

Washoe County



Health District

RECYCLING FOCUS GROUPS: UNDERSTANDING THE RECYCLING BEHAVIORS AND BARRIERS IN WASHOE COUNTY

Prepared for
The Washoe County Health District
Environmental Health Services

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Foreword

Public health education and programs should be based on the needs and desires of the public. All too often the qualitative data that probes the depths of these needs is left out of the planning process. We would like to extend our thanks to the many people who helped make this report a possibility and who helped us to foster improvement in the system.

Big thanks to Jeanne Rucker, REHS from Environmental Health Services, for the opportunity to do this project, and for her support both monetarily and administratively to make the project a success. Thanks to Patsy Buxton, CGMS, for her patience and guidance in preparing the finances for this project, and to Paula Valentin for her help with the gift cards and processing of expenses. Thank you to Justin Caporusso from Waste Management of Nevada, Inc. for his time and expertise on the current franchise system. We would not have been able to conduct the Spanish focus groups without the support of Jessica Paz-Cedillos, from the United Latino Community, so thank you for all your effort. Thank you to Madonna Dunbar from Waste Not in the Incline Village General Improvement District who helped to recruit participants and organize the focus groups in Incline Village. Lastly, thank you to the staff at Keep Truckee Meadows Beautiful who allowed us to post the focus group announcement on their website.

I. Introduction

Curbside recycling is offered to all Washoe County residents who have residential service through the local franchised garbage and recycling hauler, Waste Management of Nevada, Inc. (hereafter called Waste Management)¹. While garbage service is a mandatory service, curbside recycling is optional and only 40% of residential customers are participating¹. There is also low utilization of local drop-off recycling centers, which are usually the only recycling outlets for residents living in multi-family dwellings, condominiums or other non-single family dwellings. Though Washoe County Health District (WCHD) does not directly provide recycling services, they do regulate the local recycling industry including Waste Management. WCHD is also trying to fulfill a Washoe County target recycling target rate of 35% by 2015; the 2010 Washoe County recycling rate was only 27%, down from 30% the previous year¹. Increasing curbside recycling participation and utilization of local drop-off facilities have been identified by WCHD staff as a means to help meet the 35% target recycling rate.

As with any human behavior, recycling behavior is determined by a complex set of factors including home ownership, geographical location, perception of benefit, and level of knowledge^{1,2}. In order for the WCHD to increase county-wide recycling, future educational materials and outreach programs need to be tailored to the community's specific needs and beliefs regarding recycling. Facilitated focus groups are group interviews and are very effective qualitative data collection tools for understanding the motivations, beliefs and barriers of a specific group of people or populations². To develop a better understanding of the recycling behaviors (or lack thereof), a series of 14 focus groups were completed between October 15 and December 15, 2011 with the residents of Washoe County by Ms. Lee Bryant, WCEHS, and Ms. Emily Brown. This report outlines the findings of this effort and states specific recommendations based on the responses of the participants.

II. Recruitment and Focus Group Sessions

Recruitment entailed using announcement on the local public radio station, KUNR; posting flyers throughout the community; and newspaper advertisements in the Reno News & Review, Sparks Today and the Reno Gazette Journal. All but three of the focus groups were held at the Washoe County Complex at 1001 East 9th Street in Reno. The focus group held in Incline Village was at the Washoe County Water Resources Building in Incline Village and the two Spanish language focus groups were held at churches in Reno and Sparks. A total of 14 sessions were held and a total of 111 residents participated.

Focus groups are usually conducted with homogenous groups to facilitate discussion². However, to address the large pool of Washoe County residents, groups were organized by city of residency, type of habitation (e.g., single family home, apartment), English or Spanish as a first language and whether or not they currently recycled. Interested parties were instructed in all of the recruitment media to call Ms. Bryant (for the English Groups) or Ms. Jessica Paz-Cedillos (for the Spanish groups) from United Latino Communities for initial screening. Screening

¹ Salgado, L. (2011). Washoe County Solid Waste Management Plan.

² Wholey, J., Harty, H. & Newcomer, K. (2010). Handbook of Practical Program Evaluation, 3rd edition.

included asking each participant a series of questions to, one, determine eligibility in the focus group, and two, to determine which focus group they should most appropriately attend. Focus groups were usually 60-75 minutes long and were facilitated with the same standard script that contained open-ended questions about recycling behaviors, knowledge and general beliefs. All but one of the sessions was held in the evening during the week with one evening Saturday session.

Spanish-Speaking Groups

The Latino population makes up 22.2% percent of Washoe County based on the 2010 US Census, so it was important to strongly recruit this demographic since they are the largest minority in Washoe County. The United Latino Communities (ULC) office in Carson City, Nevada was utilized to help with the recruitment. The ULC represents Latinos in Washoe County, as well as Carson City, and had several connections with the University of Nevada, Reno (UNR) and church groups. The ULC, headed by Ms. Paz-Cedillos, arranged the details for two Spanish-language focus groups, translated the survey and script, lead the focus groups and compiled notes and observations. Although Spanish recruitment flyers were posted alongside English flyers, no Spanish-speaking participants were recruited through this method.

The ULC felt that focus groups held in familiar community settings, such as schools or churches, would produce better attendance with this demographic rather than individual recruitment. Representatives at several locations were contacted, and two separate focus groups were scheduled at Spanish-speaking churches in Reno and Sparks. The sessions were held on a weekday evening during the second hour of a regularly held mass in the church community space. The ULC had talked with the Latino Research Center at the UNR, but due to scheduling, a separate on-campus focus group could not be arranged. Instead, approximately ten Latino UNR students attended the second Spanish focus group.

III. Descriptive Statistics

Surveys

Demographic surveys were modeled after the 2010 US Census to facilitate analysis with national and regional data. These surveys were optional, anonymous and given to participants at the conclusion of the focus group facilitation. Surveys that were not completed were coded as “unknown” and surveys with incorrectly marked answers were coded as “not valid answer” for data analyses. The missing or invalid data accounted for roughly 10% of all the data; limitations of this missing data are discussed in the Discussion section below.

Demographics

In total, 110 participant responses were included in analysis (additionally one participant’s responses were removed from the project and data analysis since they were younger than 18 years of age which was outside of the inclusion criteria) and 14 focus groups were conducted. The demographics of the focus group participants were older, more educated and more likely to

be female than the general population of Washoe County. Ethnicity and race responses showed that participants proportionally were slightly more likely to be white though other race and ethnic groups were relatively similar to Washoe County. Most of the participants resided in City of Reno similar to the general Washoe County population; however, City of Sparks and Incline Village General Improvement District (IVGID) residents were slightly under represented with Washoe County residents significantly underrepresented.

Table 1. Descriptive Statistics of Focus Group Participants

Category	Age
Mean	51
Median	52
Mode	37
Minimum	21
Maximum	83

IV. Findings from Focus Groups

1) Information about Recycling Services

In every focus group participants expressed a difficulty in finding consistent about curbside recycling specifics, local recycling outlets and general information about recycling. There was not a clear understanding of what items were accepted and allowed in curbside recycling service. Participants were not always sure how to prepare items to be recycled (e.g., should labels be removed). One participant stated, “We don’t know if we are doing it wrong and ruining a whole batch.” There was significant interest in where to take household hazardous waste (e.g., batteries, light bulbs, oil) for recycling or appropriate disposal, but a lack of knowledge about outlets.

Many participants had tried to research answers to these questions, but information was sparse and inconsistent. One participant stated, “Even people who are motivated can’t get information.” Local information sources mentioned included Keep Truckee Meadows Beautiful, Waste Management, Washoe County, phonebook insert, Nevada recycling hotline, etc. However, it was noted that these sources didn’t always agree and there was not a “central clearing house of information.” (As a side note, the phonebook insert has recently been updated, but this did not occur until after the focus groups had started, so this may have added to some of the confusion.) General online websites were mentioned (e.g., EPA), but this information didn’t always coincide with recycling capabilities in Washoe County. Even when information was available, it was not always well promoted to the community. One participant stated, “I didn’t even know Washoe County had a website for recycling until this focus group.” Some of the most popular and trusted sources of information participants utilized were friends, family and word of mouth. Even at the focus groups, participants would ask each other questions about other outlets.

Getting information directly from Waste Management was an issue that was brought up multiple times. “When I call Waste Management I get a different answer every time.” There were often

long wait times on their customer service lines and Waste Management employees didn't always have information about local hours of drop-off facilities or where to take items not accepted curbside. Participants wanted Waste Management to maintain a better listing of their own resources and needed to better train their employees to answer customers' questions. During one of the Spanish-speaking focus groups, it was asked if the Spanish option on the customer service number for Waste Management was appropriate for Spanish-speaking patrons. The participant said yes, but they had to wait a long time on the phone. It took so long they called back and did the English-speaking prompt instead, which took less time. Though individuals may have had issues with Waste Management phone customer representatives, participants spoke highly of the sanitation workers and said they were very helpful in answering curbside recycling questions.

Inconsistent information was also an issue for participants when requesting bins for curbside service. One participant said his bins were delivered to his new residence without calling Waste Management, but when he called Waste Management to get bins at his previous residence; he was told by a Waste Management service representative his account already had bins though he had never requested them previously for this address.

2) Barriers to Recycling

Even for those who have the desire to recycle, there are multiple barriers that can make this act difficult in Washoe County. Not all recyclable materials are accepted in curbside recycling, but some additional materials can be taken to Waste Management drop-off centers or other local businesses. This is not an option for everyone though, for several reasons. First, the Waste Management drop-off centers are not open 24 hours a day, so their operation hours may not be convenient for all residents. Many of the participants who work a traditional 40 hours work week said they had to make a concerted effort to stop by during those times. If one wanted to try and recycle items, other than materials Waste Management actively advertises it accepts in curbside service (e.g., #5 plastics), it can be time intensive to go to all the different outlets for items. Basically, you have to be a motivated person to find recycling information, or it becomes a hobby. "You have to want to do it." For those who don't already have a drive to recycle, these barriers make it even more difficult for them to start.

Participants who live in apartments or other dwellings that don't have access to curbside recycling encountered additional barriers to recycling. Many apartment complexes do not offer recycling. Participants whose complexes do have recycling felt the managers didn't do a sufficient job promoting this option to tenants; many recyclable items still ended up in the trash. For those who live in apartments and took their recycling to drop-off centers, limited space was an issue for storing recyclable materials. Many apartments are not large and often participants noted that they didn't have an extra space, such as a garage, to store bags or bins in. One participant noted that they took cans for redemption on the bus. They said that this was not allowed, or was at least frowned upon, and bags could sometimes be confiscated. (This participant got around this problem by carrying cans and bottles in a suitcase!)

Some participants expressed a frustration with the lack of recycling at local public events. Participants wished to see more recycling at specific events such as shows at the Livestock Event Center, UNR football games and farmer's markets. However, participants did notice more

recycling containers at the Rib Cook-off this last year than the proceeding years, yet they still observed trash cans full of plastic cups and aluminum cans that could have been recycled. The good paper recycling program at the UNR campus was acknowledged several times.

Finally, while viewpoints varied about whether or not scavenging through recycling bins (illegal recyclers) was good or bad, problems from this activity were reported. Scavengers usually leave a mess when going through homeowners' curbside recycling bins, and at least one homeowner reported that they were required by their homeowners association to put their trash out in the morning to avoid this. Others simply did not like having strangers being in their neighborhood and going through their items. One participant didn't mind people collecting their recyclable materials, but stated, "If they just would have asked I would have given it to them." There was discussion about whose property the recycling was, as well as why Washoe County or Waste Management wasn't doing more to stop the activity.

3) Sentiments Regarding Franchisee

At almost every focus group, there was some frustration with the provider of curbside recycling services; Waste Management. "I think Waste Management wants to make things as difficult as possible." Many of these comments revolved around information, or lack of information, provided by Waste Management about curbside recycling, recycling in Washoe County in general by Waste Management, their general goals and infrastructure.

There was an emphasis on looking at the *local* impacts or the *local* benefits of recycling. Some of the questions asked included how much money was saved or made through selling recyclables and why there was no credit for recycling profits on trash bills. Along with showing local benefit, they wanted Waste Management to be more involved in the community and should promote what they are currently doing to improve recycling. For example, many of the participants were unaware of Waste Management's Waste to Energy Plant in Storey County or the Single Stream campaign. Participant's wanted Waste Management to better promote the good things they are doing to the community.

In almost all of the focus groups, participants would discuss the variety of recycling programs they had seen or read about in other communities across the country. Some expressed a frustration with Waste Management in that, they have seen other recycling programs run by Waste Management, which they perceive to be superior to the current system, yet they have not adopted that same system in Washoe County. Services were compared to others across the country, but the most common comparison was to recycling in California, especially the three bin system that can be seen in areas such as San Francisco and Los Angeles(e.g., trash, recycling, composting). Many "extreme recyclers", or those very dedicated to recycling, had previously lived somewhere outside of Washoe County, many in areas like Oregon or California, where recycling services are perceived by participants to be superior to the current Washoe County recycling system. These participants would like services to be similar and would be willing to pay more for improved services though this sentiment was not shared by all participants.

There were also many questions about Waste Management's ability to provide services. There was some discussion about moving to a single stream recycling system or making recycling

mandatory, and participants wondered if Waste Management had the infrastructure to handle this increase. There were questions about how scavenging was affecting Waste Management's profits and ability to provide recycling services. There was also the question about why Waste Management doesn't do more to promote recycling in apartments, especially since the participants believed this may increase their profits. One apartment dweller stated, "They (Waste Management) complain about losing aluminum (from curbside and illegal recyclers) but they don't push for apartments to get recycling." Finally there were questions about how much infrastructure change and cost would be needed to make changes to improve the system.

Finally, there was a desire to have greater education and transparency from Waste Management about their overall recycling practices in Washoe County. When talking about items they had collected to be recycled and placed in curbside for collection, one participant stated, "I don't even know if they get recycled." One idea that was mentioned multiple times was for Waste Management to host tours of their recycling facilities or the landfill. There was also the idea to have videos showing where the recycling goes. Many participants felt that a few simple public relations moves like these would go a long way towards improving Waste Management's perception in the community.

4) Making It Easier to Recycle

Many of the participants expressed frustration with curbside recycling, yet, many of the participants said they were satisfied with services based on the survey responses. It is unknown why this gap in responses exists and should be investigated further. Many ideas were also given for how recycling could be improved upon in Washoe County. Overall it seemed the focus group participants simply wanted to recycle more often and more items. To increase recycling participation, it was suggested that recycling needed to be as easy and convenient as possible. Hours should be increased at recycling centers, and curbside pick-up should occur at least weekly, rather than the current bi-weekly schedule. They wanted additional drop-off centers, especially in frequently trafficked locations such as grocery stores and convenient stores. They wanted more recycling in public places such as schools, casinos, bars and restaurants.

Single stream recycling was mentioned multiple times. Several participants had been part of the Waste Management Kings Row Single Stream Recycling Pilot Project and were very happy with those services. Many of these same individuals were wondering what the results were and what Waste Management was going to do with the information. It was felt that this option could promote additional residents to begin recycling.

Some felt that recycling should be mandatory. Curbside services should be opt-out rather than opt-in; "You should get (recycling) bins and not have to call." In the Spanish-language focus groups, which were composed of more participants who didn't recycle regularly, several people noted that they wanted to use curbside recycling, but they didn't have the bins so they assumed they couldn't get them. They also suggested a financial incentive on your trash bill for recycling, or a fee should be charged if you don't recycle. Some participants suggested outlawing plastic shopping bags or charging a fine for their use. Others promoted the idea of a 5 cent can or bottle tax and wanted machines that would make it easy to redeem this incentive.

5) Recycling Negatives

Because the curbside bins are open, recyclable material could be blown away or could not be picked up in inclement weather. Open containers also increases access to materials for scavengers. Others did not want their neighbors to see what was in their bins in fear of being judged or stigmatized. For example, someone might not want to put out all their empty alcohol containers for fear that their neighbors would label them as alcoholics. While this was not an essential feature, it was felt that even this small change could help to convince more people to keep them in their house, thus making it more convenient to recycle.

Another disadvantage mentioned about the current bins was their size. Many people said they fill up the recycling containers faster than their garbage can. The suggestion was made to have a smaller garbage can, or to at least have a recycling can the same size. It was felt that this would serve as a reminder to people that they should produce more recycling than garbage. Several people also mentioned that the bins were sometimes hard to carry to the curb (especially those with physical limitations), and if materials could all be put into another rolling bin, they could be more easily wheeled to the curb.

6) Promotion and Education

Many participants felt that if you simply tell the public what to, especially in regards to curbside recycling, they will do it. In reference to this idea, one participant said, “If you build it, or promote it, they will come.” They wanted information to be provided regularly and in as many places as possible, including on the curbside crates to quickly illustrate what can be recycled. Information should also be delivered with trash bills or with the yearly ‘magnet calendar’ with recycling pick-up dates.

For the general public, especially for those who don’t have curbside services, participants expressed the need for promotion as well. Consistent branding efforts could be promoted through visuals such as bus signs and billboards, as well as through radio and TV public service announcements. Videos could be created showing what the recycling system looks like in Washoe County and where your recycled items go. Handouts could be distributed in the mail that contains clear information about what can be recycled and where to take these materials. They wanted more collection events, such as the annual e-waste collection or Christmas tree collection event, to be held and better promoted.

Participants wanted more campaigns to focus on the local recycling infrastructure and local benefits, especially considering the current state of the local and national economy. It was suggested that Washoe County or Waste Management should let people know how their recycling efforts are helping with concrete examples (e.g., recycling ten cans is equal to the energy used watching four and a half hours of TV). Even some of the non-recyclers said they might recycle more if they knew it was going to a local cause such as the Boy Scouts or if they knew it was benefiting Washoe County financially or by creating jobs. The participants thought it would be helpful to promote local benefits, or general benefits, of recycling as patriotic. They suggested developing campaigns to show landfills and the amount of trash that is produced in an attempt to show the sheer magnitude of refuse being produced and where it goes. Finally, it was

consistently suggested that efforts “start with the kids” and that more recycling education be given in schools, school-aged children or at least recycling be available at schools.

There was conflicting information about the benefits of recycling in general. For example, many didn’t understand the factors that are considered in the recycling of different materials (e.g., geographic location and market forces for raw materials). Based on the surveys it also became very apparent there is a lack of knowledge about the Nevada Recycling Hotline, the Illegal Dumping Hotline and recycling information on the Washoe County Website. All participants, not just those living in apartments, there was a lack of knowledge about the legislation passed during the 2011 State of Nevada Legislative session that addresses recycling services in multi-family dwellings.

The personal drivers behind recycling for Washoe County residents varied. Some saw the opportunity to make a few extra dollars on redeemable items. Others cited environmental reasons such as “There is all that gorgeous land out there; I don’t want to fill it up” or “I don’t want to be up in my arms garbage.” There was also the viewpoint that recycling was a habit you learned growing up. “It’s a generational thing, if your parents do, then you do.” Many participants noted that they have always recycled. Several people talked about how “young people” don’t care, or know, about recycling. Others talked about society’s addiction to disposable goods and the affect this “throw-away” culture and consumerism had on reuse and recycling.

Several other interesting findings were observed in the Spanish language focus groups. For one there was a very clear difference in knowledge about recycling between age groups. In general, the major benefit stated for recycling was financial gain. Younger participants were more likely to state non-financial benefits of recycling than the older participants. There also seemed to be less of an understanding on how to request recycling bins and how often recycling was picked up. There may be a need for more Spanish-language recycling education materials or media messages. Finally, many participants lived in apartments, so the same issues of space and access were raised.

Though the focus group with the “non-recyclers” was small (only 3 participants), they gave a very different perspective of recycling that is often not included in focus groups or research on recycling. All of them had access to recycling services, either curbside or drop-off, but generally chose not to recycle. Most of them felt a “green” guilt from those who recycled which caused resentment within the participants. They also didn’t want to become consumed by recycling and make it a “hobby.” They specifically said the ads that target only environmental benefits of recycling are not effective with them. They will do it if there is a personal benefit or it benefits a local entity. They showed the same excitement in finding their own “kind” as was seen in the recycling groups potentially highlighting how polar this topic has become.

V. Discussion and Results

The lack of consistent information about recycling and a general lack of understanding about the recycling system in Washoe County is producing frustration within the recycling community and

creating a barrier to increasing utilization by non-recyclers. This lack of understanding was also an issue for those collecting cans for redemption across state line potentially placing some members in the community in bad standing of the law. Residents also don't understand the positives happening in the community from the legislation passed in the last legislative session regarding multi-family dwelling recycling; and from the private sector and local government. Potentially, if all these efforts were supported or organized in unison the ability to move this issue forward could be strengthened and expedited. There are a plethora of outlets in Washoe County to take recyclable materials and HHW. However, it can be a logistical nightmare to utilize all of them for all materials especially without curbside service. In this same vein, issues related to finding appropriate outlets and information about outlets for HHW (for either recycling or appropriate disposal) is a major issue.

Based on responses, Waste Management is viewed as an outsider and there is a general frustration with the inconsistent answers from the general customer service line. There is a general desire to understand the local benefits of the recycling services; perhaps this is a function of the current economical status, however, the reason for this need was not addressed in the focus group. There is a strong satisfaction with curbside recycling services but, also a desire for expanded and more convenient drop-off services. It was apparent the participants are unaware of most Waste Management efforts to update services or get involved in the community.

There was a strong sentiment to influence the youth of the community and focus on schools as targets of change. There was also a desire to see recycling become a constant force in the community. Participants wanted to see more ad campaigns, recycling at schools and recycling at public events. Efforts in the community by local businesses, individuals or non-profits may need to be highlighted or recognized publically to better exhibit the recycling capacity of the community.

The monetary value resulting from redemption of recyclable materials was a stronger driving force in the Spanish-speaking groups than the other groups. There may be a potential acculturation or generation effect in this group where the younger individuals were more aware of the environmental benefits of recycling and other materials that could be recycled than the traditional cans and bottles. This effect should be investigated further to more profoundly understand if length of time living in a particular locale effects recycling behavior.

In general, the main incentives for recycling among the participants were conditioning (i.e., grew up with it), convenience, local benefit, environmental benefit, and monetary benefit. These factors need to be considered if any outreach or educational programs are going to be developed by Washoe County and would be advantageous to consider during franchise contract negotiations.

Limitations

There were several limitations to the results presented in this report. First and foremost, although multiple efforts were made to have a representative sample, recyclers as well as by people living in homes in the City of Reno who have curbside recycling services are over-represented. The focus group participants were also more educated, more likely to be female and

white than the general population of Washoe County. All of the minorities besides African American were represented but slightly less than actually reside in Washoe County.

About 10% of data is missing due to a lack of response or invalid answers (i.e., marking a question with two answers). This is an issue with data validity because we cannot compare the individuals who completed the survey correctly to those who did not to determine if there was any difference between the two groups. Had the missing survey data been complete and included, it potentially may have changed the values and results on the demographic comparisons.

Residents in IVGID have more access to more recycling services through Waste Management and Waste Not which may have skewed the satisfaction results on the surveys and responses. Another limitation is business recycling was not considered, so individuals with concerns for commercial and industrial businesses were not addressed.

The goal of every focus group is to keep participant attendance homogenous and to facilitate the groups exactly the same. However, due to resources and time constraints not all focus groups were homogenous by city of residence or recycling habits, especially in the Spanish-language groups. The IVGID group and the two Spanish-language groups were focused more on targeting a specific location or ethnicity. We only had a small number of participants from outside the Reno-Sparks city limits, so residents who live in Washoe County were grouped with other participants from the cities they lived nearest. Due to both researchers inability to fluently speak Spanish, both Spanish-language focus groups were conducted by the ULC. While the Ms. Bryant and Ms. Brown worked to provide a clear script and train the ULC director on the importance of specific focus group steps, these groups were still facilitated differently from the bulk of the groups since not all terms and concepts could be directly translated to Spanish. Also, due simply to human nature and the variety of participant opinions, inherent limitations of focus groups and group dynamics, there were slight differences in all focus groups.

Focus group participants were offered a \$10 Wal-mart[®] gift card for participation. Usually gift cards are a tool to recruit volunteers that would have otherwise not become involved, however, for this particular project it may have been a deterrent. On a few occasions we received negative comments about using Wal-mart[®] as a patron because the individuals viewed Wal-mart[®] as environmentally unfriendly. On the other hand, use of financial incentives could have also attracted people with limited financial means regardless of their stance on this topic.

The use of more educated media is probably what attracted such an educated group of participants. Future projects should try and reach a larger variety of demographics. However, the mass media campaigns were more successful at attracting volunteers than the flyers posted in the community. The posting of the announcement on the Keep Truckee Meadows Beautiful was also very successful.

VI. Recommendations

The researchers would like to make several recommendations to the WCHD related to improving regarding improving recycling services based on the findings from the focus groups.

1. When applicative or appropriate, work with Washoe County, City of Reno, City of Sparks and IVGID managers and/or other pertinent individuals during garbage and recycling franchise negotiations to address issues expressed by residents in this project
2. Provide additional information on recycling through one or more of the following:
 - a. Create a Washoe County recycling website or improve the existing webpage,
 - b. Work to provide accurate information about local recycling services and how the system functions; or,
 - c. Work with local groups and private businesses to make a central site about recycling.
3. Collaborate with local schools and the Washoe County School District to either:
 - a. Increase recycling in Washoe County Schools; or,
 - b. Develop educational materials that can be given to the schools and students about the benefits of recycling and local recycling options
4. Enforce all regulations at temporary events to provide recycling outlets and containers for patrons and participants.
5. Develop an educational or outreach campaign to educate the general public of the local benefits of recycling, of local drop off centers and the location of information resources about local recycling facilities.
6. Share findings of this report to the representative entities that manage the Illegal Dumping Hotline and the Nevada Recycling Hotline.
7. Develop a system to acknowledge individual, businesses or other groups in the community who are promoting recycling or have substantially improved recycling in Washoe County.

Appendix A

Figures and Graphs

Figure 1. Washoe County, Focus Groups Participant Comparison by Municipality, 2011

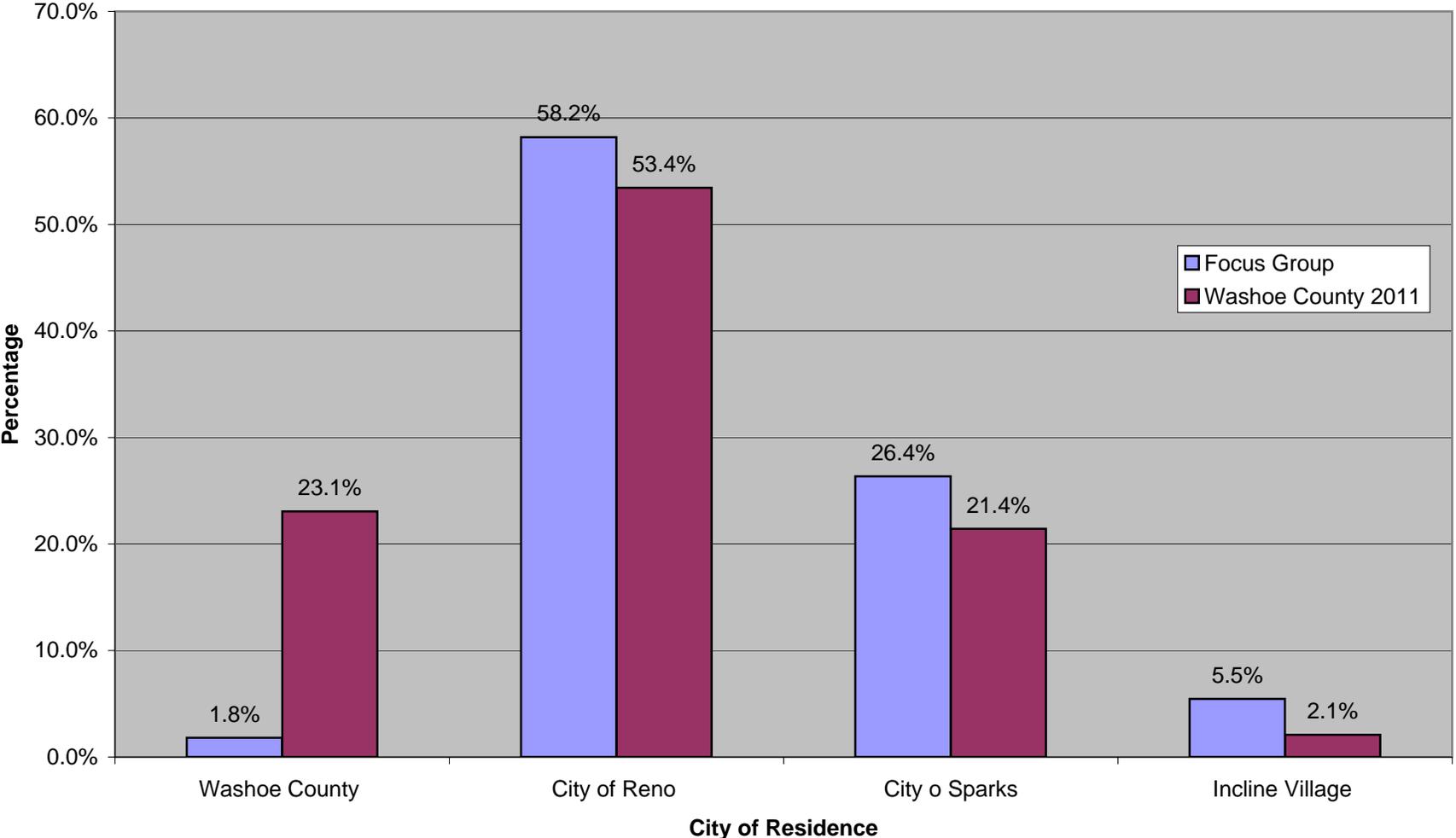


Figure 2. Washoe County, Focus Group Participant Comparison by Gender, 2011

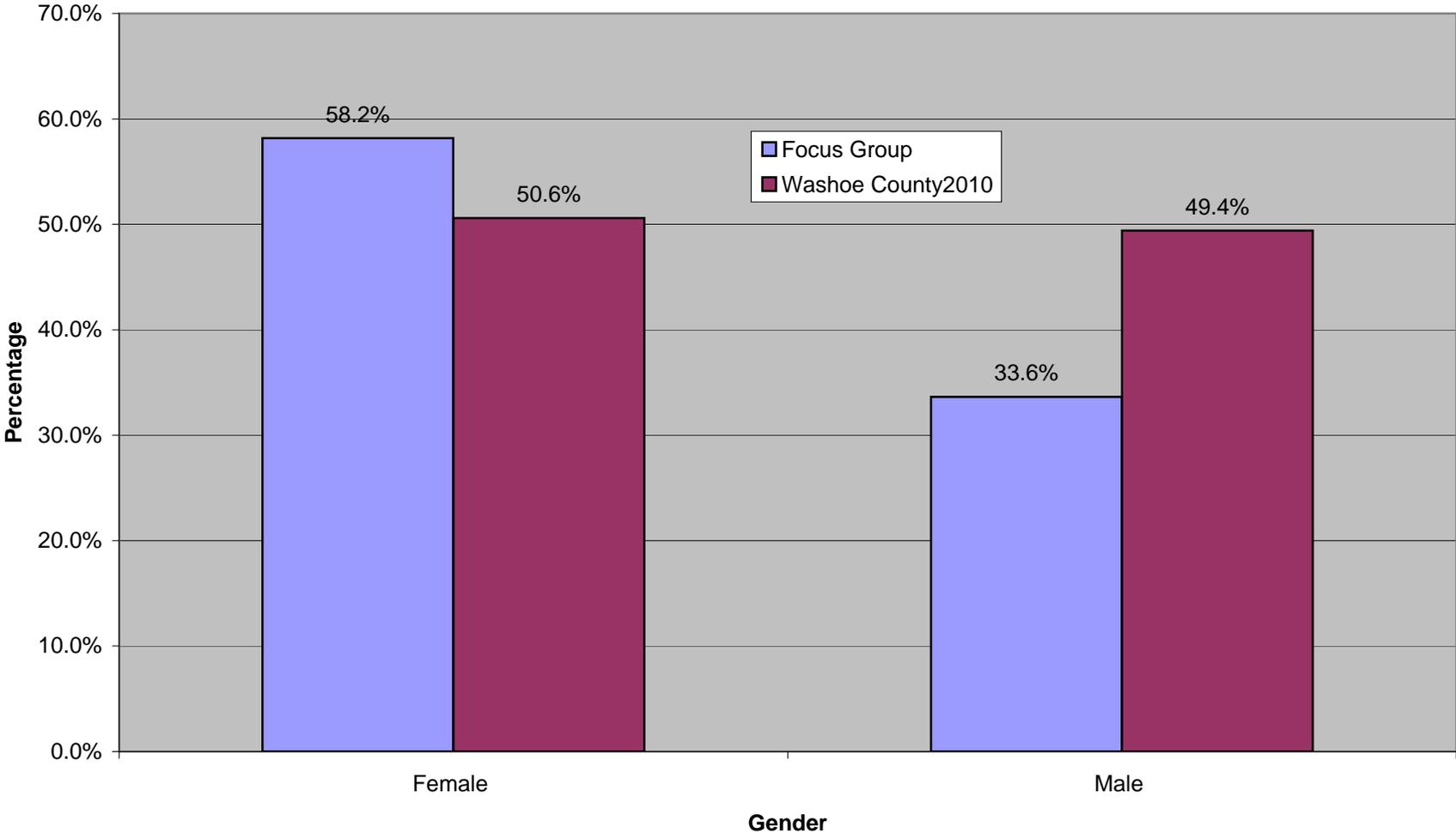


Figure 3. Washoe County, Focus Group Participant Comparison by Age Range, 2011

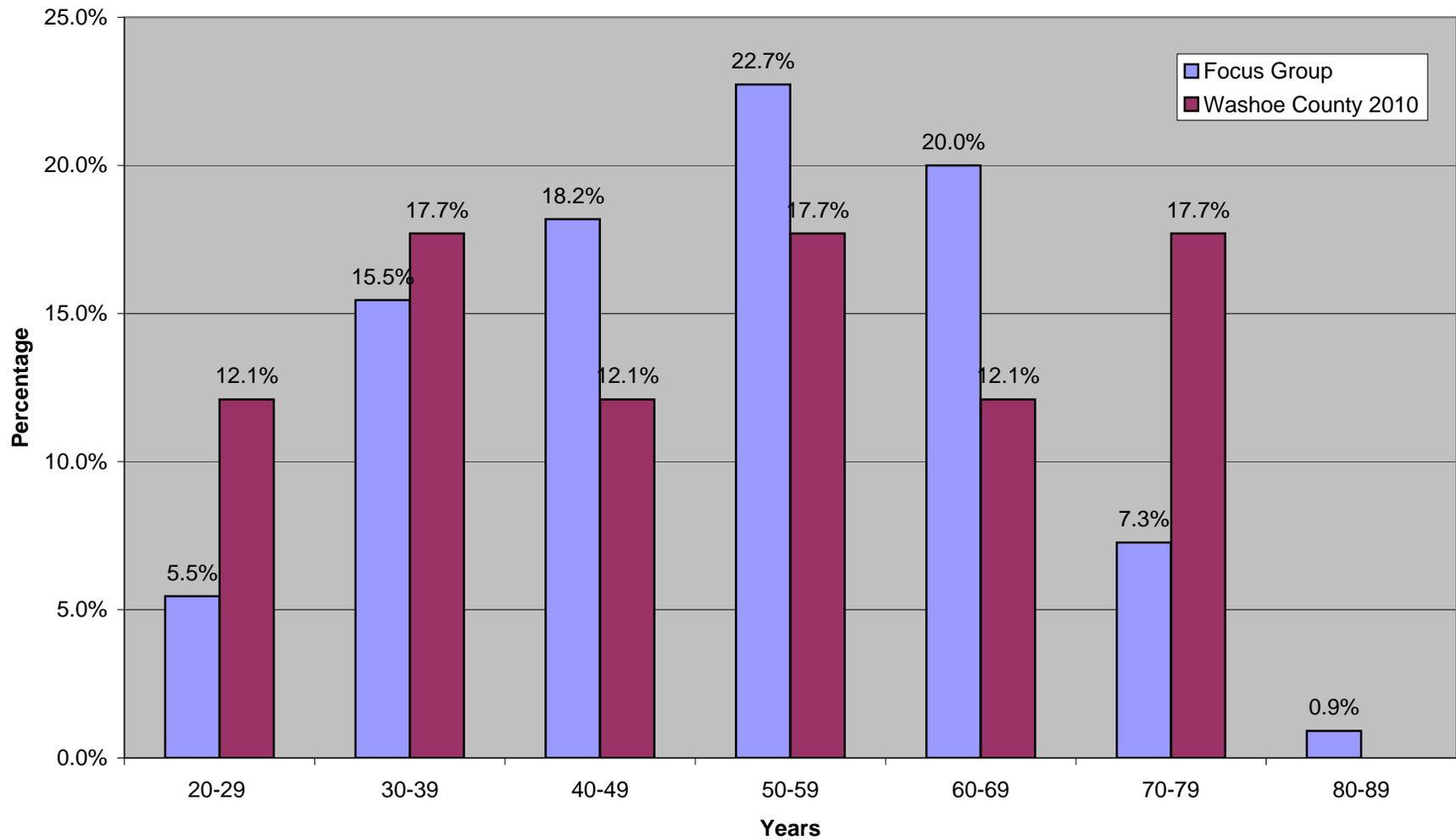


Figure 4. Washoe County, Focus Group Participant Comparison by 65 Years and Older, 2011

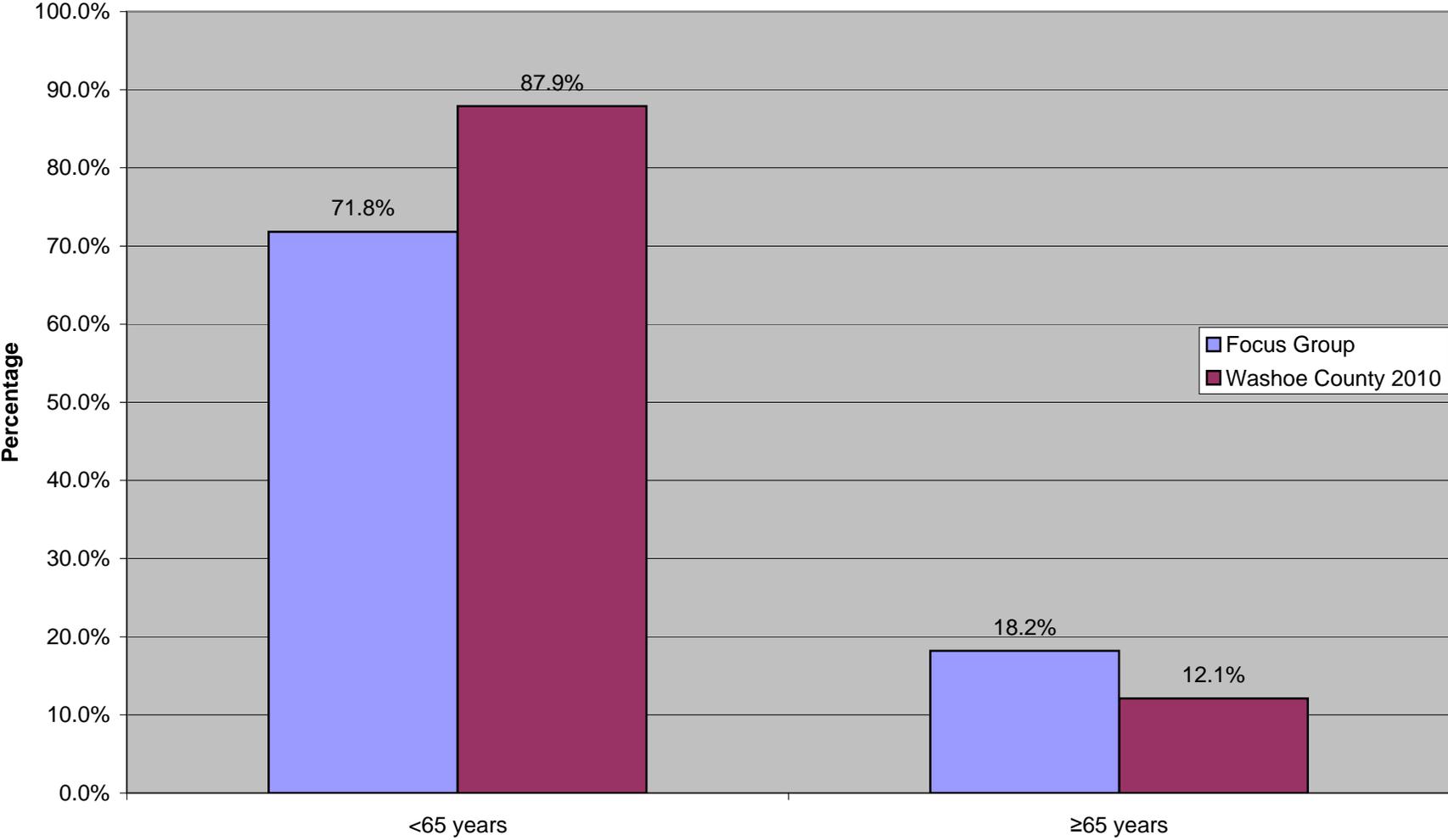


Figure 5. Washoe County, Focus Group Participant Comparison by Marital Status, 2011

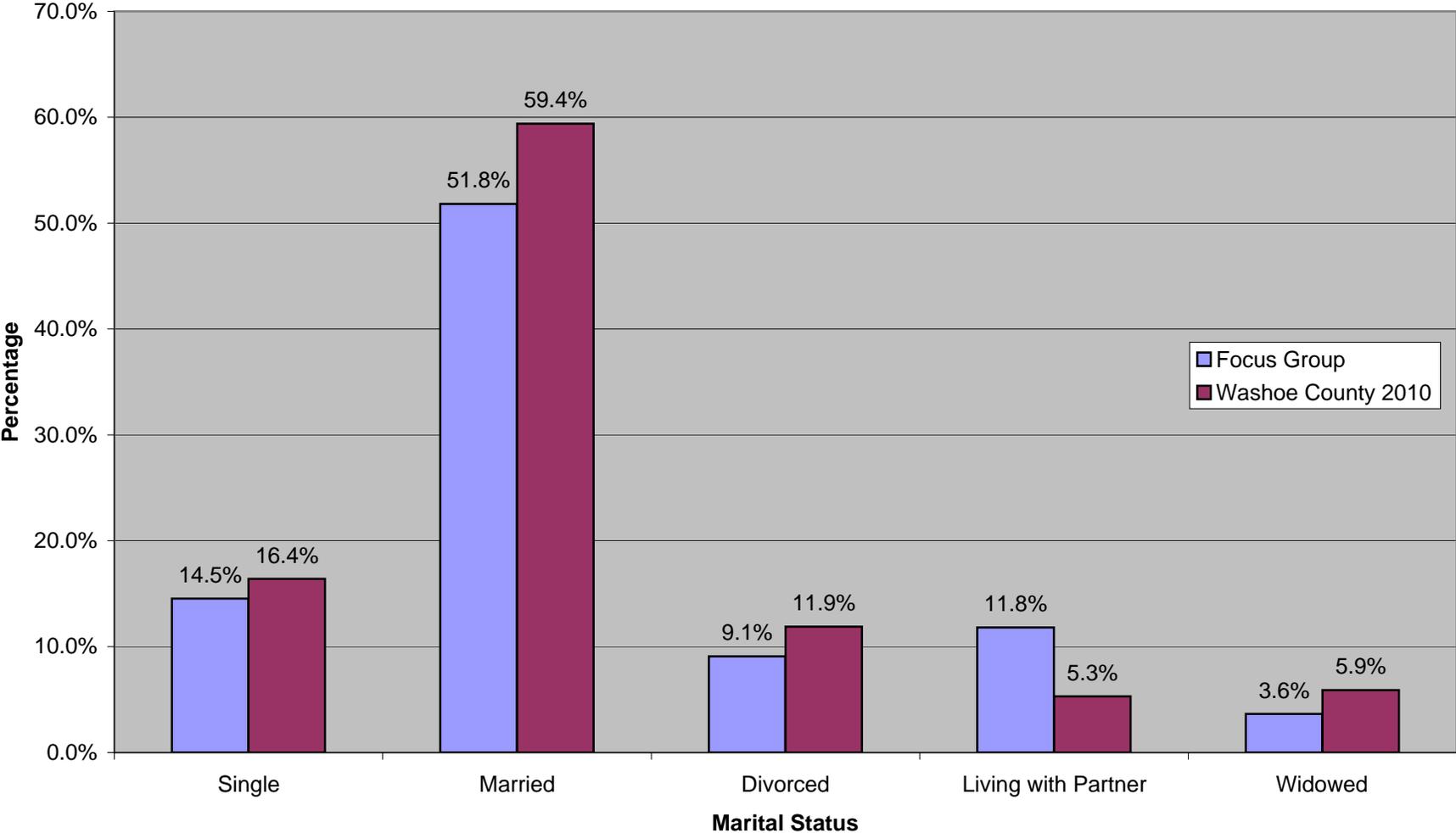


Figure 6. Washoe County, Focus Group Participant Comparison by Hispanic Origin, 2011

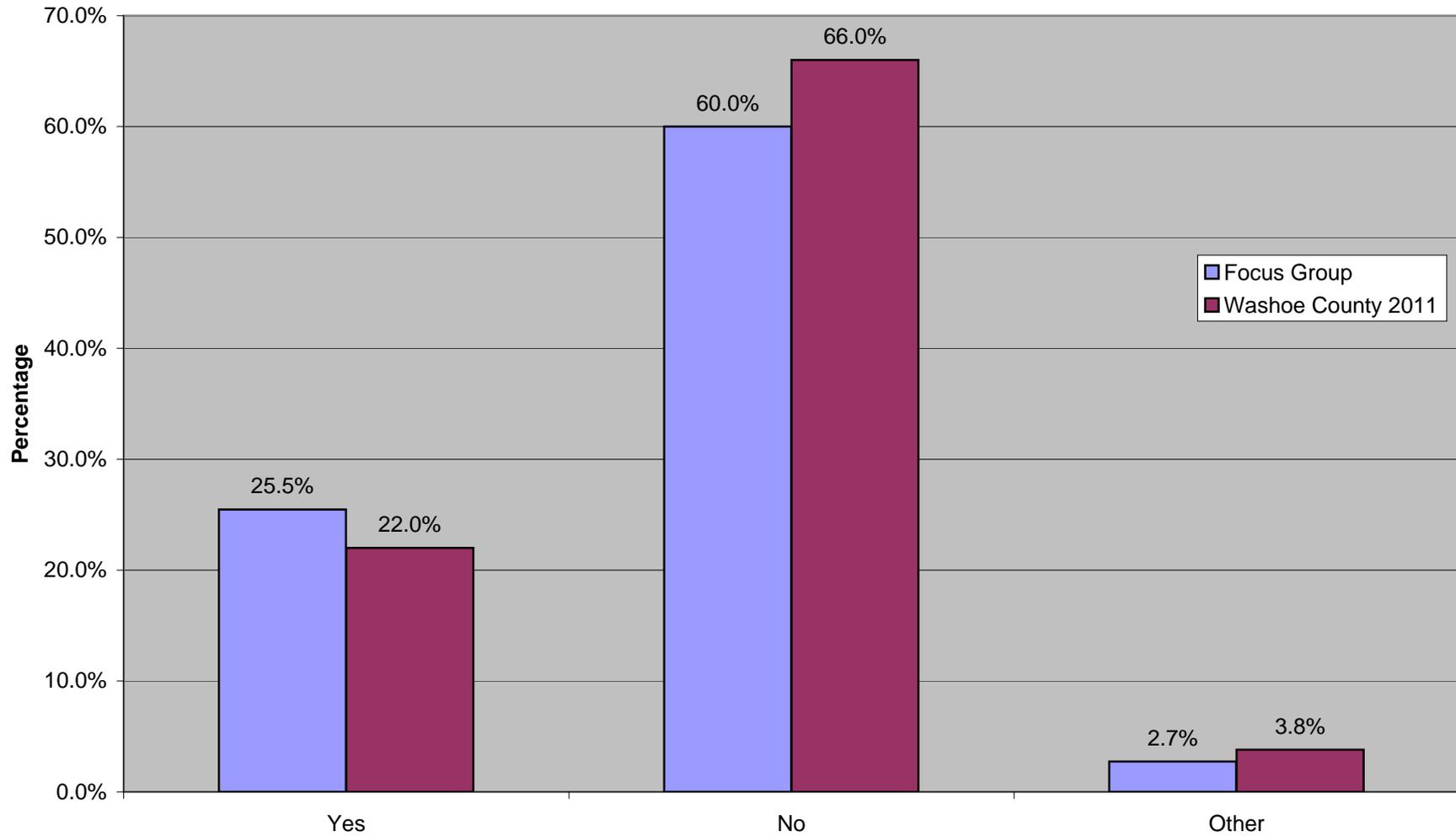


Figure 7. Washoe County, Focus Group Participant Comparison by Ethnicity Comparison, 2011

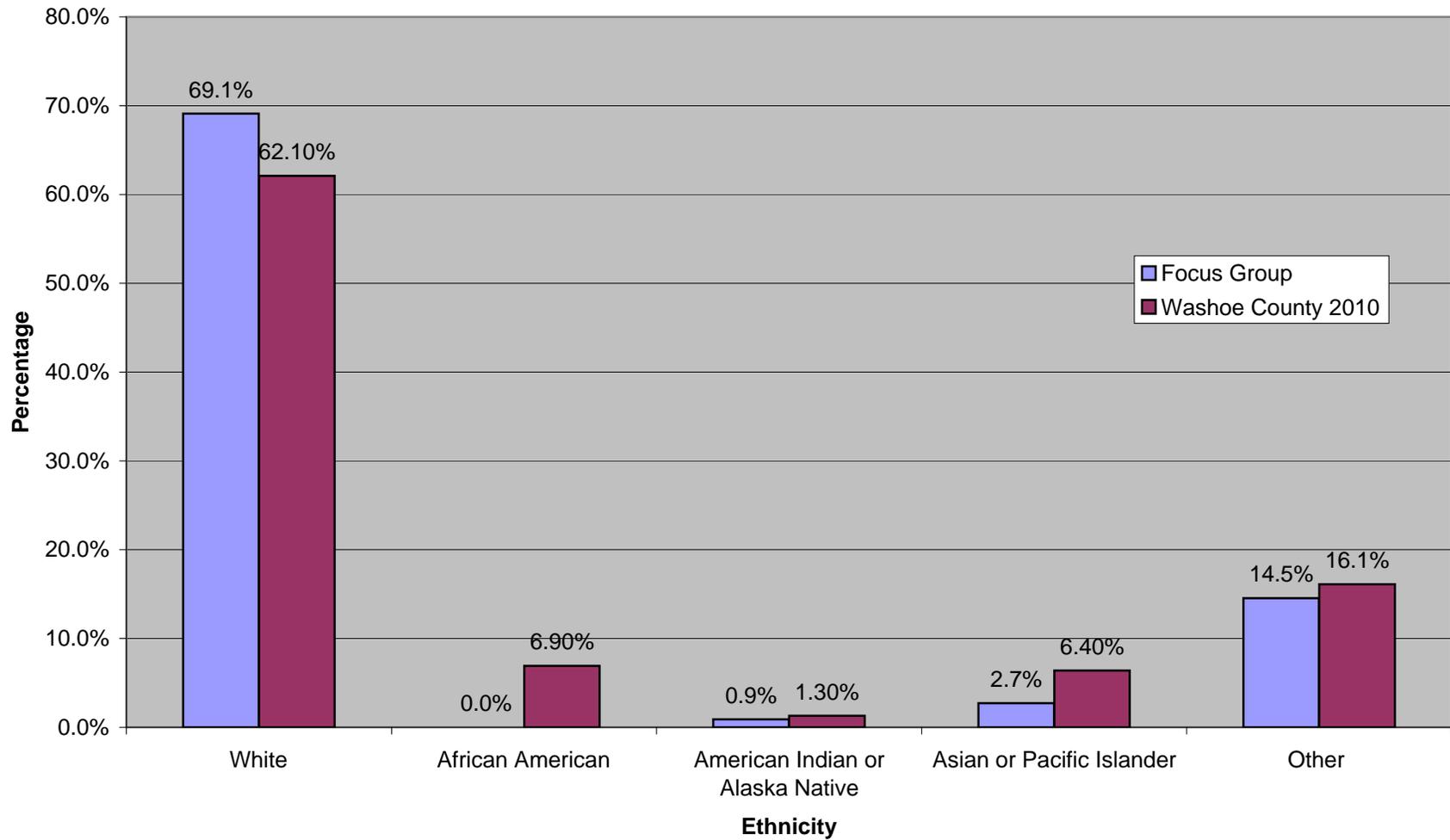


Figure 8. Washoe County, Focus Group Participant Comparison by Education Level Completed, 2011

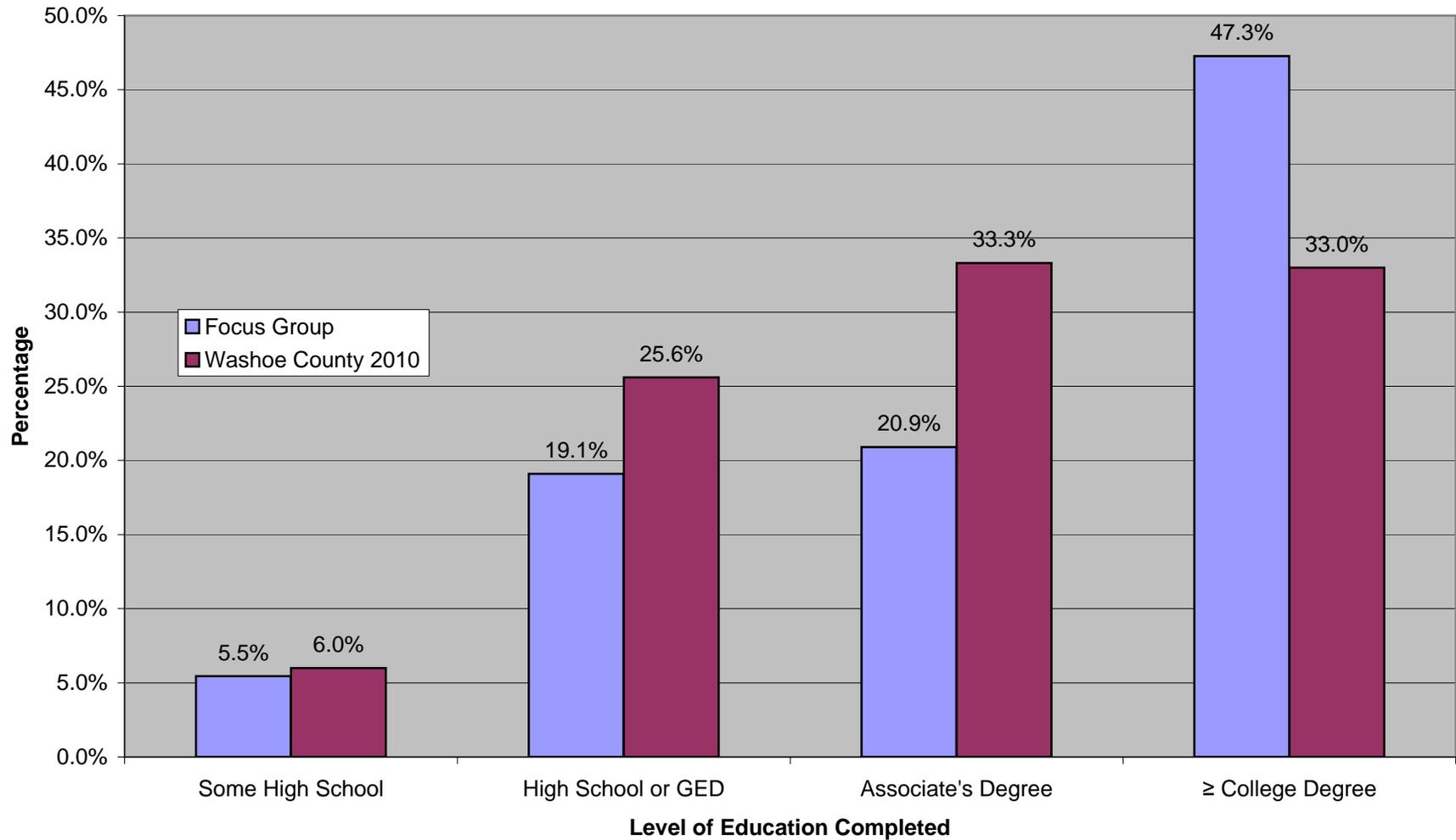


Figure 9. Washoe County, Focus Group Participants by Education Level Completed, 2011

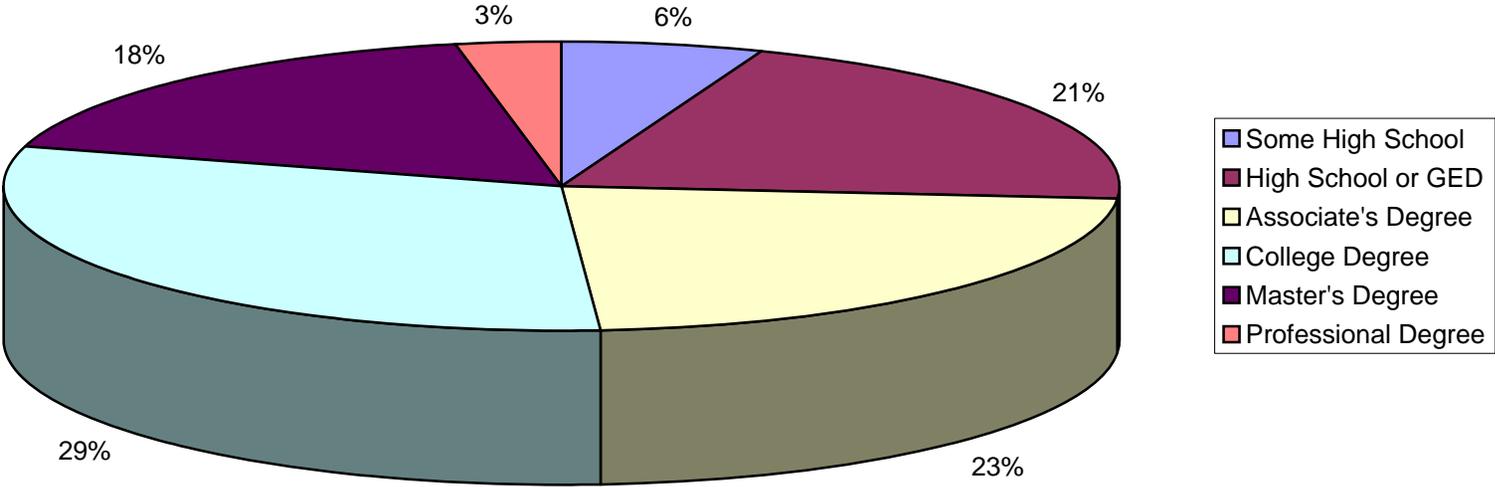


Figure 10. Washoe County, Focus Group Participants with Curbside Recycling Service, Percentages, 2011

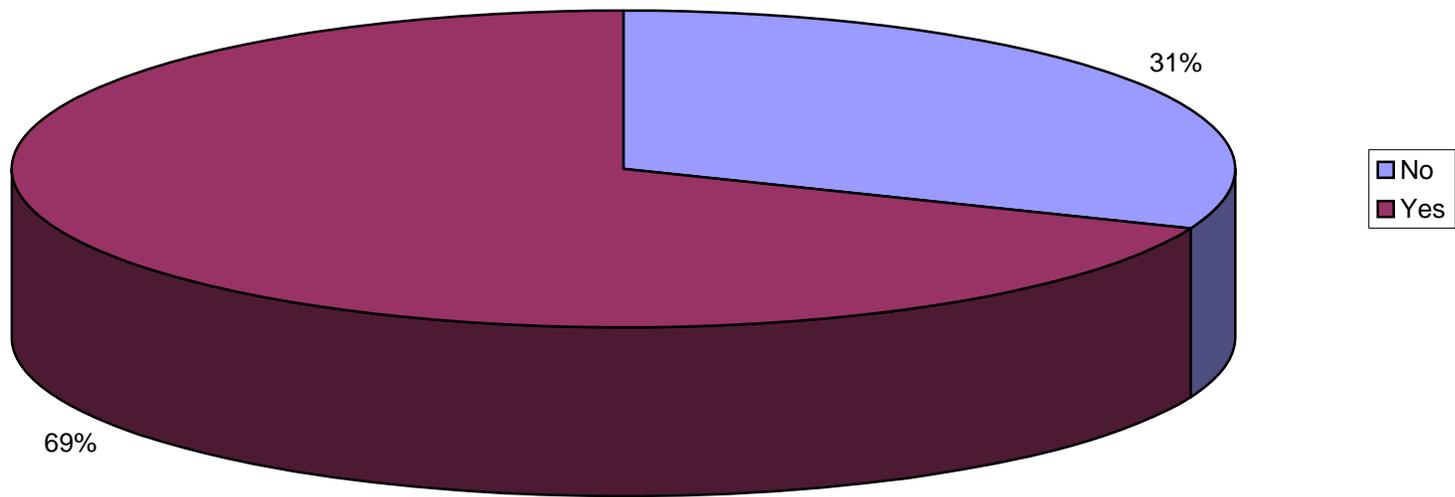


Figure 11. Washoe County, Focus Group Participants with Curbside Recycling Service Satisfaction, 2011

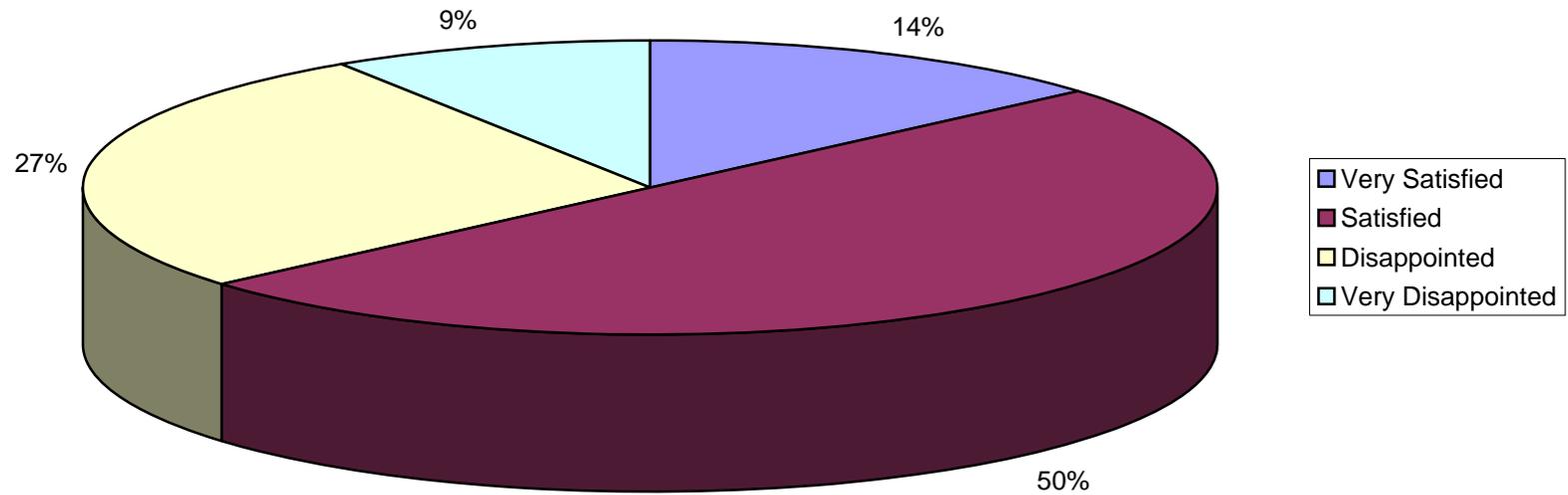


Figure 12. Washoe County, Focus Group Participants, Knowledge of the Nevada Recycling Hotline, Percentages, 2011

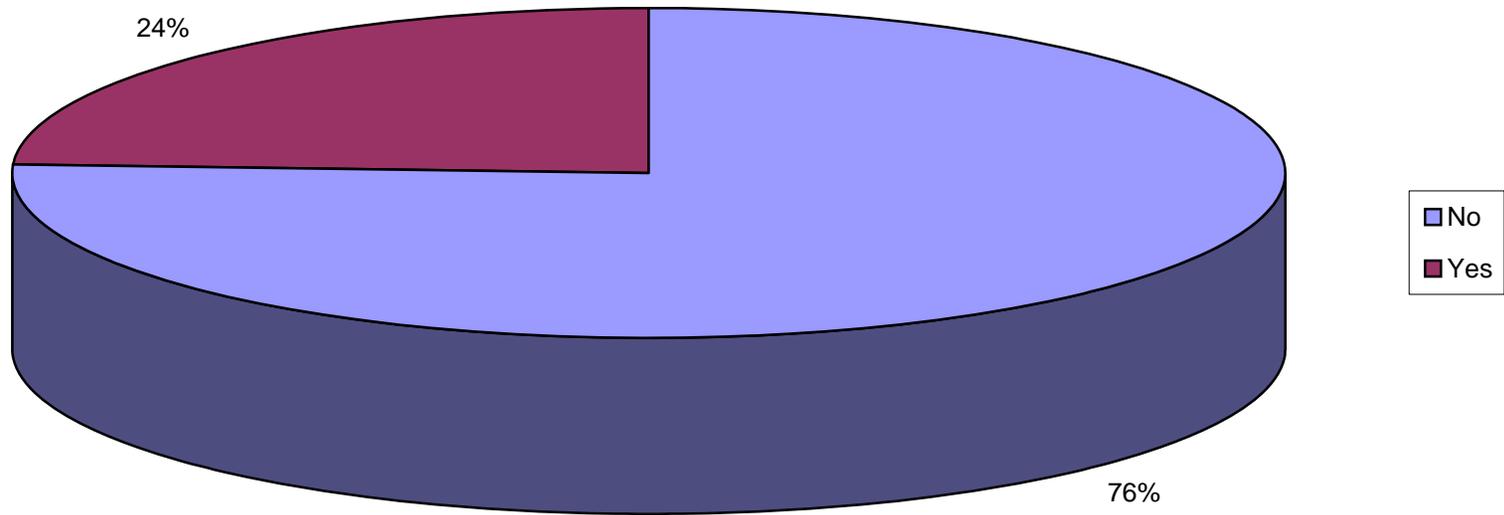


Figure 13. Washoe County, Focus Group Participants by Knowledge of Drop-off Facilities, 2011

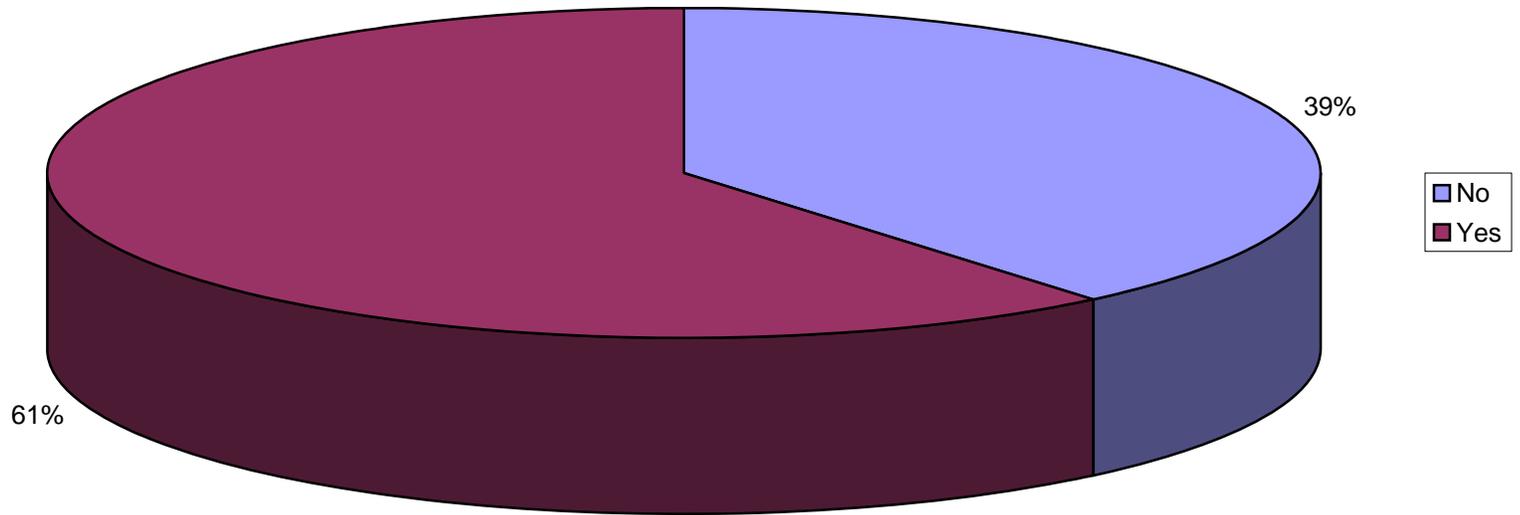


Figure 14. Washoe County, Focus Group Participants by Knowledge of Recycling Information on the Washoe County Website, 2011

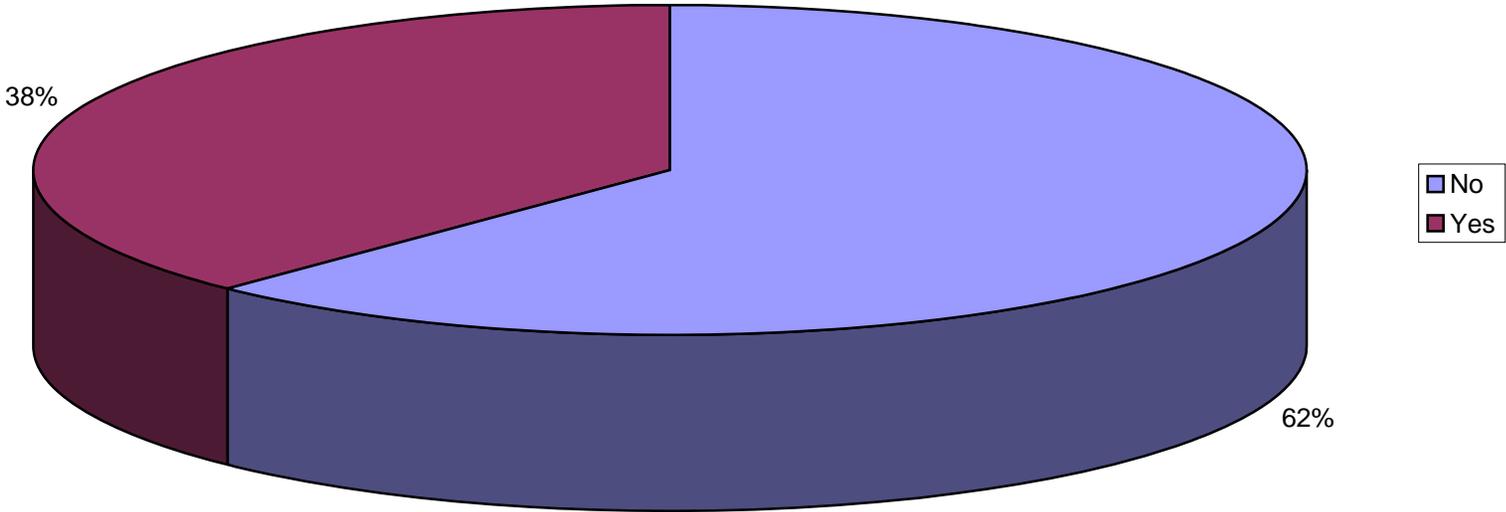
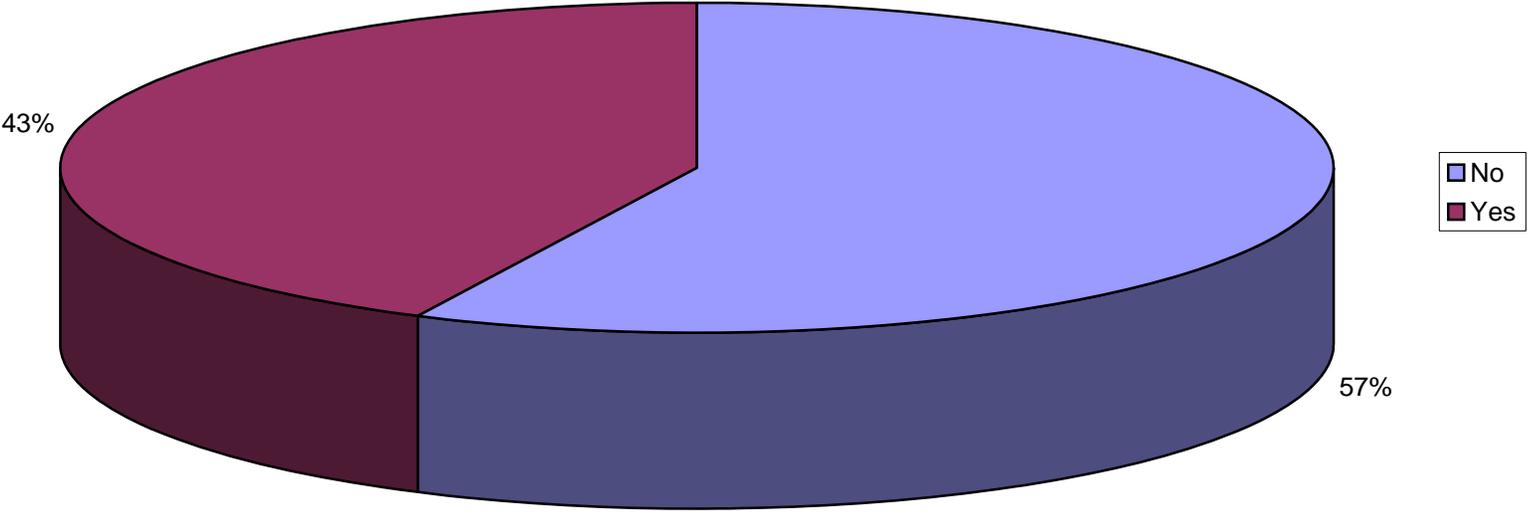


Figure 15. Washoe County, Focus Group Participants by Knowledge of The Illegal Dumping Hotline, 2011



Appendix B
Focus Group Scripts

Introduction (5 minutes)

Hello my name is Emily Brown and I will be leading this focus group discussion tonight. Also here is Lee Salgado, who will be listening to your responses and taking notes. We are conducting these focus groups for the Washoe County Health District, who contracts with Waste Management to provide recycling services. We would like to thank you for coming and taking the time to attend this focus group session. As you can see, a focus group is a discussion with a group of people on some type of topic. The purpose of this focus group is to discuss why you, as someone who lives in Washoe County, does or does not recycle and what barriers you might face when trying to recycle. There are no right or wrong answers today; we just want to hear what you have to say! The goal of these focus groups is to take your thoughts that we hear today and use them to improve how recycling is promoted in Washoe County and to understand how to improve Washoe County recycling services.

I will be asking you some questions about your recycling habits, behaviors and opinions. I encourage all of you to get involved in discussion. We are just as interested in hearing from those who don't recycling as those who do. I would like to emphasize that none of the information we collect or record tonight will include your name or any other identifiable information. Also, this information will only be used internally or in discussions with local recycling facilities; it will not be for public view. This session should take about an hour to an hour and a half. Please feel free to have some snacks, and once we are finished each of you will receive a \$10 WalMart gift card as a small thank you for your participation. Before we begin, are there any questions?

Before we start, in order to ensure everyone is on the same page, I want to clarify what "recycling" means. Recycling includes any action where a bottle, can, glass, paper products or other materials are not thrown away but rather are collected in a manner to be recycled. We'll also talk about curbside recycling, which is when you put recyclable materials in the yellow and green crates that are picked up with your home trash.

To start off, I'd like to learn about your recycling behaviors.

Topic 1: Recycling Behavior (30 Minutes)

Q1a) What are the ways you recycle?

Probe: Some examples include curbside recycling, using public recycling containers or cashing in materials to recycling centers

Q1b) Where do you recycle?

Probe: home, parks, work, events

Q2) Are there times you don't recycle? If so, what are some of the reasons you do not recycle?

Probe: recycling containers not available; bottles still have liquid in them

Q3) Why do you recycle the types of items that you do you recycle?

Probe: only recycle items accepted in curbside recycling

Q4) What are some reasons that effect how often you recycle?

Probe: When curbside recycling is picked up, hours of recycling centers

Q5) What would make recycling easier or more convenient for you?

Now we are going to ask you some questions about your opinions and beliefs about recycling in general and in Washoe County

Topic 2: Recycling Attitude (30 minutes)

Q6a) In general, what do you think are the benefits of recycling, if any?

Q6b) In general, what do you think are the downfalls of recycling, if any?

Probe: Is it worthwhile? Is it cost-effective? Do your products just get thrown away?

Q7a) How satisfied are you with the current curbside recycling services in Washoe County and why?

Q7) How satisfied are you with the recycling services in general in Washoe County and why?

Next we would like to hear your thoughts on the promotion of recycling in Washoe County. The current recycling rate is 27%, and the Washoe County Health District is trying to increase the recycling rate to 35% by 2015.

Topic 3: Recycling Promotion (20 minutes)

Q8) How do you normally get information about recycling?

Probe: Waste Management; WCHD website; general online

Q9) If you were going to improve the promotion of recycling in Washoe County, how would you do it?

Q10) The green paper you have lists all the items that can be put in curbside recycling. The red paper lists all the items that cannot be put into curbside recycling. What do you think about these two lists of items?

Q11) The blue paper is a list of all the items that can be recycled in Washoe County in addition to curbside recycling. Please circle all the items you did not know could be recycled in the community. What do you think about this list of items?

Q12) Does seeing these lists make you want to recycle more or less often?

That is all the questions we have for you tonight! Thank you again for your generous feedback. Before you go, could you please fill out the demographic questionnaire? We will only be using this information to help us better organize the feedback we heard from you tonight. We will be presenting your feedback to Washoe County. The Washoe County Health Department does not provide recycling services, but they do negotiate the contract with the company who does. We hope to use this information to better understand the needs of the public, and thus be able to negotiate more or improved services. We also hope to use your feedback to develop educational materials and outreach to improve recycling utilization in Washoe County, When you are done, please bring it to Lee and she will give you your gift card. Thank you again, and if you have any questions please feel free to ask us, or to email or call us.

Appendix C

Questionnaires

Demographic Survey

1) What is your zip code? _____

2) What is your sex?

Female

Male

3) What is your year of birth? 19_____

4) What is your marital status?

Single

Married

Living with partner

Divorced

Widowed

5) Are you Spanish/Latino/Hispanic? Please make one.

No, not Spanish/Latino/Hispanic

Yes, Mexican, Mexican American, Chicano, Central American

Yes, other. Please specify _____

6) What is your race? Please make all that apply.

White

Black, African American, or Negro

American Indian or Alaska Native

Asian or Pacific Islander

Other. Please specify _____

7) What is the highest level of education completed?

Some high school

High school/GED

2 year Associate degree (AA)

4 year Bachelors degree (BS, BA)

Master's degree

Doctoral degree

Professional degree (MD, JD)

Diversion & Recycling Survey

1) Do you have curbside recycling service?

- Yes (if yes, please skip to question 3)
- No

2) If you answered "No" on question #1, please mark all the reasons you do not have curbside recycling service.

- I don't want it
- I am a renter and can't get the service
- I don't know how to get recycling service
- I didn't know this service was available
- Other: _____

[If you answered "No" on question #1, please skip to question #5.]

3) How satisfied are you with your curbside recycling service?

- Very satisfied
- Satisfied
- Disappointed
- Very disappointed

4) How often do you put your recycling bins out for collection?

- Never
- Once a month
- Twice a month (every collection)

5) Did you know there are several local facilities to drop off recyclable materials?

- Yes
- No

6) Did you know there is a recycling hotline?

- Yes
- No

7) Are you aware there is information about recycling and local recycling services on the Washoe County website?

- Yes
- No

8) Are you aware there is an illegal dumping hotline?

- Yes
- No

Encuesta Geográfica:

1) ¿Cuál es su código Postal? _____

2) ¿Sexo?

- Femenino
- Masculino

3) ¿Cuál es su fecha de nacimiento? 19 _____

4) ¿Cuál es su estado civil?

- Soltero(a)
- Casado(a)
- Viviendo con pareja
- Divorciado(a)
- Viudo(a)

5) ¿Es Español/Hispano/Latino?

- No, no soy Español(a)/Latino(a)/Hispano(a)
- Sí, soy Mexicano(a)/Mexicano(a)-American(a)/Chicano(a)/Centro Americano(a)
- Sí, otro. Por favor especifique _____

6) ¿Cuál es su raza? Por favor marquee todos los que aplican.

- Blanco(a)
- Afro-Americano(a)
- Indio(a)-Americano(a) o Nativo(a) de Alaska
- Asiáticos o Isleños del Pacífico
- Otro. Por favor especifique _____

7) ¿Cuál es el nivel más alto de educación completado?

- Primaria
- Secundaria
- Algo de Preparatoria
- Termine la Preparatoria
- Maestra
- Doctorado

Encuesta de Reciclaje:

1) ¿Tiene servicio de reciclaje?

- Sí (Si usted tiene brinque a la pregunta numero 3)
- No

2) ¿Si usted contesto "No" en la pregunta numero 1, por favor marquee razones por que usted no tiene servicio de reciclaje?

- No lo quiero
- Estoy rentando y no puedo tener el servicio
- No sé cómo tener servicio de reciclaje
- No sabía que este servicio estaba disponible
- Otro _____

(Si usted marco "No" en la pregunta numero 1, brinquese a la pregunta numero 5)

3) ¿Qué tan satisfecho esta con su servicio de reciclaje?

- Muy satisfecho(a)
- satisfecho(a)
- Decepcionado(a)
- Muy Decepcionado(a)

4) ¿Cada cuánto pone sus rejas de reciclaje para colección?

- Nunca
- Una vez al mes
- Dos veces por mes (Todos las colecciones)

5) ¿Sabía Ud. que hay muchas ubicaciones para dejar sus materiales reciclables?

- Sí
- No

6) ¿Sabía Ud. que hay una línea telefónica de reciclaje?

- Sí
- No

7) ¿Sabía Ud. que hay información acerca del reciclaje y servicios de reciclaje locales en la página de internet del condado de Washoe?

- Sí
- No

8) ¿Sabía Ud. que hay una línea telefónica para reportar personas que tiran basura ilegalmente?

- Sí
- No

Appendix D
Examples of Advertising

RECYCLING: TELL US — DO YOU OR DON'T YOU?

PARTICIPATE IN A FOCUS GROUP TO TELL US WHY!



We want to know why you recycle or why you don't recycle. Tell us how services and messages about recycling can be improved during a 1 to 1 1/2 hour focus group session.

To be a part of a focus group, you must be:

- A Washoe County resident
- Over 18 years old
- Have your own transportation to the Washoe County Health District building at 1001 East Ninth Street in Reno

TO PARTICIPATE: CALL LEE AT 328-2611

Participants will receive a \$10 Wal-Mart gift card in thanks for their participation!

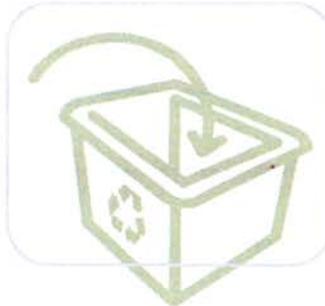
One participant per household.



Washoe County Health District — Environmental Health Services

RECYCLING: TELL US — DO YOU OR DON'T YOU?

PARTICIPATE IN A FOCUS GROUP TO TELL US WHY!



We want to know why you recycle or why you don't recycle. Tell us how services and messages about recycling can be improved during a 1 to 1 1/2 hour focus group session.

To be a part of a focus group, you must be:

- A Washoe County resident
- Over 18 years old
- Have your own transportation to the Washoe County Health District building at 1001 East Ninth Street in Reno

TO PARTICIPATE: CALL LEE AT 328-2611

Participants will be provided refreshments and a \$10 Wal-Mart gift card in thanks for their participation!

One participant per household.

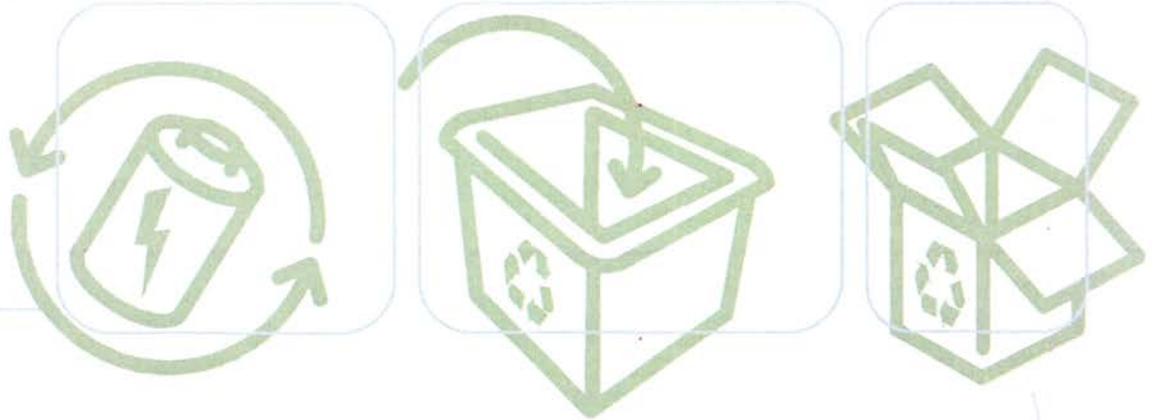


Recycling Focus Group

Call Lee: 328-2611

RECICLAR: ¡DÍGANOS! — ¿LO PRACTICA O NO LO PRACTICA?

**PARTICIPE EN NUESTRAS JUNTAS DE ORIENTACIÓN Y DEBATE
PARA HACERNOS SABER: ¡PORQUE SI O PORQUE NO!**



Queremos saber porque recicla o no recicla. Díganos como mejorar los servicios e implementar una campaña para promover el reciclaje, durante nuestras juntas de orientación y debate sobre el reciclaje, solo duran de 1 a 1 ½ horas.

Para poder participar deberá:

- Ser residente del condado de Washoe
- Ser mayor de 18 años de edad
- Tener su propio modo de transportación a las instalaciones del Distrito de Salud del Condado de Washoe (Washoe County Health District) en 1001 East Ninth St. en Reno.

PARA PARTICIPAR:

LLAMAR A LEE AL TELÉFONO 775-328-2611

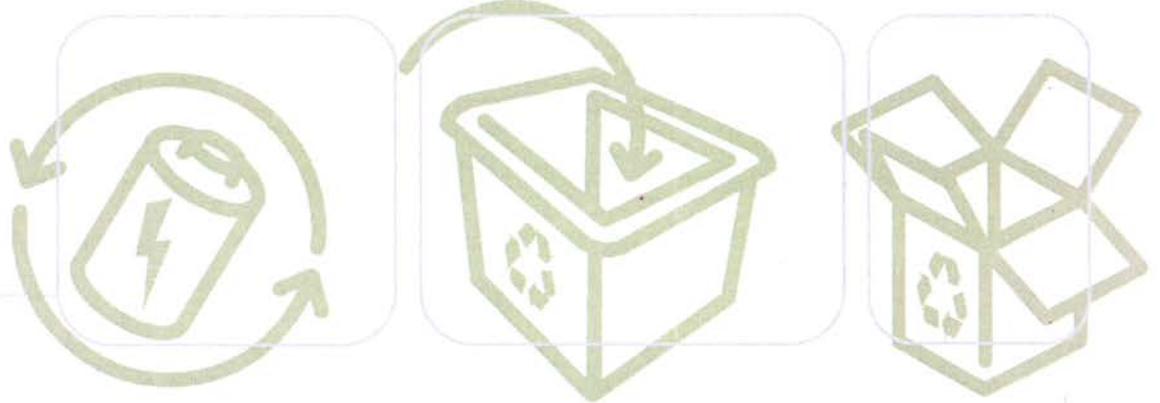
Cada participante recibirá refrigerios así como una tarjeta de regalo con \$10 proporcionada por Wal-Mart en agradecimiento por su participación.

Solo un participante por hogar.



RECICLAR: ¡DÍGANOS! — ¿LO PRACTICA O NO LO PRACTICA?

**PARTICIPE EN NUESTRAS JUNTAS DE ORIENTACIÓN Y DEBATE
PARA HACERNOS SABER: ¡PORQUE SI O PORQUE NO!**



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- Tener su propio modo de transportación a las instalaciones del Distrito de Salud del Condado de Washoe (Washoe County Health District) en 1001 East Ninth St. en Reno.

PARA PARTICIPAR: LLAMAR A LEE AL TELÉFONO 775-328-2611

Cada participante recibirá refrigerios asi como una tarjeta de regalo con \$10 proporcionada por Wal-Mart en agradecimiento por su participación.
Solo un participante por hogar.



Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

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Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

Llamar a Lee: 328-2611

Recicla o no recicla

Llamar a Lee: 328-2611

Appendix E
Mock Focus Group Transcript

What are some of the ways that you recycle?

- 1) Recycles glass, plastic, aluminum, papers. Would like to be able to recycle more.
- 2) Curbside, wish more was taken at curbside. Actually, she doesn't know what's taken and what goes into garbage. Her son's school is tremendous with recycling. Tons of bins to toss Capri Suns, plastic, etc. At home, they also shred and recycle their newspapers.
- 3) He was living in an apartment that had recycling. He moved into a home and doesn't have bins. He takes things out to be recycled.
- 4) She had bins delivered but no one ever picked them up, they were not in an area that recycled.
- 5) There should be a program to get more people involved.
- 6) Any future contract should HAVE to include multi-family. If WM is saying that there's not enough to make it worth my while, that can't be true.

What are other ways that you recycle other than at home or would want to recycle but can't?

- 1) A friend works at AT&T and they have buckets to collect batteries.
- 2) Batteries Plus takes them. Discussion about types of batteries.
- 3) What about bins at grocery stores for plastic bags? What do they do with it?
- 4) There is an e-waste event at a mall.

How do you feel about recycling?

- 1) Is it really doing that much? I would do it for extra money but it doesn't do much.
- 2) It's not saving the planet. I don't think that much actually gets recycled when it's taken from curbside.
- 3) I'm okay with recycling but I don't want it to be a big pain. It shouldn't be a chore like gardening to just throw away your trash.
- 4) If you're at someone's house who recycles, it feels overwhelming because everything you touch has to go somewhere. I see the pros and cons from where I work. I think it consumes people or it does not. There's no medium.

Why do you recycle? What are the benefits?

- 1) Creates more jobs.
- 2) Less in the landfill.
- 3) Who wants more dumps around?
- 4) Saves a lot of energy which equates to cleaner air and using less water.

What are some negatives about recycling or are there any negatives to recycling?

- 1) People are lazy and don't do it.
- 2) There is no negative. Pride in your country. Should leave it clean for people coming after you.

