

2024 Minnesota Community Survey Methodology

Lumaris Research conducted the Minnesota Community Survey in 2024, using an address-based sampling methodology to survey Minnesota residents.

Data collection occurred in two phases from July to November 2024, yielding 3,339 total respondents.

The survey was administered in multiple languages (English, Spanish, Hmong, and Somali) to ensure broad accessibility across Minnesota's diverse communities.

Study design & timeline

Survey administration

- First Collection Phase: July 20 – Nov. 20, 2024 (922 respondents)
- Second Collection Phase: October 7 – Nov. 22, 2024 (2,477 respondents)
- Total Completed Interviews: 3,339
- AAPOR Response Rate 1: 8.75%

Language accessibility

The survey instrument was professionally translated by Weaving Cultures LLC and administered in:

- English
- Spanish
- Hmong
- Somali

Sampling methodology

Frame construction

The sample was drawn from the U.S. Postal Service Computerized Delivery Sequence File, provided by Marketing Systems Group (MSG). This comprehensive frame ensured all occupied residential addresses in Minnesota had a nonzero probability of selection.

Stratification design

We employed a stratified random sampling approach with differential selection probabilities across mutually exclusive strata. The stratification incorporated both demographic concentration and geographic considerations:

1. High-Density Demographic Areas

- Black, non-Hispanic communities, >80% census block group (CBG) concentration
- Hispanic communities, >60% CBG concentration
- Asian communities, >60% CBG concentration
- Indigenous/American Indian

Sample distribution by racial and ethnic groups

RACE/ETHNICITY	QUALIFICATION	% ABS SAMPLE	% OF SAMPLED HOUSEHOLDS
High-density areas			
Black, non-Hispanic	>80% CBG	0.25%	8.9%
Hispanic	>60% CBG	0.8%	2.3%
Asian	>60% CBG	0.25%	7.4%
Indigenous/American Indian	>60% CBG	0.09%	2.6%
Targeted Groups			
All remaining CBGs/ Hispanic ethnic group and/or surname	Modeled in ABS frame	5.4%	6.4%
All remaining CBGs/ target American Indian ethnic group	Modeled in ABS frame	1.3%	1.5%
All remaining CBGs/ target all Asian ethnic groups and/or surname	Modeled in ABS frame	8.2%	9.7%
All remaining CBGs/ target African American ethnic group	Modeled in ABS frame	3.0%	3.6%
General Population			
All remaining addresses in ABS frame	Statewide	81.5%	57.6%

communities, >60% CBG concentration

2. Targeted Populations

- Hispanic surname and ethnic group areas
- American Indian population centers
- Asian surname and ethnic group regions
- African American population clusters

3. General Population

- All remaining Minnesota addresses not captured in specialty strata

Contact protocol

Lumaris Research implemented a three-phase mailing strategy to all 40,000 sampled addresses:

1. Initial contact

- Format: 4.125 x 9.5-inch envelope
- Incentive: Included one dollar bill
- Contents: Survey invitation with online access information

2. Follow-up communication

- Format: Reminder postcard
- Timing: Sent to non-respondents after initial mailing

3. Final outreach

- Format: 4.125 x 9.5-inch envelope
- Contents: Final reminder and survey access details

Each mailing included:

- Web link and unique survey access code
- QR code for mobile access
- Survey availability in four languages

Weighting methodology

Lumaris Research weighted the survey to adjust the sample to the target population of Minnesota adults. The weighting process employed a two-step approach:

- 1. Base weight construction**
- Adjusted for differential probabilities of selection
 - Accounted for sample design
 - Created in collaboration with MSG

2. Raking calibration
The survey was calibrated to known population benchmarks using the following dimensions:

- Demographic controls:**
- Age (5 categories)
 - Gender
 - Race/ethnicity
 - Educational attainment
 - Metropolitan status

- Interaction terms:**
- Gender × Age (3)
 - Education (3) × Age (3)
 - Education (3) × Gender
 - Race/ethnicity × Education (3)

- Additional controls:**
- Volunteer status
 - 2020 presidential vote

Weighting dimensions

RAKING	BENCHMARK SOURCE
Core Demographics	
Age (5 categories)	2021 ACS
Gender	2021 ACS
Race/ethnicity	2021 ACS
Education	2021 ACS
Demographic interactions	
Gender × Age (3)	2021 ACS
Education (3) × Age (3)	2021 ACS
Education (3) × Gender	2021 ACS
Race/ethnicity × Education (3)	2021 ACS
Additional demographics	
Metropolitan status	2021 CPS ASEC
Volunteer status	2021 CPS Volunteer supplement
2020 presidential vote	2020 election results

Note: 2020 election results adjusted for ACS population of citizens.

Margin of error and variance

- Overall margin of error: ± 2.2 percentage points
- Design effect: 1.7
- Effective sample size: 2,008
- Unweighted sample size: 3,339

These estimates incorporate all design features and weighting adjustments. The overall design effect for a survey is commonly approximated as 1 plus the squared coefficient of variation of the weights. While sampling error represents one source of potential variance, additional factors such as question wording and response accuracy may contribute to total survey error.

Dispositions

Dispositions

SURVEY RESPONDENTS	AAPOR CODE	COUNT
Complete	I	3,399
Partial	P	330
Refusal and breakoff	R	56
Non-contact	NC	41
Other	O	0
Unknown household	UH	35,034
Unknown respondent eligibility	UO	0
Not eligible	NE	1,140

$$\text{AAPOR RR1} = 1 / ((I+P) + (R+NC+O) + (UH + UO))$$

8.75%

Detailed dispositions

RESPONSE CATEGORY	AAPOR CODE	COUNT
Interviews		
Full complete	1.1	3,399
Partial complete	1.2	330
Eligible, non-interview		
Refusal	2.11	18
Started but incomplete	2.1121	38
Completed after field dates	2.27	41
Unknown eligibility, non-interview		
Not returned/completed	3.199	35,034
Not eligible		
No such address or undelivered	4.313	1,140
AAPOR RR1 = 1/((I+P) + (R+NC+O) + (UH + UO))		8.75%