

Harrisonburg Stormwater & Environmental Survey

147
Total Responses

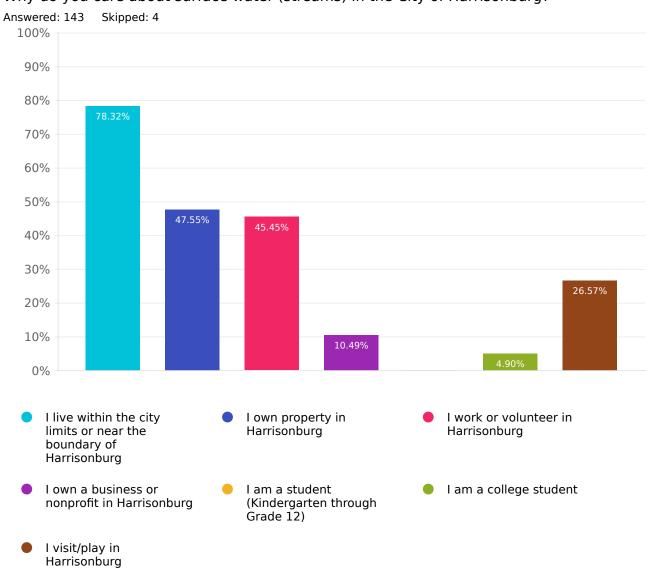
109 Completed Responses

38 Partial Responses

639 Survey Visits

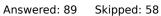
Harrisonburg Programs

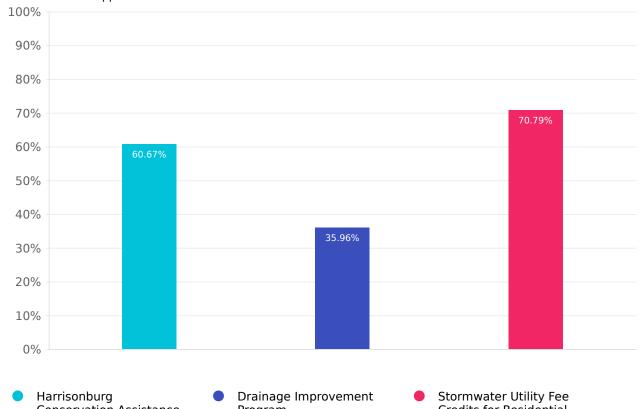
Why do you care about surface water (streams) in the City of Harrisonburg?



Choices	Response percent	Response count
I live within the city limits or near the boundary of Harrisonburg	78.32%	112
I own property in Harrisonburg	47.55%	68
I work or volunteer in Harrisonburg	45.45%	65
I own a business or nonprofit in Harrisonburg	10.49%	15
I am a student (Kindergarten through Grade 12)	0.00%	0
I am a college student	4.90%	7
l visit/play in Harrisonburg	26.57%	38

Are you aware of the following stormwater programs?





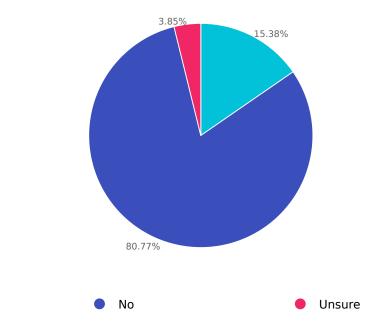
- Harrisonburg Conservation Assistance Program
- Drainage Improvement Program
- Stormwater Utility Fee Credits for Residential Property

Choices	Response percent	Response count
Harrisonburg Conservation Assistance Program	60.67%	54
Drainage Improvement Program	35.96%	32
Stormwater Utility Fee Credits for Residential Property	70.79%	63

Have you participated in the Harrisonburg Conservation Assistance Program?

Answered: 52 Skipped: 95

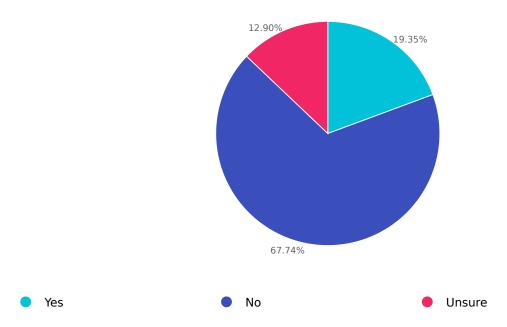
Yes



Choices	Response percent	Response count
Yes	15.38%	8
No	80.77%	42
Unsure	3.85%	2

Have you or your neighborhood participated in the Drainage Improvement Program?

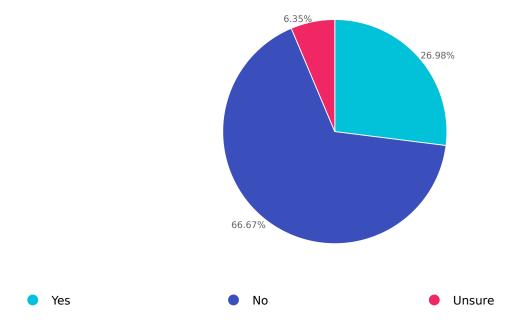
Answered: 31 Skipped: 116



Choices	Response percent	Response count
Yes	19.35%	6
No	67.74%	21
Unsure	12.90%	4

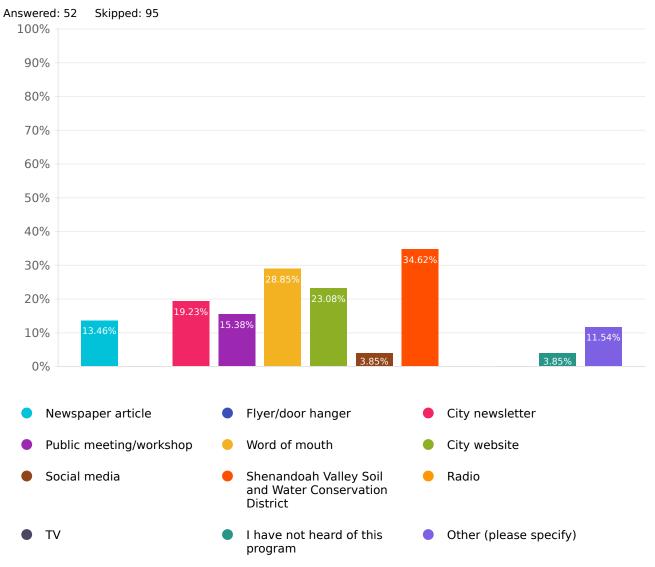
Have you participated in the Stormwater Utility Fee Credits for Residential Property Program?

Answered: 63 Skipped: 84



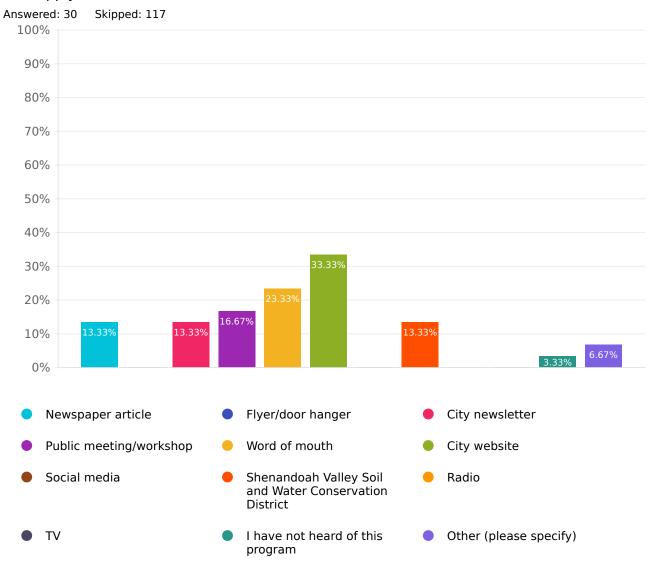
Choices	Response percent	Response count
Yes	26.98%	17
No	66.67%	42
Unsure	6.35%	4

Where did you hear about the Harrisonburg Conservation Assistance Program? (select all that apply)



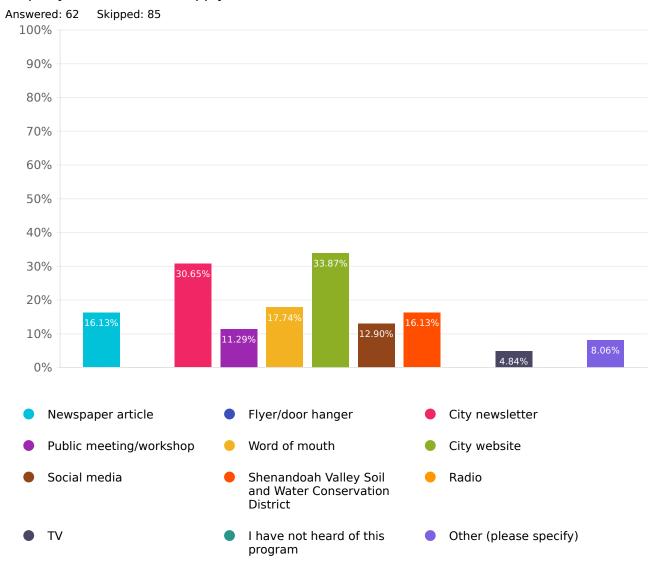
Choices	Response percent	Response count
Newspaper article	13.46%	7
Flyer/door hanger	0.00%	0
City newsletter	19.23%	10
Public meeting/workshop	15.38%	8
Word of mouth	28.85%	15
City website	23.08%	12
Social media	3.85%	2
Shenandoah Valley Soil and Water Conservation District	34.62%	18
Radio	0.00%	0
TV	0.00%	0
I have not heard of this program	3.85%	2
Other (please specify)	11.54%	6

Where did you hear about the Harrisonburg Drainage Improvement Program? (select all that apply)



Choices	Response percent	Response count
Newspaper article	13.33%	4
Flyer/door hanger	0.00%	0
City newsletter	13.33%	4
Public meeting/workshop	16.67%	5
Word of mouth	23.33%	7
City website	33.33%	10
Social media	0.00%	0
Shenandoah Valley Soil and Water Conservation District	13.33%	4
Radio	0.00%	0
TV	0.00%	0
I have not heard of this program	3.33%	1
Other (please specify)	6.67%	2

Where did you hear about the Harrisonburg Stormwater Utility Fee Credits for Residential Property? (select all that apply)



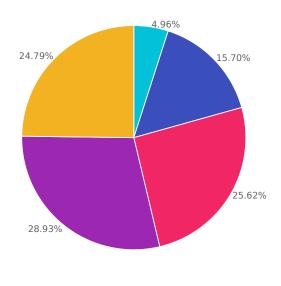
Choices	Response percent	Response count
Newspaper article	16.13%	10
Flyer/door hanger	0.00%	0
City newsletter	30.65%	19
Public meeting/workshop	11.29%	7
Word of mouth	17.74%	11
City website	33.87%	21
Social media	12.90%	8
Shenandoah Valley Soil and Water Conservation District	16.13%	10
Radio	0.00%	0
TV	4.84%	3
I have not heard of this program	0.00%	0
Other (please specify)	8.06%	5

Drainage Issues and Flooding

Q9

How often do you experience drainage issues or flooding on your property?

Answered: 121 Skipped: 26

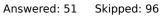


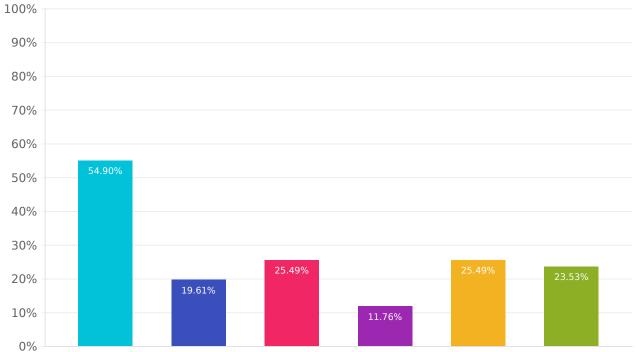
Sometimes

- Always (every time it rains, regardless of amount)
- Rarely (only happened once or twice)
- Very often (frequently, but it depends on the amount of rainfall)
- Never

Choices	Response percent	Response count
Always (every time it rains, regardless of amount)	4.96%	6
Very often (frequently, but it depends on the amount of rainfall)	15.70%	19
Sometimes	25.62%	31
Rarely (only happened once or twice)	28.93%	35
Never	24.79%	30

If flooding occurs on your property, what happens? (select all that apply)



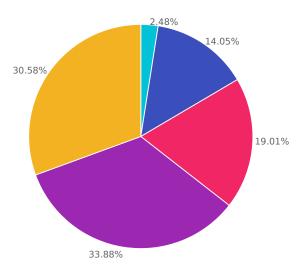


- Flooding occurs on my property with little or no damage
- Flooding damages fences, sheds, or other outbuildings
- A stream next to or on my property occasionally flows over its banks
- Flooding damages my home and/or attached garage or business
- Flooding damages the lawn, trees, landscaping, or other plants
- Flooding damages my driveway and/or parking lot

Choices	Response percent	Response count
Flooding occurs on my property with little or no damage	54.90%	28
A stream next to or on my property occasionally flows over its banks	19.61%	10
Flooding damages the lawn, trees, landscaping, or other plants	25.49%	13
Flooding damages fences, sheds, or other outbuildings	11.76%	6
Flooding damages my home and/or attached garage or business	25.49%	13
Flooding damages my driveway and/or parking lot	23.53%	12

How often do you experience standing water in your yard?

Answered: 121 Skipped: 26



Sometimes

- Always (every time it rains, regardless of amount)
 - Rarely (only happened once or twice)
- Very often (frequently, but it depends on the amount of rainfall)
- Never

Choices	Response percent	Response count
Always (every time it rains, regardless of amount)	2.48%	3
Very often (frequently, but it depends on the amount of rainfall)	14.05%	17
Sometimes	19.01%	23
Rarely (only happened once or twice)	33.88%	41
Never	30.58%	37

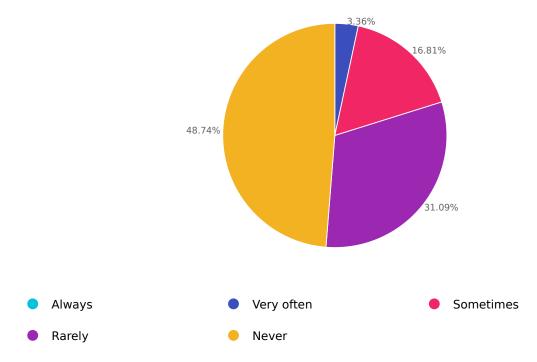
Q12

Please provide additional details to help us understand the standing water you experience. Please describe the duration, depth, location, etc. (short answer)

Answered: 35 Skipped: 112

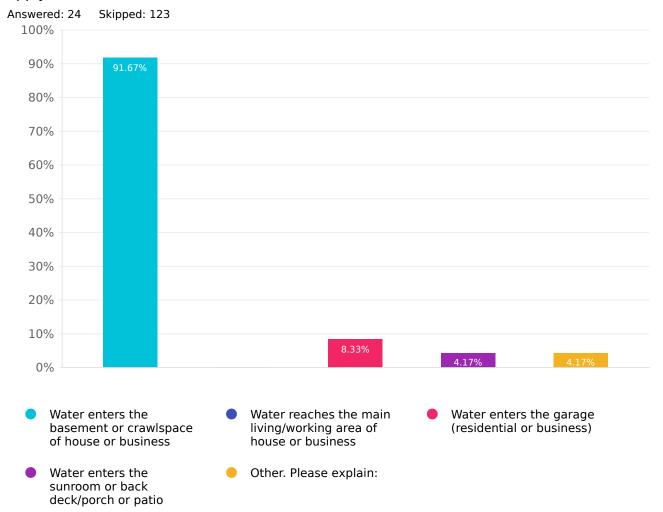
How often do you experience flooding in your home or business?

Answered: 119 Skipped: 28



Choices	Response percent	Response count
Always	0.00%	0
Very often	3.36%	4
Sometimes	16.81%	20
Rarely	31.09%	37
Never	48.74%	58

If you experience flooding in your house or business, where does it occur? (select all that apply)



Choices	Response percent	Response count
Water enters the basement or crawlspace of house or business	91.67%	22
Water reaches the main living/working area of house or business	0.00%	0
Water enters the garage (residential or business)	8.33%	2
Water enters the sunroom or back deck/porch or patio	4.17%	1
Other. Please explain:	4.17%	1

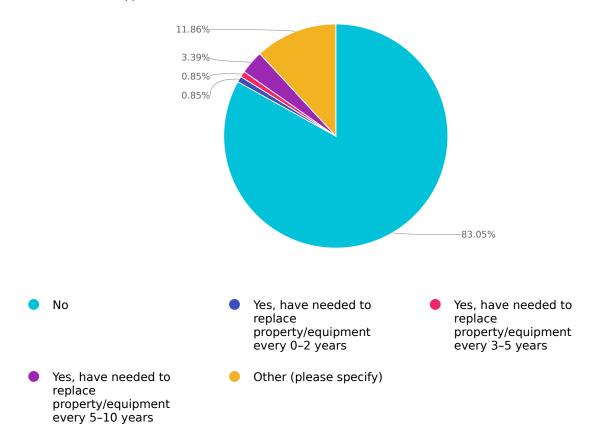
When purchasing a property, were you aware of stormwater features (stormwater pipes, inlets, drains, ditches, streams) on the property and in the neighborhood?

Answered: 85 Skipped: 62

Q16

Have you had any property loss (e.g., appliances, HVAC equipment, furniture) due to flooding?

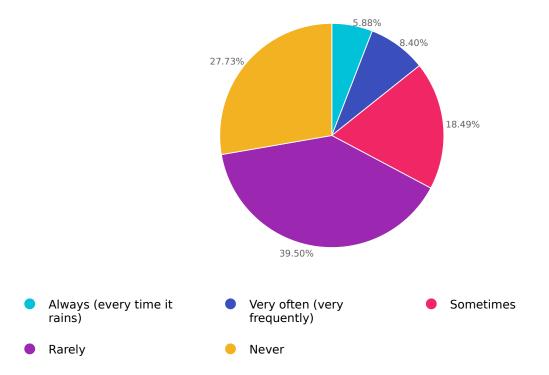
Answered: 118 Skipped: 29



Choices	Response percent	Response count
No	83.05%	98
Yes, have needed to replace property/equipment every 0-2 years	0.85%	1
Yes, have needed to replace property/equipment every 3–5 years	0.85%	1
Yes, have needed to replace property/equipment every 5–10 years	3.39%	4
Other (please specify)	11.86%	14

How frequently do you experience roadway flooding in your neighborhood?

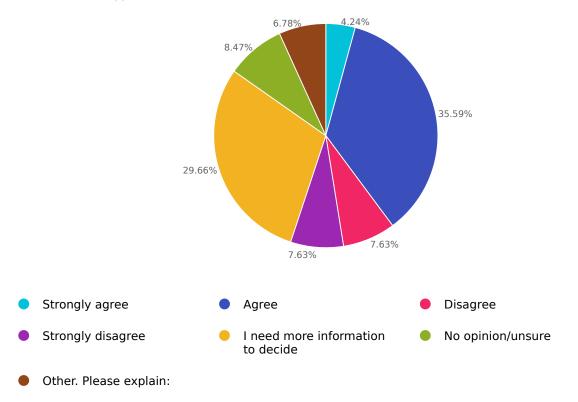
Answered: 119 Skipped: 28



Choices	Response percent	Response count
Always (every time it rains)	5.88%	7
Very often (very frequently)	8.40%	10
Sometimes	18.49%	22
Rarely	39.50%	47
Never	27.73%	33

The City does a good job of managing stormwater **quantity** (flooding, drainage, stormwater runoff issues).

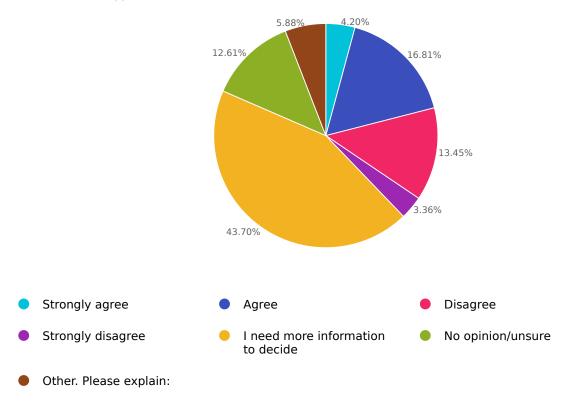
Answered: 118 Skipped: 29



Choices	Response percent	Response count
Strongly agree	4.24%	5
Agree	35.59%	42
Disagree	7.63%	9
Strongly disagree	7.63%	9
I need more information to decide	29.66%	35
No opinion/unsure	8.47%	10
Other. Please explain:	6.78%	8

The City does a good job of managing stormwater in regard to stormwater **quality** (water pollution: bacteria, nutrients, sediment).

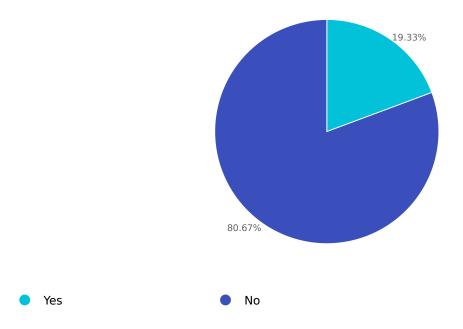
Answered: 119 Skipped: 28



Choices	Response percent	Response count
Strongly agree	4.20%	5
Agree	16.81%	20
Disagree	13.45%	16
Strongly disagree	3.36%	4
I need more information to decide	43.70%	52
No opinion/unsure	12.61%	15
Other. Please explain:	5.88%	7

In the past 5 years have you contacted City staff for assistance related to stormwater management?

Answered: 119 Skipped: 28



Choices	Response percent	Response count
Yes	19.33%	23
No	80.67%	96

Q21

Was the City responsive to your call or email and returned your call in a timely manner? (short answer)

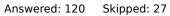
Answered: 23 Skipped: 124

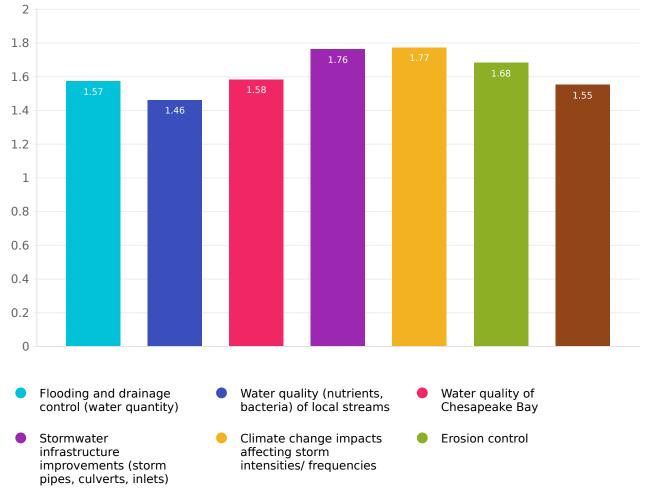
Q22

Was your issue resolved? Why or why not? How long did it take? (short answer)

Answered: 21 Skipped: 126

Rate the importance of the following stormwater management issues:





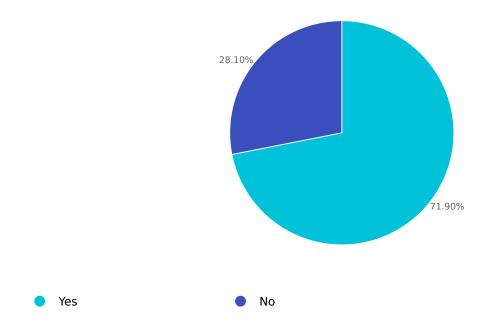
- -
- Green spaces/trees

Row	1 (Extremely important)	2	3	4	5 (Not important)	Average rating	Response count
Flooding and drainage control (water quantity)	57.98% (69)	31.09% (37)	7.56% (9)	2.52% (3)	0.84% (1)	1.57	119
Water quality (nutrients, bacteria) of local streams	72.27% (86)	17.65% (21)	4.20% (5)	3.36% (4)	2.52% (3)	1.46	119
Water quality of Chesapeake Bay	64.17% (77)	22.50% (27)	6.67% (8)	5.00% (6)	1.67% (2)	1.58	120
Stormwater infrastructure improvements (storm pipes, culverts, inlets)	45.83% (55)	37.50% (45)	12.50% (15)	3.33% (4)	0.83% (1)	1.76	120
Climate change impacts affecting storm intensities/ frequencies	57.98% (69)	24.37% (29)	7.56% (9)	2.52% (3)	7.56% (9)	1.77	119
Erosion control	50.00% (60)	40.00% (48)	5.00% (6)	1.67% (2)	3.33% (4)	1.68	120
Green spaces/trees	66.39% (79)	21.85% (26)	5.88% (7)	1.68% (2)	4.20% (5)	1.55	119

Q24

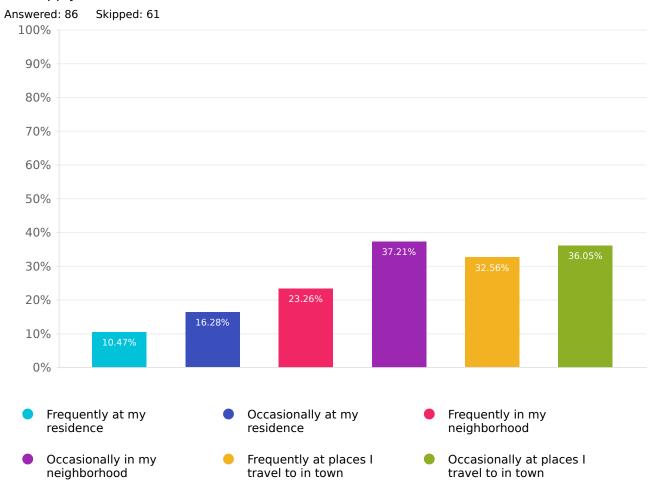
Do you notice trash and debris in the drainage system?

Answered: 121 Skipped: 26



Choices	Response percent	Response count
Yes	71.90%	87
No	28.10%	34

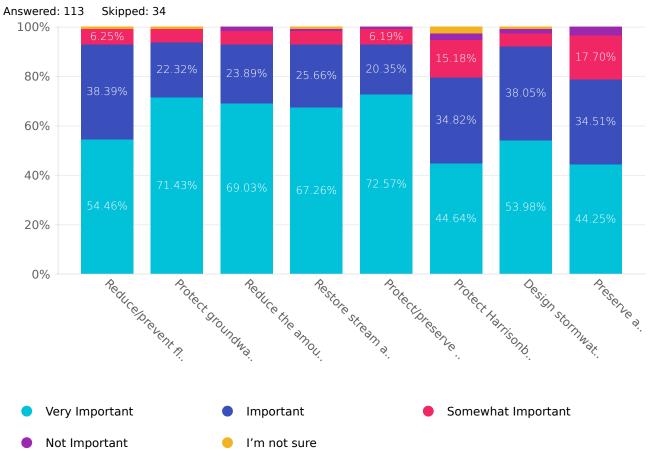
Where and how often do you notice trash and debris in the drainage system? (select all that apply)



Choices	Response percent	Response count
Frequently at my residence	10.47%	9
Occasionally at my residence	16.28%	14
Frequently in my neighborhood	23.26%	20
Occasionally in my neighborhood	37.21%	32
Frequently at places I travel to in town	32.56%	28
Occasionally at places I travel to in town	36.05%	31

Watershed Restoration and Water Quantity Goals

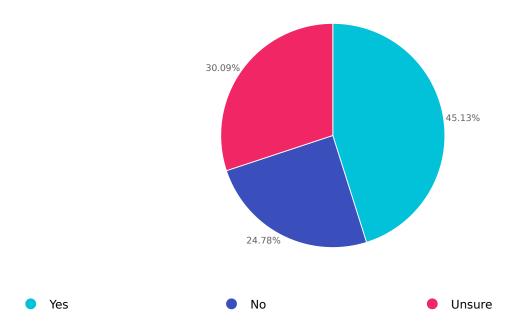
 $$^{\rm Q26}$$ Harrisonburg is identifying goals and objectives to guide the development of the Stormwater Implementation Plan. How important are the following?



Row	Very Important	Important	Somewhat Important	Not Important	I'm not sure	Response count
Reduce/prevent flooding in neighborhoods/business es	54.46% (61)	38.39% (43)	6.25% (7)	0.00%	0.89% (1)	112
Protect groundwater (drinking water wells, etc.)	71.43% (80)	22.32% (25)	5.36% (6)	0.00%	0.89% (1)	112
Reduce the amount of pollution and stormwater runoff draining from roadways/developed land	69.03% (78)	23.89% (27)	5.31% (6)	1.77% (2)	0.00% (0)	113
Restore stream and wildlife habitats damaged by pollution and stormwater runoff/flooding	67.26% (76)	25.66% (29)	5.31% (6)	0.88%	0.88% (1)	113
Protect/preserve natural areas (forests, streams) and open spaces	72.57% (82)	20.35% (23)	6.19% (7)	0.88%	0.00% (0)	113
Protect Harrisonburg communities from droughts	44.64% (50)	34.82% (39)	15.18% (17)	2.68%	2.68% (3)	112
Design stormwater infrastructure— including "grey" systems (pipes, curbs and gutters, culverts) and "green" systems (grassy swales, ditches, rain gardens)— that can withstand severe weather events	53.98% (61)	38.05% (43)	5.31% (6)	1.77% (2)	0.88% (1)	113
Preserve access to recreational waters (lakes, streams, rivers, etc.)	44.25% (50)	34.51% (39)	17.70% (20)	3.54% (4)	0.00% (0)	113

Are you aware of the City's efforts to improve water quality?

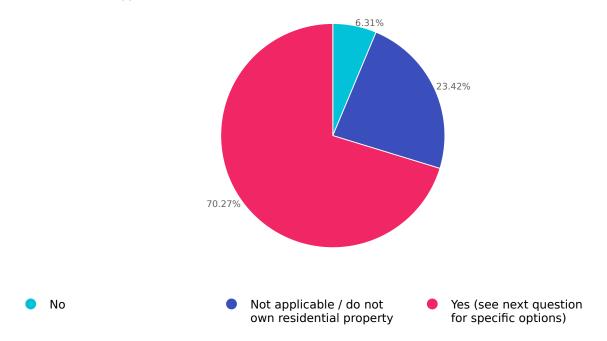
Answered: 113 Skipped: 34



Choices	Response percent	Response count
Yes	45.13%	51
No	24.78%	28
Unsure	30.09%	34

Would you be willing to implement residential stormwater **quality** (bacteria/nutrients) or **quantity** (runoff/flood) control efforts on your property?

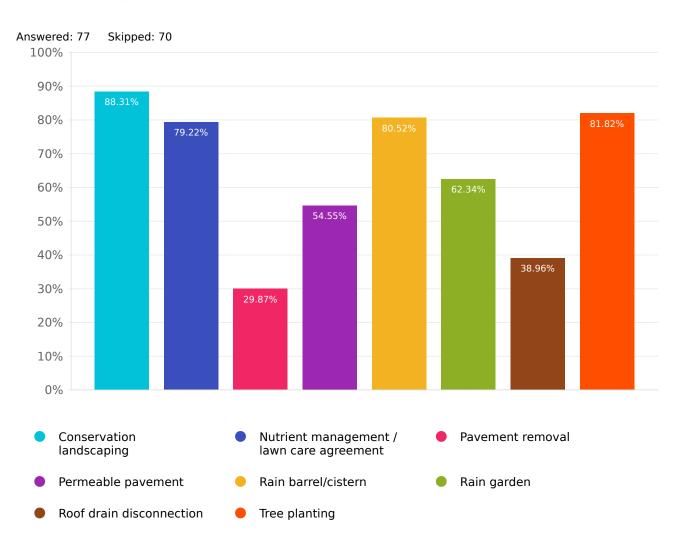
Answered: 111 Skipped: 36



Choices	Response percent	Response count
No	6.31%	7
Not applicable / do not own residential property	23.42%	26
Yes (see next question for specific options)	70.27%	78

Which residential stormwater quality (nutrients) or quantity (runoff/flood) control efforts would you be willing to implement on your property? (Click on the table to expand the view. Select X in the top right of table to close and return to survey.)

Residential Stormwater Practice	Land	Do Project	Maintenance
	Requirement	Yourself?	Burden
Conservation landscaping	Low	Yes	Low
Nutrient management/lawn care	Low	Yes	Low
agreement			
Pavement removal	Medium	No	Medium
Permeable pavement	Medium	No	Medium
Rain barrel/cistern	Low	Yes	Medium-Low
Rain gardens	Medium-Low	No	Medium
Roof drain disconnection	Low	Yes	Low
Tree planting	Low	Yes	Low



Choices	Response percent	Response count
Conservation landscaping	88.31%	68
Nutrient management / lawn care agreement	79.22%	61
Pavement removal	29.87%	23
Permeable pavement	54.55%	42
Rain barrel/cistern	80.52%	62
Rain garden	62.34%	48
Roof drain disconnection	38.96%	30
Tree planting	81.82%	63

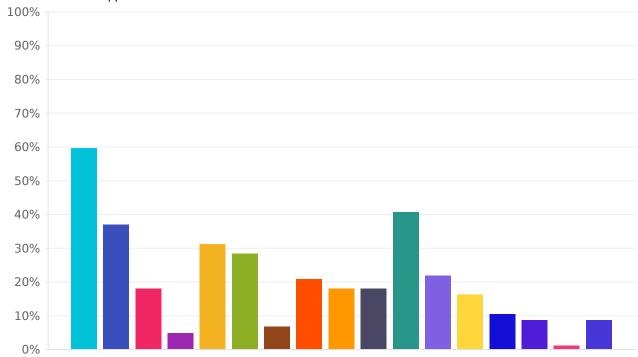
Q30

Is there anything else that should be considered when developing the Harrisonburg Stormwater Implementation Plan goals and objectives? (short answer)

Answered: 46 Skipped: 101

How can we best inform you about stormwater issues or news? (select all that apply)





- Emails from "Notify Harrisonburg" (https://www.harrisonbur gva.gov/notifyharrisonburg)
- City of Harrisonburg Public Works YouTube (https://www.youtube.co m/channel/UCeFluPPCuy 3JA-aaR7paBKg)
- Poster/flyer inside a City building
- Trusted nonprofit/community organization
- Radio
- Prefer not to hear about stormwater issues or news

- City of Harrisonburg Public Works Facebook (https://www.facebook.co m/harrisonburgpublicwor ks/about)
- City of Harrisonburg website (https://www.harrisonbur gva.gov/stormwatermanagement-program)
- An outdoor informational kiosk at a park facility
- City's "Stormwater and Environmental" enewsletter
- TV
- Other (please specify)

- City of Harrisonburg
 Public Works Instagram
 (https://www.instagram.c
 om/hbgpublicworks)
- Newspaper article
- Poster/flyer at local store/business
- Public meeting/workshop
- Place of worship

Choices	Response percent	Response count
Emails from "Notify Harrisonburg" (https://www.harrisonburgva.gov/notify-harrisonburg)	59.43%	63
City of Harrisonburg Public Works Facebook (https://www.facebook.com/harrisonburgpublicworks/about)	36.79%	39
City of Harrisonburg Public Works Instagram (https://www.instagram.com/hbgpublicworks)	17.92%	19
City of Harrisonburg Public Works YouTube (https://www.youtube.com/channel/UCeFluPPCuy3JA-aaR7paBKg)	4.72%	5
City of Harrisonburg website (https://www.harrisonburgva.gov/stormwater-management- program)	31.13%	33
Newspaper article	28.30%	30
Poster/flyer inside a City building	6.60%	7
An outdoor informational kiosk at a park facility	20.75%	22
Poster/flyer at local store/business	17.92%	19
Trusted nonprofit/community organization	17.92%	19
City's "Stormwater and Environmental" e-newsletter	40.57%	43
Public meeting/workshop	21.70%	23
Radio	16.04%	17
TV	10.38%	11
Place of worship	8.49%	9
Prefer not to hear about stormwater issues or news	0.94%	1
Other (please specify)	8.49%	9

Q32

If we can inform you with a poster or flyer inside a city building, which city buildings?

Answered: 5 Skipped: 142

If we can inform you with a poster or flyer inside at a store or business, please list which stores or businesses:

Answered: 12 Skipped: 135

Q34

If we can inform you through a trusted nonprofit/community organization, please list which nonprofit or community organizations:

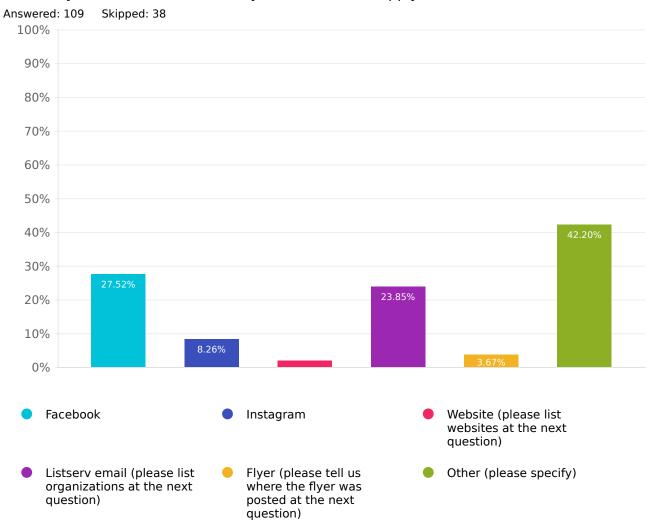
Answered: 14 Skipped: 133

Q35

If we can inform you through a place of worship, please list which place of worship:

Answered: 7 Skipped: 140

How did you hear about this survey? (select all that apply)



Choices	Response percent	Response count
Facebook	27.52%	30
Instagram	8.26%	9
Website (please list websites at the next question)	1.83%	2
Listserv email (please list organizations at the next question)	23.85%	26
Flyer (please tell us where the flyer was posted at the next question)	3.67%	4
Other (please specify)	42.20%	46

Which website(s) notified you about this survey?

Answered: 1 Skipped: 146

Q38

Which organizations(s) notified you about this survey?

Answered: 25 Skipped: 122

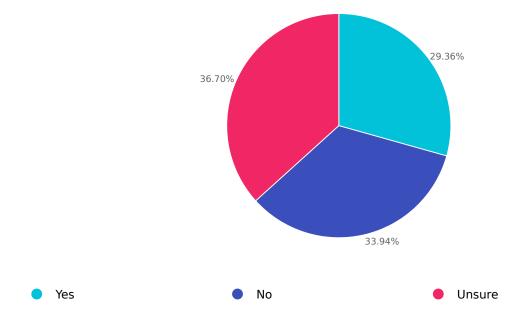
Q39

Where was the flyer posted?

Answered: 4 Skipped: 143

Q40

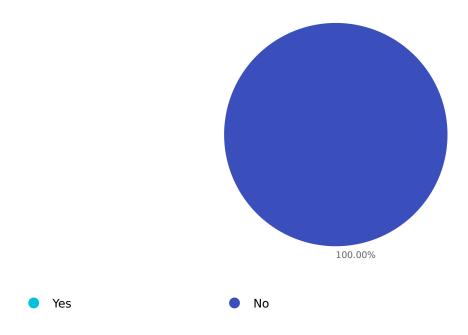
Would you be interested in learning more and sharing your thoughts, concerns, and experiences at an evening public meeting on May 7, 2024?



Choices	Response percent	Response count
Yes	29.36%	32
No	33.94%	37
Unsure	36.70%	40

If you attend the public meeting on May 7, 2024, do you need interpretation/translation services?

Answered: 71 Skipped: 76



Choices	Response percent	Response count
Yes	0.00%	0
No	100.00%	71

Q42

For which language do you need interpretation/translation services?

Answered: 0 Skipped: 147

No Responses

Q43

Sign up for Harrisonburg Stormwater Implementation Plan Updates

Would you like to receive Harrisonburg updates and opportunities to provide feedback? If yes, please provide your email address (note: email address will not be linked to survey responses):

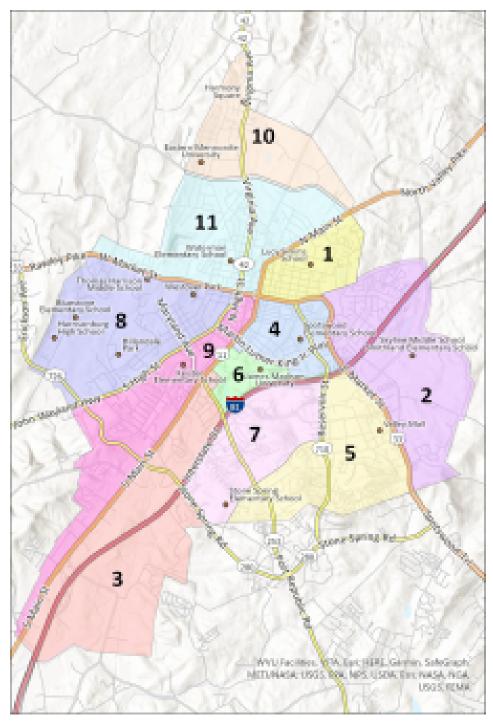
Answered: 55 Skipped: 92

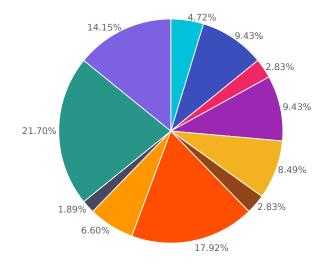
Voluntary Demographic Questions

The following questions ask about you and your background. This information helps us work toward our goal of inclusive engagement. Please note that your responses are OPTIONAL, will remain CONFIDENTIAL, and will be used solely for data collection.

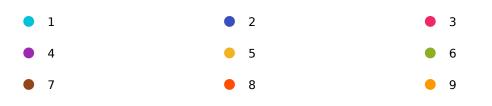
Q44

Using the map below, please identify where in Harrisonburg you live. Click on map to expand the map view. Select X in the top right of map to close and return to survey.



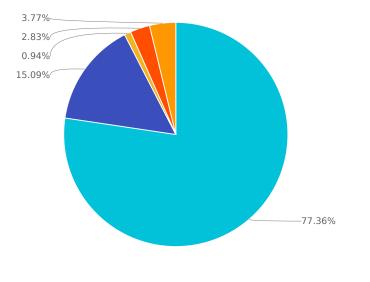


I do not live in the City



Choices	Response percent	Response count
1	4.72%	5
2	9.43%	10
3	2.83%	3
4	9.43%	10
5	8.49%	9
6	0.00%	0
7	2.83%	3
8	17.92%	19
9	6.60%	7
10	1.89%	2
11	21.70%	23
I do not live in the City	14.15%	15

What is your housing status?

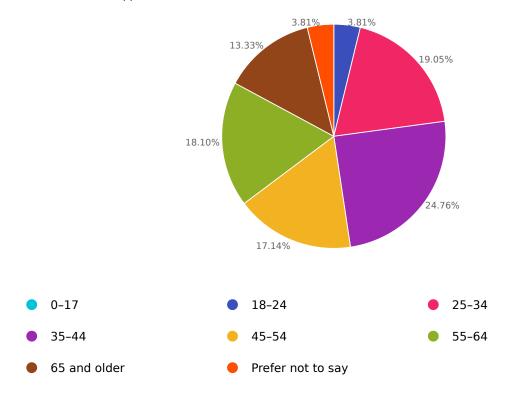


- Owner of a house, townhouse, or apartment
- Dorm/student housing
- Tiny house/recreational vehicle
- Renting a house, townhouse, or apartment
 - K-12 student/live with parents
- N/A

- Renting a room
- Hotel/transient
- Other (please specify)

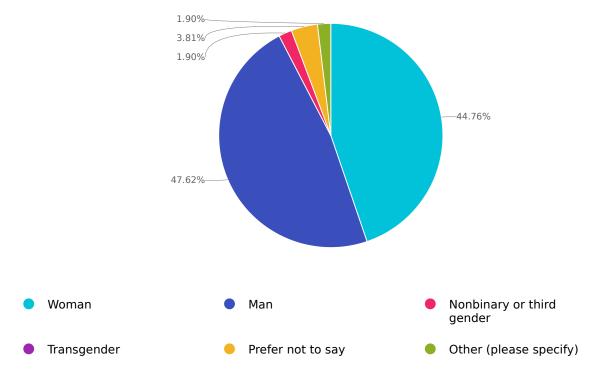
Choices	Response percent	Response count
Owner of a house, townhouse, or apartment	77.36%	82
Renting a house, townhouse, or apartment	15.09%	16
Renting a room	0.00%	0
Dorm/student housing	0.00%	0
K-12 student/live with parents	0.94%	1
Hotel/transient	0.00%	0
Tiny house/recreational vehicle	0.00%	0
N/A	2.83%	3
Other (please specify)	3.77%	4

What is your age?



Choices	Response percent	Response count
0-17	0.00%	0
18-24	3.81%	4
25-34	19.05%	20
35-44	24.76%	26
45-54	17.14%	18
55-64	18.10%	19
65 and older	13.33%	14
Prefer not to say	3.81%	4

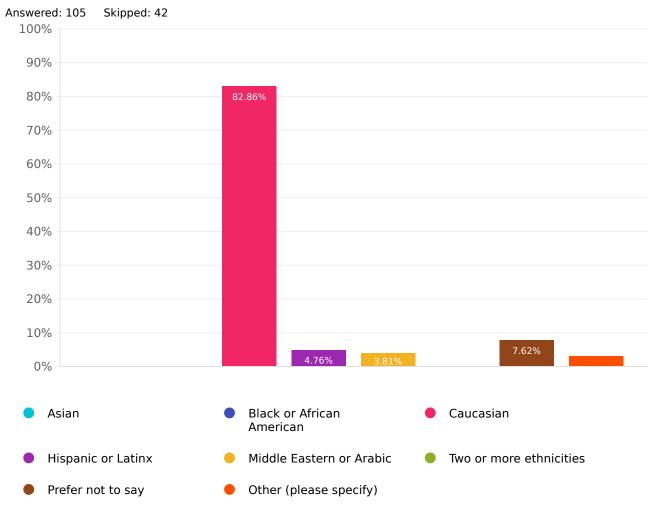
What is your gender identity?



Choices	Response percent	Response count
Woman	44.76%	47
Man	47.62%	50
Nonbinary or third gender	1.90%	2
Transgender	0.00%	0
Prefer not to say	3.81%	4
Other (please specify)	1.90%	2

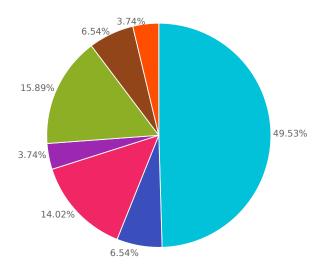
Q48

Which of the following best describes your racial/ethnic identity? (select all that apply)



Choices	Response percent	Response count
Asian	0.00%	0
Black or African American	0.00%	0
Caucasian	82.86%	87
Hispanic or Latinx	4.76%	5
Middle Eastern or Arabic	3.81%	4
Two or more ethnicities	0.00%	0
Prefer not to say	7.62%	8
Other (please specify)	2.86%	3

What is your employment status?



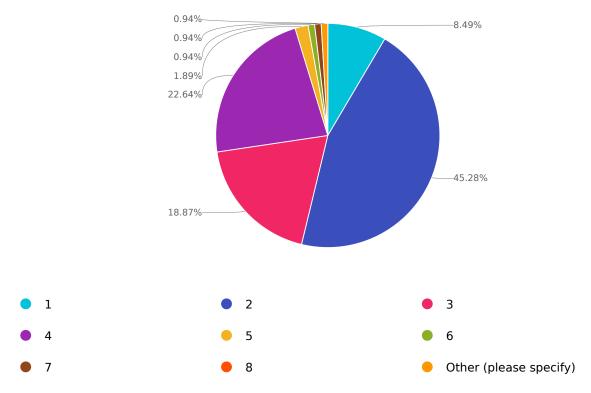
- Full-time employment
- Part-time employment or seasonal employment
- Self-employed, gig, or freelance

- Unemployed
- On disability
- Retired

- Prefer not to say
- Other (please specify)

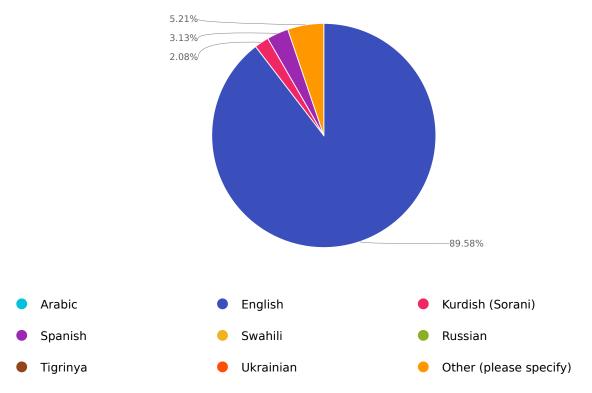
Choices	Response percent	Response count
Full-time employment	49.53%	53
Part-time employment or seasonal employment	6.54%	7
Self-employed, gig, or freelance	14.02%	15
Unemployed	3.74%	4
On disability	0.00%	0
Retired	15.89%	17
Prefer not to say	6.54%	7
Other (please specify)	3.74%	4

What is your household size (including yourself)?



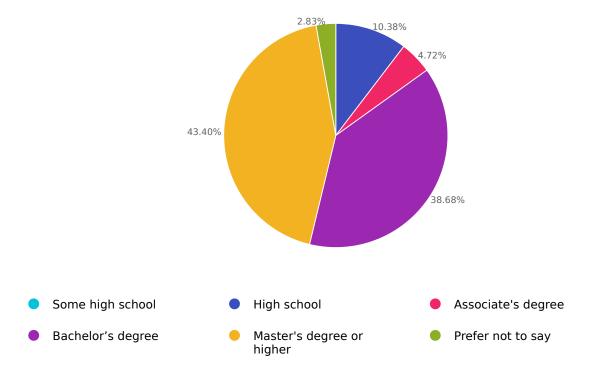
Choices	Response percent	Response count
1	8.49%	9
2	45.28%	48
3	18.87%	20
4	22.64%	24
5	1.89%	2
6	0.94%	1
7	0.94%	1
8	0.00%	0
Other (please specify)	0.94%	1

What language do you speak at home most of the time?



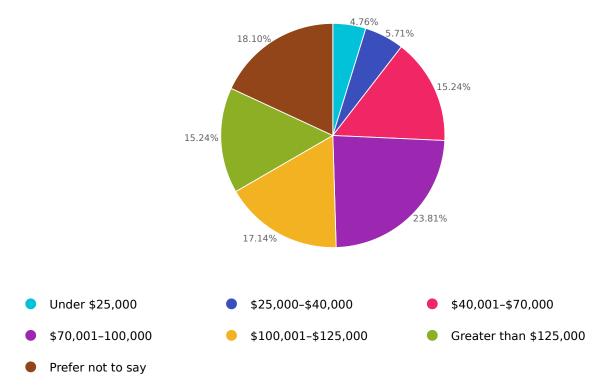
Choices	Response percent	Response count
Arabic	0.00%	0
English	89.58%	86
Kurdish (Sorani)	2.08%	2
Spanish	3.13%	3
Swahili	0.00%	0
Russian	0.00%	0
Tigrinya	0.00%	0
Ukrainian	0.00%	0
Other (please specify)	5.21%	5

What is the highest level of education that you have completed?



Choices	Response percent	Response count
Some high school	0.00%	0
High school	10.38%	11
Associate's degree	4.72%	5
Bachelor's degree	38.68%	41
Master's degree or higher	43.40%	46
Prefer not to say	2.83%	3

What is your approximate annual household income?



Choices	Response percent	Response count
Under \$25,000	4.76%	5
\$25,000-\$40,000	5.71%	6
\$40,001-\$70,000	15.24%	16
\$70,001-100,000	23.81%	25
\$100,001-\$125,000	17.14%	18
Greater than \$125,000	15.24%	16
Prefer not to say	18.10%	19