

Appendix IV: Detailed Survey Methodology

Sample Selection

Interviewing Service of America, a company specializing in phone survey services which conducted the interviewing, purchased a random digit dial sample (RDD) where part of the sample was geocoded up-front using reverse directory look-up. Phone numbers of Minneapolis residents were randomly selected for interviewing. Once interviews were completed using the RDD list, those that had respondent address information were geocoded to determine in which of 11 community planning districts a respondent resided. The pre-geocoded list was used at the end of data collection to “fill-up” quotas set by community planning district.

If items were unable to be geocoded, they were manually examined to see if the community planning district could be identified from the information in record. Failing obvious identification, a reverse phone directory was used to generate address information for numbers with incomplete or inaccurate information.

Quotas

An overall quota of at least 105 completed interviews was set for each of the eight community planning districts within the City of Minneapolis. An additional quota system based on racial groups was used to ensure that a representative number of these populations participated in the survey.

Survey Administration and Response Rate

The survey was administered by Interviewing Service of America, and the data were recorded electronically using a Computer-Assisted Telephone Interviewing system (CATI).¹² Phone calls were made from November 11, 2005 to January 25, 2006. A majority of the interviews was completed during the evening hours, although calls were made on the weekend and during weekdays also¹³. All phone numbers were dialed at least six times before replacing with another number, with at least one of the attempts on either a weekend or weekday. Interviewers who spoke Spanish, Vietnamese, Somali, Hmong, Laotian and Oromo were available for this survey; 29 surveys were conducted in Spanish, four in Hmong, five in Vietnamese, one in Laotian and one in Oromo.

A total of 36,056 phone numbers were dialed during the survey administration. Some of these numbers are considered ineligible for the survey. Of the approximately 5,310 households called,¹⁴ 1,327 completed interviews providing a response rate of 25%. However, 50 of the completed interviews were ineligible for reporting purposes, as the community planning district in which they lived could not be ascertained (either the respondent refused to give an address or the address given

¹² CATI is a software program that automatically dials phone numbers, logs dispositions and records responses to completed interviews.

¹³ The City of Minneapolis noted the following specific conditions that took place at approximately the same time as the survey administration:

- During November, Truth in Taxation Statements were mailed to every property in the City, showing the estimated tax bill for 2006.
- City Elections took place on November 8, 2006, three days before survey calls began.
- November to January is a holiday season for many cultures.

- Various service-specific conditions (e.g., the survey was conducted during winter months, possibly suggesting that the amount of snow fall could impact responses to snow emergency related questions).

¹⁴ Disconnected, fax/data line or business phone numbers were not included as eligible households. For 7,342 phone numbers where the eligibility status of the household was unknown, 15% were estimated to be eligible. This proportion was assumed to hold for those households not contacted, or where the household refused, and therefore prevented knowing the eligibility status, and only 15% of these numbers were included in the final response rate calculation.

was incorrect). The total number of completes used for reporting purposes is 1,277. Approximately 1,210 households refused the survey. The dispositions of the numbers dialed during the survey are listed in the table below.

Disposition of all Numbers Called for the Minneapolis 2005 Resident Survey	
Complete	1,327
Refusal/Partial	1,210
Number changed	37
No eligible person	9
Language problem	239
Always busy	282
No answer	2,132
Technical phone problems	2,925
Out of sample - other strata than originally coded	994
Fax/data line	1,183
Disconnected number	18,602
Answering machine	1,453
Business, government office, other organizations	2,207
Quota filled	
Other	3,456
Total phone numbers used	36,056
I=Complete Interviews	1,327
P=Partial Interviews	0
R=Refusal and break off	1,210
NC=Non Contact	1,453
O=Other	239
e ¹⁵ =estimated proportion of cases of unknown eligibility that are eligible	15%
UH=Unknown household	5,339
UO=Unknown other	2,003
Response Rate ¹⁶	25%

¹⁵ Estimate of e is based on proportion of eligible households among all numbers for which a definitive determination of status was obtained (a very conservative estimate).

¹⁶ The response rate was calculated as $I / ((I+P) + (R+NC+O) + e(UH+UO))$.

Confidence Intervals

It is customary to describe the precision of estimates made from surveys by a “level of confidence” (or margin of error). The 95 percent confidence level for the survey is generally no greater than plus or minus three percentage points around any given percent reported for the entire sample (1,277 completed interviews). For each community planning district from the survey, the margin of error rises to as much as plus or minus 9.6% for a sample size of 105 (in smallest) to plus or minus 8.4% for 137 completed surveys (in largest). Where estimates are given for sub-groups, they are less precise. Generally the 95% confidence interval is plus or minus five percentage points for samples of about 400 to ten percentage points for samples as small as 100.

The relationship between sample size and precision (the 95 percent confidence interval or margin of error) is shown in the table to the side. Though the margin of error decreases as sample size increases, higher cost and diminishing benefit often prohibit sample sizes larger than 1,500 to 2,000, with citizen survey samples most commonly in the range of 400 to 1,000.

<u>Sample Size</u>	<u>Margin of Error</u>
100	10%
300	5.5%
400	5%
800	3.5%
1,000	3%
1,500	2.5%
2,000	2.2%

Weighting the Data

The demographic characteristics of the survey sample were compared to those found in the 2000 Census estimates and other population norms for the City of Minneapolis and were statistically adjusted to reflect the larger population when necessary.

Variables were chosen for weighting because opinions varied by subgroup or because the proportion of survey respondents in each category varied from the population norm – or a combination of these considerations. The weighting variables chosen were sex, age, ownership status (rent vs. own) and community planning district.

Consequently, sample results were weighted using the population norms to reflect the appropriate percent of those residents. Other discrepancies between the whole population and the sample were also aided by the weighting due to the intercorrelation of many socioeconomic characteristics, although the percentages were not the same in the sample compared to the population norms. The results of the weighting scheme are presented in the following table.

Minneapolis Resident Survey Weighting Table

Characteristic	Percent in Population		
	Population Norm ¹⁷	Unweighted Data	Weighted Data
Sex and Age			
18-34 years of age	45%	25%	43%
35-54 years of age	36%	45%	37%
55+ years of age	19%	30%	20%
Female	50%	53%	50%
Male	50%	47%	50%
Females 18-34	22%	12%	20%
Females 35-54	17%	23%	18%
Females 55+	11%	18%	12%
Males 18-34	23%	13%	23%
Males 35-54	19%	22%	19%
Males 55+	8%	12%	8%
Race and Ethnicity			
Latino/Hispanic	8%	6%	8%
Not Latino/Hispanic	92%	94%	92%
White	68%	74%	70%
People of Color	32%	26%	30%
Housing			
Own home	51%	68%	54%
Rent home	49%	32%	46%
Household Income¹⁸			
Less than \$25,000	32%	24%	29%
\$25,000 to \$99,999	58%	64%	60%
\$100,000 or more	10%	12%	11%
Community planning district			
Calhoun Isle	10%	9%	10%
Camden	7%	9%	7%
Central	8%	8%	9%
Longfellow	8%	9%	8%
Northeast	10%	11%	10%
Nokomis	10%	9%	10%
Near North	7%	9%	7%
Phillips	4%	9%	4%
Powderhorn	14%	9%	14%
Southwest	13%	11%	13%
University	7%	9%	8%

¹⁷ Source: 2000 Census.

¹⁸ Household income in 1999.

Data Analysis

The results analyzed by National Research Center, Inc. staff using the Statistical Package for the Social Sciences (SPSS). For the most part, frequency distributions and mean ratings are presented in the body of the report. A complete set of frequencies for each survey question is presented in Appendix III: Complete Set of Frequencies.

Also included are crosstabulations of select survey questions (Appendix II: Crosstabulations of Select Survey Questions). Chi-square or ANOVA tests of significance were applied to these breakdowns of selected survey questions. A “p-value” of 0.05 or less indicates that there is less than a 5% probability that differences observed between groups are due to chance; or in other words, a greater than 95% probability that the differences observed in the selected categories of our sample represent “real” differences among those populations. Where differences between subgroups are statistically significant, they are marked with grey shading in the appendices.