

**National Women’s Business Council**  
**Supporting Statement and Additional Documentation**  
**Research on Millennial Women Entrepreneurs**

**B. Collection of Information Employing Statistical Methods**

1. Respondent Universe and Selection Methods

As discussed in Section A, data for this component of the research study will be collected through focused group interviews. The respondent universe for this study is current and prospective entrepreneurs located in the cities listed below and identified through public articles, press, LinkedIn and Crunchbase.<sup>1</sup> **Current entrepreneurs** are those who are currently operating a business. **Prospective entrepreneurs** are individuals that want to start a business in the short-term but have not yet done so.<sup>2</sup> The pre-interview questionnaire in Appendices 1 and 2 will be used to determine if a potential participant is a prospective entrepreneur using the questions “do you currently own your own business” and “do you aspire to start your own business in the near future?”. Respondents who answer yes to both questions will be considered “prospective entrepreneurs” for the purposes of this data collection. This study will not include individuals who may want to start a business at some point in their lives, but who have no imminent plans to do so. The prospective entrepreneur category, comprised entirely of women, is specific to millennials wishing to start a business in the short-term who have not yet done so. Despite some of the limitations introduced by the necessity of sharp focus, limited time, and small sample sizes, applications of focus groups are widespread (Fontana & Frey, 2000; Krueger & Casey, 2000, 2008; Madriz, 2008; Morgan, 1988, 2008). Focus groups have entered the repertoire of techniques for qualitative researchers and evaluators involved in participatory studies with co-researchers.

To produce meaningful results, more than one focus group on a particular topic is required. For a single group, practice dictates that three or four groups per population are acceptable.<sup>3,4</sup> This allows researchers to reach the critical “saturation point” in a series of focus groups, the point at which patterns are discernable in the coding of data and notes.<sup>5</sup> We propose conducting three focus groups for each participant category outlined below, consistent with professional and research standards for focus groups. The ideal amount of time for a focus group is 45 to 90 minutes. Beyond that period,

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<sup>1</sup> For more information, please see <https://www.crunchbase.com/>

<sup>2</sup> No focus groups with non-entrepreneurs, individuals not interested in pursuing entrepreneurship in the short term, will be conducted.

<sup>3</sup> For example, when speaking to prospective millennial women entrepreneurs in a focus group, three separate focus groups should be performed to align with professional best practices and to extract the best results.

<sup>4</sup> Performing the focus groups in different cities across the United States does not influence the number of groups that should be performed. Instead, it provides the ability to ascertain geographic influence on the subject matter.

<sup>5</sup> Patton, Michael Quinn. 2015. *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Thousand Oaks, CA: Sage Publications.

focus groups are unproductive and begin to impose on participant time. Below we outline the rationale for conducting focus groups with both prospective and current entrepreneurs, following by a discussion of the recruitment selection methods to be implemented and a discussion of limitations to the research.

According to Krueger and Casey (2014),<sup>6</sup> collecting data directly from the affected individuals “allows professionals to see reality from the client’s perspective.” In order to address the research gaps outlined in Section A, it is necessary to capture the perspective of individual that are interested in or seek to become entrepreneurs, but have not yet done so. This will enable the NWBC to understand perceptions of entrepreneurial millennial women in the respondent universe prior to the establishment and ongoing operations of a new firm, elucidating key challenges.

Focus groups can be recruited in multiple ways. We will use the following in recruiting participants:

- Nomination – key individuals nominate people they believe would make good participants. Nominees are familiar with the topic, known for their ability to respectfully share their opinions, and willing to volunteer their time for the study. Key individuals include professors of business, accelerator or incubator leaders, and business support organization leaders, such as those of women’s business centers.
- Members of the Same Group/Community – an existing group can be an ideal pool from which to invite participants. Examples include undergraduate or graduate business programs (for prospective entrepreneurs), Small Business Development Centers or Women’s Business Centers (for prospective entrepreneurs doing research on starting a business but not yet having done so), young people networking organizations (for current entrepreneurs), and incubator and accelerator graduate/participants (for current entrepreneurs). Combined with snowball sampling,<sup>7</sup> targeted emails that rely on networks of contacts are effective at recruitment and reduce hesitation to participate. Sources such as Crunchbase and LinkedIn allow search by location (and gender in the case of Crunchbase) as well as contact information.

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<sup>6</sup> Krueger, Richard A., Mary Anne Casey. 2014. *Focus groups: a practical guide for applied research*. Sage Publications.

<sup>7</sup> Snowball sampling, in general application, is a type of convenience sample. Snowball sampling is appropriate when recruiting people who are difficult to identify or have to meet certain criteria to participate. Essentially, it involves finding, one person who qualifies to participate and asking him or her to recommend several other people who have the knowledge/traits you are looking for, thus growing the pool of potential participants. This use of snowballing is a type of purposive sampling. Snowballing can be used to approximate a random sample. There are two main ways that this can happen. The first happens when the first wave of participants are given a selection criterion that helps “randomize” the sampling process. An example would be to have the person recommend potential participants who live the farthest away. After a few rounds, you get a pretty good mix. The second uses network analysis theory to calculate weights for the data so that they reflect the known census/demographic characteristics of the population being studied. For more information, please see [https://www.researchgate.net/post/What\\_is\\_snowball\\_sampling](https://www.researchgate.net/post/What_is_snowball_sampling)

The focus group component of this research project will employ a combination of recruitment strategies above. For each city, we will develop a list of prospective and current entrepreneurs from the respondent universe described above. We will utilize public articles, press, LinkedIn, and Crunchbase to identify prospective and current entrepreneurs. Successful recruitment requires careful efforts. When working with focus groups/group interviews, it is important to utilize a systematic and deliberate process.

We have deliberately systematized our focus group recruitment strategies.<sup>8</sup> Nevertheless, we recognize that a group interviews the proposed selection introduces bias into the sample. Given that the sample is not intended to be a statistically significant representation of all millennials and instead is intended to provide insights as part of an overall research process, this is an acceptable limitation and will be thoroughly discussed in the final product. In order to limit bias to the fullest extent possible, we will generate a pool of names of potential participants, randomly selecting names in the pool to reduce bias. Randomization will be done for those individuals who pass the selection screens as we typically encounter more willing participants than are necessary in this type of research.<sup>9</sup> Thus, while bias may be introduced, we are looking for those participants who are actively engaged in entrepreneurship as well as those who have been actively engaged in attempting to start their own businesses in the short-term. **The results of this qualitative data collection will not be representative**, but rather, will identify patterns that help illuminate **why** individuals may be acting in certain ways, **what** barriers or facilitators exist, and fit those responses with the information that we know from other components of this research study.

A last limitation to this research is response rates. Typical response rates for social scientific approaches such as surveys are between 10 to 30 percent. Response rates for more qualitative face-to-face personal and group interviews are much higher, reaching as high as 80 to 85 percent, since screening has occurred and individuals have agreed in advance to participate. Incentivized participation also improves response rates. Given our small sample size, we would expect that we will achieve the 6 to 12 individuals per group interview – a widely agreed upon range for effective and useful focus group data to emerge. Once engaged in a focus group interview, an effective, well-trained moderator will be able to guide participants in discussion throughout the time period. All participants will have the opportunity to engage with the questions asked as well as with one another. To that end, we will have high response rates among those selected, typical for this methodology, and expect that per best practices in the field, combining incentivization, and both careful and random selection of participants from the screened pool, response rates will reflect typical rates at or above the 30 percent threshold for quantitative research.

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<sup>8</sup> This process is detailed below.

<sup>9</sup> The participant profile will be used as a selection screener to ensure that all willing participants meet the study criteria: the correct gender for each group, entrepreneurial status, presence of student debt, correct age range, etc. The profile will also be used to ensure that groups are non-homogenous in terms of race and ethnicity.

There are some inherent limitations with the use of focus groups as a research and data collection methodology. Specifically, focus groups such as these do not capture broad or wholly representative data. Rather, as indicated above, the use of focus groups here will build upon the demographic and quantitative data already compiled in this research study. In particular, scholars such as Madriz note that focus groups can provide new avenues for exploration, helping to hone and craft further hypotheses and suggest additional areas of inquiry as part of an overall project.

We will complete 9 focus groups in three separate cities. The selection of geographic location is a linear process that incorporates a series of screens to remove cities that do not meet the desired attributes while creating a geographically diverse set. We began our selection with a list that compiled several online lists of “top cities for millennials” and “top cities for millennial entrepreneurs,” and includes 52 cities across the United States. The cities were drawn from the following lists:

- The Voactiv list<sup>10</sup> started with the 50 largest cities and ranked them on the following: youngest population, lowest employment rate, lowest average rent, cheapest gallon of gas, cheapest electricity, lowest average cost of food and beverage, public transportation ridership, green commuter index, cheapest broadband, highest average salary, most laundromats per capita, most coffee shops per capita, most vintage clothing stores per capita, most cheap takeout restaurants per capita, lowest priced manicures and pedicures, highest percentage of young single people, most music venues per capita, cheapest pack of cigarettes, cheapest pint of beer, cheapest ounce of high-quality marijuana.
- The Niche list<sup>11</sup> ranked the metropolitan areas in the United States with at least 1 million residents using a combination of the following: a proprietary survey of nearly 500,000 college students and recent graduates over four years, data from the U.S. Census Bureau, FBI crime rates. Factors included percentage of population between 25 and 34 years old, median rent, median income, education level, racial diversity, unemployment rate, crime rates, best professional sports, best shopping, most accessible, best nightlife, best cultural attractions.
- The Nerdwallet list<sup>12</sup> was developed by analyzing 181 metropolitan areas in the United States. The list was developed using the following data sources: U.S. Small Business Administration, U.S. Census Bureau, U.S. Bureau of Labor Statistics, Council for Community and Economic Research.
  - o Small business financing accounted for 20 percent of the overall score and considered SBA loans per 100,000 people
  - o Local business environment accounted for 25 percent of the overall score and incorporated the unemployment rate (10 percent) and the number of small businesses per 100 residents (15 percent)

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<sup>10</sup> Please see <http://www.vocativ.com/culture/media/livability/>

<sup>11</sup> Please see <https://ink.niche.com/methodology-25-best-places-millennials/>

<sup>12</sup> Please see <https://www.nerdwallet.com/blog/finance/best-cities-for-young-entrepreneurs-2015/>

- o Local economy accounted for 55 percent of the overall score and considered the percentage of the population ages 25 to 34 (15 percent), the percentage of the population age 25 and older with a bachelor's degree (15 percent), the median earnings of the population (15 percent), the cost of living index (10 percent).

Before beginning the screening process, we gathered the following information for each location:

- Primary County
- Total Population (2015 Census Estimate)
- Unemployment Rate (MSA-level, Bureau of Labor Statistics)
- Innovation Accelerator Presence (Seed-DB)
- 2011 and 2015 County-Level Census Data (for each year)
  - o Total Population
  - o Population of Millennial Men
  - o Population of Millennial Women
- Change in Total Population and Millennial Population
- Average Student Loan Debt
  - o Student Loan Burden Ranking
- Median Income, Individuals Aged 25-44

The 52 cities screened include:

Scottsdale, Arizona	Tempe, Arizona	Berkeley, California
Los Angeles, California	San Diego, California	San Francisco, California
San Jose, California	Santa Clara, California	Sunnyvale, California
Denver, Colorado	Washington, D.C.	Atlanta, Georgia
Boise, Idaho	Chicago, Illinois	Fort Wayne, Indiana
Baton Rouge, Louisiana	Boston, Massachusetts	Cambridge, Massachusetts
Ann Arbor, Michigan	Minneapolis, Minnesota	St. Paul, Minnesota
Lincoln, Nebraska	Henderson, Nevada	Reno, Nevada
Jersey City, New Jersey	New York, New York	Charlotte, North Carolina
Durham, North Carolina	Raleigh, North Carolina	Winston-Salem, North Carolina
Fargo, North Dakota	Oklahoma City, Oklahoma	Portland, Oregon
Pittsburgh, Pennsylvania	Charleston, South Carolina	Arlington, Texas
Austin, Texas	Dallas, Texas	Fort Worth, Texas
Garland, Texas	Houston, Texas	Irving, Texas
Lubbock, Texas	Midland, Texas	Plano, Texas
Round Rock, Texas	Salt Lake City, Utah	Alexandria, Virginia
Arlington, Virginia	Bellevue, Washington	Seattle, Washington
Madison, Wisconsin		

*Screen 1: Declining Millennial Population*

Using the collected population information, we calculated the percentage of millennials in 2011 and 2015 and found the difference. Any locations where the percentage of millennials declined (i.e., a shrinking millennial population) were rejected. We included this screen to ensure that the cities we target are attractive to millennials.

This step removed 5 cities:

Chicago, Illinois	Jersey City, New Jersey
New York, New York	Fargo, North Dakota
Midland, Texas	

*Screen 2: No Primary Accelerator in Seed-DB*

Innovation accelerators are startup assistance programs that provide seed funding to participants in exchange for equity in the company. Accelerators rose in popularity in the late 2000s as a method for company founders to gain necessary experience, training, mentorship, and funding. The majority of accelerators have a selective application process for companies and founding teams. Accelerator programs operate with a cohort model that concludes with a demo day where participating entrepreneurs pitch their ideas to a group of investors. Given their newness, accelerators are a component of the entrepreneurial ecosystem we anticipate that millennial women entrepreneurs are interested in. Accelerator programs are also connected with experienced entrepreneurs, mentors, venture capitalists, and angel investors. As such, accelerator programs address issues that all entrepreneurs face in terms of education, networking, and access to capital. However, research indicates that these issues are particularly pronounced for women and minority entrepreneurs.<sup>13</sup> For these reasons, we feel that it is important that the cities selected have established innovation accelerators.

To identify which cities in the sample have established accelerator programs, we utilized Seed-DB. Seed-DB<sup>14</sup> is a data aggregator for entrepreneurs, accelerators, and investors tracking companies and organizations that provide seed-level funding. A hallmark of Seed-DB is a comprehensive list of accelerators. We searched for all cities in our sample and rejected those without established accelerators listed in Seed-DB.

This step removed 25 cities:

Tempe, Arizona	Berkeley, California
San Diego, California	Boise, Idaho
Fort Wayne, Indiana	Baton Rouge, Louisiana
St. Paul, Minnesota	Henderson, Nevada

<sup>13</sup> Fairlee, R.W. Robb, A.M. *Race and Entrepreneurial Success: Black-, Asian- and White-owned Businesses in the United States*. Cambridge, MA: The MIT Press. 2008.

Robb, A. Coleman, S. Stangler, D. *Sources of Economic Hope: Women's Entrepreneurship*. Ewing Marion Kauffman Foundation. November 2014.

<sup>14</sup> For more information, please see <http://seed-db.com/accelerators>

Reno, Nevada	Charlotte, North Carolina
Raleigh, North Carolina	Winston-Salem, North Carolina
Oklahoma City, Oklahoma	Charleston, South Carolina
Arlington, Texas	Fort Worth, Texas
Garland, Texas	Irving, Texas
Lubbock, Texas	Plano, Texas
Round Rock, Texas	Salt Lake City, Utah
Alexandria, Virginia	Arlington, Virginia
Bellevue, Washington	

*Screen 3: Popularity*

Screen 3 incorporates the ability to determine which cities are generating buzz for their suitability for millennials and millennial entrepreneurs. Screen 3 removes cities that were not included on two lists<sup>15</sup> of best cities for millennials or millennial entrepreneurs. This screen is in place to select the most popular and “buzzed” about cities from the remaining 22 locations.

This step removed 11 cities:

Scottsdale, Arizona	Santa Clara, California
San Jose, California	Sunnyvale, California
Atlanta, Georgia	Ann Arbor, Michigan
Lincoln, Nebraska	Durham, North Carolina
Portland, Oregon	Dallas, Texas
Houston, Texas	

*Screen 4: Student Debt Burden*

Given the importance of evaluating student debt to our research hypotheses, we incorporated the student debt burden into the screening process. We compared the average student loan debt to the median income for individuals aged 25 to 44 in each city. To elucidate causal information about the impacts of high student loan debt, we want to travel to cities with the highest student loan debt burden relative to income. Therefore, we screened for cities with a student loan debt to average salary ratio greater than 0.5.

This step removed 3 cities:

San Francisco, California	Cambridge, Massachusetts
Seattle, Washington	

*Final City Selection*

<sup>15</sup> The lists referenced are those discussed on pages 20 and 21 of this submission.

The multi-faceted screening process employed selects cities for inquiry in a replicable, transparent manner. The eight finalist cities include:

Los Angeles, California	Denver, Colorado
Washington, D.C.	Boston, Massachusetts
Minneapolis, Minnesota	Pittsburgh, Pennsylvania
Austin, Texas	Madison, Wisconsin

We selected Boston, Denver, and Los Angeles for our focus group locations based on the factors and process outlined above as well as discussions with the NWBC. As part of this selection, we performed various analyses probing lifestyle factors, race, industry, total population, and funding source distributions in each city to develop geographic cohort that will provide rich data for comparison and contrast among the focus groups. We selected each city for multiple reasons, including, but not limited to:

- Los Angeles was selected due to its large Hispanic/Latino population, its ranking as America’s second largest city, its west coast location, and that it is a traditional hot-bed of entrepreneurial activity.
- Denver has one of the first and largest innovation accelerators, TechStars, as well as a non-coastal location, and is a young city, with an average age of 31.7 years and 2.5 percent annual growth in the millennial population.
- Boston is a leading innovation hub in the United States, the city is racially diverse, with approximately a 45 percent non-White population, high student loan debt burden at a 73.1 percent loan-to-income ratio.

Figure 2 shows the composition and location for the nine focus groups that we will conduct (gray boxes).

**Figure 2  
Focus Group Summary**

Boston, MA	Denver, CO	Los Angeles, CA
Prospective Millennial Women Entrepreneurs	Prospective Millennial Women Entrepreneurs	Prospective Millennial Women Entrepreneurs
Current Millennial Women Entrepreneurs	Current Millennial Women Entrepreneurs	Current Millennial Women Entrepreneurs
Current Millennial Men Entrepreneurs	Current Millennial Men Entrepreneurs	Current Millennial Men Entrepreneurs



## 2. Procedures for the Collection of Information

Nine focus groups will be conducted to obtain in-depth insights on the effects and relationship between student debt and business formation and growth in technology-based industries. After recruitment, the contractor will host 3 separate focus groups in each selected city. For each location, the contractor will separately collect information from (1) prospective millennial women entrepreneurs, (2) current millennial women entrepreneurs, and (3) current millennial men entrepreneurs. The focus group sessions will be digitally recorded and professionally transcribed to ensure maximum information collection in the most efficient means possible.

The proposed focus groups will not result in a statistically significant representative sample of all millennials in the United States. As such, no attempt to generalize findings from the focus group as such will be made. The focus group data will be analyzed by PQC, Inc. and will be incorporated into a larger research report. As discussed above, this research includes a literature analysis and environmental scan, data analysis using American Community Survey and Survey of Business Owner and Self-Employed Persons data, and focus group results. The final report will synthesize all elements mentioned. The findings will be used in the manner described in A.2 of this submission.

Focus groups have entered the repertoire of techniques for qualitative researchers and evaluators involved in participatory studies with co-researchers. Several steps comprise careful and accurate qualitative focus group analysis. Developing some manageable classification or coding scheme is the first step in data analysis. Content analysis involves identifying, coding, categorizing, classifying and labeling the primary patterns in the data. These processes permit analysis of the core content of focus group interviews in order to determine what is most significant. Software programs provide different tools and formats for coding; however, the principles of the analytical process are the same whether doing it manually or with the assistance of the computer program. In general, the following steps should be followed when analyzing focus group transcript data in order to “make meaning” of these data:

1. Read and re-read focus group and interview data as transcribed – increase familiarity with these data and utilize memo notations alongside the development of both manifest (descriptive) and latent (analytical) codes.
2. Coding (by hand and by multiple independent coders as well as using computer software MAXQDA<sup>16</sup> program) will be conducted.
3. Codes are then condensed so that extensive and varied raw text data can be analyzed/summarized more efficiently – categorizing information to identify themes and patterns and organize multiple sets of data into coherent categories.

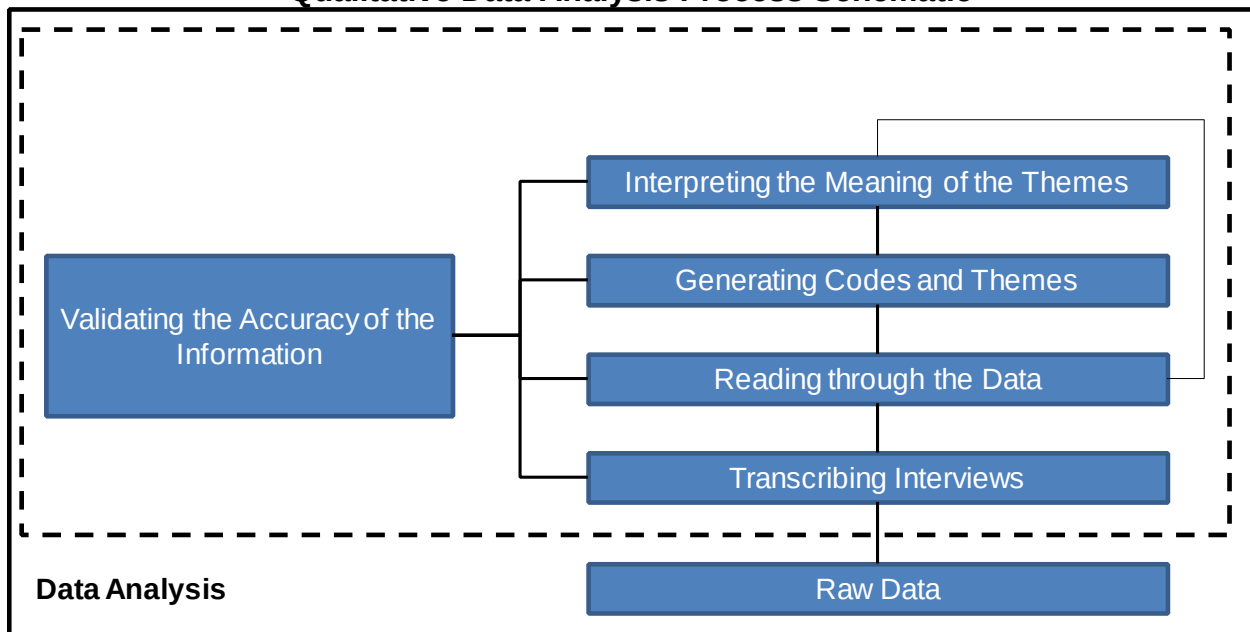
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<sup>16</sup> MAXQDA is a professional software program for qualitative and mixed methods data analysis. It is available for both Mac and PC platforms. [www.maxqda.com](http://www.maxqda.com)

4. A codebook of significant codes and broader themes is then developed – codebooks standardize the qualitative data analysis process and allow multiple analysts to use and apply these tools, increasing inter-coder reliability.
5. Preliminary summary statements and analyses are conducted in order to establish clear links between the research objectives and the summary findings and to ensure that these links are both transparent (able to be demonstrated to others) and defensible (justifiable given the objectives of the research) – in this step the qualitative findings are transformed into more quantitative and measurable trends in order to build applicable theories and explanatory models.
6. Interpretation of the data to develop a model or theory about the underlying structure of experiences or processes that are evident in the text is the final step in the analysis process.

Classifying and coding qualitative data produces a framework for organizing and describing what has been collected during qualitative data collection. This descriptive phase of analysis is essential. It builds a foundation for the interpretive phase when meanings are extracted from the data, comparisons are made, creative frameworks for interpretation are constructed, conclusions are drawn, significance is determined. It is an iterative process, as shown in Figure 3.<sup>17</sup>

**Figure 3**  
**Qualitative Data Analysis Process Schematic**



<sup>17</sup> Adapted from Creswell, John W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 3<sup>rd</sup> ed. Sage Publications.

### 3. Methods to Maximize Response Rate

We will take two primary steps to maximize response rates. First, we will send initial emails to potential participants, informing them of the value of their potential contribution to the research and data collection, as well as how the results will be used. Focus group participants will receive an email confirmation upon selection.<sup>18</sup> Second, we will call all focus group participants 7 days in advance of the focus group in which they are scheduled to participate as a reminder. Email reminders will be sent to participants 24 hours prior to their scheduled focus group, including details on location.

### 4. Test of Procedures and Methods

The focus group design and methodology have been thoroughly vetted by the Contractor team as well as the NWBC. We have performed internal tests to vet and verify the questions recorded, consistent with professional focus group design standards.

### 5. Names and Contact Information for Individuals Consulted on Qualitative Design and Name of Agency Contact or Contractor Who Will Collect and Analyze Information for the Agency

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<sup>18</sup> For more information on the selection process, please see Appendices 1 and 2.

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