SHAPE 1998: Methodology Report
Survey of the Health of Adults, the Population, and the Environment

Hennepin County Community Health Department
Minneapolis Department of Health and Family Support
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www.co.hennepin.mn.us/commhlth/reports/shape.htm
Acknowledgements

The Survey of the Health of Adults, the Population, and the Environment (SHAPE) is a collaborative effort of the Minneapolis Department of Health and Family Support and the Hennepin County Community Health Department.

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Introduction

The Hennepin County Community Health Department and the Minneapolis Department of Health and Family Support developed the Survey of the Health of Adults, the Population, and the Environment (SHAPE), with the support of the Minnesota Department of Health. A primary reason for conducting the SHAPE survey was to provide data on the health status and the determinants of health of adults in Hennepin County. These data will be useful for planning, programming, and policy development to government agencies, health plans, and other organizations. A second major reason was to establish baseline data for geographic areas within Hennepin County and the county as a whole to help measure changes in health indicators over time.

The SHAPE survey instrument included questions concerning chronic disease, injury, disability, behavioral risks, and health care access and use, as well as perceptions of community, personal safety, and discrimination. Questions about demographic characteristics such as income, employment, and race/ethnicity were also included.

Interviews with 10,745 persons were conducted between October 1997 and February 1998 by staff at the Survey Research Center of the Division of Health Services Research and Policy located in the School of Public Health, University of Minnesota. A total of 10,731 interviews were conducted by telephone, and 14 were done in-person with respondents who could not be interviewed by telephone because of hearing problems.

The purpose of this technical report is to provide background information about the survey and data collection methods.

Questionnaire Design and Content

The design of the SHAPE questionnaire occurred over the course of one year, starting in 1996. Public health professionals from the Hennepin County Community Health Department (HCCHD), the Minneapolis Department of Health and Family Support (MDHFS), the Minnesota Department of Health (MDH), and a contracted consultant from the University of Minnesota School of Public Health developed the basic framework of survey contents – community support and social environment; chronic disease, physical disability, and injury; lifestyle and risk behavior; and health care. Representatives from HCCHD and MDHFS contacted community agencies, service providers, and other public health professionals to gain input from a wide range of public health understandings. With their input, a draft questionnaire was developed.

For many of the survey topics, questions from other sources were chosen to maximize comparability to other studies. For the remaining topics, questions were adapted from other sources or developed specifically for this study. After completion of the pretest and a review of the results, revisions to the questionnaire were made by HCCHD and MDHFS staffs, and the final version was created.
Pretesting
Pretesting was conducted three weeks prior to the onset of data collection. During this time, three versions (including the final version) of the survey were pretested. Ten to 30 surveys were completed for each version. The pretest was designed to estimate the overall length of the survey and to identify any problem questions.

The question regarding sexual identity made many older-aged respondents uncomfortable. Therefore, in the final survey, sexual identity was asked of those 65 years of age or younger. In addition, some questions (such as marital status) were re-ordered.

The pretest determined that the initial version of the questionnaire was too long. Therefore, questions were eliminated to conserve time and money. The actual interviews averaged just over 30 minutes in length.

Final Questionnaire
For certain questions / sets of questions, less than the full sample of respondents were asked to reply. Each subject had a 50% chance of being asked a particular set of questions. The probability of being asked any particular question / set of questions was independent of being asked some other question / set of questions. For each of the following questions, a different randomly selected group of approximately half the respondents was selected: chronic conditions list, injury list, seatbelt use, flu shot reception, and pneumonia vaccination reception. A randomly-selected half-sample of women was asked health screening questions (clinical breast exam, breast self exam, mammogram, Pap smear) and if they had had a hysterectomy. A half-sample of women aged less than 54 years was asked if they had given birth in the past three years. Respondents aged 65 years and younger were asked their sexual orientation. See Table 1 for a list of question topics, their sources, and approximate percentage of respondents asked the question. See the Appendix for the actual questionnaire.

Table 1
Survey Topics, Sources, and Respondents Asked

<table>
<thead>
<tr>
<th>Question #</th>
<th>Survey Topics</th>
<th>Source</th>
<th>Respondents Asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening question</td>
<td>Age</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>Screening question NOT ASKED, but INFERRED</td>
<td>Gender</td>
<td>United States Department of Justice, Bureau of Justice Statistics; National Criminal Victimization Study, 1997.</td>
<td>Everyone</td>
</tr>
<tr>
<td>1</td>
<td>Number of times moved in past five years</td>
<td>McCubbin, H.; Patterson, J.; Glynn, T.; Social Support Index. (1991) In H. McCubbin &amp; A. Thompson (eds). Family Assessment Inventories for Research and Practice. Madison, Wisconsin: Family</td>
<td>Everyone</td>
</tr>
<tr>
<td>2</td>
<td>Community Support</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>Question #</td>
<td>Survey Topics</td>
<td>Source</td>
<td>Respondents Asked</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>4</td>
<td>Usual source for care</td>
<td>Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>5</td>
<td>Medical care delay</td>
<td>Adapted from Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995, and adapted from Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>6</td>
<td>Mental health care</td>
<td>Adapted from Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995, and adapted from Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>7</td>
<td>Dental care</td>
<td>Adapted from Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995, and adapted from Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>8</td>
<td>Hospitalization in the past year</td>
<td>Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>Everyone</td>
</tr>
<tr>
<td>Question #</td>
<td>Survey Topics</td>
<td>Source</td>
<td>Respondents Asked</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>21</td>
<td>Activities of daily living</td>
<td>Adapted from Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995, and adapted from Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>22</td>
<td>Instrumental activities of daily living</td>
<td>Adapted from Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995, and adapted from Centers for Disease Control and Prevention, National Center for Health Statistics; National Health Interview Survey, 1990.</td>
<td>Everyone</td>
</tr>
<tr>
<td>23</td>
<td>Chronic conditions</td>
<td>Adapted from Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995, and adapted from The National Health Survey Report, 1995. Allentown, PA: Felix, Burdine Associates, Inc.</td>
<td>50% of respondents</td>
</tr>
<tr>
<td>24</td>
<td>Moderate activity</td>
<td>SHAPE Research Team</td>
<td>Everyone</td>
</tr>
<tr>
<td>25</td>
<td>Vigorous activity</td>
<td>SHAPE Research Team</td>
<td>Everyone</td>
</tr>
<tr>
<td>26</td>
<td>Injuries</td>
<td>SHAPE Research Team</td>
<td>50% of respondents</td>
</tr>
<tr>
<td>27</td>
<td>Family violence</td>
<td>Adapted from CDC and Group Health Puget Sound</td>
<td>Everyone</td>
</tr>
<tr>
<td>28</td>
<td>Cigarette smoking</td>
<td>Adapted from Health Risk Questionnaire</td>
<td>Everyone</td>
</tr>
<tr>
<td>29</td>
<td>Environmental tobacco smoke</td>
<td>Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995.</td>
<td>Everyone</td>
</tr>
<tr>
<td>33</td>
<td>Seat belt use</td>
<td>Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>50% of respondents</td>
</tr>
<tr>
<td>34</td>
<td>Servings of fruits/vegetables</td>
<td>Adapted from Institute for Clinical Systems Integration, Buyer’s Health Care Action Group, and HealthPartners. Adult Health Status and Health Risk Survey. Health Research Center, Institute for Research and Education, Minneapolis, MN, 1996.</td>
<td>Everyone</td>
</tr>
<tr>
<td>Question #</td>
<td>Survey Topics</td>
<td>Source</td>
<td>Respondents Asked</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>35</td>
<td>Servings of high fat foods</td>
<td>Adapted from Institute for Clinical Systems Integration, Buyer’s Health Care Action Group, and HealthPartners. Adult Health Status and Health Risk Survey. Health Research Center, Institute for Research and Education, Minneapolis, MN, 1996.</td>
<td>Everyone</td>
</tr>
<tr>
<td>36</td>
<td>Overweight/underweight</td>
<td>Adapted from Institute for Clinical Systems Integration, Buyer’s Health Care Action Group, and HealthPartners. Adult Health Status and Health Risk Survey. Health Research Center, Institute for Research and Education, Minneapolis, MN, 1996.</td>
<td>Everyone</td>
</tr>
<tr>
<td>37</td>
<td>Gave birth in past three years</td>
<td>SHAPE Research Team</td>
<td>50% of female respondents aged less than 54 years</td>
</tr>
<tr>
<td>38</td>
<td>Clinical breast exam</td>
<td>Adapted from Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>50% of female respondents</td>
</tr>
<tr>
<td>39</td>
<td>Breast self exam</td>
<td>Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995.</td>
<td>50% of female respondents</td>
</tr>
<tr>
<td>40-42</td>
<td>Mammograms and Pap smears</td>
<td>Adapted from Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>50% of female respondents</td>
</tr>
<tr>
<td>43-44</td>
<td>Vaccinations</td>
<td>Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>50% of respondents</td>
</tr>
<tr>
<td>45</td>
<td>Skip meals</td>
<td>CAW and Associates, Framingham, MA and Just Harvest: A Center for Action Against Hunger, Homestead, PA; Community Childhood Hunger Identification Project Survey</td>
<td>Everyone</td>
</tr>
<tr>
<td>46</td>
<td>Homelessness</td>
<td>CAW and Associates, Framingham, MA and Just Harvest: A Center for Action Against Hunger, Homestead, PA; Community Childhood Hunger Identification Project Survey</td>
<td>Everyone</td>
</tr>
<tr>
<td>47</td>
<td>Every-day discrimination</td>
<td>Adapted from Williams, D.; Yu, Y.; Jackson, J.S.; Anderson, M.B.; Racial differences in physical and mental health: social economic status, stress and</td>
<td>Everyone</td>
</tr>
</tbody>
</table>
### Survey Design

A primary goal of this study was to identify differences in health status, health behaviors, social environment, and access to health care between residents of different communities in Minneapolis and suburban Hennepin County.

#### Geographic Areas

A disproportionate stratified sampling method was used for this survey. Prior to sampling, Hennepin County was stratified into 19 geographic areas. Within the city of Minneapolis, the geographic areas were defined by 11 established communities, as seen in Map 1 and Table 2.

<table>
<thead>
<tr>
<th>Question #</th>
<th>Survey Topics</th>
<th>Source</th>
<th>Respondents Asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>Social service utilization</td>
<td>Adapted from National Center for Health Statistics; State and Local Area Integrated Telephone Survey (SLAITS), 1997.</td>
<td>Everyone</td>
</tr>
<tr>
<td>49</td>
<td>Firearms</td>
<td>Adapted from Centers for Disease Control and Prevention; Behavioral Risk Factor Surveillance System, 1997.</td>
<td>Everyone</td>
</tr>
<tr>
<td>50</td>
<td>Activity restrictions due to safety</td>
<td>Bridge to Health Collaborative; Bridge to Health Survey, Duluth MN, 1995.</td>
<td>Everyone</td>
</tr>
<tr>
<td>51</td>
<td>Weight</td>
<td>Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>Everyone</td>
</tr>
<tr>
<td>52</td>
<td>Height</td>
<td>Minnesota Department of Health; Minnesota Behavioral Risk Factor Surveillance System, 1995.</td>
<td>Everyone</td>
</tr>
<tr>
<td>53</td>
<td>Sexual orientation</td>
<td></td>
<td>Everyone aged 65 years and younger</td>
</tr>
<tr>
<td>54</td>
<td>Marital status</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>55</td>
<td>Race</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>56</td>
<td>Ethnicity</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>57</td>
<td>Education</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>58</td>
<td>Employment</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>59</td>
<td>Reason not in labor force</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>60</td>
<td>Children/seniors in household</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>61</td>
<td>Household income</td>
<td></td>
<td>Everyone</td>
</tr>
</tbody>
</table>
Table 2
Geographic Areas in Minneapolis

<table>
<thead>
<tr>
<th>Area</th>
<th>Minneapolis Community</th>
<th>Adult (18 years+) population 1990 Census</th>
<th>Number of Households 1990 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Calhoun-Isles</td>
<td>27,259</td>
<td>16,478</td>
</tr>
<tr>
<td>2</td>
<td>Camden</td>
<td>21,675</td>
<td>11,862</td>
</tr>
<tr>
<td>3</td>
<td>Central</td>
<td>19,992</td>
<td>12,978</td>
</tr>
<tr>
<td>4</td>
<td>Longfellow</td>
<td>23,070</td>
<td>13,066</td>
</tr>
<tr>
<td>5</td>
<td>Near North</td>
<td>22,112</td>
<td>11,908</td>
</tr>
<tr>
<td>6</td>
<td>Nokomis</td>
<td>30,153</td>
<td>16,040</td>
</tr>
<tr>
<td>7</td>
<td>Northeast community of Minneapolis, and the Hennepin County portion of the City of St. Anthony</td>
<td>33,696</td>
<td>18,303</td>
</tr>
<tr>
<td>8</td>
<td>Phillips</td>
<td>11,831</td>
<td>6,307</td>
</tr>
<tr>
<td>9</td>
<td>Powderhorn</td>
<td>39,221</td>
<td>22,665</td>
</tr>
<tr>
<td>10</td>
<td>Southwest</td>
<td>39,946</td>
<td>21,376</td>
</tr>
<tr>
<td>11</td>
<td>University</td>
<td>27,818</td>
<td>11,713</td>
</tr>
</tbody>
</table>

Total Adult (18 years+) Population of Minneapolis from 1990 Census: 296,773
Total Adult (18 years+) Population of Total Hennepin County from 1990 Census: 793,622
In suburban Hennepin County, eight geographic areas were defined by combinations of cities or townships, as seen in Map 2 and Table 3.

Map 2
Geographic Areas in Hennepin County

Table 3
Geographic Areas in Hennepin County

<table>
<thead>
<tr>
<th>Area</th>
<th>City or town in suburban Hennepin County</th>
<th>Adult (18 years+) population 1990 Census</th>
<th>Number of Households 1990 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Bloomington, Edina, Richfield, Eden Prairie, Fort Snelling</td>
<td>161,490</td>
<td>84,452</td>
</tr>
<tr>
<td>13</td>
<td>Crystal, Golden Valley, New Hope, Robbinsdale</td>
<td>63,669</td>
<td>32,056</td>
</tr>
<tr>
<td>14</td>
<td>Brooklyn Center, Brooklyn Park, Osseo</td>
<td>63,489</td>
<td>32,712</td>
</tr>
<tr>
<td>15</td>
<td>Champlin, Dayton, Maple Grove, Medicine Lake, Plymouth</td>
<td>76,630</td>
<td>37,681</td>
</tr>
<tr>
<td>16</td>
<td>Hopkins, Minnetonka, St. Louis Park</td>
<td>86,243</td>
<td>46,746</td>
</tr>
<tr>
<td>17</td>
<td>Deephaven, Excelsior, Greenwood, Long Lake, Minnetonka Beach, Minnetrista, Mound, Orono, St. Bonifacius, Shorewood, Spring Park, Tonka Bay, Wayzata, Woodland</td>
<td>32,836</td>
<td>16,900</td>
</tr>
<tr>
<td>18</td>
<td>Greenfield, Independence, Loretto, Maple Plain, Medina, Rockford</td>
<td>7,176</td>
<td>3,425</td>
</tr>
<tr>
<td>19</td>
<td>Corcoran, Hanover, Hassan, Rogers</td>
<td>5,316</td>
<td>2,450</td>
</tr>
</tbody>
</table>
Total Adult (18 years+) Population of suburban Hennepin County from 1990 Census: 496,849
Total Adult (18 years+) Population of Total Hennepin County from 1990 Census: 793,622

**Sampling Frame**
A list of telephone numbers within Hennepin County with corresponding addresses was obtained from Genesys Sampling Systems, a division of Marketing Systems Group of Fort Washington, Pennsylvania. The list did not include phone numbers from student dormitories within the University of Minnesota. The list was augmented with dormitory phone numbers to adjust for this. For the purposes of this study, each dormitory room was considered to be a household.

Approximately 550 interviews were conducted within each area, although the areas themselves contain different numbers of households. A target of 550 completed interviews in each of the 19 areas was a compromise between the cost of data collection and the statistical precision deemed necessary to make meaningful comparisons at the local level. In keeping with statistical convention, the probability of a Type I Error at 5% and the probability of a Type II Error at 20% were set. Examination of the power curve for both proportions and for means was made. The target sample size provides the ability to make statements about percentages with an error of plus or minus 6% for the worst case (for questions with a full sample). For means, the error would be plus or minus 0.12 standard deviations. Examination of the tables in this report reveal that assumptions were conservative and the actual precision was typically much better than either of these estimates.

**Respondent Selection**
Survey respondents were selected at random through a two-stage process. In the first stage, households were contacted via telephone. Then, one adult from the household was selected to participate in the survey. To select the respondent, the person answering the phone was asked to identify the adult in the household who had most recently had a birthday. This individual became the designated respondent for that household. In the case of twins having the most recent birthday, the person answering the phone was asked to randomly select one twin.

**Households Without Phones**
Although the percentage of homes in Hennepin County with phones is quite high (see Table 4 for phone ownership rates), three areas in Minneapolis stood out as having low telephone ownership percentages. Because of this, in-person interviews were conducted in the communities of Central, Near North, and Phillips. Information from these interviews was not included in the SHAPE dataset, as a convenience sample was used to identify respondents.

**Table 4**
**Telephone Ownership**

<table>
<thead>
<tr>
<th>SHAPE Area</th>
<th>Percentage of households with telephones 1990 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Calhoun-Isles</td>
<td>99.06</td>
</tr>
<tr>
<td>2 – Camden</td>
<td>98.67</td>
</tr>
<tr>
<td>3 – Central</td>
<td>90.53</td>
</tr>
<tr>
<td>4 – Longfellow</td>
<td>98.83</td>
</tr>
<tr>
<td>5 – Near North</td>
<td>90.64</td>
</tr>
<tr>
<td>SHAPE Area</td>
<td>Percentage of households with telephones (1990 Census)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>6 – Nokomis</td>
<td>99.56</td>
</tr>
<tr>
<td>7 – Northeast</td>
<td>97.36</td>
</tr>
<tr>
<td>8 – Phillips</td>
<td>84.83</td>
</tr>
<tr>
<td>9 – Powderhorn</td>
<td>93.87</td>
</tr>
<tr>
<td>10 – Southwest</td>
<td>99.58</td>
</tr>
<tr>
<td>11 – University</td>
<td>97.33</td>
</tr>
<tr>
<td>12 – Bloomington, Edina, Richfield, Eden Prairie, Fort Snelling</td>
<td>99.45</td>
</tr>
<tr>
<td>13 – Crystal, Golden Valley, New Hope, Robbinsdale</td>
<td>99.69</td>
</tr>
<tr>
<td>14 – Brooklyn Center, Brooklyn Park, Osseo</td>
<td>99.02</td>
</tr>
<tr>
<td>15 – Champlin, Dayton, Maple Grove, Medicine Lake, Plymouth</td>
<td>99.64</td>
</tr>
<tr>
<td>16 – Hopkins, Minnetonka, St. Louis Park</td>
<td>99.42</td>
</tr>
<tr>
<td>17 – Deephaven, Excelsior, Greenwood, Long Lake, Minnetonka Beach, Minnetrista, Mound, Orono, St. Bonifacius, Shorewood, Spring Park, Tonka Bay, Wayzata, Woodland</td>
<td>98.98</td>
</tr>
<tr>
<td>18 – Greenfield, Independence, Loretto, Maple Plain, Medina, Rockford</td>
<td>99.42</td>
</tr>
<tr>
<td>19 – Corcoran, Hanover, Hassan, Rogers</td>
<td>99.11</td>
</tr>
</tbody>
</table>

**Data Collection**

The SHAPE questionnaire was administered via the telephone between October 1, 1997 and February 15, 1998. The interviewing was contracted to the Survey Research Center of the Division of Health Services Research and Policy at the University of Minnesota School of Public Health.

**Interviewer Selection**

Interviewers were professional interviewers employed by the University of Minnesota. They were selected for their communication skills, trained specifically for this project, and supervised closely in their work.

**Training of Interviewers**

Training of the interviewers was conducted in three phases. In the first phase, new interviewers were required to attend an initial training session during which they received basic instructions in survey interviewing. In the second phase, the interviewers learned about this specific project, and how to apply general interview techniques to this project. In the third phase, interviewers practiced reading the questionnaire and using the computer equipment by role-playing with other interviewers.
Computer Assisted Telephone Interview
This project used the Sawtooth Computer Assisted Telephone Interview (CATI) System. To conduct interviews using this system, each interviewer uses a microcomputer that displays questions on the computer screen in the proper order. The interviewer wears a headset and has both hands free for entering responses into the computer via the keyboard. Responses are generally entered as numbers, such as “1” for yes and “2” for no. The only circumstance that differs from this general procedure occurs when a pre-coded list of possible responses appears on the computer screen and the interviewer moves the cursor to highlight any response that is mentioned. Pressing the spacebar at a particular response highlights the selected item. Any number of pre-coded responses can be selected in this way, including an “other-specify” response that lets the interviewer enter any other response not on the pre-coded list.

Supervision
Interviewers were supervised throughout the data collection process. Supervisory responsibilities included distributing new phone numbers and scheduled appointments, reviewing completed questionnaires for errors and omissions, maintaining a Master Log of completed interviews, and monitoring interviews. In addition, supervisors called individuals who had previously refused to answer the survey in an attempt to gain their participation.

Monitoring
The “silent entry” monitoring system used enabled supervisors to listen to interviews and provide feedback immediately following the interview to interviewers regarding improvements in interviewing quality. This system allowed the monitor to hear both the interviewer and the respondent during the survey. Interviewers whose performance was not satisfactory were re-evaluated on subsequent shifts. During the duration of the data collection period, ten percent of all interviews were monitored.

Operations
Interviews were conducted by telephone from the phone bank located at the Survey Research Center. The interviewing was organized into ten shifts conducted seven days per week, including weekend, evening and weekday hours. Monday through Friday, shifts were held from 9:00 a.m. to 9:00 p.m. On Saturdays, shifts were held from 9:00 a.m. – 3:00 p.m. On Sundays, shifts were held from 5:00 p.m. to 9:00 p.m.

Telephone numbers to be called were recorded on contact record forms and were distributed to interviewers at the beginning of each shift. The disposition for each attempt to complete an interview was recorded on these contact records. Each telephone number in the sample continued to be called until it had been attempted at least 30 times without success or until the data collection period ended.

The back of each contact record contained two forms: (1) a refusal form for recording relevant information about those respondents refusing to participate in the interview, and (2) a callback form for scheduling future interview appointments. For each call made, interviewers recorded the date, time, and disposition of the call as well as their interviewer ID number.

“Other-specify” responses were recorded verbatim using the CATI software. In addition, interviewers were instructed to use a comment sheet to record any incidents of repeating questions
or categories, miscellaneous ad-libs by respondents, and any problems they encountered during the interview.

**Answering Machine Messages**
The sample for this study included many households with answering machines. Interviewers were instructed to leave a message stating that they were calling from the University of Minnesota and requesting the respondent call the Survey Research Center to be included in the study. Eight hundred and four (804) target households with answering machines who were part of the original sampling list were contacted 30 or more times on different days and times of day without success. This group was subsequently dropped from the sample, and the sample was refreshed with new names.

**In-Person Interviews**
In-person interviews were conducted with 14 persons who were hard of hearing. In these cases, a supervisor went into the home of the person being interviewed.

**Completion Status**

**Completed Questionnaires**
A total of 10,745 telephone interviews was completed for the SHAPE project; 6,344 in the city of Minneapolis, and 4,401 in suburban Hennepin County. Table 5 lists the number of completed interviews within each of the 19 geographic areas. An additional 1,165 people contacted refused to participate. Table 6 lists the disposition codes for Hennepin County overall, and Table 7 details the final study dataset.

**Table 5**
**Completed Interviews**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of completed Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Calhoun-Isles</td>
<td>551</td>
</tr>
<tr>
<td>2 – Camden</td>
<td>575</td>
</tr>
<tr>
<td>3 – Central</td>
<td>576</td>
</tr>
<tr>
<td>4 – Longfellow</td>
<td>569</td>
</tr>
<tr>
<td>5 – Near North</td>
<td>550</td>
</tr>
<tr>
<td>6 – Nokomis</td>
<td>586</td>
</tr>
<tr>
<td>7 – Northeast</td>
<td>550</td>
</tr>
<tr>
<td>8 – Phillips</td>
<td>604</td>
</tr>
<tr>
<td>9 – Powderhorn</td>
<td>600</td>
</tr>
<tr>
<td>10 – Southwest</td>
<td>566</td>
</tr>
<tr>
<td>11 – University</td>
<td>617</td>
</tr>
<tr>
<td>12 – Bloomington, Edina, Richfield, Eden Prairie, Fort Snelling</td>
<td>550</td>
</tr>
<tr>
<td>13 – Crystal, Golden Valley, New Hope, Robbinsdale</td>
<td>550</td>
</tr>
<tr>
<td>14 – Brooklyn Center, Brooklyn Park, Osseo</td>
<td>551</td>
</tr>
<tr>
<td>Area</td>
<td>Number of completed Interviews</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>15 – Champlin, Dayton, Maple Grove, Medicine Lake, Plymouth</td>
<td>550</td>
</tr>
<tr>
<td>16 – Hopkins, Minnetonka, St. Louis Park</td>
<td>550</td>
</tr>
<tr>
<td>17 – Deephaven, Excelsior, Greenwood, Long Lake,</td>
<td>550</td>
</tr>
<tr>
<td>Minnetonka Beach, Minnetrista, Mound, Orono, St. Bonifacius,</td>
<td></td>
</tr>
<tr>
<td>Shorewood, Spring Park, Tonka Bay, Wayzata, Woodland</td>
<td></td>
</tr>
<tr>
<td>18 – Greenfield, Independence, Loretto, Maple Plain, Medina,</td>
<td>550</td>
</tr>
<tr>
<td>Rockford</td>
<td></td>
</tr>
<tr>
<td>19 – Corcoran, Hanover, Hassan, Rogers</td>
<td>550</td>
</tr>
<tr>
<td>Total</td>
<td>10,745</td>
</tr>
</tbody>
</table>

Table 6
Final Disposition

<table>
<thead>
<tr>
<th>Type of Disposition</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone interviews</td>
<td>10,731</td>
</tr>
<tr>
<td>In-person interviews</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total Completed Interviews</strong></td>
<td><strong>10,745</strong></td>
</tr>
<tr>
<td>Disconnected telephone number</td>
<td>3,024</td>
</tr>
<tr>
<td>Telephone number assigned to deceased person</td>
<td>17</td>
</tr>
<tr>
<td>Business phone</td>
<td>1,056</td>
</tr>
<tr>
<td>Did not meet age requirement</td>
<td>49</td>
</tr>
<tr>
<td>Out of Hennepin County Area</td>
<td>342</td>
</tr>
<tr>
<td>Duplicate telephone number</td>
<td>361</td>
</tr>
<tr>
<td><strong>Total Out of Sample</strong></td>
<td><strong>4,849</strong></td>
</tr>
<tr>
<td>Refused</td>
<td>1,165</td>
</tr>
<tr>
<td>Not completed due to language/communication problems</td>
<td>399</td>
</tr>
<tr>
<td>Attempted without success due to telephone answering machines</td>
<td>804</td>
</tr>
<tr>
<td>on more than 20 separate occasions</td>
<td></td>
</tr>
<tr>
<td>Not used</td>
<td>4,788</td>
</tr>
</tbody>
</table>

**TOTAL SAMPLE** 22,750
Table 7
Final Study Dataset

<table>
<thead>
<tr>
<th>Completed interviews</th>
<th>10,745</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed interviews deleted from study dataset (due to no information about household size, or age, or gender)</td>
<td>128</td>
</tr>
</tbody>
</table>

FINAL STUDY DATASET 10,617

Survey Response Rate
The overall response rate for this survey was 90.1 percent. Response rates within the 19 geographic areas ranged from 85.5 to 97.7 percent. Table 8 lists the area-specific response rates. For this study, the number of persons the interviewers attempted to reach, or the total number of persons in the sample included persons who responded to the survey, persons who refused to participate in the survey, and persons who were in the process of being contacted when the survey ended. Phone numbers not included in the sample were business phones, disconnected numbers, and those located outside Hennepin County. Households not included were those in which the oldest resident was 17 years of age or under, where the calls were responded to by an answering machine 20 or more consecutive times, where the resident was deceased, and where the target person could not communicate coherently.

Table 8
Completed Interviews and Response Rates

<table>
<thead>
<tr>
<th>Area</th>
<th>Response Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Calhoun-Isles</td>
<td>89.0</td>
</tr>
<tr>
<td>2 – Camden</td>
<td>96.6</td>
</tr>
<tr>
<td>3 – Central</td>
<td>85.5</td>
</tr>
<tr>
<td>4 – Longfellow</td>
<td>93.9</td>
</tr>
<tr>
<td>5 – Near North</td>
<td>94.7</td>
</tr>
<tr>
<td>6 – Nokomis</td>
<td>97.7</td>
</tr>
<tr>
<td>7 – Northeast</td>
<td>94.0</td>
</tr>
<tr>
<td>8 – Phillips</td>
<td>89.2</td>
</tr>
<tr>
<td>9 – Powderhorn</td>
<td>86.7</td>
</tr>
<tr>
<td>10 – Southwest</td>
<td>92.3</td>
</tr>
<tr>
<td>11 – University</td>
<td>85.7</td>
</tr>
<tr>
<td>12 – Bloomington, Edina, Richfield, Eden Prairie, Fort Snelling</td>
<td>85.8</td>
</tr>
<tr>
<td>13 – Crystal, Golden Valley, New Hope, Robbinsdale</td>
<td>90.0</td>
</tr>
<tr>
<td>14 – Brooklyn Center, Brooklyn Park, Osseo</td>
<td>87.7</td>
</tr>
<tr>
<td>15 – Champlin, Dayton, Maple Grove, Medicine Lake, Plymouth</td>
<td>87.2</td>
</tr>
</tbody>
</table>
### Management of SHAPE data

**Data Cleaning**

After the data collection was complete, the data were transferred from an ASCII file to an SPSS file. A systematic examination was conducted to remove data entry errors. Additional data cleaning involved using a computer program to evaluate each case for variables with out-of-range values. Finally, the file was examined manually to identify cases with inconsistent or inappropriate responses. Respondents with missing information were not re-contacted by an interviewer.

**Recoding of Data**

Four responses of weight less than 60 pounds were recoded as missing. Five responses of height three feet or less were recoded as missing. One response indicating weight of 100 pounds and height of three feet was left in the dataset.

**Weighting of Sample Data**

The SHAPE data were weighted in the analysis to account for differences in the 19 geographic areas by household size, adult population, gender, and age. Respondents reported the number of adults living in their household as part of the interview. The number of adults living in each of the 19 geographic areas was obtained from 1990 U.S. Census data. Additionally, the sample weights included a post-stratification adjustment that was based on 1990 U.S. Census figures for the age and gender distributions of the adult population within each of the 19 geographic areas.

In order to correctly weight the sample, information on age, gender, household size, and geographic area was needed for all respondents. There were 128 individuals for whom these data were not complete. These individuals were dropped from the final sample, making the size of the final research data set 10,617.

When the unit of analysis is a person, weighting is necessary due to:
- Unequal probabilities of adults being selected because of different number of adults in the households.
• Disproportionate sampling rates of adults living in geographic areas that are aggregated together into larger regions.
• Differences in the age/gender distribution of the actual survey respondents and the actual distribution as measured by the 1990 Census.

When the unit of analysis is a household, weighting is necessary due to:
• Disproportionate sampling rates of households found in geographic areas that are aggregated together in to larger regions.

Weights used in SHAPE data analysis include:

**HhRegW2**
HhRegW2 is used to compute the survey response estimates for each of the 19 geographic areas, and takes into account the following factors:
• Unequal probability based on the number of adults in the household in the sample.
• Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.

**Weight19**
Weight19 is used to compute the survey response estimates for the city of Minneapolis, suburban Hennepin County, and Hennepin County as a whole. This weight takes into account the following:
• Unequal probability based on the number of adults in the household in the sample.
• Disproportionate sampling rates among the 19 geographic areas based on the number of adult residents.
• Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.

**Hsawgt**
Hsawgt is used to compute the survey response estimates for each of the four Human Service Areas (Minneapolis, South Suburban, West Suburban, and Northwest Suburban) within Hennepin County. This weight takes into account the following factors:
• Unequal probability based on the number of adults in the household in the sample.
• Disproportionate sampling rates among the four Human Service Areas based on the number of adult residents.
• Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.

**Housewgt**
Housewgt is used to compute the survey response estimates for households in each of the 19 geographic areas within Hennepin County, and takes into account:
• Disproportionate sampling rates among the 19 geographic areas based on the number of households.
Table 9 summarizes the appropriate weight variable to use for various geographic units of analysis.

**Table 9**  
**Data Weights**

<table>
<thead>
<tr>
<th>Geographic Unit of Analysis</th>
<th>Unit of Analysis</th>
<th>Weight Variable to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the 19 geographic areas</td>
<td>Person</td>
<td>HhRegW2</td>
</tr>
<tr>
<td>City of Minneapolis</td>
<td>Person</td>
<td>Weight19</td>
</tr>
<tr>
<td>Suburban Hennepin County</td>
<td>Person</td>
<td>Weight19</td>
</tr>
<tr>
<td>All of Hennepin County</td>
<td>Person</td>
<td>Weight19</td>
</tr>
<tr>
<td>One of the four Human Service Areas</td>
<td>Person</td>
<td>Hsawgt</td>
</tr>
<tr>
<td>Any</td>
<td>Households</td>
<td>Housewgt</td>
</tr>
</tbody>
</table>

For more information about weighting, see Appendix B, SHAPE Weighting.
Appendix A

SHAPE QUESTIONNAIRE

Intro. question:

AGE: What is your age?

___ ___ ___ years

9 Refused

GENDER: Please enter gender

1   Male
2   Female

1. Altogether, how many times have you moved in the last 5 years, that is, since 1992?

___ ___ times

97 Don’t know
99 Refused

2. I am going to ask you some questions about your community. All have the following responses: strongly agree, agree, disagree, strongly disagree

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>DK</th>
<th>RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. People can depend on each other in this community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>b. Living in this community gives me a secure feeling.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>c. People here know they can get help from the community if they are in trouble.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>d. This is not a very good community to bring children up in.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>e. There is a feeling in this community that people should not get too friendly with each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>f. If I had an emergency, even people I do not know in this community would be willing to help.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

3. Do you currently have health insurance? (including Medicare)

1   Yes
2   No (SKIP TO Q.4)
7   Don’t Know
9   Refused
3b. Was there any time during the past 12 months that you did not have health insurance?
   _1_ Yes
   _2_ No
   _7_ Don't Know
   _9_ Refused

3c. Is that health insurance from Medical Assistance (MA), GAMC (General Assistance Medical Care), or MinnesotaCare (a State sponsored health insurance program)?
   _1_ Yes
   _2_ No
   _7_ Don't know
   _9_ Refused

4. Is there one particular person or place where you usually go when you are sick or need advice about your health?
   _1_ Yes
   _2_ No
   _7_ Don't know
   _9_ Refused

5. In the past 12 months, was there a time when you thought that you needed medical care but did not get it, or delayed getting it?
   _1_ Yes
   _2_ No (SKIP TO Q6A)
   _7_ Don't know (SKIP TO Q6A)
   _9_ Refused (SKIP TO Q6A)

5b. What was the main reason that you did not get medical care or delayed getting care:
   _01_ Didn't know where to go
   _02_ Don't like, trust, or believe doctors
   _03_ Because of cost
   _04_ Lack of insurance
   _05_ Could not get an appointment when I had time to go
   _06_ Had no one to take care of my children
   _07_ Health of a family member interfered
   _08_ Speak a different language
   _09_ Transportation problems
   _10_ Didn't think I could find help that would be respectful of my culture
   _11_ Other (Specify) _______________________
   _97_ Don't know
   _99_ Refused
6. In the past 12 months, was there a time when you wanted to talk with a mental health professional about an emotional or mental health problem but did not do it?
   1  Yes
   2  No  (SKIP TO Q7A)
   7  Don’t know  (SKIP TO Q7A)
   9  Refused  (SKIP TO Q7A)

6b. What was the main reason that you did not get the mental health care:
   01  Didn’t know where to go
   02  Because of cost
   03  Lack of insurance
   04  Speak a different language
   05  Transportation problems
   06  Afraid of being stigmatized or judged
   07  Didn’t think I could find help that would be respectful of my culture
   08  Other (Specify) ______________________
   97  Don’t know
   99  Refused

7. In the past year, have you postponed dental work?
   1  Yes
   2  No  (SKIP TO Q8)
   7  Don’t know  (SKIP TO Q8)
   9  Refused  (SKIP TO Q8)

7b. What was the main reason that you postponed dental work:
   01  It costs too much
   02  Lack of insurance
   03  Could not get an appointment
   04  Transportation problems
   05  Too nervous or afraid
   06  No teeth
   07  Other (Specify) ______________________
   97  Don’t know
   99  Refused

8. Have you been hospitalized during the past 12 months?
   1  Yes
   2  No
   7  Don’t know
   9  Refused
The next question is about your health now and your current daily activities. Please try to answer the question as accurately as you can.

9. In general, would you say your health is:
   1   Excellent,
   2   Very good
   3   Good
   4   Fair
   5   Poor
   7   Don't know
   9   Refused

Now, I'm going to read a list of activities that you might do during a typical day. As I read each item, please tell me if your health now limits you a lot, limits you a little, or does not limit you at all in these activities.

10. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf:
    1   Yes, limited a lot   (skip to Q11A)
    2   Yes, limited a little (skip to Q11A)
    3   No, not limited at all (skip to Q11A)
    4   Don't do these activities
    7   Don't know   (skip to Q11A)
    9   Refused   (skip to Q11A).

10b. Is that because of your health?
    1   Yes
    2   No
    7   Don't know
    9   Refused

11. Climbing several flights of stairs. Does your health now limit you a lot, limit you a little, or not limit you at all?
    1   Yes, limited a lot   (SKIP TO Q12)
    2   Yes, limited a little   (SKIP TO Q12)
    3   No, not limited at all   (SKIP TO Q12)
    4   Don't do these activities
    7   Don't know   (SKIP TO Q12)
    9   Refused   (SKIP TO Q12)

11b. Is that because of your health?
    1   Yes
    2   No
    7   Don't know
    9   Refused
The following questions ask about your physical health and your daily activities.

12. During the past 4 weeks, have you accomplished less than you would like as a result of your physical health?
   1   Yes
   2   No
   7   Don't know
   9   Refused

13. During the past 4 weeks, were you limited in the kind of work or other regular daily activities you do as a result of your physical health?
   1   Yes
   2   No
   7   Don't know
   9   Refused

14. During the past 4 weeks, have you accomplished less than you would like as a result of any emotional problems, such as feeling depressed or anxious?
   1   Yes
   2   No
   7   Don't know
   9   Refused

15. During the past 4 weeks, did you not do work or other regular activities as carefully as usual as a result of any emotional problems, such as feeling depressed or anxious?
   1   Yes
   2   No
   7   Don't know
   9   Refused

16. During the past 4 weeks, how much did pain interfere with your normal work, including both work outside the home and housework? Did it interfere:
   1   Not at all
   2   A little bit
   3   Moderately
   4   Quite a bit
   5   Extremely
   7   Don't know
   9   Refused
17. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities like visiting with friends or relatives? Has it interfered…
   1. All of the time
   2. Most of the time
   3. Some of the time
   4. A little of the time
   5. None of the time
   7. Don’t know
   9. Refused

The next questions are about how you feel and how things have been with you during the past 4 weeks.

As I read each statement, please give me the one answer that comes closest to the way you have been feeling; is it all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time?

18. How much of the time during the past 4 weeks…have you felt calm and peaceful?
   1. All of the time
   2. Most of the time
   3. A good bit of the time
   4. Some of the time
   5. A little of the time
   6. None of the time
   7. Don’t know
   9. Refused

19. How much of the time during the past 4 weeks, did you have a lot of energy?
   1. All of the time
   2. Most of the time
   3. A good bit of the time
   4. Some of the time
   5. A little of the time
   6. None of the time
   7. Don’t know
   9. Refused

20. How much of the time during the past 4 weeks, have you felt downhearted and blue?
   1. All of the time
   2. Most of the time
   3. A good bit of the time
   4. Some of the time
   5. A little of the time
   6. None of the time
   7. Don’t know
   9. Refused
21. Because of any impairment or health problem, do you need the help of other persons with personal care needs such as eating, bathing, dressing, or getting around this home?

1  Yes
2  No
7  Don’t know
9  Refused

22. Because of any impairment or health problem, do you need the help of other persons in handling routine needs such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?

1  Yes
2  No
7  Don’t know
9  Refused

23. Has a doctor or other health care provider ever told you that you had any of the following conditions?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>DK</th>
<th>RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.1 Asthma</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.2 Cancer – specify type</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.3 Chronic lung disease (including chronic bronchitis or emphysema)</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.4 Diabetes</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.5 Chronic digestive disease</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.6 Heart trouble or angina</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.7 High blood pressure or hypertension</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.8 High cholesterol or triglycerides</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.9 Arthritis or rheumatism</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.10 Osteoporosis</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.11 Stroke</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.12 Severe allergies</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
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<tr>
<td>23.13 Migraine headaches</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.14 Chronic back pain</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>23.15 Depression</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

24. In an average week, how many days do you get at least 30 minutes of moderate physical activities? Examples of moderate activity include walking, swimming, or cycling.

0  None
1  1 day
3  2 days
4  3 days
4  4 days
5  5 days
6  6 days
7  7 days
97 Don’t know
99 Refused
25. In an average week, how many days do you participate in vigorous physical activities that last at least 20 minutes? Examples of vigorous activity include stair-master, lap swimming, skiing machine, and jogging.

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>1 day</th>
<th>2 days</th>
<th>3 days</th>
<th>4 days</th>
<th>5 days</th>
<th>6 days</th>
<th>7 days</th>
<th>Don’t know</th>
<th>Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
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</tbody>
</table>

26:

<table>
<thead>
<tr>
<th>Now I'd like to read you a list of injuries. Please tell me if any of these happened to you in the past 12 months:</th>
<th>DK</th>
<th>RF</th>
<th>No</th>
<th>Yes</th>
<th>On purpose</th>
<th>An accident</th>
<th>DK</th>
<th>RF</th>
<th>At home or in my yard</th>
<th>At work</th>
<th>Other (Specify)</th>
<th>DK</th>
<th>RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>a: did any of these happened to you in last 12 months?</td>
<td></td>
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<td>b: Would you characterize this injury?</td>
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<td>c: Where did this happen?</td>
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</tbody>
</table>

| .1* Boating, snowmobiling, or other activity in a recreational vehicle | 7   | 9   | 2   | 1   |           |             |     |     |                      |         |                  |     |     |
| .2* Involved in a motor vehicle accident when you were not in a vehicle | 7   | 9   | 2   | 1   |           |             |     |     |                      |         |                  |     |     |
| .3* Involved in a motor vehicle accident when you were in a motor vehicle | 7   | 9   | 2   | 1   |           |             |     |     |                      |         |                  |     |     |
| .4* Sports-related injuries | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .5* Poisoning | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .6* Injury as a result of falling | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .7* Fire or burns, including scalding or chemical burns | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .8* Exposure to the elements (heatstroke, frostbite, etc.) | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .9* Suffocation or near-drowning | 7   | 9   | 2   | 1   | 1-1>      | 2           | 1   | 7   | 9                    | 1       | 2               | 3   | 7   |
| .10* Injury caused by machinery or equipment | 7   | 9   | 2   | 1   |           |             |     |     |                      |         |                  |     |     |

<table>
<thead>
<tr>
<th>26A.1 - 26A.10</th>
<th>26B.1 - 26B.16</th>
<th>26C.1 - 26C.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>.1 Injury caused by knives or other sharp objects</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>.2 Injury caused by firearms</td>
<td>7</td>
<td>9</td>
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<tr>
<td>.3 Repetitive motion</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>.4 Physically assault</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>.5 Sexual abuse/assault</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>.6 Animal bite</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>26D.1 - 26D.6</th>
<th>26E.1-26E.6</th>
<th>26F.1-26F.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>.1</td>
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<td>.2</td>
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<tr>
<td>.6</td>
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</tbody>
</table>
27. Within the last 12 months, have you been hit, slapped, pushed, kicked or injured with an object or weapon by your spouse, partner, or other family member?
   1   Yes
   2   No
   7   Don’t know
   9   Refused

28. How would you describe your cigarette smoking habits?
   1   Never smoked (SKIP TO Q29)
   2   Used to smoke, but don’t anymore (SKIP TO Q28C)
   3   Smoke now
   7   Don’t know (SKIP TO Q28C)
   9   Refused (SKIP TO Q28C)

28b. On the average, about how many cigarettes a day do you now smoke?
   ___ number of cigarettes
   997   Don’t know
   999   Refused

28c. During the past 12 months, have you quit smoking for 1 day or longer?
   1   Yes
   2   No
   3   Quit more than 12 months ago
   7   Don’t know
   9   Refused

29. Does anyone regularly smoke inside your home?
   1   Yes
   2   No
   7   Don’t know
   9   Refused

30. During the past month, have you had at least one drink of any alcoholic beverage such as beer, wine, wine coolers, or liquor?
   1   Yes
   2   No (SKIP TO Q32AA)
   3   Never drink /did not drink for last 12 months (skip to Q33)
   7   Don’t know (skip to Q31A)
   9   Refused (skip to Q31A)
31. During the past month, how many days per week or per month did you drink any alcoholic beverages, on the average?
   1. To enter days per week
   2. To enter days per month
   7. Don’t know
   9. Refused

   WEEK __ Days per week
   97. Don’t know
   99. Refused

   MONTH___ Days per month
   97. Don’t know
   99. Refused

32. A drink is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. On the days when you drank, about how many drinks did you drink on the average?
   1. To enter number of drinks in Q32AA
   7. Don’t know (skip to Q32B)
   9. Refused (skip to Q32B)

   32AA ___ Drinks per day
   97. Don’t know
   99. Refused

32B. Considering all types of alcoholic beverages, how many times during the past month did you have 5 or more drinks on an occasion?
   1. To enter number of times in Q32BA
   7. Don’t know (skip to Q32C)
   9. Refused (skip to Q32C)

   Q32BA ___ number of times
   97. Don’t know
   99. Refused

32C. During the past month, how many times have you driven when you've had perhaps too much to drink?
   1. To enter number of times in Q32CA
   7. Don’t know (skip to Q33)
   9. Refused (skip to Q33)

   32CA ___ number of times
   97. Don’t know
   99. Refused
33. How often do you use seat belts when you drive or ride in a car? Would you say:
   1. Always
   2. Nearly always
   3. Sometimes
   4. Seldom
   5. Never
   6. Never drive or ride in a car
   7. Don't know
   9. Refused

34. Yesterday, how many servings of fruits and vegetables did you eat?
   0. None
   0.5. Less than one
   1. 1 serving
   2. 2 servings
   3. 3 servings
   4. 4 servings
   5. 5 or more servings
   7. Don't know
   9. Refused

35. Yesterday, how many servings of foods high in cholesterol or fat, such as red meat, cheese, fried foods, or eggs did you eat?
   0. None
   0.5. Less than one
   1. 1 serving
   2. 2 servings
   3. 3 servings
   4. 4 servings
   5. 5 or more servings
   7. Don't know
   9. Refused

36. Do you consider yourself...
   1. Overweight
   2. Underweight
   3. About average
   7. Don't know
   9. Refused

37. Have you given birth in the past 3 years?
   1. Yes
   2. No
   7. Don't know
   9. Refused
38. A clinical breast exam is when a doctor, nurse, or other health professional feels the breast for lumps. How long has it been since you had a clinical breast exam?
   1. Within the past year
   2. Within the past 2 years
   3. Within the past 3 years
   4. Within the past 5 years
   5. 5 or more years ago
   6. Never
   7. Don’t know
   9. Refused

39. About how often do you examine your breasts for lumps?
   1. Monthly
   2. Every few months
   3. Rarely
   4. Never
   7. Don’t know
   9. Refused

40. A mammogram is an x-ray of each breast to look for breast cancer. How long has it been since you had a mammogram?
   1. Within the past year
   2. Within the past 2 years
   3. Within the past 3 years
   4. Within the past 5 years
   5. 5 or more years ago
   6. Never
   7. Don’t know
   9. Refused

41. A Pap smear is a test for cancer of the cervix. How long has it been since you had a Pap smear?
   1. Within the past year
   2. Within the past 2 years
   3. Within the past 3 years
   4. Within the past 5 years
   5. 5 or more years ago
   6. Never
   7. Don’t know
   9. Refused

42. A hysterectomy is an operation to remove the uterus (womb). Have you had a hysterectomy?
   1. Yes
   2. No
   7. Don’t know
   9. Refused
43. During the past 12 months, have you had a flu shot?
   1  Yes
   2  No
   7  Don't know
   9  Refused

44. Have you ever had a pneumonia vaccination?
   1  Yes
   2  No
   7  Don't know
   9  Refused

45. Do you or other members of your household ever cut the size of meals or skip meals because there is not enough money for food?
   1  Yes
   2  No
   7  Don't know
   9  Refused

46. In the last year was there 1 or more nights you spent on the street or in a homeless shelter?
   1  Yes
   2  No
   7  Don't know
   9  Refused
47. In your day-to-day life how often have any of the following things happened to you?

<table>
<thead>
<tr>
<th>Question</th>
<th>Almost every day</th>
<th>At least once a week</th>
<th>A few times a month</th>
<th>A few times a year</th>
<th>Less than once a year</th>
<th>Never</th>
<th>DK</th>
<th>RF</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. You are treated with less courtesy than other people 47.1</td>
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<tr>
<td>b. You are treated with less respect than other people 47.2</td>
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<td>c. You receive poorer service than other people at restaurants or stores 47.3</td>
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<tr>
<td>d. People act as if they think you are not smart 47.4</td>
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<td>e. People act as if they are afraid of you 47.5</td>
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<td>f. People act as if they think you are dishonest 47.6</td>
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<td>g. People as if they're better than you 47.7</td>
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<td>h. You are called names or insulted 47.8</td>
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<tr>
<td>i. You are threatened or harassed 47.9</td>
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</table>

48. Have you or anyone in your household received any of the following in the past 12 months?

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
<th>Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Subsidized or sliding fee child care 48.1</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>b. SSI 48.2</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>c. Home health care services 48.3</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>d. Assisted living services 48.4</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>e. Welfare, AFDC, GA, TANF ... 48.5</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>f. Low income housing assistance 48.6</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>g. GWIC (Women, Infants &amp; Children) 48.7</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>h. Food Stamps 48.8</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>i. Food from food shelves 48.9</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

The next few questions are about firearms. This would include handguns, pistols, rifles, and automatic and semi-automatic weapons.

49 Are there any firearms in your home?

1. Yes
2. No (SKIP TO Q50)
7. Don't know (SKIP TO Q50)
9. Refused (SKIP TO Q50)
49b. Are they all stored in a locked place or stored with a trigger lock?

1. Yes
2. No
7. Don’t know
9. Refused

50. During the past year, have you restricted your activities because you did not feel safe:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
<th>Not applicable</th>
<th>Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 50.1 In your home?</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>b. 50.2 In your neighborhood?</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>c. 50.3 At school?</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>d. 50.4 Where you work?</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>e. 50.5 Traveling to and from work or school?</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

51a. How much do you weigh without shoes?

1. To enter the weight in Q51B
7. Don’t know (skip to Q52A)
9. Refused (skip to Q52A)

51b. ___ ___ ___ pounds (accept weights between 24 to 900)

52a. How tall are you without shoes?

1. To enter the height in Q52B
7. Don’t know (skip to Q53)
9. Refused (skip to Q53)

52B ___ feet
52C ___ inches

53. Which of the following best describes your sexual identity?

1. Heterosexual or straight
2. Bisexual
3. Homosexual, gay, or lesbian
4. Transgender
5. Not sure
9. Refused
54. Are you currently:
   1 Married
   2 Separated
   3 Divorced
   4 Widowed
   5 Never been married
   6 A member of an unmarried couple (Living together but not married)
   7 Don’t Know
   9 Refused

55. What is your race? Would you say you are...
   1 White
   2 Black or African American
   3 Oriental/Asian or Pacific Islander
   4 American Indian, Alaska Native
   5 Multi-racial
   6 Other
   7 Don’t know
   9 Refused

56. Are you of Hispanic, Latino, or Spanish origin?
   1 Yes
   2 No
   7 Don’t know
   9 Refused

57. What is the highest grade or year of school you completed?
   1 Some high school or less (or never attended)
   2 Grade 12 or GED (high school graduate)
   3 Some college or trade school
   4 Associate degree
   5 Bachelor’s degree
   6 Graduate or professional degree
   7 Don’t know
   9 Refused

58. Are you currently:
   1 Full time employed (SKIP TO Q60A)
   2 Part time employed (SKIP TO Q60A)
   3 Self-employed (SKIP TO Q60A)
   4 Not in labor force (SKIP TO Q60A)
   7 Don’t know (SKIP TO Q60A)
   9 Refused (SKIP TO Q60A)
59. If not in labor force, what is the reason:
   1  Disabled
   2  Retired
   3  Homemaker
   4  Student
   5  Looking, but haven't found work
   6  Not looking for work
   7  Don't Know
   9  Refused

60. How many people in your household are:
   60A.1 Number of children under 6 years old ___ ___
   60A.2 Number of children 6-17 years old ___ ___
   60A.3 Number of adults from 18-64 ___ ___
   60A.4 Number of adults 65 and older ___ ___

   60B I have a total of ___ ___ Is that correct?
      y  Yes
      n  No   (SKIP TO Q60A)

In the following questions, we are going to ask some information on your household income. We
know they are very personal and private. However, as with all the other questions, all your
responses will be kept confidential.

61. Approximately what was your household's income from all sources last year before taxes?
(If you are self-employed or own your own business, please report your net income after
business deductions.)
   1  To enter amount in INCOME
   7  Don't know   (SKIP TO Q61A)
   9  Refused   (SKIP TO Q61A)

INCOME
   61A - 61l. How about if I give you some categories:

Q61A  Household Size = 1
   1  $0 - $7,700
   2  $7,701 - $11,600
   3  $11,601 - $15,500
   4  $15,501 - $23,200
   5  $23,201 - $31,000
   6  $31,001 - $38,700
   7  $38,701 - $46,400
   8  Greater than $46,400
   9  Refused.
Q61B  Household size = 2
1  $0 - $10,400
2  $10,401 - $15,500
3  $15,501 - $20,700
4  $20,701 - $31,100
5  $31,101 - $41,400
6  $41,401 - $51,800
7  $51,801 - $62,200
8  Greater than $62,200
9  Refused.

Q61C  Household size = 3
1  $0 - $13,000
2  $13,001 - $19,500
3  $19,501 - $26,000
4  $26,001 - $38,900
5  $38,901 - $51,900
6  $51,901 - $64,900
7  $64,901 - $77,900
8  Greater than $77,900
9  Refused.

Q61D  Household size = 4
1  $0 - 15,600
2  $15,601 - $23,400
3  $23,401 - 31,300
4  $31,301 - $46,800
5  $46,801 - $62,400
6  $62,401 - $78,000
7  $78,001 - $93,600
8  Greater than $93,600
9  Refused.

Q61E  Household size = 5
1  $0 - $18,200
2  $18,201 - $27,300
3  $27,301 - $36,400
4  $36,401 - $54,700
5  $54,701 - $72,900
6  $72,901 - $91,100
7  $91,101 - $109,300
8  Greater than $109,300
9  Refused.
Q61F  Household size = 6
1  $0 - $20,800
2  $20,801 - $31,300
3  $31,301 - $41,700
4  $41,701 - $62,500
5  $62,501 - $83,400
6  $83,401 - $104,200
7  $104,201 - $125,000
8  Greater than $125,000
9  Refused.

Q61G  Household size = 7
1  $0 - $23,500
2  $23,501 - $35,200
3  $35,201 - $46,900
4  $46,901 - $70,400
5  $70,401 - $93,800
6  $93,801 - $117,300
7  $117,301 - $140,800
8  Greater than $140,800
9  Refused.

Q61H  Household size = 8
1  $0 - $26,100
2  $26,101 - $39,100
3  $39,101 - $52,200
4  $52,201 - $78,200
5  $78,201 - $104,300
6  $104,301 - $130,400
7  $130,401 - $156,500
8  Greater than $156,500
9  Refused.

Q61I  Household size = 9
1  $0 - $28,700
2  $28,701 - $43,100
3  $43,101 - $57,400
4  $57,401 - $86,100
5  $86,101 - $114,800
6  $114,801 - $143,500
7  $143,501 - $172,200
8  Greater than $172,200
9  Refused.
Q61J  Household size =10
1  $0 - $31,300
2  $31,301 - $47,000
3  $47,001 - $62,600
4  $62,601 - $94,000
5  $94,001 - $125,300
6  $125,301 - $156,600
7  $156,601 - $187,900
8  Greater than $187,900
9  Refused

Q61K  Household size=11
1  $0 - $33,900
2  $33,901 - $50,900
3  $50,901 - $67,900
4  $67,901 - $101,800
5  $101,801 - $135,800
6  $135,801 - $169,700
7  $169,701 - $203,600
8  Greater than $203,600
9  Refused.

Q61L  Household size=12
1  $0 - 36,600
2  $36,601 - $54,800
3  $54,801 - $73,100
4  $73,101 - $109,700
5  $109,701 - $146,200
6  $146,201 - $182,800
7  $182,801 - $219,400
8  Greater than $219,400
9  Refused

On behalf of Hennepin County Community Health Department and the Minneapolis Department of Health and Family Support, thank you very much for your participation.
Appendix B

SHAPE Weighting

It was necessary to weight the SHAPE data as part of the analysis process. There is a need to weight data when the researcher needs to adjust how much weight to give the responses of each survey participant due to unequal probability of being selected as part of the sample, disproportionate sampling rates between areas, or when the distribution of the group sampled does not match the population.

In SHAPE, when the unit of analysis is a person, the need to weight was due to:

• unequal probabilities of adults being selected because of different number of adults in the households;
• disproportionate sampling rates (e.g., 539 respondents out of 161,490 adults in Area 12 compared to 545 respondents out of 5,316 adults in Area 19) of adults living in geographic areas which are aggregated together into larger regions (e.g., suburban Hennepin County); and
• differences in the age/gender distribution of the actual survey respondents and the actual distribution as measured by the 1990 Census.

When the unit of analysis is a household, the need to weight was due to:

• disproportionate sampling rates (e.g., 539 households responding out of 84,535 households in Area 12 compared to 545 households responding out of 2,471 households in Area 19) of households found in geographic areas which are aggregated together into larger regions (e.g., suburban Hennepin County)

Because of the need to weight the cases, cases that were missing any of the key fields were dropped from the analysis. There was a total of 128 cases dropped because they were missing any or all of the following:

• household size;
• age; and
• gender

Dropping the 128 cases brought the final number of cases analyzed to 10,617.

When the unit of analysis is a person, the weighting process is a three-phase process. In Phase One, weights are generated based on the number of adults living in the household to account for the unequal probability of an adult being selected.

In Phase Two, the weights are adjusted to account for the different adult population sizes (disproportionate sampling) of the geographic areas being aggregated. If some of the 19 geographic areas in SHAPE are not being aggregated for an analysis, this phase is skipped.
The final phase is to do post-stratification adjustments based on the age-gender distribution of the survey respondents in a geographic area compared to the population as measured by the 1990 Census. For the purpose of this weighting, the population was broken down into the following age groups: 18-24, 25-44, 45-64, 65-84, and 85 and older.

There are seven different sets of weights, or weighting variables, used with the SHAPE data. A particular set is used for certain types of analyses.

The following set of data was used to compute the weights:

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>1990 Adult Population (Jan 20, 1998/OPD)</th>
<th>1990 Adult Population (Feb 23, 1998/UL)</th>
<th>Adults in SHAPE Sample</th>
<th>Adults in SHAPE Sample after cleaning</th>
<th>Sampling Rate and Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calhoun-Isles</td>
<td>27,370</td>
<td>27,259</td>
<td>600</td>
<td>596</td>
<td>2.19%</td>
</tr>
<tr>
<td>Camden</td>
<td>21,859</td>
<td>21,675</td>
<td>551</td>
<td>540</td>
<td>2.49%</td>
</tr>
<tr>
<td>Central</td>
<td>20,172</td>
<td>19,992</td>
<td>569</td>
<td>561</td>
<td>2.81%</td>
</tr>
<tr>
<td>Longfellow</td>
<td>23,200</td>
<td>23,070</td>
<td>586</td>
<td>577</td>
<td>2.50%</td>
</tr>
<tr>
<td>Near North</td>
<td>22,020</td>
<td>22,112</td>
<td>576</td>
<td>567</td>
<td>2.56%</td>
</tr>
<tr>
<td>Nokomis</td>
<td>30,168</td>
<td>30,153</td>
<td>617</td>
<td>609</td>
<td>2.02%</td>
</tr>
<tr>
<td>Northeast/St. Anthony</td>
<td>33,533</td>
<td>33,696</td>
<td>575</td>
<td>569</td>
<td>1.69%</td>
</tr>
<tr>
<td>Phillips</td>
<td>11,509</td>
<td>11,831</td>
<td>550</td>
<td>544</td>
<td>4.60%</td>
</tr>
<tr>
<td>Powderhorn</td>
<td>39,298</td>
<td>39,221</td>
<td>604</td>
<td>600</td>
<td>1.53%</td>
</tr>
<tr>
<td>Southwest</td>
<td>39,961</td>
<td>39,946</td>
<td>566</td>
<td>562</td>
<td>1.41%</td>
</tr>
<tr>
<td>University</td>
<td>27,797</td>
<td>27,818</td>
<td>550</td>
<td>545</td>
<td>1.96%</td>
</tr>
<tr>
<td>Area 12</td>
<td>161,490</td>
<td>161,490</td>
<td>550</td>
<td>539</td>
<td>0.33%</td>
</tr>
<tr>
<td>Area 13</td>
<td>63,669</td>
<td>63,669</td>
<td>550</td>
<td>545</td>
<td>0.86%</td>
</tr>
<tr>
<td>Area 14</td>
<td>63,489</td>
<td>63,489</td>
<td>551</td>
<td>539</td>
<td>0.85%</td>
</tr>
<tr>
<td>Area 15</td>
<td>76,630</td>
<td>76,630</td>
<td>550</td>
<td>545</td>
<td>0.71%</td>
</tr>
<tr>
<td>Area 16</td>
<td>86,243</td>
<td>86,243</td>
<td>550</td>
<td>544</td>
<td>0.63%</td>
</tr>
<tr>
<td>Area 17</td>
<td>32,836</td>
<td>32,836</td>
<td>550</td>
<td>543</td>
<td>1.65%</td>
</tr>
<tr>
<td>Area 18</td>
<td>7,176</td>
<td>7,176</td>
<td>550</td>
<td>547</td>
<td>7.62%</td>
</tr>
<tr>
<td>Area 19</td>
<td>5,316</td>
<td>5,316</td>
<td>550</td>
<td>545</td>
<td>10.25%</td>
</tr>
</tbody>
</table>

1 Source: Hennepin County Office of Planning and Development
2 Source: Urban Landreman's computations from 1990 Census files
3 Adults in SHAPE sample after cleaning data divided by the February 23, 1998 computation of 1990 adult population.
<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>1990 # of Households¹</th>
<th>Households in SHAPE Sample Unweighted</th>
<th>Sampling Rate and Fraction²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calhoun-Isles</td>
<td>16,478</td>
<td>596</td>
<td>3.62%</td>
</tr>
<tr>
<td>Camden</td>
<td>11,862</td>
<td>540</td>
<td>4.55%</td>
</tr>
<tr>
<td>Central</td>
<td>12,978</td>
<td>561</td>
<td>4.32%</td>
</tr>
<tr>
<td>Longfellow</td>
<td>13,066</td>
<td>577</td>
<td>4.42%</td>
</tr>
<tr>
<td>Near North</td>
<td>11,908</td>
<td>567</td>
<td>4.76%</td>
</tr>
<tr>
<td>Nokomis</td>
<td>16,040</td>
<td>609</td>
<td>3.80%</td>
</tr>
<tr>
<td>Northeast/St. Anthony</td>
<td>18,303</td>
<td>569</td>
<td>3.11%</td>
</tr>
<tr>
<td>Phillips</td>
<td>6,307</td>
<td>544</td>
<td>8.62%</td>
</tr>
<tr>
<td>Powderhorn</td>
<td>22,665</td>
<td>600</td>
<td>2.65%</td>
</tr>
<tr>
<td>Southwest</td>
<td>21,376</td>
<td>562</td>
<td>2.63%</td>
</tr>
<tr>
<td>University</td>
<td>11,713</td>
<td>545</td>
<td>4.65%</td>
</tr>
<tr>
<td>Area 12</td>
<td>84,452</td>
<td>539</td>
<td>0.64%</td>
</tr>
<tr>
<td>Area 13</td>
<td>32,056</td>
<td>545</td>
<td>1.70%</td>
</tr>
<tr>
<td>Area 14</td>
<td>32,712</td>
<td>539</td>
<td>1.65%</td>
</tr>
<tr>
<td>Area 15</td>
<td>37,681</td>
<td>545</td>
<td>1.45%</td>
</tr>
<tr>
<td>Area 16</td>
<td>46,746</td>
<td>544</td>
<td>1.16%</td>
</tr>
<tr>
<td>Area 17</td>
<td>16,900</td>
<td>543</td>
<td>3.21%</td>
</tr>
<tr>
<td>Area 18</td>
<td>3,425</td>
<td>547</td>
<td>15.97%</td>
</tr>
<tr>
<td>Area 19</td>
<td>2,450</td>
<td>545</td>
<td>22.24%</td>
</tr>
</tbody>
</table>

¹ Source: Hennepin County Office of Planning and Development
² Number of households in SHAPE sample after cleaning data divided by the 1990 Census count of households

The following tables show the data that was used to compute the post-stratification weights:

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1997 Adult Population Projections¹</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>45,689</td>
<td>5.54%</td>
<td>368</td>
<td>3.5%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>192,017</td>
<td>23.30%</td>
<td>1786</td>
<td>16.8%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>108,194</td>
<td>13.13%</td>
<td>1388</td>
<td>13.1%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>44,010</td>
<td>5.34%</td>
<td>659</td>
<td>6.2%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>4,486</td>
<td>0.54%</td>
<td>38</td>
<td>0.4%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>48,254</td>
<td>5.86%</td>
<td>418</td>
<td>3.9%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>191,405</td>
<td>23.23%</td>
<td>2537</td>
<td>23.9%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>113,916</td>
<td>13.82%</td>
<td>2143</td>
<td>20.2%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>63,387</td>
<td>7.69%</td>
<td>1153</td>
<td>10.9%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>12,642</td>
<td>1.53%</td>
<td>126</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
### Geographic Area – Calhoun-Isles

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,872</td>
<td>6.87%</td>
<td>10,536</td>
<td>3.09%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>7,744</td>
<td>28.41%</td>
<td>74,412</td>
<td>21.79%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>1,986</td>
<td>7.29%</td>
<td>44,450</td>
<td>13.02%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>905</td>
<td>3.32%</td>
<td>20,414</td>
<td>5.98%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>136</td>
<td>0.50%</td>
<td>0.329</td>
<td>0.10%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>2,512</td>
<td>9.22%</td>
<td>13,500</td>
<td>3.95%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>7,771</td>
<td>28.51%</td>
<td>93,838</td>
<td>27.48%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>2,089</td>
<td>7.66%</td>
<td>50,705</td>
<td>14.85%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>1,670</td>
<td>6.13%</td>
<td>29,626</td>
<td>8.78%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>574</td>
<td>2.11%</td>
<td>3,293</td>
<td>0.96%</td>
</tr>
</tbody>
</table>

1 Source: 1990 Census Report #4 Hennepin County Population Projections, August 1992; Hennepin County Office of Planning and Development

2 Source: 1990 Census data files, Hennepin County Office of Planning and Development

The 1997 population projections are used for Fweight. The 1990 population counts are used for most of the other population-based weights.

### Geographic Area – Camden

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,185</td>
<td>5.47%</td>
<td>12,026</td>
<td>4.13%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>5,438</td>
<td>25.09%</td>
<td>36,366</td>
<td>12.49%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>1,923</td>
<td>8.87%</td>
<td>34,361</td>
<td>11.80%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>1,500</td>
<td>6.92%</td>
<td>16,322</td>
<td>5.60%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>144</td>
<td>0.66%</td>
<td>2,863</td>
<td>0.98%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>1,206</td>
<td>5.56%</td>
<td>19,758</td>
<td>6.78%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>5,247</td>
<td>24.21%</td>
<td>58,987</td>
<td>20.26%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>2,258</td>
<td>10.42%</td>
<td>56,410</td>
<td>19.37%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>2,396</td>
<td>11.05%</td>
<td>49,538</td>
<td>17.01%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>378</td>
<td>1.74%</td>
<td>4,882</td>
<td>1.57%</td>
</tr>
</tbody>
</table>

### Geographic Area – Central

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,859</td>
<td>9.30%</td>
<td>11,770</td>
<td>5.68%</td>
</tr>
<tr>
<td>Males – 25 to 64</td>
<td>5,611</td>
<td>28.07%</td>
<td>51,433</td>
<td>24.81%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>2,037</td>
<td>10.19%</td>
<td>22,262</td>
<td>10.74%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>1,033</td>
<td>5.17%</td>
<td>12,794</td>
<td>6.17%</td>
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<tr>
<td>Males – 85 and older</td>
<td>137</td>
<td>0.69%</td>
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<td>% of Total Population</td>
<td>SHAPE Survey Respondents (weighted by hhgeowgt)</td>
<td>Sampling Rate</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------</td>
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</tr>
<tr>
<td>Males – 18 to 24</td>
<td>1,514</td>
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<td>6.572</td>
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<td>Males – 25 to 44</td>
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<td>Males – 45 to 64</td>
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<td>12.48%</td>
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<td>4.78%</td>
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<td>5,505</td>
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<tr>
<td>Females – 45 to 64</td>
<td>2,237</td>
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<tr>
<td>Females – 65 to 84</td>
<td>2,422</td>
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<td>32.005</td>
<td>10.92%</td>
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<tr>
<td>Females – 85 and older</td>
<td>444</td>
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<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,683</td>
<td>7.61%</td>
<td>18.212</td>
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<td>Males – 25 to 44</td>
<td>5,358</td>
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<td>Males – 45 to 64</td>
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<td>Males – 65 to 84</td>
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<tr>
<td>Females – 18 to 24</td>
<td>1,881</td>
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<td>Females – 25 to 44</td>
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<tr>
<td>Females – 45 to 64</td>
<td>2,399</td>
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<tr>
<td>Females – 65 to 84</td>
<td>1,487</td>
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</tr>
<tr>
<td>Females – 85 and older</td>
<td>278</td>
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<td>1.06%</td>
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<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,396</td>
<td>4.63%</td>
<td>5.294</td>
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<td>Males – 25 to 44</td>
<td>7,631</td>
<td>25.31%</td>
<td>70.583</td>
<td>17.94%</td>
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<tr>
<td>Males – 45 to 64</td>
<td>2,738</td>
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<td>47.644</td>
<td>12.11%</td>
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<tr>
<td>Males – 65 to 84</td>
<td>2,146</td>
<td>7.12%</td>
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<td>9.15%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>215</td>
<td>0.71%</td>
<td>6.705</td>
<td>1.70%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>1,394</td>
<td>4.62%</td>
<td>8.823</td>
<td>2.24%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>7,667</td>
<td>25.43%</td>
<td>79.759</td>
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<tr>
<td>Females – 45 to 64</td>
<td>3,274</td>
<td>10.86%</td>
<td>75.524</td>
<td>19.19%</td>
</tr>
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<td>Females – 65 to 84</td>
<td>3,258</td>
<td>10.80%</td>
<td>56.820</td>
<td>14.44%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>434</td>
<td>1.44%</td>
<td>6.353</td>
<td>1.61%</td>
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<tr>
<td>Gender – Age Group</td>
<td>1990 Adult Population</td>
<td>% of Total Population</td>
<td>SHAPE Survey Respondents (weighted by hhgeowgt)</td>
<td>Sampling Rate</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------</td>
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</tr>
<tr>
<td>Males – 18 to 24</td>
<td>2,023</td>
<td>6.00%</td>
<td>11,365</td>
<td>2.70%</td>
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<td>7,708</td>
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<td>73,243</td>
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<td>11.81%</td>
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<tr>
<td>Males – 65 to 84</td>
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<td>7.92%</td>
<td>31,570</td>
<td>7.51%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>188</td>
<td>0.56%</td>
<td>1,684</td>
<td>0.40%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>2,100</td>
<td>6.23%</td>
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<td>2.80%</td>
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<tr>
<td>Females – 25 to 44</td>
<td>7,224</td>
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<td>95,973</td>
<td>22.82%</td>
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<tr>
<td>Females – 45 to 64</td>
<td>3,751</td>
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<td>69,875</td>
<td>16.62%</td>
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<td>Females – 65 to 84</td>
<td>4,070</td>
<td>12.08%</td>
<td>68,612</td>
<td>16.32%</td>
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<tr>
<td>Females – 85 and older</td>
<td>590</td>
<td>1.75%</td>
<td>6,735</td>
<td>1.60%</td>
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Geographic Area – Phillips

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>892</td>
<td>7.54%</td>
<td>10,422</td>
<td>7.58%</td>
</tr>
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<td>Males – 25 to 44</td>
<td>3,139</td>
<td>26.53%</td>
<td>32,322</td>
<td>23.52%</td>
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<td>Males – 45 to 64</td>
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<td>Males – 65 to 84</td>
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<td>4.29%</td>
<td>6,193</td>
<td>4.51%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>83</td>
<td>0.70%</td>
<td>0,906</td>
<td>0.66%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>918</td>
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<td>4.84%</td>
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<tr>
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<td>21.97%</td>
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Geographic Area – Powderhorn

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<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>3,135</td>
<td>7.99%</td>
<td>13,619</td>
<td>2.81%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>11,265</td>
<td>28.72%</td>
<td>125,857</td>
<td>25.97%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>2,923</td>
<td>7.45%</td>
<td>52,597</td>
<td>10.85%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>1,490</td>
<td>3.80%</td>
<td>22,542</td>
<td>4.65%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>181</td>
<td>0.46%</td>
<td>2,348</td>
<td>0.48%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>3,466</td>
<td>8.84%</td>
<td>8,453</td>
<td>1.74%</td>
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<tr>
<td>Females – 25 to 44</td>
<td>10,318</td>
<td>26.31%</td>
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<td>16.47%</td>
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<td>Females – 65 to 84</td>
<td>2,684</td>
<td>6.84%</td>
<td>45,553</td>
<td>9.40%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>620</td>
<td>1.58%</td>
<td>6,575</td>
<td>1.36%</td>
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<td>Gender – Age Group</td>
<td>1990 Adult Population</td>
<td>% of Total Population</td>
<td>SHAPE Survey Respondents (weighted by hhgeowgt)</td>
<td>Sampling Rate</td>
</tr>
<tr>
<td>--------------------</td>
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<td>77,459</td>
<td>14.34%</td>
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<td>Males – 45 to 64</td>
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<td>Males – 85 and older</td>
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<td>0.76%</td>
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<td>0.36%</td>
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<tr>
<td>Females – 18 to 24</td>
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<td>3.68%</td>
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<td>11.42%</td>
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<tr>
<td>Females – 85 and older</td>
<td>1,129</td>
<td>2.83%</td>
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<td>1.98%</td>
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</table>

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>7,586</td>
<td>27.27%</td>
<td>63,474</td>
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<td>Males – 25 to 44</td>
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<td>3.09%</td>
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<td>Males – 85 and older</td>
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<td>0.000</td>
<td>0.00%</td>
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<td>6,541</td>
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<td>0.60%</td>
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<table>
<thead>
<tr>
<th>Gender – Age Group</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>8,931</td>
<td>5.53%</td>
<td>5,294</td>
<td>1.35%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>35,193</td>
<td>21.79%</td>
<td>70,583</td>
<td>17.94%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>21,313</td>
<td>13.20%</td>
<td>47,644</td>
<td>12.11%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>9,528</td>
<td>5.90%</td>
<td>35,997</td>
<td>9.15%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>629</td>
<td>0.39%</td>
<td>6,705</td>
<td>1.70%</td>
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<td>Females – 18 to 24</td>
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<td>5.80%</td>
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<td>2.24%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>37,579</td>
<td>23.27%</td>
<td>79,759</td>
<td>20.27%</td>
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<tr>
<td>Females – 45 to 64</td>
<td>23,457</td>
<td>14.53%</td>
<td>75,524</td>
<td>19.19%</td>
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<td>Females – 65 to 84</td>
<td>13,451</td>
<td>8.33%</td>
<td>56,820</td>
<td>14.44%</td>
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<td>Females – 85 and older</td>
<td>2,038</td>
<td>1.26%</td>
<td>6,353</td>
<td>1.61%</td>
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<td>-----------------------</td>
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<td>-----------------------------------------------</td>
<td>--------------</td>
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<tr>
<td>Males – 18 to 24</td>
<td>3,529</td>
<td>5.54%</td>
<td>25,902</td>
<td>2.98%</td>
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<td>Males – 25 to 44</td>
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<td>20.46%</td>
<td>136,196</td>
<td>15.67%</td>
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<td>Males – 45 to 64</td>
<td>8,160</td>
<td>12.82%</td>
<td>138,702</td>
<td>15.96%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>4,311</td>
<td>6.77%</td>
<td>46,791</td>
<td>5.38%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>383</td>
<td>0.60%</td>
<td>5,013</td>
<td>0.58%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>3,637</td>
<td>5.71%</td>
<td>31,751</td>
<td>3.65%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>13,541</td>
<td>21.27%</td>
<td>223,929</td>
<td>25.77%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>9,287</td>
<td>14.59%</td>
<td>170,454</td>
<td>19.62%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>6,400</td>
<td>10.05%</td>
<td>81,049</td>
<td>9.33%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>1,394</td>
<td>2.19%</td>
<td>9,191</td>
<td>1.06%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>4,436</td>
<td>6.99%</td>
<td>34,099</td>
<td>3.79%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>16,159</td>
<td>25.45%</td>
<td>147,208</td>
<td>16.34%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>7,330</td>
<td>11.55%</td>
<td>128,079</td>
<td>14.22%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>2,364</td>
<td>3.72%</td>
<td>33,267</td>
<td>3.69%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>121</td>
<td>0.19%</td>
<td>1,663</td>
<td>0.18%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>4,981</td>
<td>7.95%</td>
<td>23,287</td>
<td>2.59%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>16,789</td>
<td>26.44%</td>
<td>241,188</td>
<td>26.78%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>7,844</td>
<td>12.35%</td>
<td>214,574</td>
<td>23.82%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>3,089</td>
<td>4.87%</td>
<td>76,515</td>
<td>8.49%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>376</td>
<td>0.59%</td>
<td>0.832</td>
<td>0.09%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
<th>1990 Adult Population</th>
<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>4,484</td>
<td>5.85%</td>
<td>29,164</td>
<td>2.62%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>22,701</td>
<td>29.62%</td>
<td>218,226</td>
<td>19.64%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>8,933</td>
<td>11.66%</td>
<td>150,847</td>
<td>13.57%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>1,838</td>
<td>2.40%</td>
<td>39,220</td>
<td>3.53%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>79</td>
<td>0.10%</td>
<td>1,006</td>
<td>0.09%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>4,627</td>
<td>6.04%</td>
<td>18,102</td>
<td>1.63%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>23,357</td>
<td>30.48%</td>
<td>366,056</td>
<td>32.94%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>8,405</td>
<td>10.97%</td>
<td>236,328</td>
<td>21.27%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>2,095</td>
<td>2.73%</td>
<td>51,288</td>
<td>4.62%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>111</td>
<td>0.14%</td>
<td>1,006</td>
<td>0.09%</td>
</tr>
<tr>
<td>Gender – Age Group</td>
<td>1990 Adult Population</td>
<td>% of Total Population</td>
<td>SHAPE Survey Respondents (weighted by hhgeowgt)</td>
<td>Sampling Rate</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Males – 18 to 24</td>
<td>4,702</td>
<td>5.45%</td>
<td>26,032</td>
<td>2.20%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>19,818</td>
<td>22.98%</td>
<td>165,244</td>
<td>13.97%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>9,560</td>
<td>11.08%</td>
<td>164,112</td>
<td>13.88%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>5,205</td>
<td>6.04%</td>
<td>91,676</td>
<td>7.75%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>416</td>
<td>0.48%</td>
<td>2,264</td>
<td>0.19%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>5,441</td>
<td>6.31%</td>
<td>47,536</td>
<td>4.02%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>21,464</td>
<td>24.89%</td>
<td>280,688</td>
<td>23.73%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>10,903</td>
<td>12.64%</td>
<td>285,215</td>
<td>24.11%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>7,498</td>
<td>8.69%</td>
<td>113,181</td>
<td>9.57%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>1,236</td>
<td>1.43%</td>
<td>6,791</td>
<td>0.57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
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<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>1,669</td>
<td>5.08%</td>
<td>15,082</td>
<td>3.25%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>7,989</td>
<td>24.33%</td>
<td>60,760</td>
<td>13.08%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>4,828</td>
<td>14.70%</td>
<td>73,688</td>
<td>15.86%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>1,628</td>
<td>4.96%</td>
<td>21,977</td>
<td>4.73%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>139</td>
<td>0.42%</td>
<td>0.431</td>
<td>0.09%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>1,493</td>
<td>4.55%</td>
<td>16,806</td>
<td>3.62%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>7,959</td>
<td>24.24%</td>
<td>116,349</td>
<td>25.05%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>4,515</td>
<td>13.75%</td>
<td>109,454</td>
<td>23.56%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>2,240</td>
<td>6.82%</td>
<td>48,263</td>
<td>10.39%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>376</td>
<td>1.15%</td>
<td>1,724</td>
<td>0.37%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender – Age Group</th>
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<th>% of Total Population</th>
<th>SHAPE Survey Respondents (weighted by hhgeowgt)</th>
<th>Sampling Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males – 18 to 24</td>
<td>443</td>
<td>6.17%</td>
<td>3,296</td>
<td>3.11%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>1,813</td>
<td>25.26%</td>
<td>14,879</td>
<td>14.03%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>1,036</td>
<td>14.44%</td>
<td>14,409</td>
<td>13.59%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>290</td>
<td>4.04%</td>
<td>5,388</td>
<td>5.06%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>28</td>
<td>0.39%</td>
<td>0.094</td>
<td>0.09%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>397</td>
<td>5.53%</td>
<td>5,274</td>
<td>4.97%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>1,788</td>
<td>24.92%</td>
<td>29,947</td>
<td>28.24%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>947</td>
<td>13.20%</td>
<td>26,180</td>
<td>24.69%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>355</td>
<td>4.95%</td>
<td>6,027</td>
<td>5.68%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>79</td>
<td>1.10%</td>
<td>0.565</td>
<td>0.53%</td>
</tr>
<tr>
<td>Gender – Age Group</td>
<td>1990 Adult Population</td>
<td>% of Total Population</td>
<td>SHAPE Survey Respondents (weighted by hhgeowgt)</td>
<td>Sampling Rate</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Males – 18 to 24</td>
<td>377</td>
<td>7.09%</td>
<td>3.070</td>
<td>3.75%</td>
</tr>
<tr>
<td>Males – 25 to 44</td>
<td>1,497</td>
<td>28.16%</td>
<td>16.116</td>
<td>19.71%</td>
</tr>
<tr>
<td>Males – 45 to 64</td>
<td>711</td>
<td>13.37%</td>
<td>8.511</td>
<td>10.41%</td>
</tr>
<tr>
<td>Males – 65 to 84</td>
<td>160</td>
<td>3.01%</td>
<td>1.326</td>
<td>1.62%</td>
</tr>
<tr>
<td>Males – 85 and older</td>
<td>8</td>
<td>0.15%</td>
<td>0.140</td>
<td>0.17%</td>
</tr>
<tr>
<td>Females – 18 to 24</td>
<td>323</td>
<td>6.08%</td>
<td>3.418</td>
<td>4.18%</td>
</tr>
<tr>
<td>Females – 25 to 44</td>
<td>1,467</td>
<td>27.60%</td>
<td>30.000</td>
<td>36.69%</td>
</tr>
<tr>
<td>Females – 45 to 64</td>
<td>587</td>
<td>11.04%</td>
<td>15.348</td>
<td>18.77%</td>
</tr>
<tr>
<td>Females – 65 to 84</td>
<td>166</td>
<td>3.12%</td>
<td>3.767</td>
<td>4.61%</td>
</tr>
<tr>
<td>Females – 85 and older</td>
<td>20</td>
<td>0.38%</td>
<td>0.070</td>
<td>0.09%</td>
</tr>
</tbody>
</table>

The sets of weights are as follows:

1. **HHGEOWG**

The weight variable, hhGeoWgt, is used to adjust for:
- the unequal probability of an adult being selected; and
- the disproportionate sampling rates within the 19 geographic areas in SHAPE.

This variable does not take into account any post-stratification effects. Because of this, this weight is NEVER used for the analysis of SHAPE data, but used only as a component in building other weights that do take post-stratification adjustments into account.

The weighting process is a two-step process. In Step One, weights are generated based on the factors listed above and the weights are summed for all the cases. In Step Two, the weights generated in Step One are standardized to sum to the number of cases in order to keep the size of the standard errors correct.

For example, the sum of the weights calculated in Step One equals 1470927.54. In Step Two, all the computed weights are divided by 1470927.54/10671 (AveWgt in the SPSS code), so that their revised sum is 10671 (the number of cases being analyzed).

The SPSS code used to generate hhGeoWgt is:

```spss
COMPUTE hhadult = q60a.3 + q60a.4.

* Exclude cases with:
* 1) no household size for adults; OR (26 cases)
* 2) age missing; OR (97 cases)
* 3) gender missing. (5 cases)
* because these are key variables for weighting.

SELECT IF (hhsum <> 99).
```
IF (hhadult = 0) hhadult = 1.
SELECT IF (ageGp5 <> 9 AND NOT SYSMIS(gender)).
compute HHGeoWgt = -9999999.
FORMAT HHGeoWgt (F18.5).

COMPUTE AveWgt = 1470927.54/(10745 - 26 - 97 - 5).
*COMPUTE AveWgt = 1.

if (geocode = 1) pop90 = 21859.
if (geocode = 2) pop90 = 33533.
if (geocode = 3) pop90 = 22020.
if (geocode = 4) pop90 = 20172.
if (geocode = 5) pop90 = 27797.
if (geocode = 6) pop90 = 23200.
if (geocode = 7) pop90 = 11509.
if (geocode = 8) pop90 = 39298.
if (geocode = 9) pop90 = 27370.
if (geocode = 10) pop90 = 39961.
if (geocode = 11) pop90 = 30168.
if (geocode = 12) pop90 = 161490.
if (geocode = 13) pop90 = 63669.
if (geocode = 14) pop90 = 63489.
if (geocode = 15) pop90 = 76630.
if (geocode = 16) pop90 = 86243.
if (geocode = 17) pop90 = 32836.
if (geocode = 18) pop90 = 7176.
if (geocode = 19) pop90 = 5316.

COMPUTE populat = pop90.

if (geocode = 1) HHGeoWgt=(hhadult * populat/ 551)/AveWgt.
if (geocode = 2) HHGeoWgt=(hhadult * populat/ 575)/AveWgt.
if (geocode = 3) HHGeoWgt=(hhadult * populat/ 576)/AveWgt.
if (geocode = 4) HHGeoWgt=(hhadult * populat/ 569)/AveWgt.
if (geocode = 5) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 6) HHGeoWgt=(hhadult * populat/ 586)/AveWgt.
if (geocode = 7) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 8) HHGeoWgt=(hhadult * populat/ 604)/AveWgt.
if (geocode = 9) HHGeoWgt=(hhadult * populat/ 600)/AveWgt.
if (geocode = 10) HHGeoWgt=(hhadult * populat/ 566)/AveWgt.
if (geocode = 11) HHGeoWgt=(hhadult * populat/ 617)/AveWgt.
if (geocode = 12) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 13) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 14) HHGeoWgt=(hhadult * populat/ 551)/AveWgt.
if (geocode = 15) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 16) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 17) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 18) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
if (geocode = 19) HHGeoWgt=(hhadult * populat/ 550)/AveWgt.
IF (hhsum = 99) HHGeoWgt = 0.

The first set of numbers used in the SPSS syntax file is the number of adults who live in each of
the 19 geographic areas.  The second set of numbers used in the SPSS syntax file is the number
of survey respondents from each of the 19 geographic areas.

Note that hhGeoWgt used the Jan 20, 1998 census figures from the Office of Planning and
Development (the figures were revised in February 1998) and the raw sample respondent figures
before cases were deleted because of missing data.

2. FWEIGHT

FWeight takes into account the following factors:
• Unequal probability based on the number of adults in the household in the sample; and
• Disproportionate sampling rates among the 19 geographic areas based on the number of adult
residents; and
• Age and gender distribution of Hennepin County as a whole, as measured by the 1990
  Census, compared to the distribution of the survey respondents.

The weighting process is a four-step process.  Steps One and Two are accomplished by taking the
 weights generated by hhGeoWgt.  Steps Three and Four accomplish the post-stratification age and
gender distribution adjustment. In Step Three, weights are generated based on the age and
gender factors listed above and the weights are summed for all the cases. In Step Four, the
weights generated in Step Three are standardized to sum to the number of cases in order to keep
the size of the standard errors correct.

For example, the sum of the weights calculated in Step Three equals 10604.6622.  In Step Four, all
the computed weights are divided by 10604.6622/10671 (AveWgt in the SPSS code), so that their
revised sum is 10671 (the number of cases being analyzed). It should be noted that the sum of the
weights in Step Three should, in theory, equal the number of cases since this is only a post-
stratification adjustment. The fact that the sum is off a bit is due only to mathematical round-off
errors.

The technical staff on the SHAPE project determined that Fweight should be replaced with
Weight19 to capture the age/gender distribution differences found within each of the 19 geographic
areas. Thus, while Fweight was used initially, is should not be used in the future. Use Weight19
instead.
The SPSS code used to generate FWeight is:

```
** FWeight.sps **.

WEIGHT OFF.
FILTER OFF.
COMPUTE ageSexWt = -9.
FORMAT ageSexWt(F18.5).

* * AgeSexWt = 1997 Population Projection total percentage / Survey total percentage
  for each Age/Sex cell
* *
IF (agegp5 = 1 AND gender = 1) AgeSexWt = (5.54/3.5).
IF (agegp5 = 1 AND gender = 2) AgeSexWt = (5.86/3.9).
IF (agegp5 = 2 AND gender = 1) AgeSexWt = (23.30/16.8).
IF (agegp5 = 2 AND gender = 2) AgeSexWt = (23.23/23.9).
IF (agegp5 = 3 AND gender = 1) AgeSexWt = (13.13/13.1).
IF (agegp5 = 3 AND gender = 2) AgeSexWt = (13.82/20.2).
IF (agegp5 = 4 AND gender = 1) AgeSexWt = (5.34/6.2).
IF (agegp5 = 4 AND gender = 2) AgeSexWt = (7.69/10.9).
IF (agegp5 = 5 AND gender = 1) AgeSexWt = (0.54/0.4).
IF (agegp5 = 5 AND gender = 2) AgeSexWt = (1.53/1.2).

IF (agegp5 = 9 OR SYSMIS(gender)) AgeSexWt = 0.

COMPUTE AveWgt = 10604.6622/10617.
*COMPUTE AveWgt = 1.
COMPUTE FWeight = (HHGeoWgt * AgeSexWt)/AveWgt.
FORMAT FWeight(F18.5).

FREQUENCIES GENERAL=FWeight
/STATISTICS=SUM.
```

3. WEIGHT19

The weight variable, weight19, is used to compute the survey response estimates for the city of Minneapolis, suburban Hennepin County, and Hennepin County as a whole.

Weight19 takes into account the following factors:

- Unequal probability based on the number of adults in the household in the sample;
- Disproportionate sampling rates among the 19 geographic areas based on the number of adult residents; and
- Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.
In other words, Weight19 takes the weights generated with hhGeoWgt and does a post-stratification adjustment to them to account for the age/gender distribution differences within each of the 19 geographic areas.

The weighting process is a four-step process. Steps One and Two are accomplished by taking the weights generated by hhGeoWgt. Steps Three and Four accomplish the post-stratification age and gender distribution adjustment. In Step Three, weights are generated based on the age and gender factors listed above. In Step Four, the weights generated in Step Three are standardized to sum to the total number of cases being analyzed in order to keep the size of the standard errors correct.

For example, the sum of the weights calculated in Step Three equals 10616.2037. In Step Four, all the computed weights are divided by 10616.2037/10671 (AveWgt in the SPSS code), so that their revised sum is 10671 (the number of cases being analyzed). It should be noted that the sum of the weights in Step Three should, in theory, equal the number of cases since this is only a post-stratification adjustment. The fact that the sum is off a bit is due only to mathematical round-off errors.

The SPSS code used to generate Weight19 is as follows:

* Computes Weight19 - post-stratification for each of the 19 SHAPE analysis areas.
*.
WEIGHT OFF.
FILTER OFF.
COMPUTE AgSx19Wt = -9.
FORMAT AgSx19Wt(F18.5).
*
* AgSx19Wt = 1990 Census Population total percentage / Survey total percentage
*                      for each Age/Sex cell for each of the 19 GEOCODE areas
*.
* Camden.
IF (geocode = 1 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.47/4.13).
IF (geocode = 1 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (5.56/6.78).
IF (geocode = 1 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (25.09/12.49).
IF (geocode = 1 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (24.21/20.26).
IF (geocode = 1 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (8.87/11.80).
IF (geocode = 1 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.42/19.37).
IF (geocode = 1 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (6.92/5.60).
IF (geocode = 1 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (11.05/17.01).
IF (geocode = 1 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.66/0.98).
IF (geocode = 1 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.74/1.57).
* Northeast.
IF (geocode = 2 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (6.15/2.70).
IF (geocode = 2 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (6.54/2.80).
IF (geocode = 2 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (24.03/17.42).
IF (geocode = 2 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (22.30/22.82).
IF (geocode = 2 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (9.24/11.81).
IF (geocode = 2 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.18/16.62).
IF (geocode = 2 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (7.36/7.51).
IF (geocode = 2 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (11.77/16.32).
IF (geocode = 2 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.58/0.40).
IF (geocode = 2 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.85/1.60).

* Near North.
IF (geocode = 3 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (7.61/6.35).
IF (geocode = 3 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (8.51/6.06).
IF (geocode = 3 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (24.23/15.58).
IF (geocode = 3 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (26.14/25.00).
IF (geocode = 3 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (9.47/12.79).
IF (geocode = 3 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.85/19.42).
IF (geocode = 3 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (4.72/3.85).
IF (geocode = 3 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (6.72/9.71).
IF (geocode = 3 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.49/0.19).
IF (geocode = 3 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.26/1.06).

* Central.
IF (geocode = 4 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (9.30/5.68).
IF (geocode = 4 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (9.87/5.93).
IF (geocode = 4 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (28.07/24.81).
IF (geocode = 4 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (16.16/16.91).
IF (geocode = 4 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (10.19/10.74).
IF (geocode = 4 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (7.88/14.81).
IF (geocode = 4 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (5.17/6.17).
IF (geocode = 4 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (9.74/11.85).
IF (geocode = 4 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.69/0.37).
IF (geocode = 4 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (2.94/2.72).

* University.
IF (geocode = 5 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (27.27/17.33).
IF (geocode = 5 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (23.51/16.53).
IF (geocode = 5 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (19.78/19.72).
IF (geocode = 5 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (14.66/15.94).
IF (geocode = 5 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (4.26/6.27).
IF (geocode = 5 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (4.22/11.16).
IF (geocode = 5 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (2.05/3.09).
IF (geocode = 5 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (3.40/9.36).
*IF (geocode = 5 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.19/0.0).
IF (geocode = 5 AND agegp5 = 5 AND gender = 1) AgSx19Wt = 0.
IF (geocode = 5 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (0.66/0.60).
* Longfellow.
IF (geocode = 6 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (6.56/2.24).
IF (geocode = 6 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (6.41/4.78).
IF (geocode = 6 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (24.36/18.23).
IF (geocode = 6 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (23.86/22.71).
IF (geocode = 6 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (9.30/12.48).
IF (geocode = 6 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (9.70/20.76).
IF (geocode = 6 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (6.51/6.43).
IF (geocode = 6 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (10.50/10.92).
IF (geocode = 6 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.89/0.29).
IF (geocode = 6 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.92/1.17).

* Phillips.
IF (geocode = 7 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (7.54/7.58).
IF (geocode = 7 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (7.76/4.84).
IF (geocode = 7 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (26.53/23.52).
IF (geocode = 7 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (21.97/19.89).
IF (geocode = 7 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (8.62/14.18).
IF (geocode = 7 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (8.41/13.08).
IF (geocode = 7 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (4.29/4.51).
IF (geocode = 7 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (9.37/9.78).
IF (geocode = 7 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.70/0.66).
IF (geocode = 7 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (4.81/1.98).

* Powderhorn.
IF (geocode = 8 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (7.99/2.81).
IF (geocode = 8 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (8.84/1.74).
IF (geocode = 8 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (28.72/25.97).
IF (geocode = 8 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (26.31/26.26).
IF (geocode = 8 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (7.45/10.85).
IF (geocode = 8 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (8.00/16.47).
IF (geocode = 8 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (3.80/4.65).
IF (geocode = 8 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (6.84/9.40).
IF (geocode = 8 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.46/0.48).
IF (geocode = 8 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.58/1.36).

* Calhoun-Isles.
IF (geocode = 9 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (6.87/3.09).
IF (geocode = 9 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (9.22/3.95).
IF (geocode = 9 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (28.41/21.79).
IF (geocode = 9 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (28.51/27.48).
IF (geocode = 9 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (7.29/13.02).
IF (geocode = 9 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (7.66/14.85).
IF (geocode = 9 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (3.32/5.98).
IF (geocode = 9 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (6.13/8.78).
IF (geocode = 9 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.50/0.10).
IF (geocode = 9 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (2.11/0.96).
* Southwest.
IF (geocode = 10 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (4.22/2.36).
IF (geocode = 10 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (4.71/3.68).
IF (geocode = 10 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (24.89/14.34).
IF (geocode = 10 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (27.09/24.34).
IF (geocode = 10 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (9.47/10.94).
IF (geocode = 10 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.99/22.08).
IF (geocode = 10 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (5.55/8.49).
IF (geocode = 10 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (9.50/11.42).
IF (geocode = 10 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.76/0.38).
IF (geocode = 10 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (2.83/1.98).

* Nokomis.
IF (geocode = 11 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (4.63/1.35).
IF (geocode = 11 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (4.62/2.24).
IF (geocode = 11 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (25.31/17.94).
IF (geocode = 11 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (25.43/20.27).
IF (geocode = 11 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (9.08/12.11).
IF (geocode = 11 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.86/19.19).
IF (geocode = 11 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (7.12/9.15).
IF (geocode = 11 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (10.80/14.44).
IF (geocode = 11 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.71/1.70).
IF (geocode = 11 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.44/1.61).

* Area 12 - Bloomington, etc.
IF (geocode = 12 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.53/2.58).
IF (geocode = 12 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (5.80/3.67).
IF (geocode = 12 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (21.79/14.77).
IF (geocode = 12 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (23.27/18.83).
IF (geocode = 12 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (13.20/13.28).
IF (geocode = 12 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (14.53/20.02).
IF (geocode = 12 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (5.90/8.72).
IF (geocode = 12 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (8.33/15.36).
IF (geocode = 12 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.39/0.40).
IF (geocode = 12 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.26/2.38).

* Area 13 - Crystal, Golden Valley, etc.
IF (geocode = 13 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.54/2.98).
IF (geocode = 13 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (5.71/3.65).
IF (geocode = 13 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (20.46/15.67).
IF (geocode = 13 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (21.27/25.77).
IF (geocode = 13 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (12.82/15.96).
IF (geocode = 13 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (14.59/19.62).
IF (geocode = 13 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (6.77/5.38).
IF (geocode = 13 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (10.05/9.33).
IF (geocode = 13 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.60/0.58).
IF (geocode = 13 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (2.19/1.06).
* Area 14 - Brooklyn Center, Brooklyn Park, etc.
IF (geocode = 14 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (6.99/3.79).
IF (geocode = 14 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (7.85/2.59).
IF (geocode = 14 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (25.45/16.34).
IF (geocode = 14 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (26.44/26.78).
IF (geocode = 14 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (11.55/14.22).
IF (geocode = 14 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (12.35/23.82).
IF (geocode = 14 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (3.72/3.69).
IF (geocode = 14 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (4.87/8.49).
IF (geocode = 14 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.19/0.18).
IF (geocode = 14 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (0.59/0.09).

* Area 15 - Champlin, Dayton, Maple Grove, etc.
IF (geocode = 15 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.85/2.62).
IF (geocode = 15 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (6.04/1.63).
IF (geocode = 15 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (29.62/19.64).
IF (geocode = 15 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (30.48/32.94).
IF (geocode = 15 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (11.66/13.57).
IF (geocode = 15 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (10.97/21.27).
IF (geocode = 15 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (2.40/3.53).
IF (geocode = 15 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (2.73/4.62).
IF (geocode = 15 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.10/0.09).
IF (geocode = 15 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (0.14/0.09).

* Area 16 - Hopkins, Minnetonka, Saint Louis Park.
IF (geocode = 16 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.45/2.20).
IF (geocode = 16 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (6.31/4.02).
IF (geocode = 16 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (22.98/13.97).
IF (geocode = 16 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (24.89/23.73).
IF (geocode = 16 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (11.08/13.88).
IF (geocode = 16 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (12.64/24.11).
IF (geocode = 16 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (6.04/7.75).
IF (geocode = 16 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (8.69/9.57).
IF (geocode = 16 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.48/0.19).
IF (geocode = 16 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.43/0.57).

* Area 17 - Deephaven, Excelsior, Greenwood, Long Lake, etc.
IF (geocode = 17 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (5.08/3.25).
IF (geocode = 17 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (4.55/3.62).
IF (geocode = 17 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (24.33/13.08).
IF (geocode = 17 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (24.24/25.05).
IF (geocode = 17 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (14.70/15.86).
IF (geocode = 17 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (13.75/23.56).
IF (geocode = 17 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (4.96/4.73).
IF (geocode = 17 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (6.82/10.39).
IF (geocode = 17 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.42/0.09).
IF (geocode = 17 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.15/0.37).
* Area 18 - Greenfield, Independence, Loretto, Maple Plain, etc.
  IF (geocode = 18 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (6.17/3.11).
  IF (geocode = 18 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (5.53/4.97).
  IF (geocode = 18 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (25.26/14.03).
  IF (geocode = 18 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (24.92/28.24).
  IF (geocode = 18 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (14.44/13.59).
  IF (geocode = 18 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (13.20/24.69).
  IF (geocode = 18 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (4.04/5.06).
  IF (geocode = 18 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (4.95/5.68).
  IF (geocode = 18 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.39/0.09).
  IF (geocode = 18 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (1.10/0.53).

* Area 19 - Corcoran, Hanover, Hassan, Rogers.
  IF (geocode = 19 AND agegp5 = 1 AND gender = 1) AgSx19Wt = (7.09/3.75).
  IF (geocode = 19 AND agegp5 = 1 AND gender = 2) AgSx19Wt = (6.08/4.18).
  IF (geocode = 19 AND agegp5 = 2 AND gender = 1) AgSx19Wt = (28.16/19.71).
  IF (geocode = 19 AND agegp5 = 2 AND gender = 2) AgSx19Wt = (27.60/36.69).
  IF (geocode = 19 AND agegp5 = 3 AND gender = 1) AgSx19Wt = (13.37/10.41).
  IF (geocode = 19 AND agegp5 = 3 AND gender = 2) AgSx19Wt = (11.04/18.77).
  IF (geocode = 19 AND agegp5 = 4 AND gender = 1) AgSx19Wt = (3.01/1.62).
  IF (geocode = 19 AND agegp5 = 4 AND gender = 2) AgSx19Wt = (3.12/4.61).
  IF (geocode = 19 AND agegp5 = 5 AND gender = 1) AgSx19Wt = (0.15/0.17).
  IF (geocode = 19 AND agegp5 = 5 AND gender = 2) AgSx19Wt = (0.38/0.09).

IF (agegp5 = 9 OR SYSMIS(gender)) AgSx19Wt = 0.

COMPUTE AveWgt = 10616.2037/10617.
*COMPUTE AveWgt = 1.
COMPUTE Weight19 = (HHGeoWgt * AgSx19Wt)/AveWgt.
FORMAT Weight19(F18.5).

The ratios used in the SPSS syntax file for Weight19 are the percent of total adults in a specific geographic area (based on the 1990 Census) who are in a particular age group/sex class (e.g., Women aged 45-64) divided by the percent of total survey respondents in that geographic area who are in that age group/sex class.

4. **HHREGWGT**

The weight variable, hhRegWgt, is used to compute the survey response estimates for each of the 19 geographic areas.

**HHRegWgt was replaced, after it was computed, by the weight variable, HHRegW2, to correct for the population estimate in the Northeast/St. Anthony SHAPE area. HHRegWgt used only the population estimate for the Northeast community. HHRegW2 included the additional population from St. Anthony to correct the oversight.**
The section on HHRegW2 describes how HHRegWgt was computed with the only difference the population estimate for Northeast/St. Anthony.

5. HHREGW2

The weight variable, hhRegW2, is used to compute the survey response estimates for each of the 19 geographic areas.

HHRegW2 takes into account the following factors:
- Unequal probability based on the number of adults in the household in the sample; and
- Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.

In other words, hhRegW2 takes the weights generated by just looking at the unequal probability weighting and does a post-stratification adjustment to them to account for the age/gender distribution differences within each of the 19 geographic areas.

The weighting process is a four-step process. In Step One, weights are generated for the number of adults living in the households of the survey respondents.

In Step Two, the weights (hhWgt) generated in Step One are standardized to sum to the total number of cases being analyzed in order to keep the size of the standard errors correct.

For example, the sum of the weights calculated in Step One equals 10608.57. In Step Two, all the computed weights are divided by 19708/10671 (AveWgt in the SPSS code), so that their revised sum is 10671 (the number of cases being analyzed).

Steps Three and Four accomplish the post-stratification age and gender distribution adjustment. In Step Three, weights are generated by multiplying hhWgt by the post-stratification adjustment to account for the age/gender distribution differences within each of the 19 geographic areas between the survey respondents and the distribution found within that geographic area as measured by the 1990 Census.

In Step Four, the weights (hhRegW2) generated in Step Three are standardized to sum to the total number of cases being analyzed in order to keep the size of the standard errors correct.

For example, the sum of the weights calculated in Step Three equals 10608.57. In Step Four, all the computed weights are divided by 10608.57/10671 (AveWgt2 in the SPSS code), so that their revised sum is 10671 (the number of cases being analyzed). It should be noted that the sum of the weights in Step Three should, in theory, equal the number of cases since this is only a post-stratification adjustment. The fact that the sum is off a bit is due only to mathematical round-off errors.
The SPSS code used to generate hhRegW2 is as follows:

```
WEIGHT OFF.
FILTER OFF.
COMPUTE hhadult = q60a.3 + q60a.4.

* Exclude cases with:
* 1) no household size for adults; OR (26 cases)
* 2) age missing; OR (97 cases)
* 3) gender missing. (5 cases)
* because these are key variables for weighting.
*.
SELECT IF (hhsum <> 99).
IF (hhadult = 0) hhadult = 1.
SELECT IF (ageGp5 <> 9 AND NOT SYSMIS(gender)).

compute HHWgt = -9999999.
FORMAT HHWgt (F18.5).

COMPUTE AveWgt = 19708/(10617).
*COMPUTE AveWgt = 1.
COMPUTE HHWgt = hhadult/AveWgt.
IF (hhsum = 99) HHWgt = 0.

FREQUENCIES GENERAL=HHWgt
 /statistics=sum.

* Computes HHRegW2 - post-stratification for each of the 19 SHAPE analysis areas after
weighting by the household size.
*.
WEIGHT OFF.
FILTER OFF.
COMPUTE Wt = -9.

* HHAgSxWt = 1990 Census Population total percentage / Survey total percentage
* for each Age/Sex cell for each of the 19 GEOCODE areas after weighting by the
household size.
*.
* Camden.
IF (geocode = 1 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.47/4.2).
IF (geocode = 1 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (5.56/6.8).
IF (geocode = 1 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (25.09/12.4).
IF (geocode = 1 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (24.21/20.3).
IF (geocode = 1 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (8.87/11.9).
IF (geocode = 1 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (10.42/19.3).
```
IF (geocode = 1 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (6.92/5.7).
IF (geocode = 1 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (11.05/17.0).
IF (geocode = 1 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.66/0.9).
IF (geocode = 1 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.74/1.6).

* Northeast.
IF (geocode = 2 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (6.00/2.8).
IF (geocode = 2 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (6.23/2.8).
IF (geocode = 2 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (22.88/17.4).
IF (geocode = 2 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (21.44/22.8).
IF (geocode = 2 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (10.01/11.9).
IF (geocode = 2 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (11.13/16.5).
IF (geocode = 2 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (7.92/7.4).
IF (geocode = 2 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (12.08/16.3).
IF (geocode = 2 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.56/0.4).
IF (geocode = 2 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.75/1.7).

* Near North.
IF (geocode = 3 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (7.61/6.4).
IF (geocode = 3 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (8.51/6.1).
IF (geocode = 3 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (24.23/15.5).
IF (geocode = 3 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (26.14/25.0).
IF (geocode = 3 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (9.47/12.8).
IF (geocode = 3 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (10.85/19.4).
IF (geocode = 3 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (4.72/3.9).
IF (geocode = 3 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (6.72/9.6).
IF (geocode = 3 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.49/0.2).
IF (geocode = 3 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.26/1.1).

* Central.
IF (geocode = 4 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (9.30/5.7).
IF (geocode = 4 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (9.87/5.9).
IF (geocode = 4 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (28.07/24.7).
IF (geocode = 4 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (16.16/16.9).
IF (geocode = 4 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (10.19/10.7).
IF (geocode = 4 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (7.88/14.8).
IF (geocode = 4 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (5.17/6.2).
IF (geocode = 4 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (9.74/11.9).
IF (geocode = 4 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.69/0.5).
IF (geocode = 4 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (2.94/2.7).

* University.
IF (geocode = 5 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (27.27/17.4).
IF (geocode = 5 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (23.51/16.5).
IF (geocode = 5 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (19.78/19.8).
IF (geocode = 5 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (14.66/15.9).
IF (geocode = 5 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (4.26/6.3).
IF (geocode = 5 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (4.22/11.1).
IF (geocode = 5 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (2.05/3.1).
IF (geocode = 5 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (3.40/9.4).
*IF (geocode = 5 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.19/0.0).
IF (geocode = 5 AND agegp5 = 5 AND gender = 1) HHAgSxWt = 0.
IF (geocode = 5 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (0.66/0.6).

* Longfellow.
IF (geocode = 6 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (6.56/2.2).
IF (geocode = 6 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (6.41/4.7).
IF (geocode = 6 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (24.36/18.3).
IF (geocode = 6 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (23.86/22.8).
IF (geocode = 6 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (9.30/12.5).
IF (geocode = 6 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (9.70/20.8).
IF (geocode = 6 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (6.51/6.5).
IF (geocode = 6 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (10.50/10.8).
IF (geocode = 6 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.89/0.4).
IF (geocode = 6 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.92/1.1).

* Phillips.
IF (geocode = 7 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (7.54/7.6).
IF (geocode = 7 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (7.76/4.9).
IF (geocode = 7 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (26.53/23.5).
IF (geocode = 7 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (21.97/20.0).
IF (geocode = 7 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (8.62/14.1).
IF (geocode = 7 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (8.41/13.1).
IF (geocode = 7 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (4.29/4.5).
IF (geocode = 7 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (9.37/9.8).
IF (geocode = 7 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.70/0.6).
IF (geocode = 7 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (4.81/2.0).

* Powderhorn.
IF (geocode = 8 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (7.99/2.9).
IF (geocode = 8 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (8.84/1.8).
IF (geocode = 8 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (28.72/25.9).
IF (geocode = 8 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (26.31/26.2).
IF (geocode = 8 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (7.45/10.8).
IF (geocode = 8 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (8.00/16.5).
IF (geocode = 8 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (3.80/4.7).
IF (geocode = 8 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (6.84/9.3).
IF (geocode = 8 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.46/0.5).
IF (geocode = 8 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.58/1.4).

* Calhoun-Isles.
IF (geocode = 9 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (6.87/3.0).
IF (geocode = 9 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (9.22/3.9).
IF (geocode = 9 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (28.41/21.8).
IF (geocode = 9 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (28.51/27.5).
IF (geocode = 9 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (7.29/13.1).
IF (geocode = 9 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (7.66/14.8).
IF (geocode = 9 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (3.32/5.9).
IF (geocode = 9 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (6.13/8.8).
IF (geocode = 9 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.50/0.2).
IF (geocode = 9 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (2.11/0.9).

* Southwest.
IF (geocode = 10 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (4.22/2.3).
IF (geocode = 10 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (4.71/3.7).
IF (geocode = 10 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (24.89/14.4).
IF (geocode = 10 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (27.09/24.4).
IF (geocode = 10 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (9.47/10.9).
IF (geocode = 10 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (10.99/22.1).
IF (geocode = 10 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (5.55/8.4).
IF (geocode = 10 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (9.50/11.4).
IF (geocode = 10 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.76/0.4).
IF (geocode = 10 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (2.83/1.9).

* Nokomis.
IF (geocode = 11 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (4.63/1.3).
IF (geocode = 11 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (4.62/2.2).
IF (geocode = 11 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (25.31/18.0).
IF (geocode = 11 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (25.43/20.3).
IF (geocode = 11 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (9.08/12.1).
IF (geocode = 11 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (10.86/19.1).
IF (geocode = 11 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (7.12/9.2).
IF (geocode = 11 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (10.80/14.5).
IF (geocode = 11 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.71/1.7).
IF (geocode = 11 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.44/1.7).

* Area 12 - Bloomington, etc.
IF (geocode = 12 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.53/2.6).
IF (geocode = 12 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (5.80/3.7).
IF (geocode = 12 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (21.79/14.7).
IF (geocode = 12 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (23.27/18.8).
IF (geocode = 12 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (13.20/13.3).
IF (geocode = 12 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (14.53/20.1).
IF (geocode = 12 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (5.90/8.7).
IF (geocode = 12 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (8.33/15.5).
IF (geocode = 12 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.39/0.4).
IF (geocode = 12 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.26/2.4).

* Area 13 - Crystal, Golden Valley, etc.
IF (geocode = 13 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.54/3.0).
IF (geocode = 13 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (5.71/3.6).
IF (geocode = 13 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (20.46/15.7).
IF (geocode = 13 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (21.27/25.8).
IF (geocode = 13 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (12.82/15.9).
IF (geocode = 13 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (14.59/19.7).
IF (geocode = 13 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (6.77/5.4).
IF (geocode = 13 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (10.05/9.3).
IF (geocode = 13 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.60/0.5).
IF (geocode = 13 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (2.19/1.1).

* Area 14 - Brooklyn Center, Brooklyn Park, etc.
IF (geocode = 14 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (6.99/3.8).
IF (geocode = 14 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (7.85/2.6).
IF (geocode = 14 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (25.45/16.3).
IF (geocode = 14 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (26.44/26.7).
IF (geocode = 14 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (11.55/14.2).
IF (geocode = 14 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (12.35/23.8).
IF (geocode = 14 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (3.72/3.8).
IF (geocode = 14 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (4.87/8.6).
IF (geocode = 14 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.19/0.2).
IF (geocode = 14 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (0.59/0.2).

* Area 15 - Champlin, Dayton, Maple Grove, etc.
IF (geocode = 15 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.85/2.7).
IF (geocode = 15 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (6.04/1.7).
IF (geocode = 15 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (29.62/19.6).
IF (geocode = 15 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (30.48/32.8).
IF (geocode = 15 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (11.66/13.6).
IF (geocode = 15 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (10.97/21.3).
IF (geocode = 15 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (2.40/3.5).
IF (geocode = 15 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (2.73/4.5).
IF (geocode = 15 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.10/0.2).
IF (geocode = 15 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (0.14/0.2).

* Area 16 - Hopkins, Minnetonka, Saint Louis Park.
IF (geocode = 16 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.45/2.1).
IF (geocode = 16 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (6.31/4.1).
IF (geocode = 16 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (22.98/14.0).
IF (geocode = 16 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (24.89/23.8).
IF (geocode = 16 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (11.08/13.8).
IF (geocode = 16 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (12.64/24.1).
IF (geocode = 16 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (6.04/7.8).
IF (geocode = 16 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (8.69/9.6).
IF (geocode = 16 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.48/0.2).
IF (geocode = 16 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.43/0.5).

* Area 17 - Deephaven, Excelsior, Greenwood, Long Lake, etc.
IF (geocode = 17 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (5.08/3.3).
IF (geocode = 17 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (4.55/3.6).
IF (geocode = 17 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (24.33/13.1).
IF (geocode = 17 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (24.24/25.0).
IF (geocode = 17 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (14.70/15.9).
IF (geocode = 17 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (13.75/23.6).
IF (geocode = 17 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (4.96/4.7).
IF (geocode = 17 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (6.82/10.3).
IF (geocode = 17 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.42/0.2).
IF (geocode = 17 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.15/0.3).

* Area 18 - Greenfield, Independence, Loretto, Maple Plain, etc.
IF (geocode = 18 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (6.17/3.1).
IF (geocode = 18 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (5.53/5.0).
IF (geocode = 18 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (25.26/14.0).
IF (geocode = 18 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (24.92/28.2).
IF (geocode = 18 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (14.44/13.5).
IF (geocode = 18 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (13.20/24.8).
IF (geocode = 18 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (4.04/5.1).
IF (geocode = 18 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (4.95/5.6).
IF (geocode = 18 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.39/0.2).
IF (geocode = 18 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (1.10/0.5).

* Area 19 - Corcoran, Hanover, Hassan, Rogers.
IF (geocode = 19 AND agegp5 = 1 AND gender = 1) HHAgSxWt = (7.09/3.8).
IF (geocode = 19 AND agegp5 = 1 AND gender = 2) HHAgSxWt = (6.08/4.1).
IF (geocode = 19 AND agegp5 = 2 AND gender = 1) HHAgSxWt = (28.16/19.6).
IF (geocode = 19 AND agegp5 = 2 AND gender = 2) HHAgSxWt = (27.60/36.7).
IF (geocode = 19 AND agegp5 = 3 AND gender = 1) HHAgSxWt = (13.37/10.4).
IF (geocode = 19 AND agegp5 = 3 AND gender = 2) HHAgSxWt = (11.04/18.8).
IF (geocode = 19 AND agegp5 = 4 AND gender = 1) HHAgSxWt = (3.01/1.6).
IF (geocode = 19 AND agegp5 = 4 AND gender = 2) HHAgSxWt = (3.12/4.6).
IF (geocode = 19 AND agegp5 = 5 AND gender = 1) HHAgSxWt = (0.15/0.2).
IF (geocode = 19 AND agegp5 = 5 AND gender = 2) HHAgSxWt = (0.38/0.2).

IF (agegp5 = 9 OR SYMSIS(gender)) HHAgSxWt = 0.

COMPUTE AveWgt2 = 10608.57/10617.
*COMPUTE AveWgt2 = 1.
COMPUTE HHRegW2 = (HHWgt * HHAgSxWt)/AveWgt2.
FORMAT HHRegW2(F18.5).

FREQUENCIES GENERAL=HHRegW2
/STATISTICS=SUM.
The ratios used in the SPSS syntax file for hhRegW2 are the percent of total adults in a specific geographic area (based on the 1990 Census) who are in a particular age group/sex class (e.g., Women aged 45-64) divided by the percent of total survey respondents in that geographic area who are in that age group/sex class (weighted by HHWgt).

6. **HSAWGT**

The weight variable, hsaWgt, is used to compute the survey response estimates for each of the four Human Service Areas (Minneapolis, South Suburban, West Suburban, and Northwest Suburban) within Hennepin County.

Since the survey responses for the city of Minneapolis (one of the four Human Service Areas) uses weight19 and Area 12 (the South Human Service Area) uses hhRegW2 for weighting purposes, hsaWgt has to match those weights for those areas to keep the results consistent. The main processing is for the West and the Northwest Human Service Areas.

HSAWgt takes into account the following factors:

- Unequal probability based on the number of adults in the household in the sample; and
- Disproportionate sampling rates among the four Human Service Areas based on the number of adult residents; and
- Age and gender distribution of each of the 19 geographic areas, as measured by the 1990 Census, compared to the distribution of the survey respondents from those areas.

The weighting process is a four-step process. Steps One and Two are accomplished by taking the weights generated by hhGeoWgt. Steps Three and Four accomplish the post-stratification age and gender distribution adjustment. In Step Three, weights are generated for the survey respondents. For residents in Minneapolis, the weights match weight19. For residents in Area 12, the weights match hhRegW2. The weights are summed for residents in each of the West and Northwest Suburban Human Service Areas.

In Step Four, the weights (hsaWgt) generated in Step Three are standardized to sum to the total number of cases being analyzed within that Human Service Area in order to keep the size of the standard errors correct.

For example, the sum of the weights for the West Suburban Human Service Area calculated in Step Three equals 1753.29819. In Step Four, all the computed weights are divided by 1753.29819/1753 (AveWgt4 in the SPSS code), so that their revised sum is 1753 (the number of cases being analyzed from the West Suburban Human Service Area). A similar process is used for the cases from the Northwest Suburban Human Service Area.

It should be noted that the sum of the weights for all the cases does not equal the total of 10617 normally found with the other weighting processes. That difference is due to the multiple weights used in this calculation.
* Computes HSAWgt - post-stratification for each of the 4 Human Service Areas.

* HSAWgt is the combination of weight19 for the City of Minneapolis, hhRegW2 for Area 12 (Bloomington, Edina, Richfield, Eden Prairie), and a new weight for the Northwest and West Suburban Human Service Areas.

* Because weight19 was used for the Mpls estimates in the Initial Findings Report, it's important to use that here to match. Using it, however, results in having fewer total cases with weight HSAWgt (8428 rather than 10617). There probably should have been a separate weight for the City of Mpls and the Suburbs total.

* WEIGHT OFF.
FILTER OFF.
COMPUTE AgSxHSAW = -9.
FORMAT AgSxHSAW(F18.5).

* AgSxHSAW = 1990 Census Population total percentage / Survey total percentage for each Age/Sex cell for each of the 19 GEOCODE areas.

* Minneapolis.
IF (region = 1) AgSxHSAW = weight19.
*IF (region = 1 AND agegp5 = 1 AND gender = 1) AgSxHSAW = (5.47/4.7).
*IF (region = 1 AND agegp5 = 1 AND gender = 2) AgSxHSAW = (5.56/5.1).
*IF (region = 1 AND agegp5 = 2 AND gender = 1) AgSxHSAW = (25.09/18.9).
*IF (region = 1 AND agegp5 = 2 AND gender = 2) AgSxHSAW = (24.21/22.5).
*IF (region = 1 AND agegp5 = 3 AND gender = 1) AgSxHSAW = (8.87/11.3).
*IF (region = 1 AND agegp5 = 3 AND gender = 2) AgSxHSAW = (10.42/17.5).
*IF (region = 1 AND agegp5 = 4 AND gender = 1) AgSxHSAW = (6.92/6.2).
*IF (region = 1 AND agegp5 = 4 AND gender = 2) AgSxHSAW = (11.05/11.8).
*IF (region = 1 AND agegp5 = 5 AND gender = 1) AgSxHSAW = (0.66/0.5).
*IF (region = 1 AND agegp5 = 5 AND gender = 2) AgSxHSAW = (1.74/1.5).

* South - Area 12 - Bloomington, etc.
IF (geocode = 12) AgSxHSAW = hhRegW2.
*IF (geocode = 12 AND agegp5 = 1 AND gender = 1) AgSxHSAW = (5.53/2.58).
*IF (geocode = 12 AND agegp5 = 1 AND gender = 2) AgSxHSAW = (5.80/3.67).
*IF (geocode = 12 AND agegp5 = 2 AND gender = 1) AgSxHSAW = (21.79/14.77).
*IF (geocode = 12 AND agegp5 = 2 AND gender = 2) AgSxHSAW = (23.27/18.83).
*IF (geocode = 12 AND agegp5 = 3 AND gender = 1) AgSxHSAW = (13.20/13.28).
*IF (geocode = 12 AND agegp5 = 3 AND gender = 2) AgSxHSAW = (14.53/20.02).
*IF (geocode = 12 AND agegp5 = 4 AND gender = 1) AgSxHSAW = (5.90/8.72).
*IF (geocode = 12 AND agegp5 = 4 AND gender = 2) AgSxHSAW = (8.33/15.36).
*IF (geocode = 12 AND agegp5 = 5 AND gender = 1) AgSxHSAW = (0.39/0.40).
*IF (geocode = 12 AND agegp5 = 5 AND gender = 2) AgSxHSAW = (1.26/2.38).

* Northwest.
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 1 AND gender = 1) AgSxHSAW = (6.134/3.113).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 1 AND gender = 2) AgSxHSAW = (6.489/2.584).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 2 AND gender = 1) AgSxHSAW = (25.530/17.475).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 2 AND gender = 2) AgSxHSAW = (26.376/29.067).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 3 AND gender = 1) AgSxHSAW = (12.493/21.491).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 3 AND gender = 2) AgSxHSAW = (12.962/24.003).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 4 AND gender = 1) AgSxHSAW = (5.397/2.533).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 4 AND gender = 2) AgSxHSAW = (5.807/3.971).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 5 AND gender = 1) AgSxHSAW = (5.642/6.788).
IF ((geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19)
AND agegp5 = 5 AND gender = 2) AgSxHSAW = (7.994/9.552).

* West.
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 1 AND gender = 1) AgSxHSAW = (5.397/2.533).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 1 AND gender = 2) AgSxHSAW = (5.807/3.971).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 2 AND gender = 1) AgSxHSAW = (23.460/13.739).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 2 AND gender = 2) AgSxHSAW = (24.721/24.353).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 3 AND gender = 1) AgSxHSAW = (12.217/14.385).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 3 AND gender = 2) AgSxHSAW = (12.962/24.003).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 4 AND gender = 1) AgSxHSAW = (5.642/6.788).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 4 AND gender = 2) AgSxHSAW = (7.994/9.552).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 5 AND gender = 1) AgSxHSAW = (0.462/0.159).
IF ((geocode = 16 OR geocode = 17 OR geocode = 18)
AND agegp5 = 5 AND gender = 2) AgSxHSAW = (1.339/0.518).
IF (agegp5 = 9 OR SYSMIS(gender)) AgSxHSAW = 0.
*COMPUTE AveWgt = 4712.09625/4716.55612.
COMPUTE AveWgt3 = 1.
COMPUTE AveWgt4 = 1.
COMPUTE AveWgt3 = 2962.704659/2369.
COMPUTE AveWgt4 = 1753.29819/1753.
IF (region = 1 ) HSAWgt = weight19.
IF (geocode = 12) HSAWgt = hhRegW2.
IF (geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19) HSAWgt = (HHGeoWgt * AgSxHSAW)/AveWgt3.
IF (geocode = 16 OR geocode = 17 OR geocode = 18) HSAWgt = (HHGeoWgt * AgSxHSAW)/AveWgt4.
FORMAT HSAWgt(F18.5).

IF (region = 1) HSA = 1.
IF (geocode = 12) HSA = 2.
IF (geocode = 13 OR geocode = 14 OR geocode = 15 OR geocode = 19) HSA = 3.
IF (geocode = 16 OR geocode = 17 OR geocode = 18) HSA = 4.

VAR LABELS HSA "Human Service Area".
VALUE LABELS HSA 1 'Minneapolis' 2 'South' 3 'Northwest' 4 'West'.

MEANS TABLES=weight19,hhRegWgt,HSAWgt BY HSA /CELLS MEAN COUNT STDDEV SUM .

*FREQUENCIES GENERAL=HSAWgt /STATISTICS=SUM.

The ratios used in the SPSS syntax file for HSAWgt are the percent of total adults in a specific Human Service Area (based on the 1990 Census) who are in a particular age group/sex class (e.g., Women aged 45-64) divided by the percent of total survey respondents in that geographic area who are in that age group/sex class (weighted by HHGeoWgt).

7. HOUSEWGT

The weight variable, houseWgt, is used to compute the survey response estimates for households in each of the 19 geographic areas within Hennepin County.

HouseWgt takes into account the following factor:
- Disproportionate sampling rates among the 19 geographic areas based on the number of households.

The weighting process is a two-step process. In Step One, weights are generated based on the factor listed above. In Step Two, the weights generated in Step One are standardized to sum to the total number of cases being analyzed in order to keep the size of the standard errors correct.
For example, the sum of the weights calculated in Step One equals 419118. In Step Two, all the computed weights are divided by 419118/10671 (AveWgt in the SPSS code), so that their revised sum is 10671 (the number of cases being analyzed).

The SPSS code used to generate houseWgt is as follows:

```
** housewgt.sps, revised on Oct. 16, 1998 **.

WEIGHT OFF.
FILTER OFF.
COMPUTE hhadult = q60a.3 + q60a.4.

compute HouseWgt = -9999999.
FORMAT HouseWgt (F18.5).

* Computes HouseWgt - for each of the 19 SHAPE analysis areas after weighting by the household size.
*. WEIGHT OFF.
FILTER OFF.

*. NumHH = 1990 Census total number of households
*. RECODE geocode (1=11862)
    (2=18303)
    (3=11908)
    (4=12978)
    (5=11713)
    (6=13066)
    (7=6307)
    (8=22665)
    (9=16478)
    (10=21376)
    (11=16040)
    (12=84452)
    (13=32056)
    (14=32712)
    (15=37681)
    (16=46746)
    (17=16900)
    (18=3425)
    (19=2450)
    (ELSE=-9)
    INTO NumHH.
```
FORMAT NumHH(F18.5).

RECODE geocode(1=540)
(2=569)
(3=567)
(4=561)
(5=545)
(6=577)
(7=544)
(8=600)
(9=596)
(10=562)
(11=609)
(12=539)
(13=545)
(14=539)
(15=545)
(16=544)
(17=543)
(18=547)
(19=545)
(ELSE=-9)
INTO sampSize.

COMPUTE AveWgt = 419118/10617.
*COMPUTE AveWgt = 1.
COMPUTE HouseWgt = (NumHH/ sampSize)/AveWgt.
FORMAT HouseWgt(F18.5).

FREQUENCIES GENERAL=sampSize,HouseWgt
/STATISTICS=SUM.

Summary

The following table summarizes which weight variable is the appropriate one to use for various geographic units of analysis.

<table>
<thead>
<tr>
<th>Geographic Unit of Analysis</th>
<th>Unit of Analysis</th>
<th>Weight Variable to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the 19 geographic areas</td>
<td>Person</td>
<td>hhRegW2</td>
</tr>
<tr>
<td>City of Minneapolis</td>
<td>Person</td>
<td>weight19</td>
</tr>
<tr>
<td>Suburban Hennepin County</td>
<td>Person</td>
<td>weight19</td>
</tr>
<tr>
<td>All of Hennepin County</td>
<td>Person</td>
<td>weight19</td>
</tr>
<tr>
<td>One of the 4 Human Service Areas</td>
<td>Person</td>
<td>Hsaweight</td>
</tr>
<tr>
<td>Any</td>
<td>Households</td>
<td>Housewgt</td>
</tr>
</tbody>
</table>
Because of the use of multiple weights, one needs to compute manually any statistical test between different levels of geographic areas (e.g., comparing one of the 19 geographic areas with the city of Minneapolis) when people are the unit of analysis.

Finally, to repeat what was stated earlier, the weights HHGeoWgt, Fweight, and HHRegWgt should NOT be used for any analysis for reasons stated in the section describing each of those weights.