flooding in parts of their community if not personally

Damage from Flooding Experienced, 2015



Thirty-two percent of Canadians have been impacted by flooding due to extreme rainfall or snowfall events in their communities. Eleven percent have had damage to their home or real estate.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Have you ever experienced damage from flooding caused by extreme rain or snowfall to any of the following?

Damage from Flooding Experienced, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Home / owned real estate	11	11	20	13	6	13	11	10	21	14	5	16	12	11	12	11	12	12	11	11
Workplace/business	8	14	13	12	8	10	9	19	13	16	10	8	13	11	7	12	9	12	10	8
Vehicle(s)	6	9	6	2	3	3	7	11	8	4	4	3	6	4	3	5	4	5	4	3
Home of immediate family member	13	17	23	16	17	14	11	22	21	16	15	16	22	16	12	17	16	16	18	17
Garden/landscaping	15	16	26	16	8	19	12	17	24	16	5	22	16	15	12	13	16	14	13	19
Other parts of community	27	39	48	33	24	38	22	48	47	34	19	35	30	33	34	30	35	31	31	36

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Have you ever experienced damage from flooding caused by extreme rain or snowfall to any of the following?

Preparedness for Potential Impacts of Flooding

“Very Prepared” and “Somewhat Prepared,” Demographics, 2015

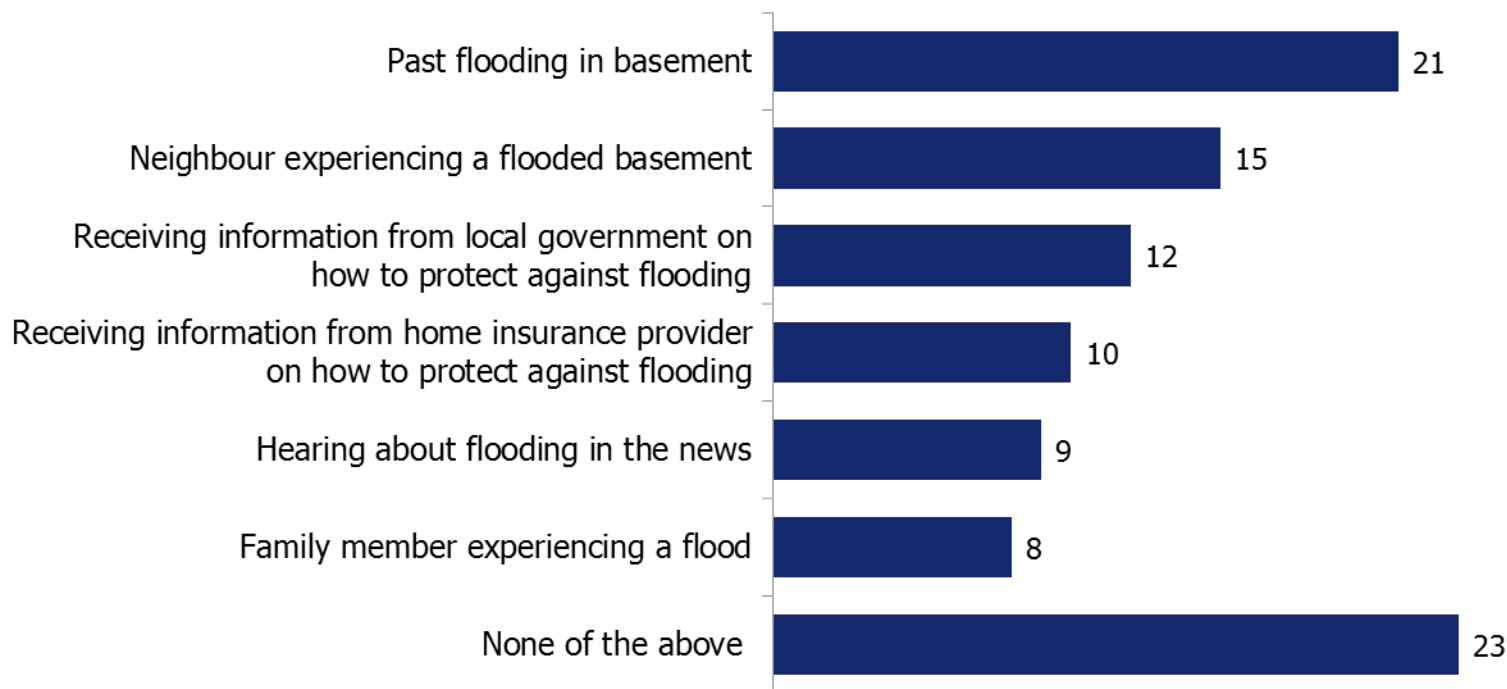
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
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Safety and security of family	72	75	76	78	66	78	68	76	84	78	63	81	71	75	77	76	73	73	79	73
Ability to manage personal stress	75	73	70	77	67	76	71	72	73	74	67	80	71	73	77	77	70	73	77	71
Having adequate insurance coverage	67	70	67	73	70	72	66	69	73	71	67	78	66	71	76	73	69	70	73	70
Physical damage to home	55	59	57	57	51	61	49	57	57	60	47	60	50	55	63	58	54	55	61	53
Ability to pay costs not covered by insurance	49	48	43	46	36	39	46	50	51	51	34	52	37	41	52	48	38	47	47	29

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) How prepared do you feel you are to deal with each of the following potential impacts of flooding?

A past flooding experience most likely to cause Canadians to take action to stormproof their homes

Event Most Likely to Cause Canadians to Stormproof Home, 2015



Although a past flooding of their basement or a neighbour's basement are the events most likely to cause action, nearly a quarter of respondents say that none of the above events would likely cause them to stormproof their home.

Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Which one of the following, if any, would be the most likely to cause you to take action to stormproof your home?

Event Most Likely to Cause Canadians to Stormproof Home, Demographics, 2015

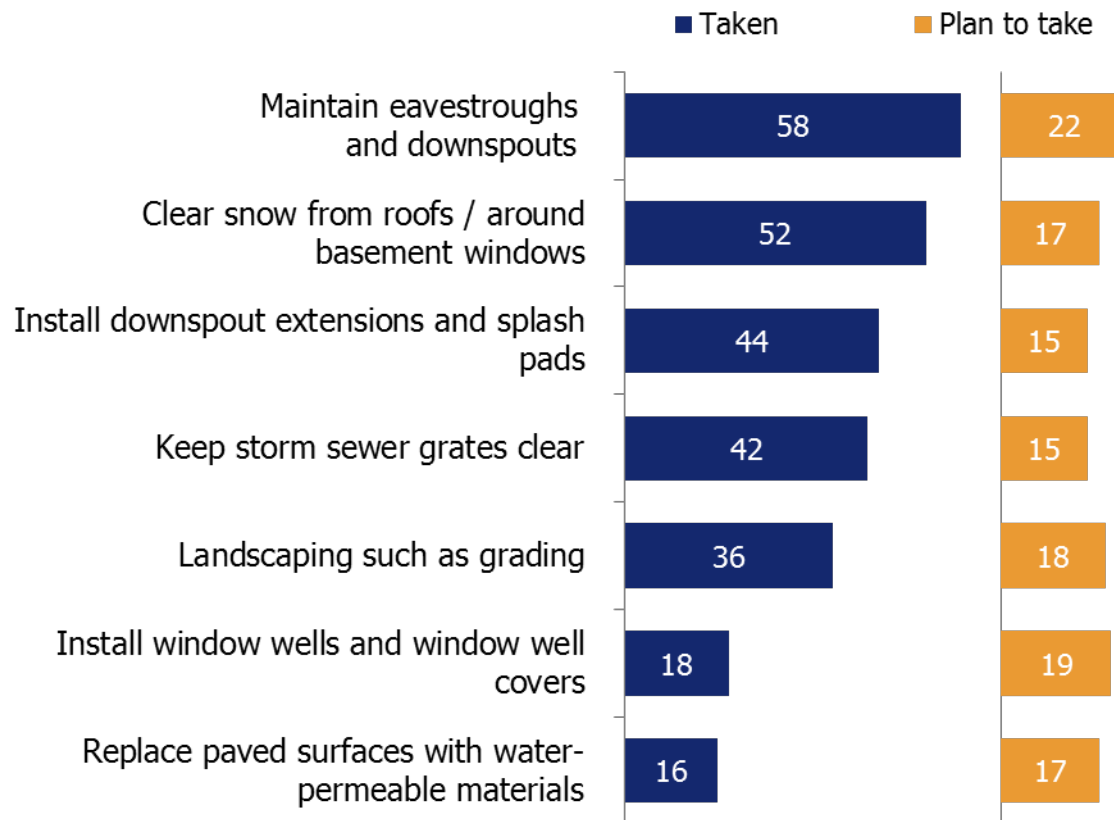
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Family member experiencing a flood	10	11	5	9	5	7	11	9	7	7	5	10	13	8	3	8	7	9	8	6
Hearing about flooding in the news	12	9	9	8	8	11	15	11	8	9	8	12	12	8	8	9	10	9	6	12
Receiving information from home insurance provider on how to protect against flooding	8	10	10	9	13	10	10	14	12	10	12	9	6	10	15	10	11	11	11	7
Receiving information from local government on how to protect against flooding	9	8	9	13	19	10	9	8	10	13	20	10	9	15	12	12	13	12	12	13
Neighbour experiencing a flooded basement	15	19	17	19	8	12	14	17	24	23	6	15	21	14	12	18	12	19	14	9
Past flooding in basement	16	26	26	23	16	28	16	25	25	21	13	22	19	24	19	18	25	21	19	24
None of the above	29	18	22	19	32	22	20	15	15	16	35	22	19	21	30	25	21	18	31	27

Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Which one of the following, if any, would be the most likely to cause you to take action to stormproof your home?

Maintaining eavestroughs/downspouts and clearing snow are most common measures taken outside home to prevent water damage

Measures Taken / Plan to Take in Coming Year to Prevent Water Damage, Outside of Home, 2015



Base: All respondents living in houses 2015 $n=1,493$

Q. (modified in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage OUTSIDE of your home?

Preventative Measures Taken to Prevent Water Damage Outside of Home, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Maintain eavestroughs and downspouts	51	58	69	63	48	64	50	60	69	63	39	71	42	59	74	58	58	59	59	57
Install downspout extensions and splash pads	32	46	59	47	39	43	29	47	59	42	38	48	31	45	55	43	44	43	42	48
Landscaping such as grading	30	38	54	35	29	40	26	39	51	34	17	43	27	35	45	36	36	35	35	38
Replace paved surfaces with water-permeable materials	17	16	24	18	11	11	21	18	27	24	7	13	13	17	16	17	15	19	16	10
Install window wells and window well covers	13	23	26	20	13	15	15	21	29	23	9	10	17	18	19	17	19	21	17	14
Keep storm sewer grates clear	47	39	37	46	37	40	52	41	42	59	33	41	36	46	42	45	40	47	44	30
Clear snow from roofs / around basement windows	30	49	61	60	51	50	25	47	62	60	42	47	47	53	56	52	53	50	52	58

Base: All respondents living in houses 2015 $n=1,493$

Q. (modified in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage OUTSIDE of your home?

Measures Plan to Take in Coming Year to Prevent Water Damage Outside of Home, Demographics, 2015

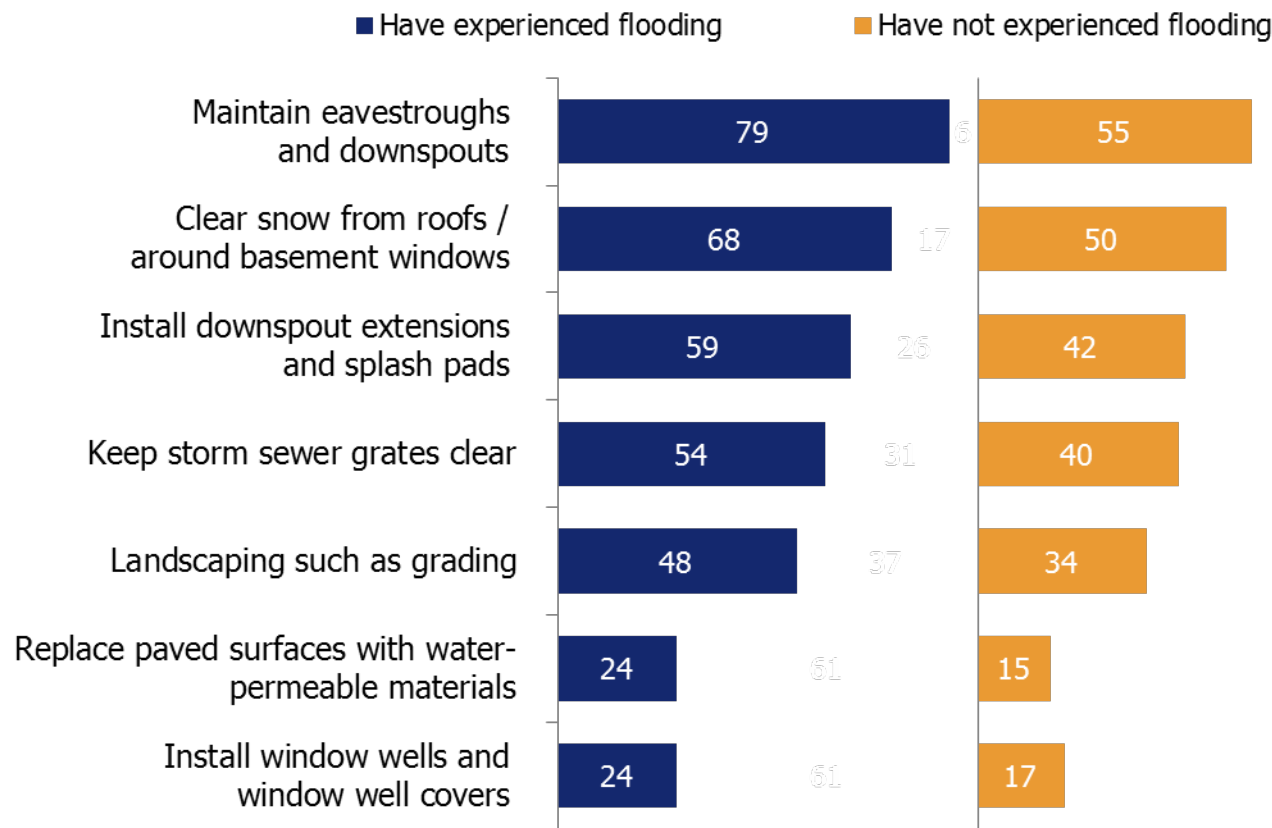
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Maintain eavestroughs and downspouts	25	25	19	24	21	11	29	26	18	21	22	7	33	22	11	20	24	23	20	22
Install downspout extensions and splash pads	21	13	15	13	13	18	23	15	16	15	14	11	22	15	7	14	15	15	18	12
Landscaping such as grading	19	15	17	19	20	16	24	16	16	21	20	11	27	17	11	16	20	19	19	17
Replace paved surfaces with water-permeable materials	20	17	20	16	14	20	22	18	14	20	13	18	27	15	10	15	19	17	17	18
Install window wells and window well covers	22	16	22	19	16	20	26	19	17	25	15	14	28	18	10	18	19	18	21	18
Keep storm sewer grates clear	20	15	16	16	12	11	27	16	10	20	14	9	26	12	8	15	15	18	13	10
Clear snow from roofs / around basement windows	18	16	21	19	16	13	20	14	22	20	23	8	26	17	9	18	17	18	19	14

Base: All respondents living in houses 2015 $n=1,493$

Q. (modified in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage OUTSIDE of your home?

Canadians who have past experience with flooding are more likely to take measures to prevent damage to the outside of their homes compared to those who have not experienced flooding

Measures Taken Outside of Home to Prevent Water Damage, Have Experienced Flooding and Have Not Experienced Flooding, 2015



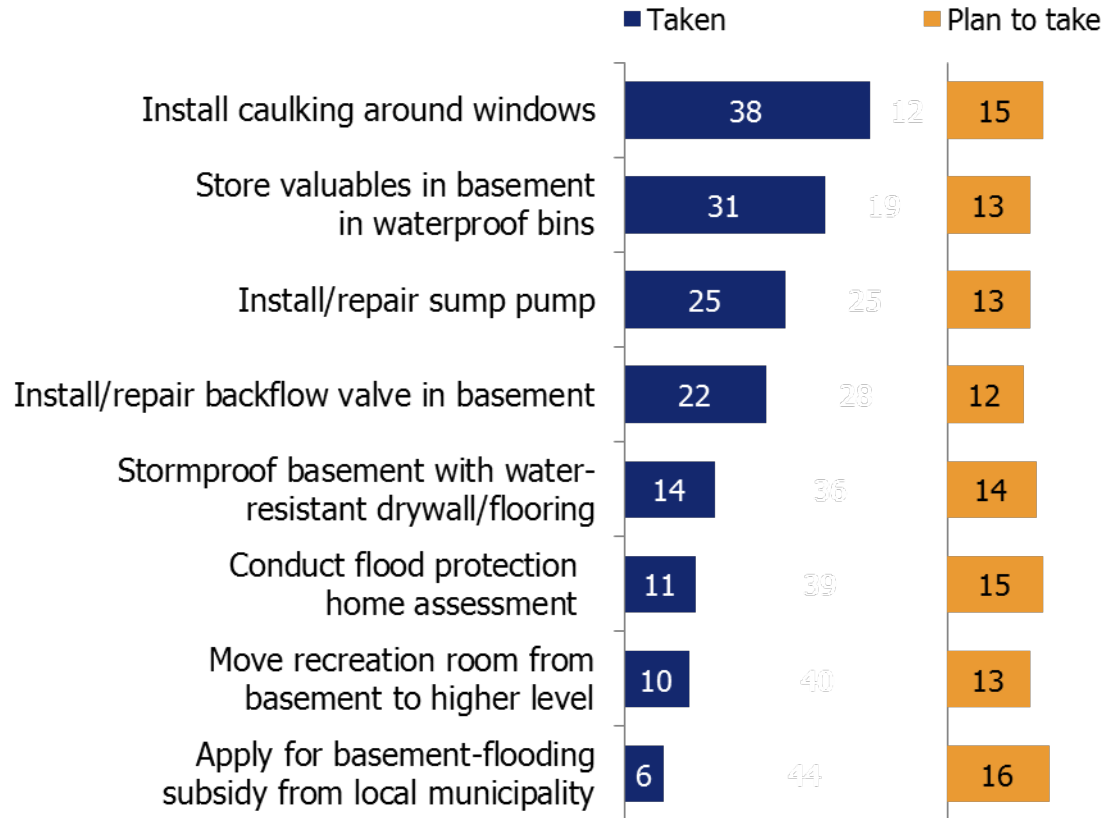
The average number of preventative measures taken outside the home by those who have past experience with flooding is 3.6 measures compared to 2.5 measures by people who have not experienced flooding.

Base: All respondents living in houses 2015 $n=1,493$ (have experienced flooding $n=209$; have not experienced flooding $n=1,284$)

Q. (modified in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage OUTSIDE of your home?

Four in ten Canadians have tried to prevent water damage by installing window caulking

Measures Taken / Plan to Take in Coming Year to Prevent Water Damage Inside of Home, 2015



Canadians are less likely to take measures inside their home to prevent water damage than they are to take measures outside their home.

Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage INSIDE of your home?

Measures Plan to Take in Coming Year to Prevent Water Damage Inside of Home, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Apply for basement-flooding subsidy from local municipality	20	13	19	14	17	15	25	16	12	15	18	12	27	13	9	14	17	16	16	14
Install caulking around windows	25	12	13	15	12	14	28	16	9	19	16	7	24	13	9	15	15	16	18	9
Conduct flood protection home assessment with drainage specialist	20	15	17	14	14	19	23	19	9	18	15	14	24	14	10	15	16	17	15	13
Stormproof basement with water-resistant drywall / special sub-flooring	20	10	19	12	15	16	22	13	15	14	19	9	20	15	8	12	16	14	15	14
Store valuables in basement in waterproof bins	19	16	14	13	10	10	21	18	14	16	13	7	21	12	7	13	14	16	15	6
Install/repair sump pump	19	10	18	11	12	15	24	12	14	17	12	6	22	11	7	12	14	14	15	10
Move recreation room from basement to higher level	18	13	16	11	12	12	21	14	16	16	14	8	20	12	6	13	13	14	14	9
Install/repair backflow valve in basement	17	12	16	13	8	14	20	14	11	19	11	10	21	11	7	13	12	14	15	6

Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage INSIDE of your home?

Preventative Measures Taken to Prevent Water Damage Inside of Home, Demographics, 2015

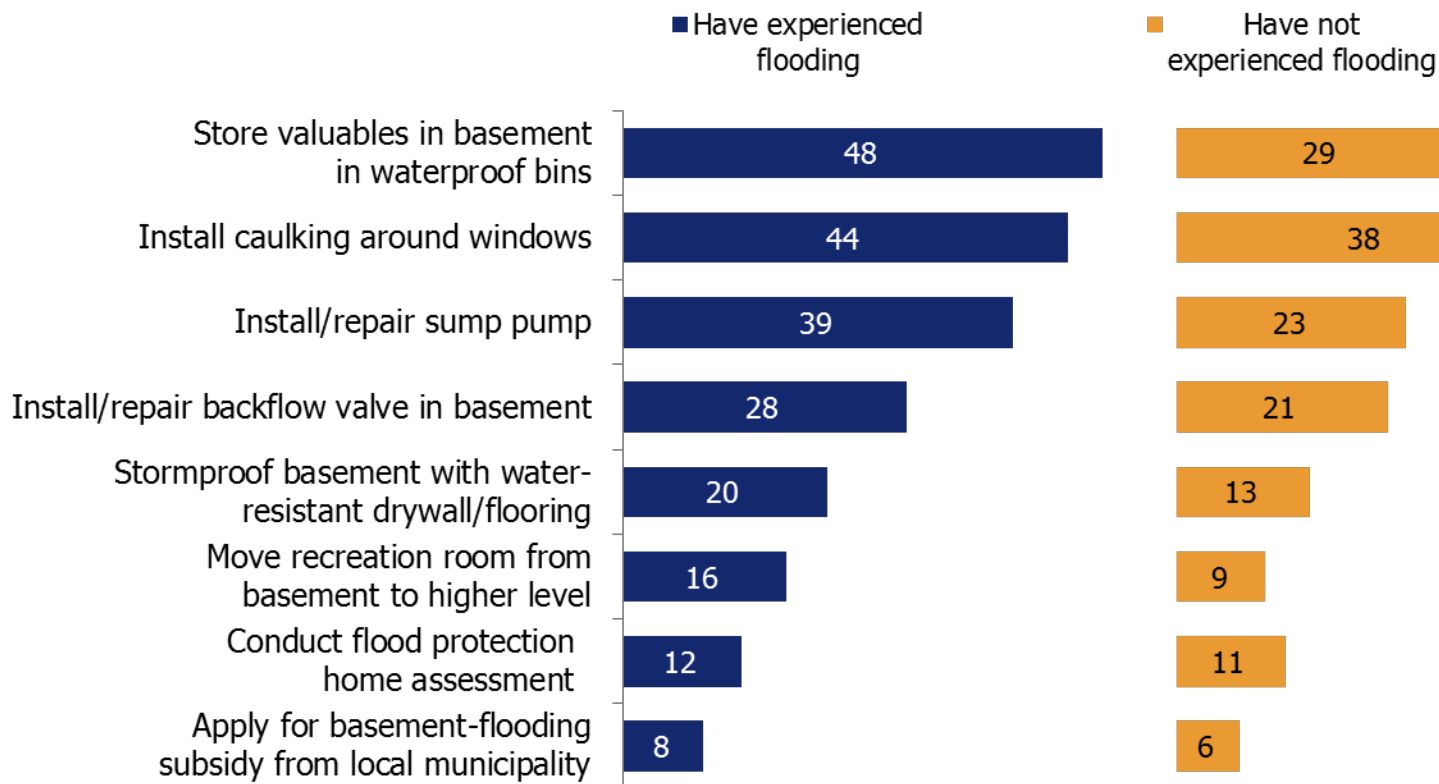
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Apply for basement-flooding subsidy from local municipality	9	8	9	5	6	5	9	8	11	8	2	2	6	8	4	8	5	6	7	6
Install caulking around windows	28	33	35	42	39	44	28	38	38	46	35	51	32	40	41	40	37	38	34	42
Conduct flood protection home assessment with drainage specialist	14	9	14	8	16	8	16	8	16	11	10	7	10	12	10	12	10	11	12	9
Stormproof basement with water-resistant drywall / special sub-flooring	17	15	17	14	13	11	18	16	16	16	9	10	15	14	14	14	14	14	14	14
Store valuables in basement in waterproof bins	25	31	42	30	32	32	24	32	36	31	21	27	28	33	30	30	32	29	29	37
Install/repair sump pump	19	22	38	24	26	25	18	15	38	16	23	26	21	26	26	26	24	19	25	38
Move recreation room from basement to higher level	12	9	13	9	9	9	13	11	9	12	5	6	13	9	8	11	9	9	11	9
Install/repair backflow valve in basement	21	21	33	15	34	17	22	22	34	15	24	13	20	22	23	20	23	19	20	30

Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage INSIDE of your home?

Canadians who have experienced past flooding of their homes are more likely to have taken measures to water prevent damage inside their homes

Measures Taken Inside of Home to Prevent Water Damage, Have Experienced Flooding and Have not Experienced Flooding, 2015



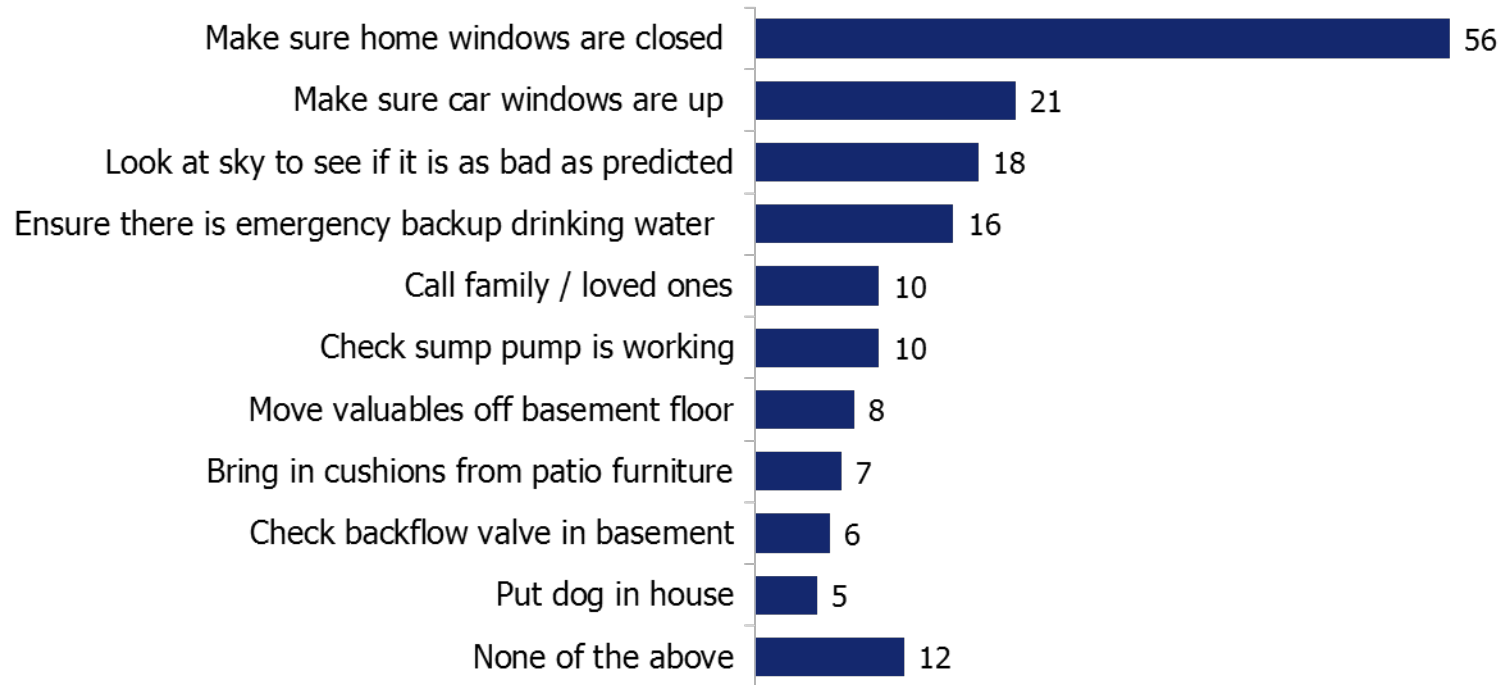
The average number of preventative measures taken inside the home by those who have past experience with flooding is 2.1 measures compared to 1.5 measures by people who have not experienced flooding.

Base: All respondents living in houses 2015 $n=1,493$ (have experienced flooding $n=209$, have not experienced flooding $n=1,284$)

Q. (new in 2015) Which of the following preventative measures have you taken and / or plan to take to help prevent water damage INSIDE of your home?

Canadians make sure their windows are closed when heavy rain is expected

Typical Action Taken After Hearing of Imminent Heavy/Extreme Rainfall, Total Mentions, 2015



After hearing a report of imminent heavy rainfall, the most typical actions taken by respondents are closing home/car windows and observing the sky themselves.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) What are the first two things you typically do when you hear a weather report calling for imminent heavy or extreme rainfall when you are at home?

Typical Action Taken After Hearing of Imminent Heavy/Extreme Rainfall, Demographics, 2015 (1 of 2)

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Put dog in house	5	7	7	5	4	6	4	4	5	3	2	4	7	4	5	5	5	4	5	10
Check backflow valve in basement	5	8	13	5	6	4	7	7	11	5	9	3	5	7	6	5	7	6	6	7
Bring in cushions from patio furniture	5	6	8	6	8	7	5	7	8	7	5	11	6	6	8	6	8	7	6	6
Move valuables off basement floor	10	12	9	7	5	7	9	13	12	7	7	8	8	8	7	9	7	9	6	7
Check sump pump is working	4	8	20	12	6	16	5	7	15	5	9	11	8	10	11	8	12	6	11	19
Call family / loved ones	9	14	9	12	5	10	10	16	9	14	4	9	12	10	7	9	11	11	11	5
Ensure there is emergency backup drinking water stored	17	13	12	17	10	29	14	15	13	20	9	30	12	14	23	15	16	15	17	17

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) What are the first two things you typically do when you hear a weather report calling for imminent heavy or extreme rainfall when you are at home?

Typical Action Taken After Hearing of Imminent Heavy/Extreme Rainfall, Demographics, 2015 (2 of 2)

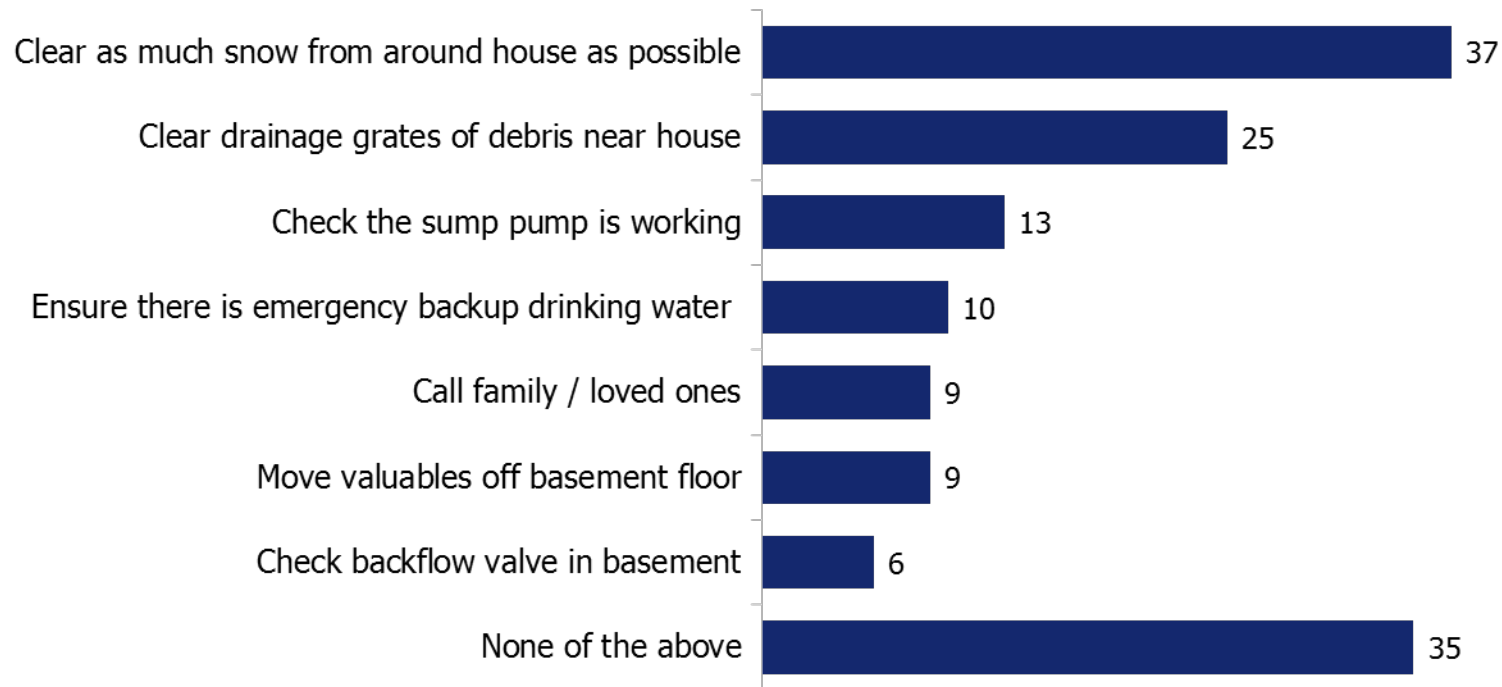
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Look at sky to see if it is as bad as predicted	20	30	16	19	15	9	20	27	18	20	18	9	21	19	14	19	17	21	15	13
Make sure car windows are up	19	14	21	21	25	27	16	14	23	14	22	28	22	20	22	21	22	18	27	25
Make sure home windows are closed	40	53	58	58	65	47	42	49	58	58	64	55	49	60	58	53	59	57	56	52
Head for higher land	1	5	1	1	2	2	1	6	1	2	1	3	2	2	1	2	1	1	2	2
Turn off hose/sprinkler	2	1	0	1	1	0	0	1	0	1	2	0	1	1	1	1	0	1	1	1
Protect landscaping	1	2	2	2	2	3	1	4	2	3	2	1	3	2	1	2	1	2	1	3
None of the above	20	7	7	10	15	8	23	8	6	13	17	7	13	11	12	14	10	13	10	11

Base: All respondents 2015 $n=2,242$

Q. (modified in 2015) What are the first two things you typically do when you hear a weather report calling for imminent heavy or extreme rainfall when you are at home?

After hearing of potential extreme snowmelt, Canadians tend to clear snow and drainage grates near their homes

Typical Action Taken After Hearing of Imminent Heavy/Extreme Snowmelt, Total Mentions, 2015



Clearing snow is the most typical action taken after hearing of a potential extreme snow melt. However, a similar proportion of respondents do not take any action.

Base: All respondents 2015 $n=2,242$

Q. (modified in 2015) When you hear that the weather is warming up and there is potential for extreme snowmelt, what are the first two things you typically do?

Typical Action Taken After Hearing of Imminent Heavy/Extreme Snowmelt, Demographics, 2015

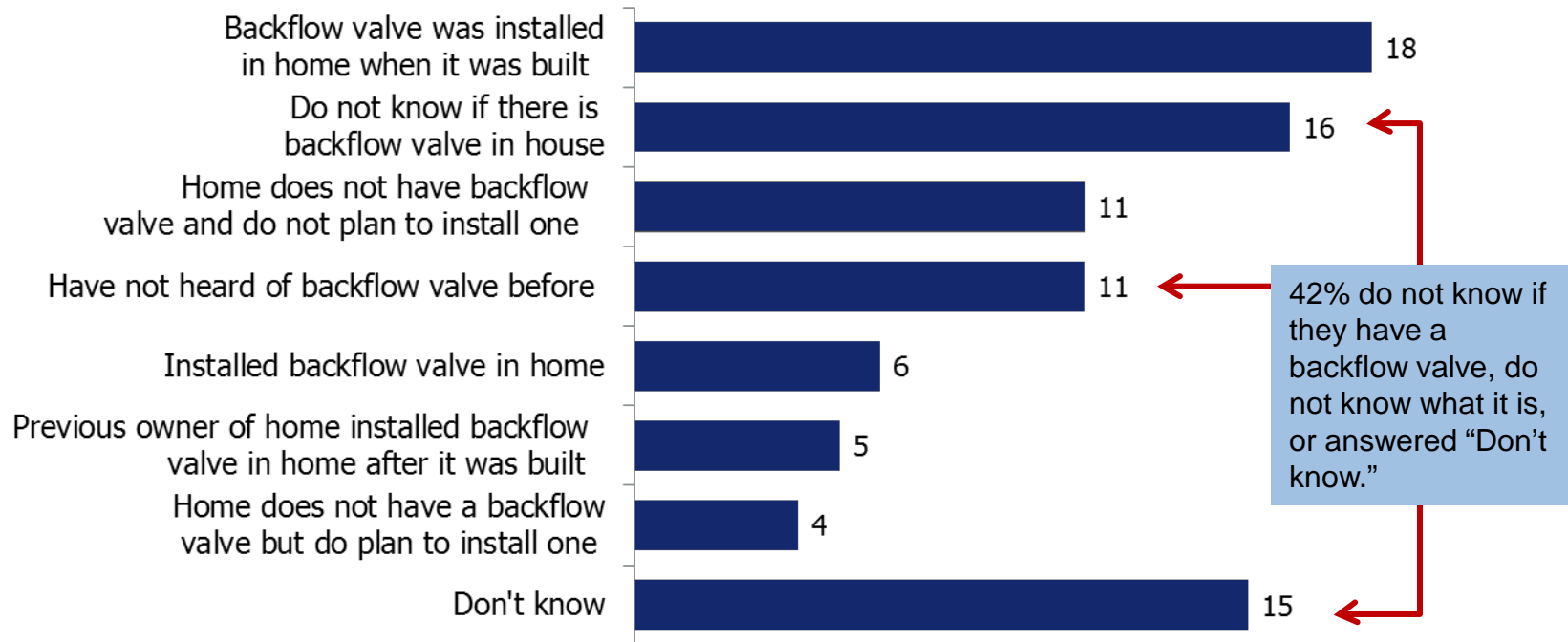
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Check backflow valve in basement	4	5	6	4	10	6	5	6	5	4	11	3	5	7	5	5	7	4	8	8
Move valuables off basement floor	6	10	9	10	8	9	6	9	9	10	7	6	10	9	7	9	8	8	9	12
Call family / loved ones	10	13	8	10	5	9	10	13	8	11	4	8	10	9	7	7	10	9	7	8
Ensure there is emergency backup drinking water	11	12	9	9	10	15	11	14	10	10	13	15	9	9	13	10	11	11	10	9
Check the sump pump is working	8	12	22	15	13	13	8	9	19	7	15	9	12	15	13	11	16	9	15	26
Clear drainage grates of debris near house	27	24	25	30	16	27	27	25	26	33	16	29	24	26	24	26	24	27	28	15
Clear as much snow from around house as possible	28	40	55	42	28	36	26	40	47	37	29	30	35	39	36	37	37	36	35	41
Head for higher land	3	2	1	1	1	0	4	3	1	2	1	0	2	1	1	1	1	2	1	0
None of the above	44	33	23	29	44	31	43	30	26	32	43	41	35	34	36	37	32	37	33	29

Base: All respondents 2015 $n=2,242$

Q. (modified in 2015) When you hear that the weather is warming up and there is potential for extreme snowmelt, what are the first two things you typically do?

Only a third of Canadians living in houses have / plan to install a backflow valve; two in five respondents do not know if their homes have a backflow valve

Status of Backflow Valve in Home, 2015



Base: All respondents living in houses 2015 $n=1,493$

Q. (new in 2015) Backflow valves help to prevent sewer drains from backing up and overflowing, and this eliminates sewer backflow as a potential source of basement flooding. From the list below, please select the statement that best applies to you.

Status of Backflow Valve in Home, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Backflow valve was installed in home when it was built	14	18	27	11	34	14	14	17	29	10	38	16	15	19	20	19	18	18	20	18
Do not know if there is backflow valve in house	18	16	17	18	10	17	16	15	19	19	8	13	18	17	12	14	17	16	16	16
Home does not have backflow valve and do plan to install one	11	9	7	13	8	10	10	10	10	10	8	19	6	10	16	13	9	11	12	9
Have not heard of backflow valve before	14	13	2	14	4	9	16	12	2	15	3	11	12	10	11	10	11	12	9	8
Installed backflow valve in home	6	7	11	5	7	6	6	8	11	8	3	8	5	6	8	7	6	8	6	4
Previous owner of home installed backflow valve in home after it was built	2	5	7	4	8	6	1	4	4	2	4	4	4	6	4	4	6	5	2	8
Home does not have a backflow valve but do plan to install one	1	7	5	5	3	2	1	9	5	7	5	3	4	4	4	5	4	5	5	1
Don't know	20	16	17	17	9	14	29	19	17	20	9	11	25	14	7	13	17	18	14	9

Base: All respondents living in houses 2015 $n=1,493$

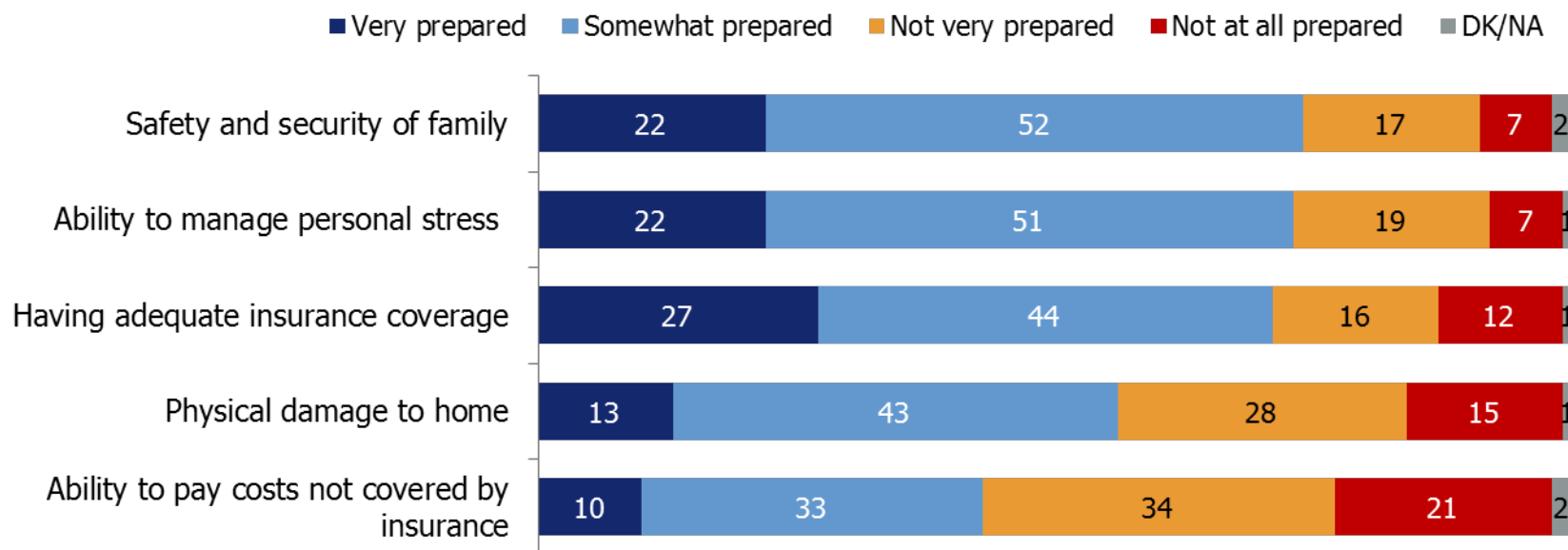
Q. (new in 2015) Backflow valves help to prevent sewer drains from backing up and overflowing, and this eliminates sewer backflow as a potential source of basement flooding. From the list below, please select the statement that best applies to you.



The Impacts and Emotional Toll of Flooding

Canadians feel more prepared to deal with the safety/emotional impacts of flooding than with financial impacts

Preparedness for Potential Impacts of Flooding, 2015



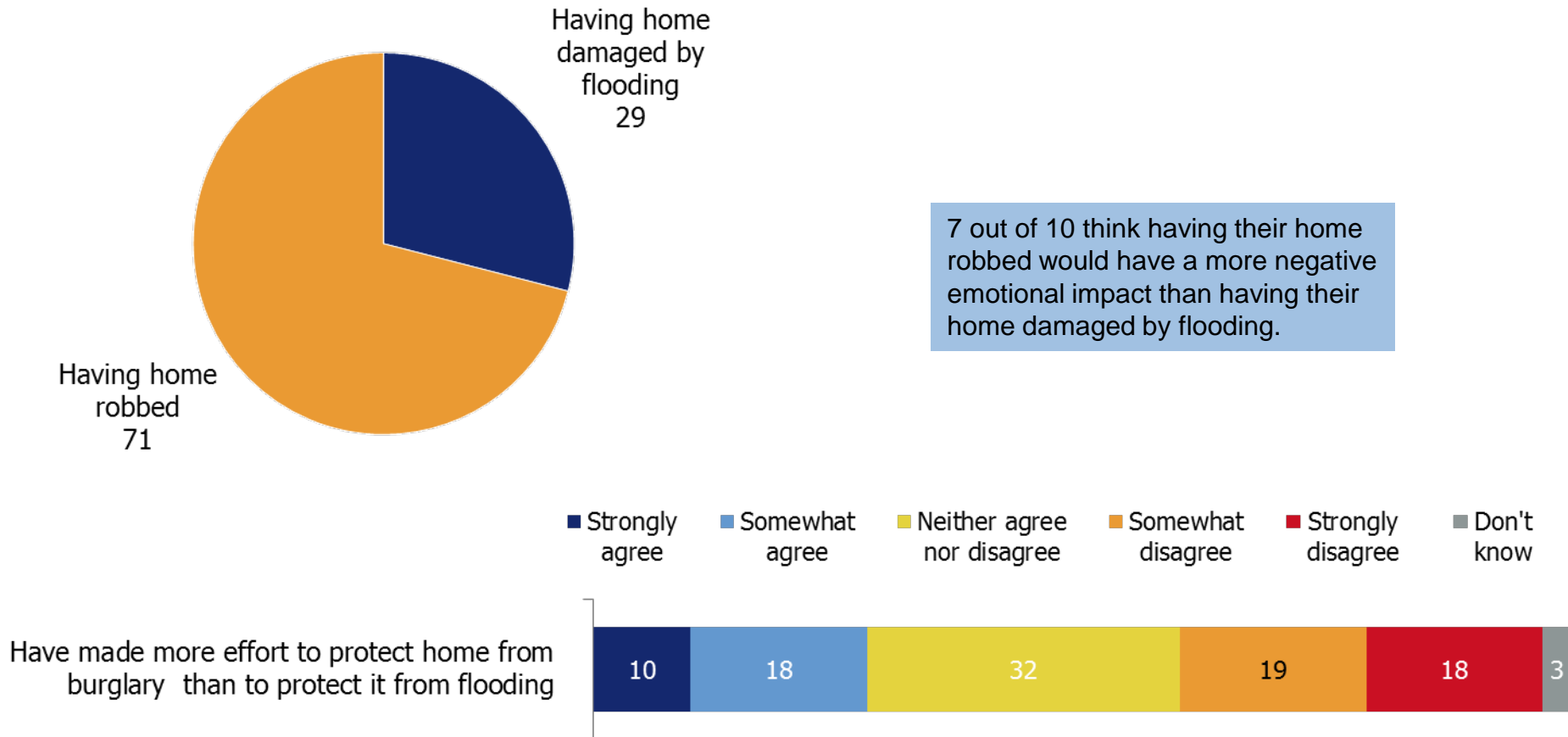
Only four out of ten feel prepared to pay costs not covered by insurance if impacted by flooding.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) How prepared do you feel you are to deal with each of the following potential impacts of flooding?

Slightly more Canadians have taken measures to protect their home from flooding than from being robbed

Emotional Impact of Flooding vs Home Being Robbed, 2015



Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Which of the following two scenarios do you think would have a more negative emotional impact?

Q. (new in 2015) Please indicate how much you agree or disagree with each of the following statements.

Emotional Impact of Flooding vs Home Being Robbed

“Strongly Agree” and “Agree,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Having home robbed	78	68	78	74	60	77	74	65	79	70	60	80	71	70	74	71	71	71	69	75
Having home damaged by flooding	22	32	22	25	40	23	26	35	21	29	40	20	29	30	26	28	29	29	31	25
Have made more effort to protect home from burglary than flooding*	31	31	30	26	28	25	34	34	34	28	30	39	30	25	30	30	25	30	30	20

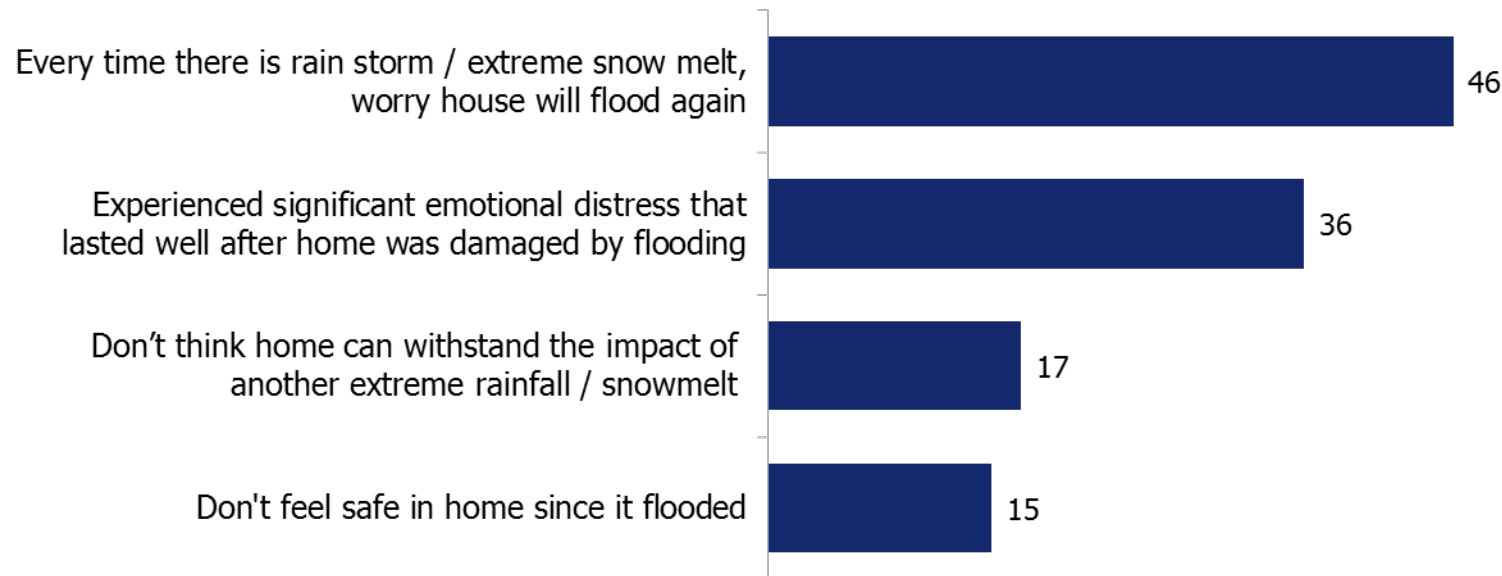
Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Which of the following two scenarios do you think would have a more negative emotional impact?

Q. (new in 2015) Please indicate how much you agree or disagree with each of the following statements.

Canadians who have experienced flooding in the past continue to worry that a flood could happen again

Feelings After Experiencing Flooding Damage to Home “Strongly Agree” and “Agree,” 2015



Almost half of respondents who have experienced flooding damage to their home worry their house will flood again, and over a third experienced significant emotional distress caused by the flooding.

Base: All respondents who have experienced damage from flooding to their home or other real estate 2015
n=281

Q. (new in 2015) To what extent do you agree or disagree with each of the following statements?

Feelings After Experiencing Flooding Damage to Home

“Strongly Agree” and “Agree,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Don't feel safe in home since it flooded	26	14	5	13	25	7	40	23	6	19	22	16	22	17	6	13	17	15	15	13
Don't think home can withstand the impact of another extreme rainfall / snowmelt	22	13	7	22	15	13	33	13	7	21	9	12	21	18	14	15	20	17	22	13
Experienced significant emotional distress that lasted well after home was damaged by flooding	31	38	34	44	29	16	41	53	23	42	26	25	41	34	33	32	39	38	32	31
Every time there is rain storm / extreme snow melt, worry house will flood again	38	32	42	55	34	43	43	29	41	61	29	55	45	53	37	43	48	46	44	46

Base: All respondents who have experienced damage from flooding to their home or other real estate 2015
n=281

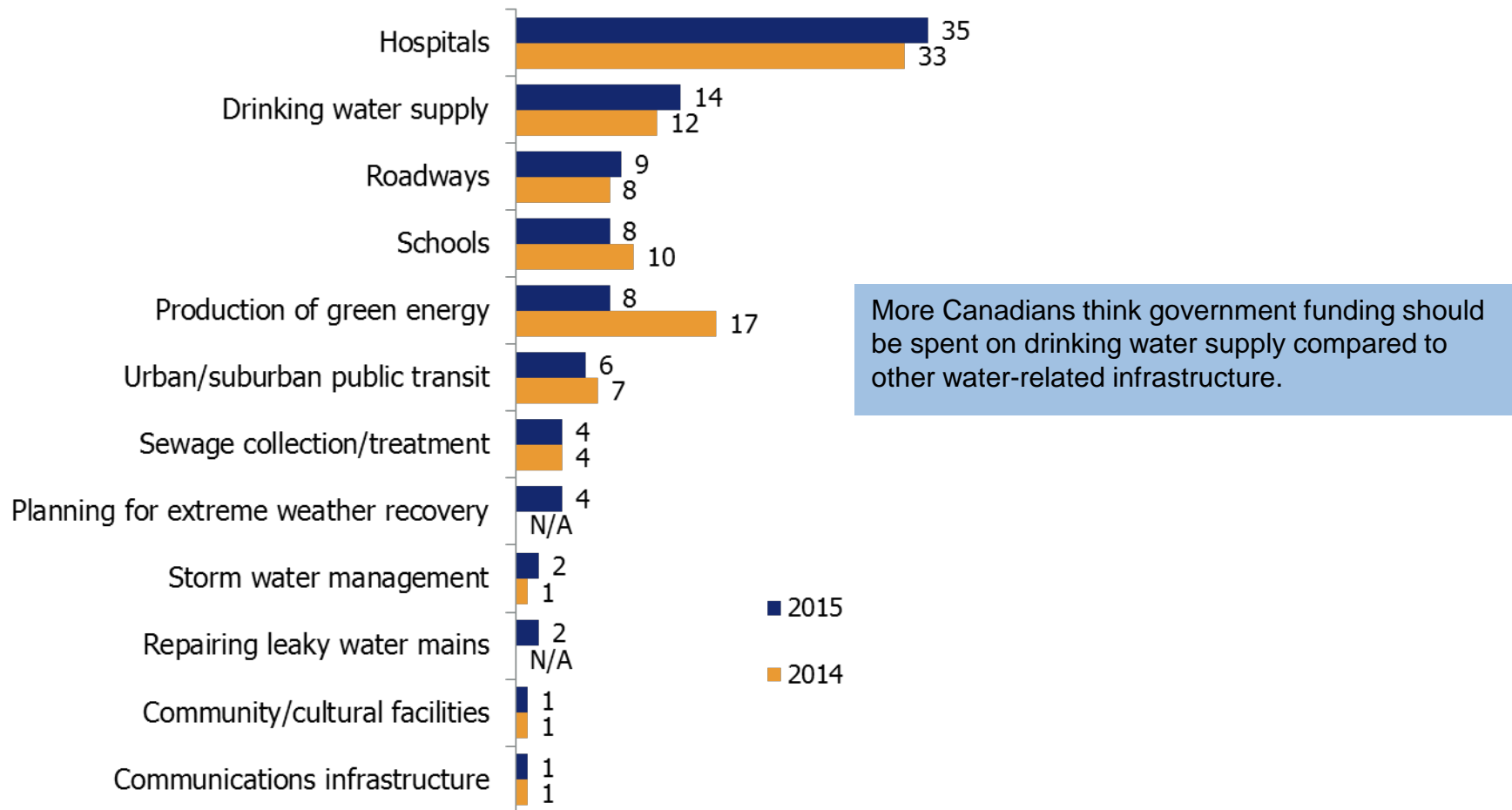
Q. (new in 2015) To what extent do you agree or disagree with each of the following statements?



Infrastructure

Support for drinking water infrastructure is still behind hospitals as the highest priority area for government funding

Highest Priority Infrastructure Area for Government Funding, 2015



Base: All respondents 2015 $n=2,242$, 2014 $n=2,074$

Q. (modified in 2015) Which one, if any, of the following infrastructure areas should be the highest priority for government funding in Canada? Please select one.

Highest Priority Infrastructure Area for Government Funding, Demographics, 2015 (1 of 2)

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Communications infrastructure	2	0	1	2	0	2	2	0	0	3	1	2	2	1	1	2	1	2	1	0
Hospitals	33	35	27	31	42	38	25	34	24	26	39	37	30	35	39	32	37	32	40	36
Schools	11	12	5	7	8	8	13	11	6	5	7	6	10	9	5	9	8	8	8	11
Community/cultural facilities	1	1	1	0	0	0	1	2	2	0	0	1	1	1	0	1	1	1	0	0
Production of green energy	7	7	8	7	9	10	9	6	4	6	10	14	14	6	5	7	9	8	5	11
Urban/suburban public transit	4	6	2	11	4	1	6	7	2	18	5	1	8	6	6	8	5	9	3	1

Base: All respondents 2015 $n=2,242$

Q. (modified in 2015) Which one, if any, of the following infrastructure areas should be the highest priority for government funding in Canada? Please select one.

Highest Priority Infrastructure Area for Government Funding, Demographics, 2015 (2 of 2)

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Roadways	8	7	20	7	9	14	9	8	25	6	8	10	7	10	9	10	8	8	8	12
Drinking water supply	17	14	17	16	9	13	18	15	19	14	12	12	12	16	14	14	14	14	15	13
Storm water management	2	4	3	3	1	4	2	3	2	4	1	2	2	2	3	3	2	2	2	2
Sewage collection/treatment	2	2	4	5	5	3	3	3	5	4	4	3	2	5	5	5	3	4	5	4
Planning for extreme weather recovery	4	3	6	4	3	3	5	4	5	5	3	5	3	3	5	2	6	4	5	2
Repairing leaky water mains	2	1	2	2	3	1	4	1	3	2	3	1	3	1	2	2	2	2	2	1

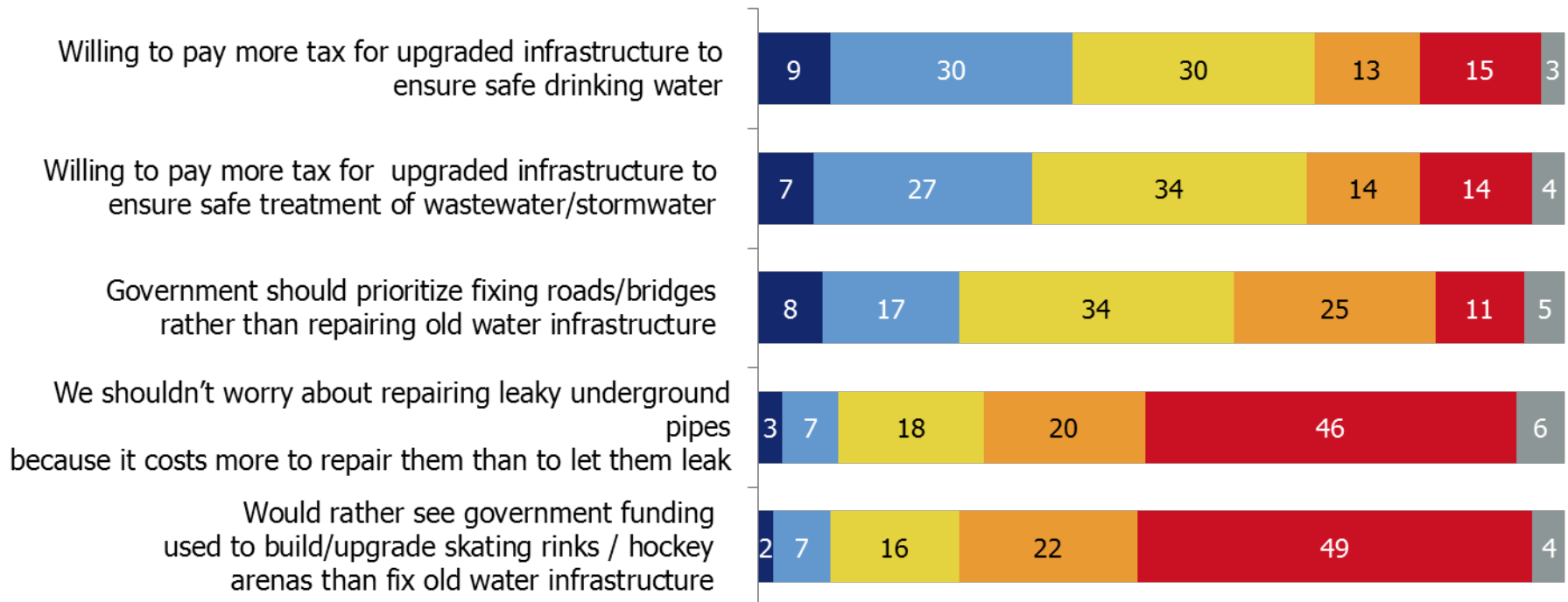
Base: All respondents 2015 $n=2,242$

Q. (modified in 2015) Which one, if any, of the following infrastructure areas should be the highest priority for government funding in Canada? Please select one.

Over a third of Canadians are willing to pay more tax to upgrade infrastructure

Attitudes toward Replacement/Repair of Aging Public Infrastructure, 2015

■ Strongly agree (5) ■ Somewhat agree (4) ■ Neither agree nor disagree (3) ■ Somewhat disagree (2) ■ Strongly disagree (1) ■ Don't know



Canadians are willing to pay more taxes to upgrade water-related infrastructure for safety reasons. Very few respondents would prioritize funding upgrades to skating rinks/arenas over fixing water infrastructure.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Many types of aging public infrastructure in Canada are now in need of repair or replacement. To what extent do you agree or disagree with each of the following statements?

Attitudes toward Replacement/Repair of Aging Public Infrastructure

“Strongly agree” and “Somewhat agree,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Willing to pay more tax for upgraded infrastructure to ensure safe drinking water	47	45	45	45	22	34	51	45	47	50	22	40	43	35	41	40	38	43	34	32
Willing to pay more tax for upgraded infrastructure to ensure safe treatment of wastewater/stormwater	40	41	42	38	21	29	40	46	42	45	22	34	37	30	37	37	32	40	28	22
Government should prioritize fixing roads/bridges rather than repairing old water infrastructure	23	22	32	24	25	27	22	22	35	25	29	22	28	25	22	24	25	24	24	28
Would rather see government funding used to build/upgrade skating rinks / hockey arenas than fix old water infrastructure	10	7	7	12	6	7	13	7	6	13	7	8	15	8	5	10	8	9	9	9
We shouldn't worry about repairing leaky underground pipes because it costs more to repair them than to let them leak	11	9	9	11	7	6	14	11	8	14	7	9	13	9	7	10	8	10	10	6

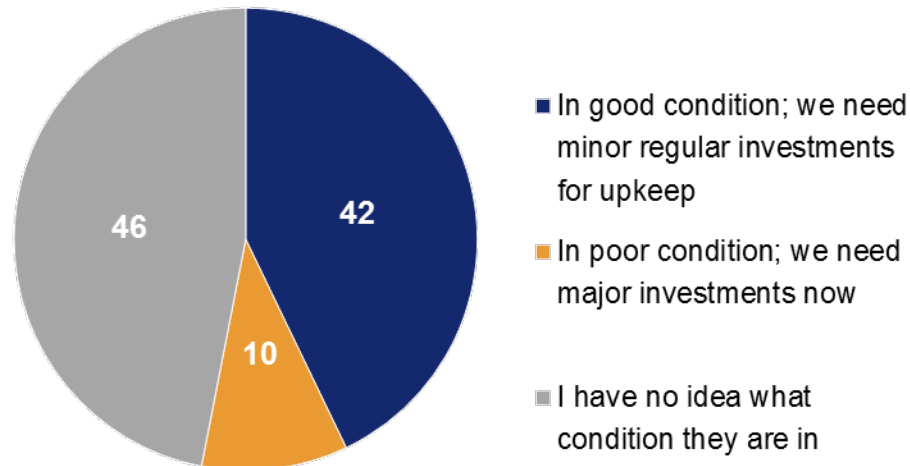
Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Many types of aging public infrastructure in Canada are now in need of repair or replacement. To what extent do you agree or disagree with each of the following statements?

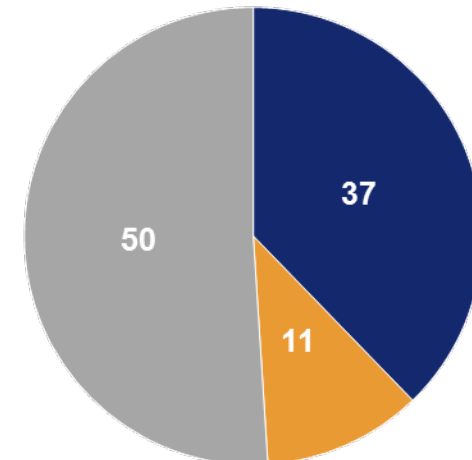
Half of Canadians have no knowledge of the condition of storm water systems

Opinions about Water Treatment, Delivery and Storm Water Management Systems, 2015

The water treatment and delivery systems in your community



The storm water management systems in your community



Few Canadians think water treatment or storm water systems require major investment. However, 46% admit to having no knowledge of the condition of water treatment systems and 50% have no knowledge of the condition of storm water systems.

Base: All respondents who use municipal water supply 2015 $n=1,992$

Q. Please indicate which one of the following is closest to your own opinion about:

Opinions about Water Treatment, Delivery and Storm Water Management Systems, Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)

The water treatment and delivery systems in your community

In good condition — we need minor regular investments for upkeep	48	49	39	39	40	45	47	54	35	38	35	52	32	44	50	48	36	41	46	42
In poor condition — we need major investments now	5	5	18	10	11	12	4	5	19	11	15	10	9	9	13	10	10	10	8	9
I have no idea what condition they are in	45	44	42	48	46	40	47	39	45	49	48	37	57	45	36	40	52	47	42	47

The storm water management systems in your community

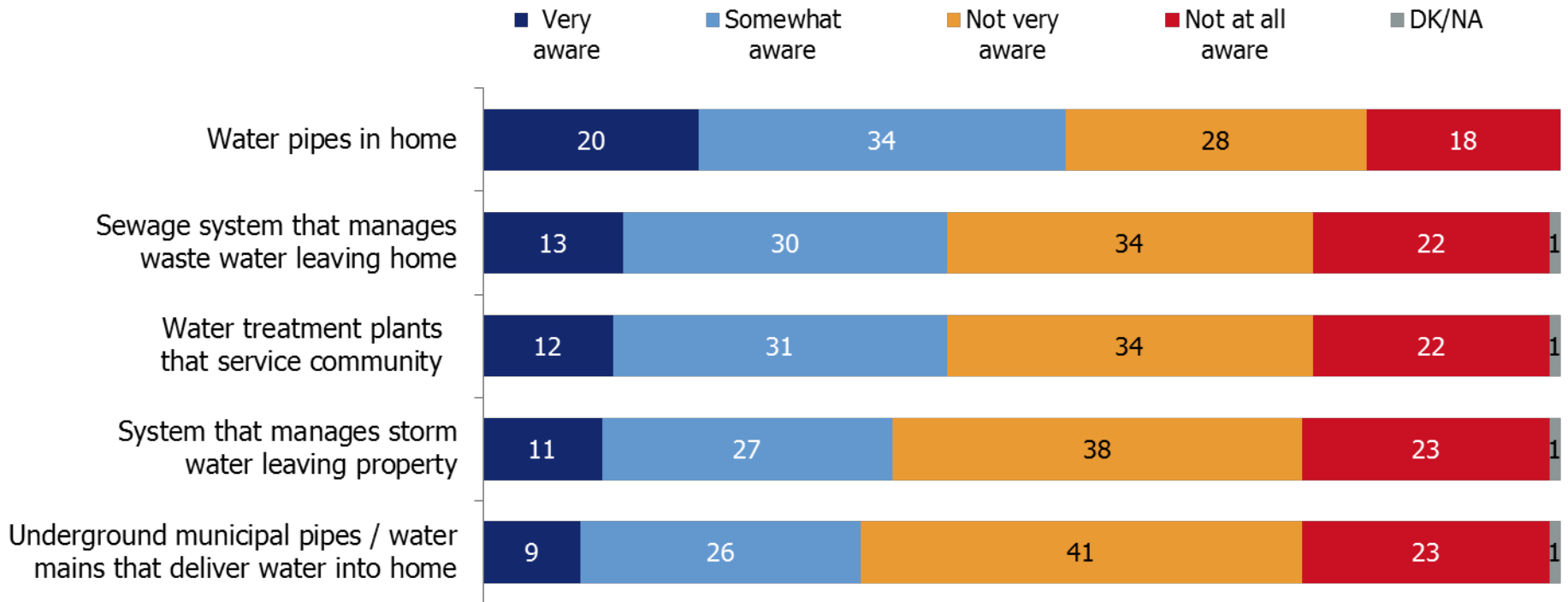
In good condition — we need minor regular investments for upkeep	43	48	35	32	36	38	44	51	32	32	34	41	31	38	42	45	28	36	40	37
In poor condition — we need major investments now	6	6	21	14	10	13	5	6	17	14	13	15	10	10	14	12	10	12	8	12
I have no idea what condition they are in	48	44	44	52	51	47	49	40	50	51	50	43	57	49	41	40	60	50	51	47

Base: All respondents who use municipal water supply 2015 $n=1,992$

Q. Please indicate which one of the following is closest to your own opinion about:

Canadians are largely unaware of the condition of water infrastructure serving their homes, with the exception of the pipes inside their homes

Awareness of Condition of Systems Servicing Home and Community, 2015



Although 54% of Canadians are aware of the conditions of the water pipes inside their homes, there is generally low awareness of the conditions of most water systems servicing their homes.

Base: All respondents who use municipal water supply, 2015 $n=1,992$

Q. (modified in 2015) You indicated that your main source of household water is the municipal water supply. How aware would you say you are of the condition of the following systems?

Awareness of Condition of Systems Servicing Home and Community

“Very Aware” and “Somewhat Aware,” Demographics, 2015

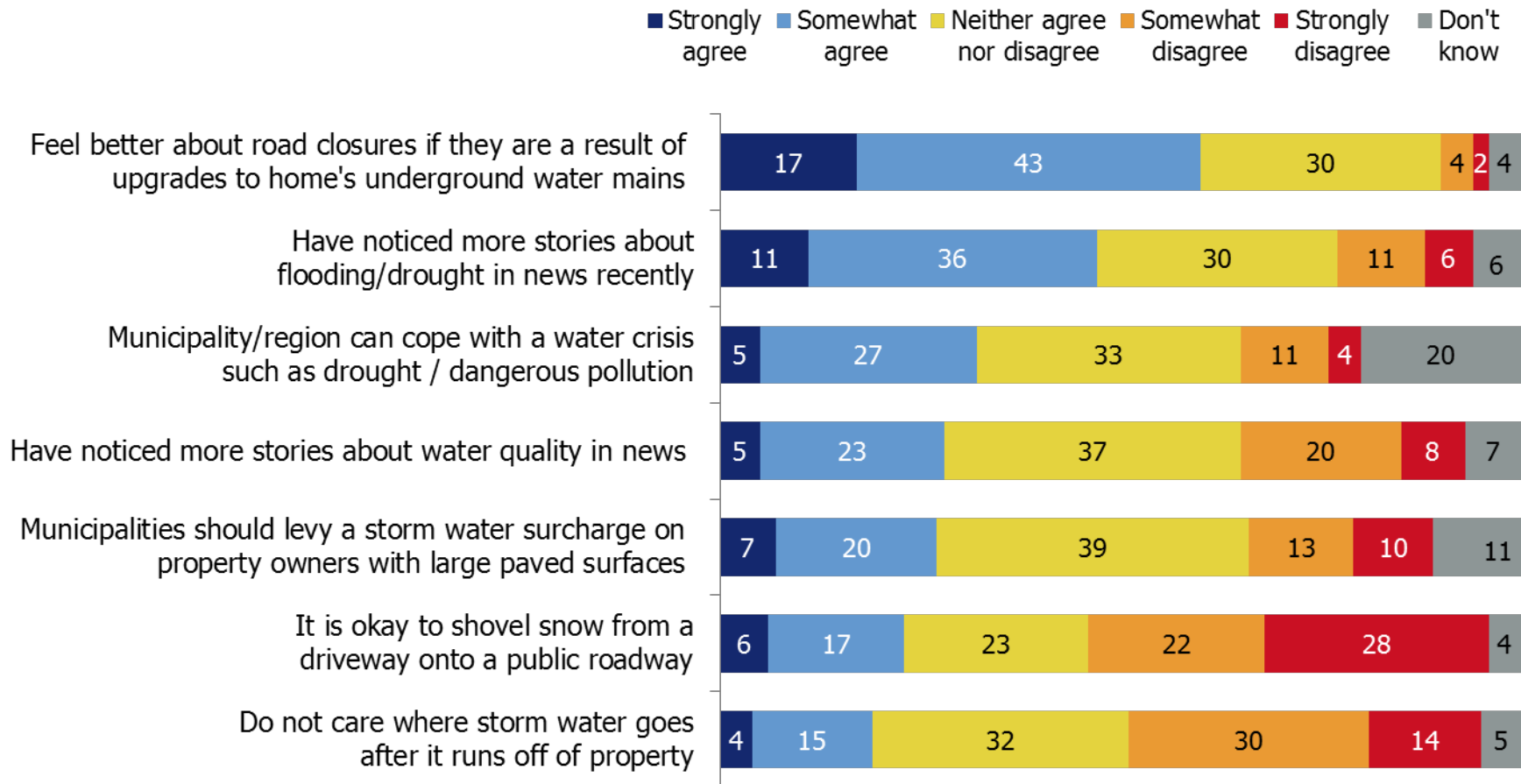
	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Underground municipal pipes / water mains that deliver water into home	38	37	37	31	36	40	32	42	34	28	33	39	22	33	50	39	29	31	43	37
System that manages storm water leaving property	44	45	47	35	33	45	39	51	48	31	30	42	27	36	54	44	32	35	45	43
Water treatment plants that service community	44	51	50	36	43	55	38	55	45	31	38	59	28	43	57	48	36	38	52	50
Sewage system that manages waste water leaving home	46	45	49	41	38	52	40	48	46	35	36	48	32	40	58	48	37	38	53	48
Water pipes in home	58	57	60	55	45	64	55	59	61	51	41	63	42	54	67	62	46	51	61	57

Base: All respondents who use municipal water supply, 2015 $n=1,992$

Q. (modified in 2015) You indicated that your main source of household water is the municipal water supply. How aware would you say you are of the condition of the following systems?

Six in ten Canadians would feel better about road closure if it is due to water main upgrades; half of Canadians do not believe it is acceptable to shovel snow onto public roadways

Attitudes About Local Water Issues, 2015



Base: All respondents 2015 n=2,242

Q. (new in 2015) Please indicate how much you agree or disagree with each of the following statements.

Attitudes About Local Water Issues

“Strongly Agree” and “Agree,” Demographics, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Feel better about road closures if they are a result of upgrades to home's underground water mains	53	64	60	62	58	55	54	66	63	65	65	64	55	59	66	62	58	62	60	51
Have noticed more stories about flooding/drought in news	45	46	49	49	40	57	46	50	49	48	41	56	41	46	52	46	47	48	46	45
Municipality/region can cope with a water crisis such as drought / dangerous pollution	37	36	27	34	28	26	42	37	27	40	28	35	31	29	37	40	24	36	30	21
Have noticed more stories about water quality in news	27	26	33	24	31	35	26	28	41	25	29	35	26	27	31	30	26	25	32	32
Have made more effort to protect home from burglary than flooding	31	31	30	26	28	25	34	34	34	28	30	39	30	25	30	30	25	30	30	20
Municipalities should levy a storm water surcharge for large paved surfaces	27	31	29	26	27	20	32	33	30	30	30	28	26	26	29	28	25	30	26	18
It is okay to shovel snow from a driveway onto a public roadway	24	33	27	23	19	16	25	35	24	22	23	21	27	23	19	27	19	25	19	20
Do not care where storm water goes after it runs off of property	18	19	19	14	25	16	21	15	18	17	24	19	25	18	12	21	15	18	19	19

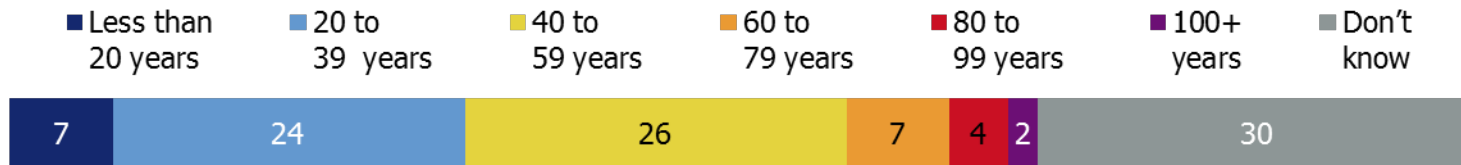
Base: All respondents 2015 $n=2,242$

Q. (new in 2015) Please indicate how much you agree or disagree with each of the following statements.

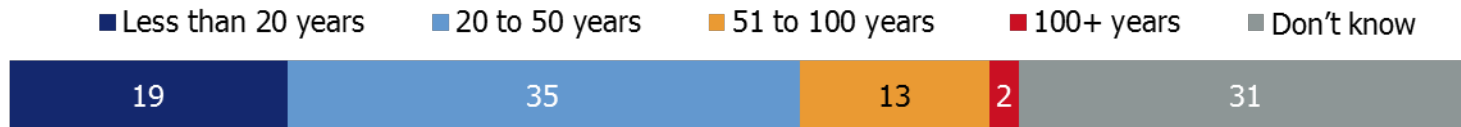
Three in ten Canadians do not know the lifespan of an underground water pipe, and do not know how old the pipes are near their home

Knowledge of Underground Water Pipes, 2015

What do you think is the lifespan of an underground water pipe?

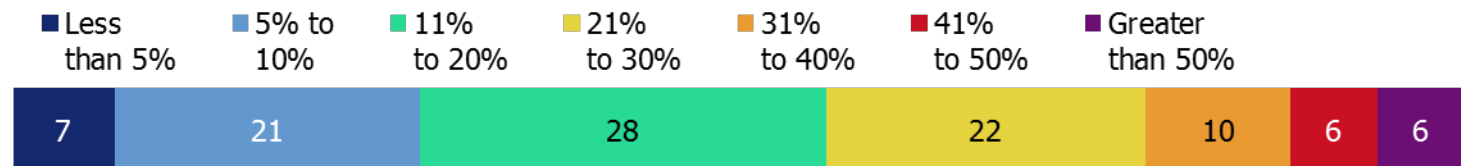


How old do you think the underground water pipes are near your home?



*The average age of failing water pipes is 47 years old.

On average, how much clean, treated water do you think is lost to leakage as it flows through underground pipes in Canada's largest cities?



Base: All respondents 2015 $n=2,242$

Q. (new in 2015) What do you think is the lifespan of an underground water pipe?

Q. (new in 2015) How old do you think the underground water pipes are near your home?

Q. (new in 2015) On average, how much clean, treated water do you think is lost to leakage as it flows through underground pipes in Canada's largest cities?

*Source: Folkman, S., "Water Main Break Rates in the USA and Canada," University of Utah, 2012.

Knowledge of Underground Water Pipes, Demographics, 2015 (1 of 2)

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)

What do you think is the lifespan of an underground water pipe?

Less than 20 years	8	10	7	7	5	6	10	11	7	6	1	6	10	6	4	5	8	6	8	7
20 to 39 years	24	24	20	26	23	27	24	21	14	23	20	24	32	22	21	24	25	22	24	33
40 to 59 years	24	28	27	24	29	25	23	28	28	23	30	30	17	29	30	30	21	25	24	29
60 to 79 years	5	9	8	7	9	7	5	6	10	6	9	8	5	7	10	9	6	8	8	5
80 to 99 years	5	1	5	4	6	3	4	1	3	5	8	4	3	3	6	5	3	5	3	4
100+ years	1	1	3	2	3	1	1	2	4	3	4	3	1	2	3	3	1	2	3	0
Don't know	31	27	30	32	25	31	34	31	33	35	28	27	32	31	25	23	36	32	29	23

How old do you think the underground water pipes are near your home?

Less than 20 years	18	25	19	20	16	22	15	23	16	19	9	22	16	22	18	21	18	18	20	23
21 to 50 years	35	44	35	35	32	35	35	50	39	37	36	39	33	32	42	38	33	36	41	27
51 to 100 years	12	7	23	14	16	8	10	9	23	16	17	9	13	13	15	16	11	16	10	8
100+ years	1	0	2	2	2	2	1	0	2	2	4	4	1	2	2	1	2	2	0	1
Don't know	34	23	22	30	34	32	39	18	20	26	34	26	36	31	23	24	36	27	28	41

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) What do you think is the lifespan of an underground water pipe?

Q. (new in 2015) How old do you think the underground water pipes are near your home?

Knowledge of Underground Water Pipes, Demographics, 2015 (2 of 2)

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)

On average, how much clean, treated water do you think is lost to leakage as it flows through underground pipes in Canada's largest cities?

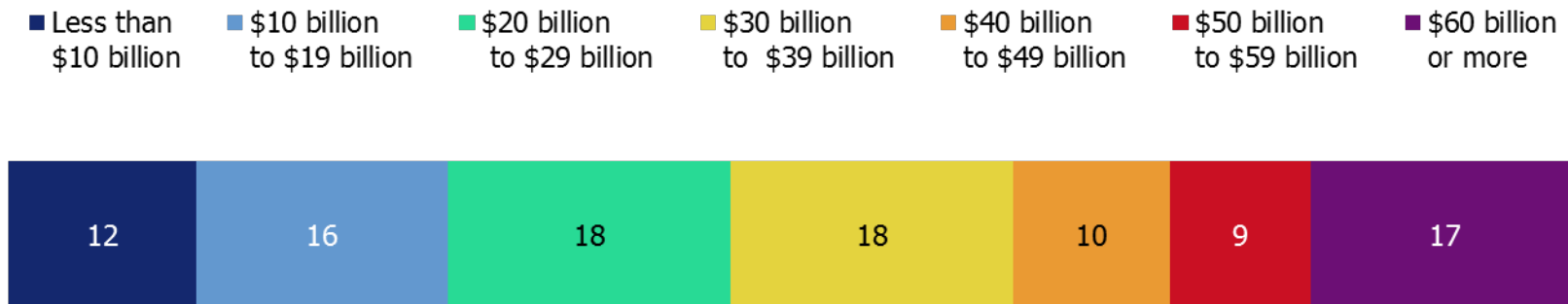
Less than 5%	9	10	10	8	2	4	10	11	9	9	2	4	6	7	7	9	5	8	4	6
6% to 10%	24	25	21	25	12	17	26	28	24	29	13	19	23	20	21	25	17	24	19	13
11% to 20%	23	32	27	30	25	32	27	28	32	28	30	35	29	28	27	30	26	29	26	26
21% to 30%	22	19	20	21	26	23	21	17	16	19	22	25	20	23	23	19	25	20	25	24
31% to 40%	10	8	9	8	15	10	7	8	8	7	12	8	10	9	13	9	12	8	13	13
41% to 50%	7	3	7	3	10	6	4	4	7	3	9	5	6	6	6	4	7	5	6	9
Greater than 50%	4	3	5	5	10	5	5	3	4	5	11	2	7	6	4	4	8	5	6	7

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) On average, how much clean, treated water do you think is lost to leakage as it flows through underground pipes in Canada's largest cities?

Many Canadians understand that it will take a great deal of investment to maintain and improve Canada's water infrastructure

Estimated Cost to Maintain/Improve Canada's Water Infrastructure, 2015



*One estimate of the costs to replace water infrastructure in Canada in fair and very poor condition is \$80.7 billion.

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) It takes a great deal of municipal infrastructure to deliver safe drinking water, and to collect, treat and pipe it to your home. Across Canada, how much do you think it would cost to maintain and improve Canada's water infrastructure?

*Source: The Canadian Infrastructure Report Card (2012)

Estimated Cost to Maintain/Improve Canada's Water Infrastructure, 2015

	REGION						CITY						AGE			GENDER		COMMUNITY SIZE		
	British Columbia	Alberta	Prairies	Ontario	Quebec	Atlantic	Vancouver	Calgary	Winnipeg	Toronto	Montreal	Halifax	18 to 34 years	35 to 55 years	>55 years	Male	Female	Urban (>100 000)	Mid-size towns/cities	Rural (<1000)
Less than \$10 billion	15	12	8	12	10	11	19	11	8	15	11	6	14	12	9	13	11	12	10	13
\$10 billion to \$19 billion	21	18	15	16	10	18	23	23	13	17	13	11	19	16	12	17	14	17	14	14
\$20 billion to \$29 billion	18	17	15	21	15	17	18	14	14	19	18	20	22	17	16	18	18	17	19	22
\$30 billion to \$39 billion	18	15	20	20	16	20	17	18	20	22	18	20	17	19	19	17	19	19	21	13
\$40 billion to \$49 billion	7	13	11	9	13	9	8	11	11	8	8	9	10	10	11	9	11	10	9	10
\$50 billion to \$59 billion	7	9	11	6	12	10	6	7	10	5	9	12	8	8	10	7	10	7	8	12
\$60 billion or more	14	14	19	16	22	14	9	15	22	15	23	20	10	19	22	18	16	18	17	16

Base: All respondents 2015 $n=2,242$

Q. (new in 2015) It takes a great deal of municipal infrastructure to deliver safe drinking water, and to collect, treat and pipe it to your home. Across Canada, how much do you think it would cost to maintain and improve Canada's water infrastructure?

Methodology

- A sample of 2,242 Canadian adults from GMI's consumer panel participated in an online survey between January 5^h, 2015 – January 25^h, 2015.
- Weighting was employed to balance demographics, to ensure that the sample's composition reflects the adult population according to Canadian census data, and to provide results intended to approximate the sample universe. Results were weighted by gender, age, region, and community size. The sample includes a minimum of 200 respondents in each of Calgary, Halifax, Montreal, Vancouver, and Winnipeg, and a minimum of 300 in Toronto.
- Respondents for this survey were selected from among those who have volunteered to participate in GMI's online surveys and polls. The data have been weighted to reflect the demographic composition of the Canadian population. Because the sample is based on those who initially self-selected for participation rather than a probability sample, sampling error cannot be calculated. All sample surveys and polls may be subject to multiple sources of error, including, but not limited to, sampling error, coverage error, and measurement error. The margin of error for a strict probability sample for a sample of this size ($n=2,242$) would be plus or minus 2.2 percent 19 times out of 20.

Note to readers

- All figures in the charts and tables in this report are expressed in percentages, unless otherwise indicated. Total percentages may not add to 100 because of rounding.
- "DK/NA" means that the respondent did not know the answer or that no answer was provided (Don't know / No answer).
- Question wording is provided at the bottom of each page.
- Where data are available, we provide tracking information from previous years using trend charts and tables. Differences of +/- 5 percentage points between years are considered to be significant differences.

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The survey questions and results reported herein are provided on a confidential basis to RBC. RBC is free to use the findings in whatever manner it chooses, including releasing them to the public or media.

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Project: 2675, GlobeScan®

February 2015

