Rapid Assessment of Unmet Need: A Disaster Response Toolkit

UC Merced Community and Labor Center

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INTRODUCTION

In recent years, the climate crisis has accelerated the frequency of natural disasters, such as record heat, catastrophic wildfires, extreme drought, and major floods. These disasters have devastating effects on vulnerable and at-risk populations such as unhoused individuals, elderly residents, linguistically or geographically isolated populations, and undocumented immigrants. These at-risk populations may face challenges in accessing federal aid. Residents who are unable to access federal disaster assistance may require supplemental relief to offset property and income losses resulting from a disaster. When individuals are unable to access federal assistance, state and local governments may seek to obtain or provide supplemental support to address unmet recovery needs. Estimating these losses can be a lengthy and complicated process, which increases burdens for vulnerable populations. This toolkit is intended to assist with streamlining the disaster needs assessment process and delivery of supplemental aid through collaboration with local and national relief agencies and organizations.

Vulnerable, At-risk, and Hard-to-Reach Populations	
Population Group	Barriers for Provision of State/Federal Assistance
Geographically Isolated	Difficult to access outreach efforts and services
Undocumented Immigration Status	May not qualify for assistance programs
Limited-English Proficient	Difficult to access and provide information necessary to file claims for assistance
Unhoused Individuals	Difficult to receive responses to claims for assistance and respond to follow-up requests
Elderly	Mobility and technology barriers to accessing information and applying for assistance programs
Individuals with Health Conditions or Disabilities	Difficult to access and provide information and access outreach efforts and services

The processes captured in this toolkit are drawn from the UC Merced Community and Labor Center's 2023 Planada Community Needs Assessment, which informed state budget allocations totaling $40 million for

residents of Planada and Pajaro whose losses after a major flood event were not adequately covered by federal disaster aid. Planada is presented as a case study in Appendix A to illustrate one example of how an academic institution worked with community partners to generate substantiated unmet need estimates following a major disaster.

Scope

This toolkit is designed to provide disaster assessment teams, which may include stakeholders from academic institutions, community-based organizations, and/or emergency management agencies, with a step-by-step guide on how to use representative sampling to accurately estimate household damage and unmet recovery needs in a disaster-impacted area. And while assessing impacts to every survivor is the ultimate goal, logistical challenges following large-scale disasters have proven this to be a difficult and protracted undertaking. However, a well-designed survey that is conducted with a representative sample and has robust safeguards against bias can provide statistically reliable estimates equivalent to a full-population survey. Recognizing the limitations of externally led population assessments, this toolkit outlines a community-oriented process, as well as minimum standards to meet scientific standards for representative sampling, including minimum sampling sizes and methodologies for data extrapolation.

This process is not intended to replace or substitute formal FEMA processes to assess and confirm damages through Initial Damage Estimates and Preliminary Damage Assessments required for federal disaster assistance. However representative sampling can quickly identify needs gaps to support efforts for complementary funding (through the state, philanthropic organizations, etc.), especially in areas where population vulnerability impedes efforts to reach all disaster survivors.

This toolkit includes a pre-disaster section to establish a foundation for a community-based assessment before guiding users through four implementation phases, including 1) Assembling the Team; 2) Designing the Survey Instrument; 3) Conducting the Survey; and 4) Analyzing and Sharing the Survey Data.

Pre-Disaster: Setting the Stage for Community-Based Research

Trust plays a critical role in reaching at-risk populations. Information will generally be more trusted if it comes from sources within an impacted community rather than from external sources. A disaster/community assessment team that does not have established relationships with community leaders or community-based organizations may face significant hurdles in conducting effective community-based research such as representative community sampling. Research institutions and emergency management agencies should work to build authentic and reciprocal relationships with community partners in the area they serve well before disaster strikes as part of a Whole Community approach.[1] These partners are essential to informing emergency response and recovery efforts, as well as delivering information to at-risk populations before, during, and after an event.

[1] https://www.fema.gov/glossary/whole-community

To build a network of trusted community leaders and organizations, research institutions and emergency management agencies should dedicate significant resources to outreach activities, such as attending and participating in local events, community meetings, and civic activities. They should also work with local leaders and organizations to learn how to integrate emergency management principles into existing efforts and priorities. Research institutions and local government agencies should also consider inviting community leaders and organizations to participate in local disaster planning efforts including training and exercise of existing emergency response and recovery plans.

Sustaining community engagement is as important as building relationships. It is important for research institutions and agencies to maintain communication—not only to update partners on their activities—but also to be aware of any transitions in partner organizations. Regular engagement through face-to-face or virtual meetings, e-mail, or regularly scheduled telephone calls will help maintain ties and ensure that shared stakeholders are updated on any changes at the organizational or community level.

The Role of the University in Supporting a Community-Led Approach to Recovery.

A university's success in supporting the implementation of this toolkit depends on the establishment of meaningful relationships with the communities it serves. For those relationships to form, a university must first develop a strong narrative about its public serving mission.

California universities, whether public or private, are among the world's most prestigious and research-intensive. Yet public universities have a unique mission—to serve the taxpayers that fund them.

Within universities, centers are typically better positioned to produce applied research, as their mission often involves issues of public and policy interest. Yet, even university centers may need to deliberately shift their activities during a crisis, as many of their resources are dedicated to academic research that takes years to carry out and where the principal focus is on theory development.

Developing university partnerships with community requires a fundamental shift in business-as-usual. It requires university faculty, staff and students to collectively embrace their institution's public-serving mission, and to allocate resources to applied research that can directly inform policy development during the immediate aftermath of a disaster.

A crisis may call for university members to embrace their public-serving mission like no other event. But it is before the crisis that one or more university members must spend time, again and again, developing a clear vision and narrative regarding the university's public-serving mission.

PHASE I: ASSEMBLING YOUR TEAM

Following a major disaster, effective recovery hinges on accurate data and understanding community needs. This section outlines a plan for conducting a representative survey to collect information on the recovery needs of the affected community. The goal of the disaster assessment team should be to conduct a systematic and representative survey that is tailored to capture the unique needs of the community.

In the first phase after a disaster, the disaster assessment team should identify and assemble staff with the necessary skills, as well as organizations, government agencies, and local officials that have been engaged in emergency response efforts to help support the assessment effort. These partners can provide critical information about the affected communities to guide the development and effective dissemination of the survey instrument. This can include information on the impacted areas, the at-risk populations residing in those locations, and strategies to overcome barriers that may hinder participation in the survey effort.

Step 1 – Assemble Necessary Staff

A well-equipped research team should have the following:

- Extensive experience with representative sampling methodologies.
- Extensive experience with successful grassroots initiatives.
- A relationship with the leaders of community organizations and/or local agencies that provided assistance during and after the disaster, particularly those with experienced community outreach workers.
- One or more team member with sufficient language proficiency or a contract with a translator to accurately translate the survey instrument into the language(s) of residents most affected by the disaster.
- One or more team member with the capability to lead a thoughtful and culturally sensitive training with study personnel who will conduct interviews with affected residents.

Step 2 – Identify Partner Organizations/Agencies

If the research team already has an established network of community partners, it should start by identifying groups and individuals that serve the impacted area, prioritizing those that assisted in the emergency response. If the team does not have a pre-existing network, it will need to identify, establish contact with, and vet local organizations and officials for the first time following the disaster. Schools, faith-based institutions, direct service providers, and local officials are a good place to start identifying organizations and agencies that have been engaged in disaster response efforts or have trusted relationships in the community. These contacts are particularly important in very small communities that may not have a robust public service network.

A well-suited community partner will have:

- Extensive history working in the community on successful grassroots initiatives.
- Assisted in the emergency response after the natural disaster.
- Experience working with or serving at-risk populations in the community.
- Community outreach workers on staff or volunteers capable to conduct or assist with community outreach.

Agency or academic partners should be prepared to provide information about their own history of community partnerships, mission, and background information on the needs and goals of the community survey. Community organizations may have concerns about spreading resources too thin. Disaster assessment teams may be able to alleviate those concerns by defining a targeted role for the partner or providing reciprocal assistance to potential partners by sharing information and resources. If feasible, disaster assessment teams or a partner agency should provide funding to community partners to support the project.

Step 3 – Establishing Roles and Responsibilities

Community partners can serve an essential role in the research, serving as local experts on the impacted area, helping to devise and vet survey questions, and/or administering the survey to residents after suitable training. Members of the disaster assessment team should schedule an initial meeting with each community partner to discuss the partnership and define roles and responsibilities. This is also a good time to begin to gather information for use in designing and administering the survey.

The disaster assessment team should work with its partners to jointly develop agreements on how the team will work together, including outlining the various roles and responsibilities of each partner.

Potential Roles for Community Partners			
Community Outreach	Survey Design	Survey Execution	Post-Survey
Publicizing survey and informing residents about survey effort	Suggesting survey topics or questions based on community feedback	Recruiting surveyors for training and survey dissemination	Sharing survey results with the community

Encouraging community participation in survey effort, especially targeting at-risk populations	Identifying languages in which the survey should be translated	Supporting training efforts by identifying potential topics, cultural norms, and local best practices	Working with residents to establish community priorities for supplemental funding
Hosting community forums before, during, and after survey collection	Reviewing completed survey before dissemination for gaps or requests for sensitive information	Identifying strategies to overcome household or neighborhood barriers	Working with elected officials to obtain supplemental funds

See Appendix B for Sample Roles and Responsibilities.

After the initial meetings, either the disaster assessment team or one of the community partners should serve as a convenor to ensure all partners coordinate efforts and stay in regular communication. The convenor should schedule and host regular in person or virtual meetings.

The convenor can help facilitate discussions and brainstorming sessions on topics such as:

- Identifying other groups or people who should be part of the effort
- Identifying areas or neighborhoods most impacted by the disaster
- Identifying at-risk populations in the affected area
- Identifying any social vulnerabilities facing residents in the community that the team should be sensitive about, such as limited-English proficiency, or undocumented status
- Identifying the primary languages spoken in the community
- Identifying particular neighborhoods that should be targeted for survey administration in languages other than English
- Identifying disaster-related issues residents are most concerned about
- Assessing how community partners might contribute to reaching at-risk populations with critical information about the survey effort
- Planning for events to share the results of data collection with residents in the impacted area

PHASE II: DESIGNING THE SURVEY INSTRUMENT

Below, the toolkit briefly covers important elements of the survey design such as survey unit, survey size, survey area, the number and types of questions to include, and accounting for different sub-populations.

Step 1: Define the Survey Unit

In a household survey, a single member of the household will answer questions relating to the entire household and all its occupants. This toolkit recommends using households rather than individuals as the survey unit for two reasons. First, researchers will be able extrapolate more data per survey, even with a relatively small sample size. Secondly, researchers will be able to easily compare and authenticate the results with the United States Census Bureau's American Community Survey (ACS) which samples one out of every twenty households every five years and is the largest survey of its kind.

To account for trailers, RVs, and Accessory Dwelling Units (ADUs) that are commonly overlooked in surveys, it is important to distinguish between individuals who live in a household under the same roof and individuals who live on the same property, but not under the same roof. The survey should account for the difference since occupants who do not share the same roof will be considered separate households, even if located on the same parcel. Collecting data for additional units that constitute "households under another roof" is especially important in capturing unmet needs because these units may be out-of-code (e.g. a converted garage or RV) and not qualify for forms of federal disaster aid that rely upon a recognized address.

Step 2: Draft the Survey Instrument

One or more members of the team should design or inform the design of a survey instrument that can gather data to use in estimating uncovered damages. Community partners can help inform the types of questions to be included based on their understanding of disaster impacts and characteristics of the community. To capture a more holistic account of long-term costs and economic loss, assessment teams should consider asking questions beyond property damage, such as job loss, additional damage assessment needs, and the potential for future economic loss. Another set of questions should assess access to state and federal recovery resources such as questions about FEMA eligibility, qualification, amounts qualified for, and the actual amounts that residents received from FEMA or other disaster relief programs. The difference between the losses sustained and access to state and federal assistance will be critical in determining unmet needs and informing the identification of alternative sources of funding. Determining how much state/federal assistance residents have received will help prevent "duplication of benefit." Under the duplication of benefit policy, if FEMA provides funding for a recovery need that is covered by another funding source, it can require the federal assistance be returned.

Economic loss impact, eligibility, and access to federal relief varies for different populations. To better understand a community's unique needs, disaster assessment teams may want to distinguish survey results by various sub-populations according to highlight vulnerabilities among homeowners, renters, immigrants, limited English proficiency residents, or other groups. In addition, disaster assessment teams may distinguish who applied, qualified, and/or received aid, and the amount of aid received. The team may also account for different levels of vulnerabilities to economic loss. For example, residents who do not have access to credit or a relationship with a banking institution will have less access to capital or loans to cover unexpected expenses than those with credit and banking relationships. These distinctions will allow a disaster assessment team to assess unmet economic needs among various sub-populations.

Assessing future economic loss is an important, but difficult to measure, component of the survey. Some losses may simply be unknown at the time the survey is conducted because the damage is difficult to see or may occur in the future. This may be the case for mold in communities impacted by flooding, foundation damage in communities impacted by earthquakes, or pest infestations when damage results in cracks, holes, or other entry points into the home. In these cases, survey questions can be designed to help predict future losses or establish the need for additional funding for longer term monitoring and mitigation. For example, questions about the use of industrial humidifiers in homes that have been flooded can help determine risks of potential future harm due to mold and moisture.

Surveys should not be overly onerous to participants. Disaster assessment teams should strive to keep surveys at a reasonable length. A 50-question survey should take about 10 to 15 minutes to complete. Surveys longer than 75 questions can be tedious for survey participants and lead to survey abandonment before completion. The research team should consider providing gift cards to survey participants to

compensate them for their time and effort and to incentivize survey completion. Gift cards typically range from $25-$45 depending on survey length.

Survey software, like Qualtrics, provide an online platform to create, distribute, and analyze survey data. It allows assessment teams to collect data using web or mobile devices, even when disconnected from the internet. Disaster assessment teams can also upload data securely and analyze results on the web or geographic information system (GIS) software to share information with external partners, as needed to facilitate the targeted delivery of recovery resources. Survey software includes various tools to increase efficiency in the collection and analysis process. For example, skip logic can be used to make certain sets of questions conditional based on previous responses. This function reduces survey completion time for respondents who do not meet certain conditions and allows for the collection of data tailored to different populations with different disaster needs, such as renters versus homeowners. Additional functionalities like tagging photos to surveys allow for visual data to be used for assessments of disaster damage. ArcGIS Survey123 is another survey software tool with geocoding capabilities. Note that disaster assessment teams using surveys that need to qualify for an Institutional Review Board (IRB) exemption may be prohibited from collecting individually identifiable data, including georeferenced data such as a home's street address.

See Appendix C for a template survey instrument.

Step 3: Submit Study Protocol to the IRB

The IRB is an administrative body established to protect the rights and welfare of human research subjects recruited to participate in research activities. Many research entities, including universities, will need to obtain IRB approval before commencing with the study. Receiving IRB approval can be a lengthy process, depending upon the type of research and provisions that must be met to protect human subjects. As such, at least one team member should be dedicated to submitting the study protocol to the IRB.

One option for research institutions seeking to streamline this requirement is to pre-emptively obtain an IRB exemption. Research can qualify for an exemption if it involves no more than minimal risk and the research procedures fit within one or more of the exemption categories in the federal IRB regulation.[2] Exemption category two applies to surveys and interviews where the recorded information cannot readily identify the subject and disclosure of the responses would not reasonably place the subject at risk. Exemption category five applies to research projects that are conducted or supported by a federal department or agency, and that are designed to study, evaluate, improve, or otherwise examine public benefit or service programs. Any request for an exemption or pre-emptive exemption must be made through the applicable research institution's IRB. See Appendix D for a sample IRB self-exemption application.

Step 4: Translate the Survey Instrument

Working with community partners, the research team should identify the languages that are spoken in the area to be sampled. A translator should be consulted to accurately translate the survey instrument into the language(s) of residents affected by the disaster. Piloting the survey is recommended to adapt the survey to specific terminology that is particular to a group, region, or area.

[2] See 45 CFR § 46.104 (2018), Exempt research.

Step 5: Determine the Sample Size

To achieve a robust sample size that will yield statistically reliable results, hundreds of residents will need to be sampled. Sample sizes, with their approximate margin of error (according to a 95% confidence interval) are listed below.

Sample size	Margin of error
200	7%
300	6%
400	5%
800	3%

Sample size selection depends on the nature of the study population. If sampling a small community with a largely homogenous population—such as a rural farmworking community—a small sample size will generally yield adequate and reliable results. On the other hand, if the study population is heterogenous, assessment teams may want to consider implementing more sophisticated sampling strategies and increasing the sample size to reduce the margin of error.

Next, the boundaries of the affected community must be carefully mapped according to established census tracts. This serves two critical functions: 1) it ensures representative sampling of individuals for accurate data collection, and 2) it allows for a comparative analysis with U.S. census data as an authoritative source. When a disaster affected area overlaps (but does not fully coincide with) a single census geographic boundary, researchers can consult with the local emergency management agency or use tools such as the U.S. Census OntheMap for Emergency Management mapping tool to identify disaster impacted areas and select an appropriate census geography for surveying (i.e., cities, townships, boroughs, and villages). Some impacted areas may not have a well-defined boundary such as unincorporated communities not recognized as census designated places. Although unincorporated communities can be delineated based on population density or smaller geographies like blocks and block groups, census data availability may be limited or unreliable, in which case supplemental data sources may be needed to authenticate survey results.

To randomly select a sample, the research team will need a complete list of the population from which to select. If the team has experience with GIS software, various public data sources can provide address data, such as OpenAddresses and the U.S. Department of Transportation (USDOT) National Address Database. Using these tools, a GIS shape file based on the established boundaries can be used to create a list of addresses. Randomizing this list of addresses can be done using GIS or statistical software. Once the research team has a list of random addresses, the data can be mapped, divided into sections, and used to generate outreach lists.

If the team has limited experience with GIS software, it can generate a random sample using the United States Place Sampler, a tool that samples random street addresses for various census geographies such as a county, tract, or town located within the U.S.

Step 6: Create a Map for Survey Sampling

After the research team has compiled a list of randomized addresses, their locations will need to be shared with surveyors to inform them of which homes to visit to conduct the survey. A geographic map showing the residences to be covered through survey outreach should accompany each set of addresses. This map should be divided into sections to support the geographic assignment of assessment teams. As such, the number of map sections should correspond with the number of surveyor teams and the number of days of survey collection. In addition to informing the assignment of teams, the maps also help track the number of homes that have been surveyed, including those who refused participation as well as homes where the surveyor was unable to make contact. This will help ensure that a representative sample is surveyed.

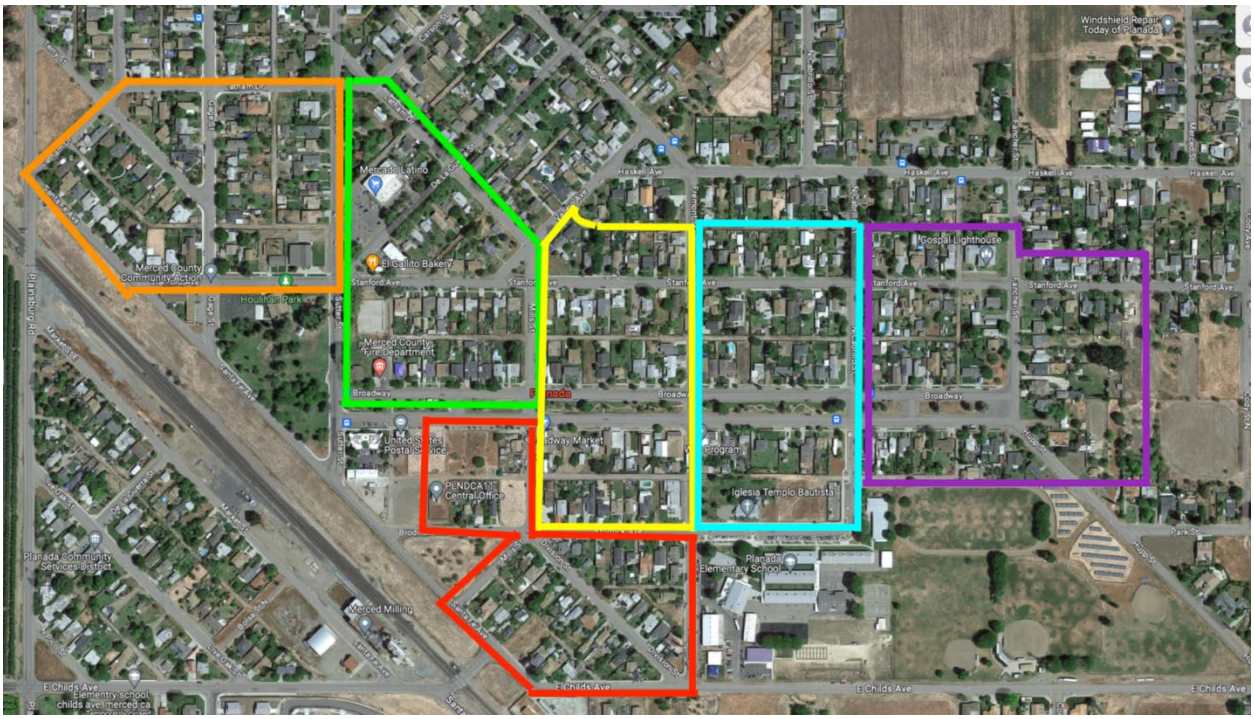


Figure 1: Map sectioning into geographic areas.

PHASE III: CONDUCTING THE SURVEY

This section will cover training, logistics and the day-to-day planning and operations necessary to safely and successfully conduct the survey in the field.

Step 1: Surveyor Training

At least one member of the disaster assessment team should be dedicated to the development and delivery of a one-day (typically 5-8 hours) training for surveyors. As many members as possible of the disaster assessment team should attend the surveyor training since it is an important relationship-building experience with community partners and signals commitment to the project.

The training should cover the purpose of the survey, presentation of the survey, social science survey techniques and best practices, question-and-answers on the survey presentation, and a practice session

where participants are paired with one another to conduct mock survey collections. A member of the assessment team should prepare all training material prior to the meeting, including a slide deck covering each topic. See Appendix E for a sample training presentation.

Researchers will need to be thoughtful and culturally sensitive during the training. This presents a potential opportunity to partner with applied research programs from local colleges and universities. If participants require translation, the team will need to arrange for at least two certified interpreters since they will need to alternate during an all-day event.

The assessment team will need to acquire a space large enough to host all training attendees, set up the room to comfortably accommodate the participants, provide breakfast and/or snacks, water, and lunch, and clean-up after the meeting.

Assessment teams should consider requesting that surveyors complete an IRB training course from the Collaborative Institutional Training Initiative (CITI) Program, a training organization that serves colleges and universities, research organizations, and governmental agencies. Anyone who completes a CITI training will be provided with a certification that can help build job skills for community outreach workers who participate in the project.

Step 2: Set Up Survey Coordination Center

To begin the survey effort, the disaster assessment teams will need to designate a location to coordinate surveying activities while teams are in the field. Ideally, this would be the office of a community organization or agency that is collaborating on the community-engaged research. The center can serve as a location to store and distribute materials, collect and compile information, track assessment progress and associated timelines, and coordinate safety and security information.

A designated logistics team should be responsible for purchasing and distributing supplies, setting-up and breaking down the center, tracking survey numbers, providing on-call assistance to surveyors in the field (e.g., for resupply, breakdowns), and coordinating gift card delivery to surveyors.

Necessary supplies for the center include:

- Snacks (for in the headquarters and to take to the field)
- Bottled water
- Lunch each day of the survey effort
- A canopy (if headquarters is outside)
- Tables and chairs
- Butcher paper
- Markers for meetings and debriefs
- First aid kit
- Gift cards (if using as a survey incentive)

See Appendix F for a complete supply list.

One or two members of the team should have vehicles ready to assist with any surveyor needs in the field, including delivering gift cards to the survey teams a several at a time as needed. The headquarters should be continually staffed to provide support to surveyors returning from the field throughout the day. One designated point of contact should coordinate information between surveyors and the logistics team. See Appendix G for job action sheets.

Step 3: Conduct Survey Interviews

To optimize survey participation, assessment teams should schedule survey collection during non-business hours. Weekends tend to work best; however, depending upon the timeline and the number of surveyors collecting data, teams may decide to work some early evening times in addition to Saturdays and/or Sundays. A full day of survey activity might be conducted according to a schedule similar to the one below.

Schedule	
Set-up	8:45am – 9:30am
Prep with team (maps, instructions, etc.)	9:30am – 10:00am
Conduct surveys (with 15-minute break)	10:00am – 12:30pm
Lunch	12:30pm – 1:00pm
Team meeting to discuss any issues	1:00pm – 1:30pm
Conduct surveys (with 15-minute break)	1:30pm – 4:00pm
Return to headquarters and debrief	4:00pm – 4:15pm
Clean-up	4:15pm – 4:45pm

Preparation, troubleshooting and debriefing will take a significant amount of time, so the assessment team should plan accordingly. In the above sample schedule, only about four and a half hours are dedicated to collecting surveys in the field, despite beginning the day at 8:45am and ending at 4:45pm.

The assessment team should develop and distribute a safety plan that includes important contact information and addresses topics such as avoiding dangerous situations, responding to aggressive animals, engaging law enforcement, and responding to emergency medical needs. Generally, survey collection should be discouraged outside of daylight hours, and as a best practice, surveyors should be paired to prioritize safety while also allowing for coverage of both sides of the street.

Given typical rates of successful survey collection, the research team should assume that each surveyor may collect about one survey an hour after accounting for people that are not home, residents not interested in taking the survey, time spent walking between selected addresses, and the time spent conducting the survey. A team of 25 surveyors might expect to collect 112 surveys per day. For a team of 25 to collect 400 surveys (to achieve a 5% margin of error), surveying may take four full days.

	Surveyors	Completed Surveys	Margin of Error	Hours	Valid Surveys
Planada Study (reference)	23	219	6%[3]	10	207
Small Team	15	300	6%	15	300
Medium Team	30	300	6%	10	300
Large Team	50	300	6%	6	300
Small Team	15	500	4%	33	500
Medium Team	30	500	4%	17	500
Large Team	50	500	4%	10	500

If surveyors are using survey collection tools that allow for geocoding, such as Qualtrics or ArcGIS Survey123, they may associate a physical location or take a photo to capture physical damage at a household where survey data has been collected to provide additional context.

PHASE IV: ANALYZING AND SHARING THE DATA

This final phase focuses on transforming the raw data into a useable format to inform policy recommendations and decisions regarding the delivery of additional assistance to impacted communities.

Step 1: Clean Data

Once the data has been collected, at least one researcher will need to clean the data. Assessment teams can use statistical software or Microsoft Excel to clean data. Data cleaning entails *fixing or removing incorrect or duplicate data* and can take several weeks depending upon the number of data points and researchers reviewing the data. To reduce cleaning time, assessment teams should minimize the use of open-ended questions which will require more time to evaluate compared to fixed option survey questions.

Step 2: Data Authentication and Weighting

Authenticating survey results involves comparing a collected data point, such as household size, percentage of renters, or the number of children or elderly residents in the household to an established data source such as data from the U.S. Census. Assessment teams should measure and report how close the survey data aligns with census data to demonstrate approximation and lend credence to any extrapolated results.

Weighting data refers to the adjustment of a data set based on core demographics like sex, age, and race to correct for differences between the survey sample and population. Weighting data makes the statistics computed from the survey data more representative of the population. For example, if a survey effort

[3] The size of the universe can shape the margin of error. The Planada study sampled 207 households (or 236 if counting addresses with more than one roof) out of Planada's 1,016 households, so the margin of error was 6%. But in a community with 2,000 households, the same sample size would have yielded a margin of error of 7%.

oversampled Latinos at a rate 5 times higher than the rate of Asians, then the assessment team would generate a race/ethnicity weight for Latinos that would be .20 (1/5) and for Asian respondents that would be 1. This creates a level playing field through which these different populations can be equally compared.

For household-based surveys, assessment teams should measure and adjust for the difference between the number of households surveyed and the total number of households in the surveyed area. For example, in the study implemented in Planada following the 2022-23 winter storms, the assessment team multiplied the total number of responses received from surveyed households (236) by 4.305 to account for the total number of households in Planada (1,016) according to American Community Survey census data.

Step 3: Use Existing Data to Develop Cost Estimates

The representative sampling will extrapolate the number and type of properties damaged and the disaster assistance received by household. Using this data, assessment teams can estimate impacts and unmet needs throughout the community even if some households do not know the actual cost of their damages. The assessment team can calculate the average cost of disaster-related damage in the affected area using mean data from households where damages were appraised. To develop a total estimate of property damage in the impacted community, the mean (or average cost of household damage) is multiplied by the total number of damaged households. Where the research team is unable to gather enough data to produce a meaningful average, other data sets can be applied. For example, to estimate vehicle damages, previous research on the impact of floods on the insurance industry can be used to establish an average cost to repair or replace a flood-damaged vehicle.

Step 4: Analyze Data/ Write Brief

After the assessment team has cleaned and analyzed the data, the team should summarize key findings in a short, accessible brief. The audience will likely be agency staff, local elected officials, state and federal representatives, and residents in the affected area. For this reason, the focus should be on presenting data and conclusions clearly and concisely, while avoiding complex statistical analyses.

Key areas to cover include frequency data on various types of losses in the community, such as property damage (both inside and outside the home), vehicle damage or loss, lost wages, and any other damage or loss that was not covered under existing disaster assistance programs. The brief may also include policy recommendations based on the survey findings, including supplemental county or state budget allocations to support recovery within the impacted community.

Tips for Writing Research Summaries

- Use short sentences with no more than 15-20 words.
- Use common words and avoid jargon or technical terms.
- When necessary, define important terms in simple language.
- Use everyday examples or analogies to explain complex concepts.
- Reduce sentences into smaller, easier-to-understand chunks.
- Use headings and subheadings to break up the text.
- Highlight key points with bold text or bullet points.
- Use visuals like charts, graphs, and images.

Step 5: Hold a Community Townhall

After the team completes surveying and data analysis, it should present its findings so residents understand how the information they provided will be used to actively shape recovery efforts. Community partners and/or local government officials can work with the assessment team to host a townhall or other forum in which residents can learn about the research findings and collectively determine local priorities. The assessment team should prepare a community-accessible slide deck or other presentation to brief residents on the surveys' findings.

Community partners and/or local government officials can also solicit input from residents to help establish community priorities and guide any supplemental funding received to the highest priority recovery needs. See Appendix H for a sample community voting process that can be used to establish recovery priorities. The results of the community voting process can be shared in follow-up reports to create a shared understanding of community-identified funding priorities.

Step 6: Follow-Up and Potential Uses of the Unmet Needs Assessment

The unmet needs assessment can be used to advance efforts to support community needs in several ways. Most importantly, it can be used to inform funding needs and support decision-making at the local, state, and federal level. Community partners and local officials can work together to secure supplemental recovery funding, develop strategies to improve access to state and federal assistance, educate stakeholders on the impact of climate disasters, and prepare for future disaster response and recovery efforts. Local emergency management agencies can also use the data to request additional local resources, plan for future emergencies, and address potential gaps in disaster assistance programs.

CONCLUSION

With the increasing frequency and intensity of extreme weather events due to climate change, impacted residents will face future disaster impacts. Research shows that vulnerable populations live in locations that are disproportionately prone to disasters and may face barriers to accessing state and federal recovery resources. One barrier to recovery is a lack of information on disaster impacts among vulnerable populations, including economic losses that may be addressed through state and federal disaster recovery programs. In times of disaster, local agencies, research institutions, and community partners can collaborate to aid in the collection of data that can inform the recovery process. This toolkit provides a step-by-step guide to assist disaster assessment teams in measuring unmet needs using community-driven research and representative sampling. This is intended to generate information to assist local, state and federal officials in developing strategies that address programmatic gaps and lessen the financial impact on vulnerable populations.

APPENDIX A

Case Study: The Planada Flood

Planada is a small, unincorporated farmworking community of about 4,000 residents located nine miles east of Merced, California. On January 9, 2023, in the middle of a heavy rainstorm, nearby Miles Creek broke through a levee and flooded the town. The flood inundated most of Planada. It damaged buildings and vehicles, including the local elementary school and about half of the town's homes. Planada residents are predominantly farmworkers, and lack flood insurance, savings, or credit to fall back on in times of emergency. Moreover, many are undocumented, making it difficult to access federal disaster funds or unemployment benefits for lost work.

Local community organizations and representatives worked with residents in the days, weeks, and months following the disaster to connect them with resources and service providers to support in the aftermath of widespread property damage. However, a substantial gap between the resources residents needed to repair or replace damaged property and the funding available to residents quickly became apparent. Residents reported being displaced or evicted due to extensive property damage, rising rents to cover costs of repairs, lost work and wages due to vehicle damage, and local business closures.

During subsequent community meetings, community leaders and residents articulated several outstanding needs, such as home inspections by third parties, aid for remediation, and protection against unlawful rent increases and evictions. Residents shared the shortcomings of federal disaster response for a community like Planada which is characterized by high rates of undocumented residents, out-of-compliance housing, and underground labor markets. In turn, public officials requested well-informed damage estimates to support requests for supplemental budgeting.

Community organizations serving Planada reached out to the UC Merced Community and Labor Center to assist in data collection to inform policymaking and a potential budget request to the California State Legislature. After meeting with Planada leaders, the UC Merced Community and Labor Center and its community partners developed and executed a Planada Community Needs Assessment Survey, a community-wide door-knocking effort to build on earlier information-gathering efforts. The Planada Survey was designed as a representative study, to provide data that could be generalized to all households in Planada for the purposes of informing policymaking.

On Friday, April 21, 2023, the Community and Labor Center conducted a survey training with staff and community volunteers. The Community and Labor Center generated a list of randomly generated household addresses. Over the following two days, staff and community volunteers conducted the survey by knocking on the doors of households on every street that appeared on the map and managed to gather information from over 200 households, a number sufficient to make representative findings for Planada.

The following week, the Community and Labor Center used the representative data to calculate community-level estimates for funding assistance for renters, home remediation, vehicle loss, and home inspections. The Community and Labor Center disseminated the results of the findings to residents at an in-person convening in Planada and worked with community organizations to engage residents in a democratic process to rank the funding needs in order to share the communities' priorities with local representatives and decision-makers. The Community and Labor Center used this information to publish a report outlining its methodology, results, and budget gap estimates.

This report ultimately served as the basis for a $20 million budget request with the California State Legislature. The Legislature and the Governor approved the full amount of the budget request in July 2023. Pajaro, a flooded community of similar size on California's Central Coast, relied on the Planada study to also request and obtain $20 million in the State Budget.

In the span of a few weeks, the UC Merced Community and Labor Center, alongside its community partners, drafted, executed, and analyzed a community needs assessment; reported its findings to residents; and incorporated resident feedback and its findings into a report used in the legislative process. When working with communities facing a disaster, especially vulnerable communities that generally fall through the gaps, time is critical. The experience in Planada can serve as a roadmap for rapid damage assessment and estimating community level need and funding gaps.

APPENDIX B

Roles and Responsibilities

Potential Roles for Community Partners			
Community Outreach	Survey Design	Survey Execution	Post-Survey
Publicizing survey and informing residents about survey effort	Suggesting survey topics or questions based on community feedback	Recruiting surveyors for training and survey dissemination	Sharing survey results with the community
Encouraging community participation in survey effort, especially targeting at-risk populations	Identifying languages in which the survey should be translated	Supporting training efforts by identifying potential topics, cultural norms, and local best practices	Working with residents to establish community priorities for supplemental funding
Hosting community forums before, during, and after survey collection	Reviewing completed survey before dissemination for gaps or requests for sensitive information	Identifying strategies to overcome household or neighborhood barriers	Working with elected officials to obtain supplemental funds

Potential Roles for Government/Agency Partners			
Community Outreach	Survey Design	Survey Execution	Post-Survey
Identifying service providers, community leaders and community-based organizations active in the area	Identifying information gaps and gaps in coverage of emergency response programs	Reviewing maps and survey area to ensure adequate coverage of impacted areas	Identifying opportunities to use data to inform legislative or agency decisions
Convening service providers, community leaders, and research institutions to discuss potential collaboration	Sharing agency priorities with research team	Contacting local law enforcement and city officials to inform them about survey efforts	Sharing data with federal, state, and local emergency response entities
Attending community forums before, during, and after survey collection	Reviewing survey and suggesting survey topics or questions based on emergency response efforts	Identifying strategies to overcome household or neighborhood barriers	Working with elected officials to obtain supplemental funds

Potential Roles for Research Partners			
Community Outreach	Survey Design	Survey Execution	Post-Survey
Meeting with community and agency partners to discuss survey needs	Drafting initial survey instrument and disseminating it to community/agency partners for feedback	Providing training material and training for canvassers	Cleaning and analyzing data
Learning about community priorities to help inform survey design	Identifying area to be surveyed	Preparing and disseminating maps and address lists to canvassers	Drafting and publishing a report on the survey findings
Attending community forums before, during, and after survey collection	Translating survey into languages spoken in the community.	Creating a reporting system to collect and track survey progress	Presenting findings at public meetings

APPENDIX C

Survey Instrument: Planada Flood Disaster Community Needs Assessment

---

Start of Block: Residence and Home Ownership

Q1 Are you at least 18 years old today?

- No (1)
- Yes (2)

Skip To: End of Survey If Are you at least 18 years old today? = No

Q2 Are you currently a resident of Planada?

- No (1)
- Yes (2)

Skip To: End of Survey If Are you currently a resident of Planada? = No

Q3 Were you a resident of Planada as of January 10, 2023?

- No (1)
- Yes (2)

Skip To: End of Survey If Were you a resident of Planada as of January 10, 2023? = No

Q4 Are you currently a renter?

- No (1)
- Yes (2)

Display This Question:

If Are you currently a renter? = Yes

Q5 Have you experienced a rent increase since January 10?

- ○ No (1)
- ○ Yes (2)

Display This Question:

If Are you currently a renter? = Yes

Q6 Have you been threatened with eviction since January 10?

- ○ No (1)
- ○ Yes (2)

Q7 Did you have flood insurance prior to the floods on January 10, 2023?

- ○ No (1)
- ○ Yes (2)

End of Block: Residence and Home Ownership

Start of Block: Household Size and Employment

Q8 Including yourself, how many people live in your household, under this same roof?

_____

Q9 How many other people live on your property, but not under your same roof?

_____

Q10 How many people living on your property are aged 18 to 65?

_____

Q11 For person #____ aged 18 to 65, please tell me if they worked for salary or wages in 2022.

- ○ No (21)
- ○ Yes (22)

Display This Question:

If For person #____ aged 18 to 65, please tell me if they worked for salary or wages in 2022. = Yes

Q12 For person #____ aged 18 to 65, please tell me:

	No (21)	Yes (22)
If they were paid all or part in cash (3)	○	○
In which industry they worked in (4)	○	○
How many days of work they have missed due to flooding in 2023 (5)	○	○
If they qualified for unemployment insurance (6)	○	○
How much in weekly benefits did they qualified for? (7)	○	○

Q13-31 [Repeat Q11 - Q12 for each person aged 18 to 65 in the household]

Q32 For person #____ aged 66 and above, please tell me if they worked for salary or wages in 2022.

- ○ No (21)
- ○ Yes (22)

Display This Question:

If For person #____ aged 66 and above, please tell me if they worked for salary or wages in 2022. = Yes

Q33 For person #____ aged 66 and above, please tell me:

	No (21)	Yes (22)
If they were paid all or part in cash (4)	○	○
In which industry they worked in (5)	○	○
How many days of work they have missed due to flooding in 2023 (6)	○	○
If they were eligible for social security benefits (7)	○	○

Q34-51 [Repeat Q32 – Q33 for each person aged 66 and above to 65 in the household]

End of Block: Household Size and Employment

Start of Block: Property Damage

Q52 Has property belonging to you, or anyone living in your household, experienced flooding on or since January 10, 2023?

- ○ No (1)
- ○ Yes (2)

Skip To: End of Block If Has property belonging to you, or anyone living in your household, experienced flooding on or sin... = No

Q53 Were large industrial dehumidifiers used to dry your house?

- ○ No (1)
- ○ Yes (2)

Q54 Prior to the floods on January 10, were there issues with mold in your household?

- ○ No (1)
- ○ Yes (2)

Q55 Since the floods on January 10, have there been new issues with mold in your household?

- ○ No (1)
- ○ Yes (2)

Q56 For each of the following items, please tell me **the number** of items in your household that are currently lacking but needed, due to damage from floods this year.

- ○ Vehicles used to drive to work (1) _____
- ○ Heating system (2) _____
- ○ Cooling system (3) _____
- ○ Other (4) _____

End of Block: Property Damage

Start of Block: Health

Q57 Do you have health insurance?

- ○ No (1)
- ○ Yes (2)

Q58 When was the last month and year that you saw a doctor?

- ○ Month (1) _____
- ○ Year (2) _____

Q59 Has a doctor ever told you that you have any of the following conditions:

- ☐ Allergies (1)
- ☐ Asthma (2)
- ☐ Mental health issues (3)
- ☐ Other health issues (4) _____

Skip To: End of Block If Condition: Selected Count Is Equal to 0. Skip To: End of Block.

Q60 Do you have any new health issues that have arisen since Jan 10? Which ones?

_____

Q61 Have any of the following health issues worsened since January 10?

	No (1)	Yes (2)
Allergies (1)	○	○
Asthma (2)	○	○
Mental health issues (3)	○	○
Other health issues (4)	○	○

End of Block: Health

Start of Block: Home Inspection And Remediation

Q62 Since January 10, have you received a home inspection for flood-damaged properties from any of the following?

- ☐ The County of Merced (1)
- ☐ Red Cross (2)
- ☐ Catholic Charities (3)
- ☐ Another third party (4) _____

Q63 How much in flood-related remediation costs did the third-party home inspection estimate that your home would need?

_____

End of Block: Home Inspection And Remediation

Start of Block: Disaster Assistance

Q64 Since January 10, has anyone in your household been eligible to apply for aid from any of the following?

- ☐ FEMA (Federal Emergency Management Agency) (1)
- ☐ USDA (United States Department of Agriculture) (2)
- ☐ Other disaster assistance (3)

Q65 Did anyone from your household apply for aid from any of the following?

- ☐ FEMA (Federal Emergency Management Agency) (1)
- ☐ USDA (United States Department of Agriculture) (2)
- ☐ Other disaster assistance (3)

Display This Question:

If Did anyone from your household apply for aid from any of the following? = FEMA (Federal Emergency Management Agency)

Or Did anyone from your household apply for aid from any of the following? = USDA (United States Department of Agriculture)

Or Did anyone from your household apply for aid from any of the following? = Other disaster assistance

Q66 How much aid did your household qualify for from:

- ○ FEMA (1) _____
- ○ USDA (2) _____
- ○ Other disaster assistance (3) _____

Q67 Since the floods on January 10, has your household fallen behind on any of the following?

- ☐ Rent or mortgage (1)
- ☐ Utility bills (2)

Display This Question:

If Since the floods on January 10, has your household fallen behind on any of the following? = Rent or mortgage

Or Since the floods on January 10, has your household fallen behind on any of the following? = Utility bills

Q68 How much has your household fallen behind on any of the following?

- ○ Rent or mortgage $ (1) _____
- ○ Utility bills $ (2) _____

Q69 Does at least one person in your household currently have any of the following financial resources:

- [ ] A bank account (1)
- [ ] Credit history (2)
- [ ] A line of available credit (3)

Q70 Since January 10, has anyone in your household applied for any loans to cover disaster-related costs?

- ○ No (1)
- ○ Yes (2)

Q71 Is there anything else you would like to share about your experience living in Planada following this year's floods?

_____

Q72 Interviewer name

_____

End of Block: Disaster Assistance

APPENDIX D

IRB Self-Exemption Application

Several University of California campuses use an IRB self-exemption application process to speed up the process to obtain study approval for exempt activities. Internal Review Boards that do not have a self-exemption process may wish to consider adopting one in order to allow university research teams to respond to urgent public needs. The following is a possible template for a self-exemption application.

Initial Submission
*required

Principal Investigator

Provide the name of the Principal Investigator of this study.

Name:
Organization:
Address:
Phone:
Email:

Is the Principal Investigator a staff, student, postdoctoral scholar or other trainee?

Yes No

Will the results of this study contribute to generalizable knowledge?

Yes No

Does this study qualify for a Self-Exemption Determination?

Please find Self-Exemption determination qualification information here.

Yes - Complete the Self-Exemption Determination sections

No - Complete the standard initial submission.

Study Title _____

Exempt Categories

Select the appropriate Exempt Category as it applies to the proposed study.

(1) Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students? opportunity to

learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

(i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

(ii) Any disclosure of the human subjects? responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects? financial standing, employability, educational advancement, or reputation; or

(iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by § 46.111(a)(7).

(3) (i) Research involving benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection and at least one of the following criteria is met:

(A) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

(B) Any disclosure of the human subjects? responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects? financial standing, employability, educational advancement, or reputation; or

(C) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by § 46.111(a)(7).

(ii) For the purpose of this provision, benign behavioral interventions are brief in duration, harmless, painless, not physically invasive, not likely to have a significant adverse lasting impact on the subjects, and the investigator has no reason to think the subjects will find the interventions offensive or embarrassing. Provided all such criteria are met, examples of such benign behavioral interventions would include having the subjects play an online game, having them solve puzzles under various noise conditions, or having them decide how to allocate a nominal amount of received cash between themselves and someone else.

(iii) If the research involves deceiving the subjects regarding the nature or purposes of the research, this exemption is not applicable unless the subject authorizes the deception through a prospective agreement to participate in research in circumstances in which the subject is informed that he or she will be unaware of or misled regarding the nature or purposes of the research.

(4) Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

(i) The identifiable private information or identifiable biospecimens are publicly available;

(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

(iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or

(iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, 44 U.S.C. 3501 note, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, 5 U.S.C. 552a, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq.

Is this research regulated by the FDA?

No Yes

Is this research supported by the Department of Justice (DOJ)?

No Yes

Does the research include targeted recruitment of any of the following?

Children/Minors
Adults who may not be legally/mentally/cognitively/competent to consent

Prisoners or parolees
American Indian/Alaska Natives

Undocumented peoples
Pregnant women

No Yes

Does the research involve any of the following?
Use or disclosure of protected health information (PHI)

Use of Video/Audio recordings for publication/presentation (not for transcription only purposes)
Requires FERPA authorization
Includes topics of self-harm, suicide, illegal behavior or other sensitive topics

No Yes

Does the research include international recruitment or study sites?

No Yes

Do you or any investigator(s) participating in this study have a conflict of interest (as listed below) related to this research project?

1. Compensation related to the research unless:

Income less than $500 in the past year when aggregated for the immediate family. Investments less than $2000
Loan balances less than $500
Gifts valued less than $50

2. Proprietary interest related to the research including, but not limited to, a patent, trademark, copyright, or licensing agreement.

3. Board or executive relationship related to the research, regardless of compensation, such as director, officer, consultant or any management position.

4. Travel Reimbursements

No Yes

Study Details

Provide a description of the study.
Include study objectives, population, recruitment, consent and all procedures.

How is this study funded?

Extramural Funding

Internal Funding

Department Funds/Startup Funds

Funded Program

Please list the program funding this research_____

SELF-EXEMPTION DETERMINATION ATTESTATION

Please attest to the following and provide your initials in the box below.

- All study personnel have complete human subjects research training via CITI.
- All amendments to studies that have undergone the self-determination process are to be maintained independently.
- If a change to the self-determined protocol results in the study no longer being eligible for self-determination a new study will be submitted in Cayuse.
- The Principal Investigator and all study personnel will follow all relevant IRB policies and procedures.

Add initials here ____

Describe any information not already provided within the submission.

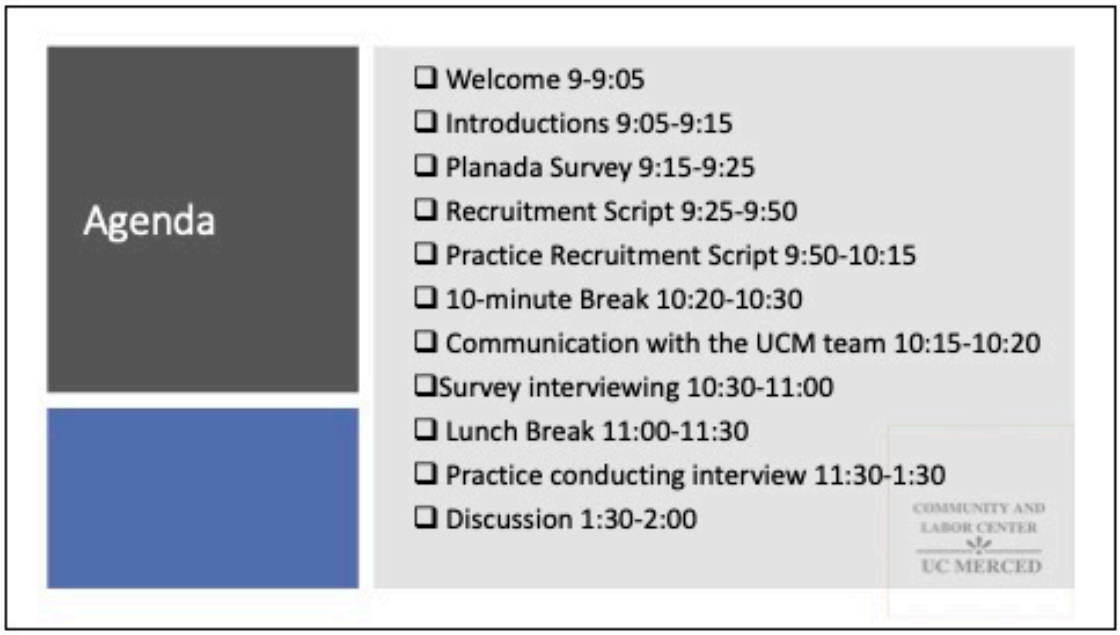
Attach any documents/links not captured within the submission.

Additional attachments/links

APPENDIX E

Training Presentation

1



2

Introductions

1. Name
2. Where did you grow up
3. Favorite place
4. What interested you about this project

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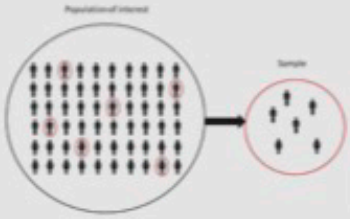
3

Purpose of this Study

Q: How do community surveys advance our understanding of community need?

Q: Why are representative survey samples important?



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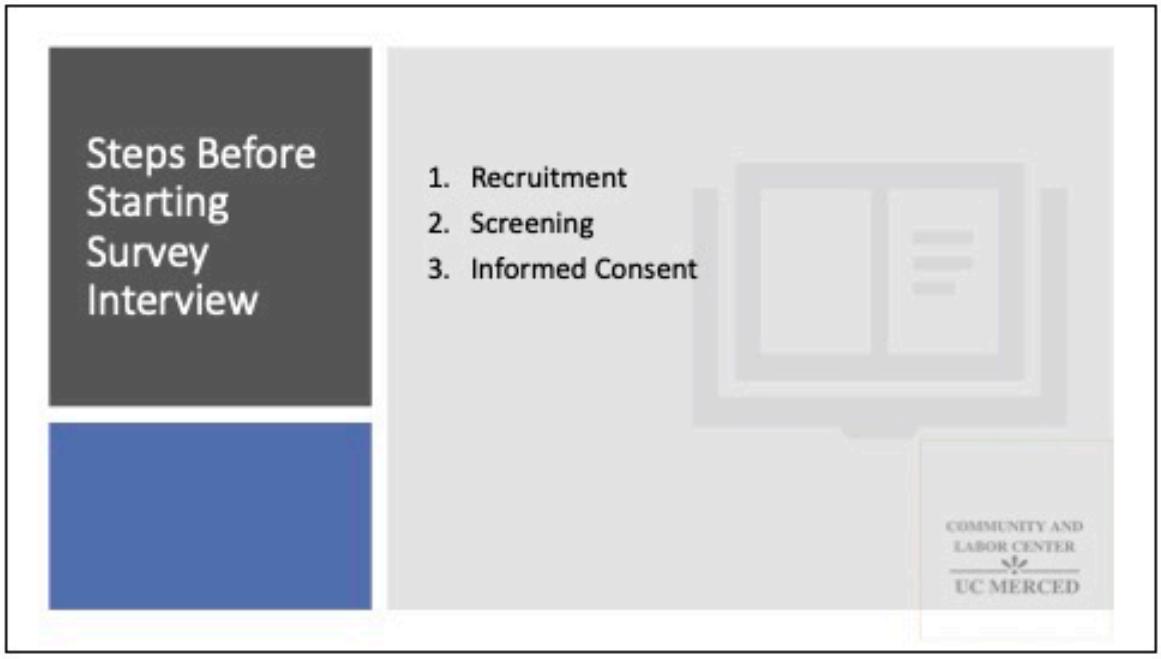
4


Steps Before Starting Survey Interview
1. Recruitment
2. Screening
3. Informed Consent
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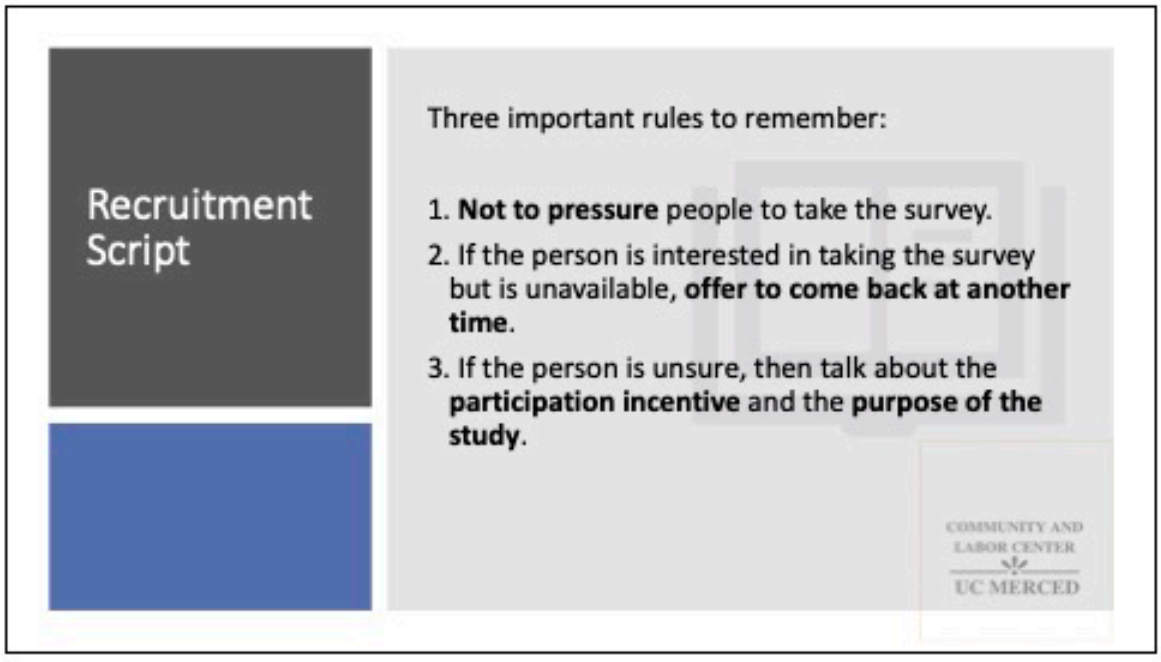
5


Recruitment Script
Three important rules to remember:
1. Not to pressure people to take the survey.
2. If the person is interested in taking the survey but is unavailable, offer to come back at another time.
3. If the person is unsure, then talk about the participation incentive and the purpose of the study.
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6

Recruitment Script

2023 My Name is_____, and I am working with __**name of your organization**__ and the **UC Merced Community and Labor Center**, a partnership striving to improve the lives of working families in the Central Valley.

We are conducting a survey to understand community needs related to disaster recovery. The information will be used to advocate for unmet disaster relief.

By agreeing to respond to this survey, you are providing your oral consent to participate in this study.

As a token of appreciation for your time, we will offer you a gift card in **the amount $25 once the survey is completed. Your participation in the study is completely voluntary. You may refuse to participate in this study, or skip any question(s) at any point during the survey. You may change your mind about being in the study and quit at any point once the study has started.**

May I begin the survey and ask you some questions that will take about 10-15 minutes?

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7

Recruitment Script: Demo and Practice

- Demonstration of the verbal recruitment script.
- Practice the recruitment script (10 min).
- Reflection Questions:
  - How did you feel while practicing survey recruitment?
  - Is there any wording or order of the script that you would change?

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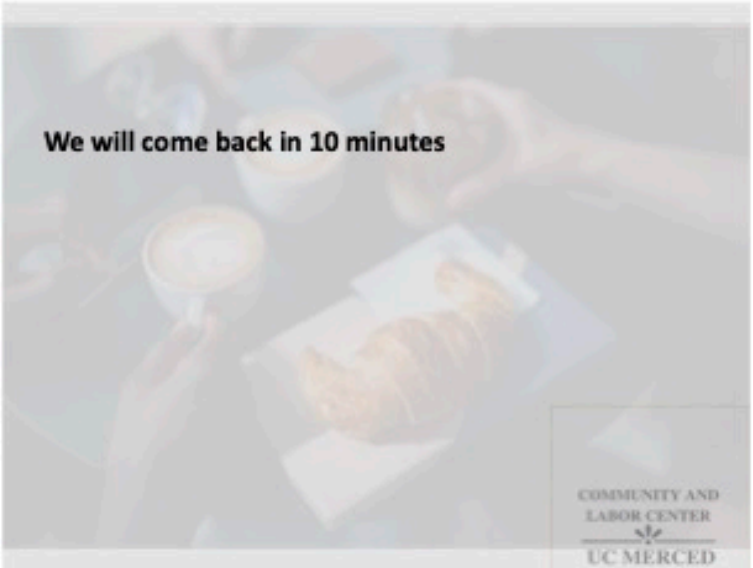
8

Break



9

Communication with UC Merced Team

- Regular check-in's
- UCM Contacts:
  1. Ed Flores
  2. Rodrigo Alatriste-Diaz

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10


Lesson on Survey Interviewing & Gathering Quality Data
• The quality of our research will depend on the quality of our data, and the quality of our data will depend on our collection efforts.
• How can we keep participants engaged and interested?
• How do we create a space for participants to respond honestly and accurately during a survey?
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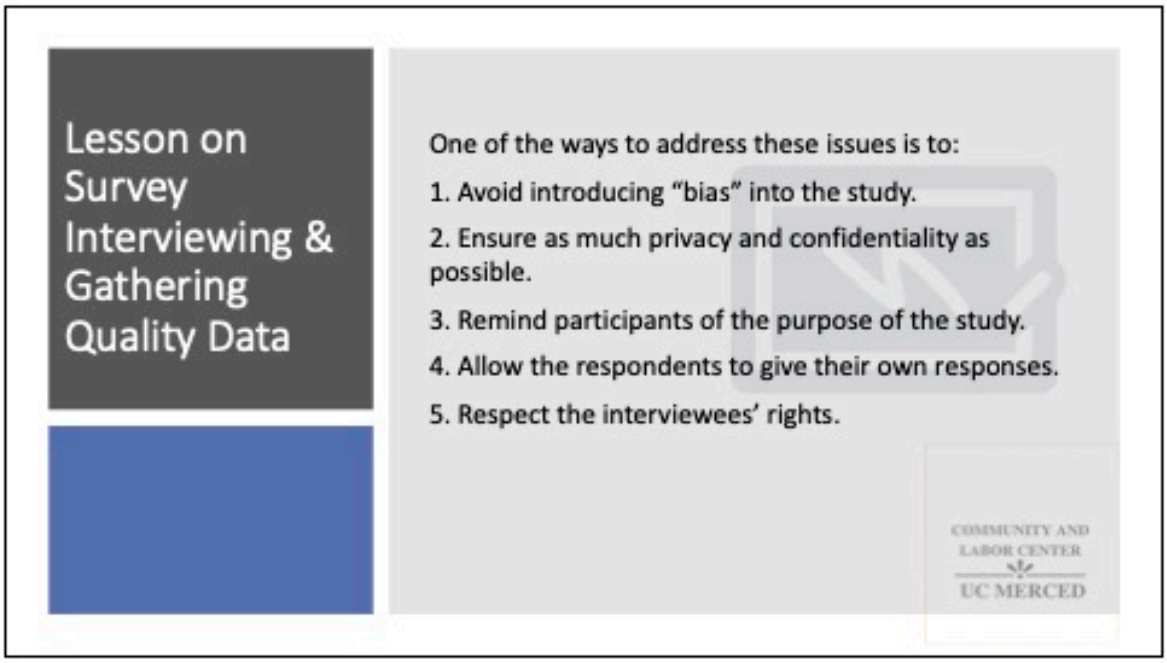
11


Lesson on Survey Interviewing & Gathering Quality Data
One of the ways to address these issues is to:
1. Avoid introducing "bias" into the study.
2. Ensure as much privacy and confidentiality as possible.
3. Remind participants of the purpose of the study.
4. Allow the respondents to give their own responses.
5. Respect the interviewees' rights.
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12

Demonstration: Conducting Interview

In this section, we will ask you a little bit about yourself.

42. What is your age in years?

43. Are you of Hispanic or Latino or Spanish origin?
☐ Yes ☐ No

44. What is your race?
☐ White
☐ Black or African American
☐ Asian
☐ Native Hawaiian or Pacific Islander
☐ Native American/Alaskan
☐ Two or more races
☐ Other (please specify: _____)

45. How many people currently live in your household (including yourself)?

46. How many of these are children under 18?

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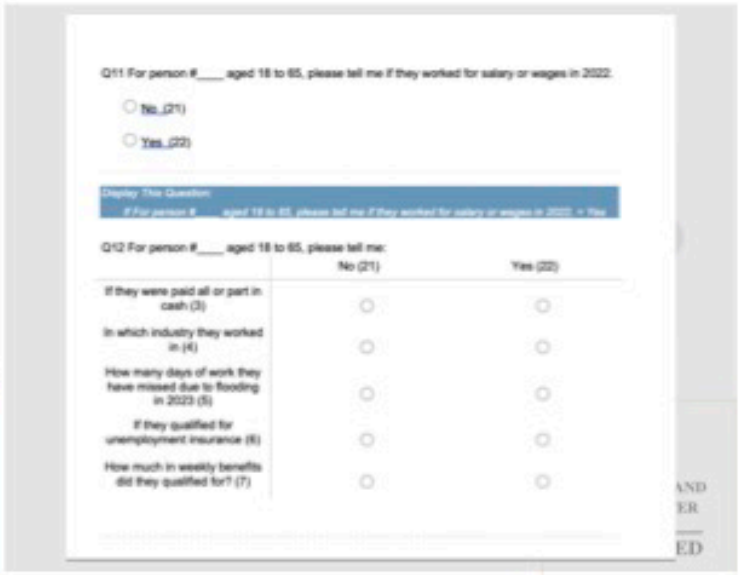
13

Questions types



Q11 For person #____ aged 18 to 65, please tell me if they worked for salary or wages in 2022.

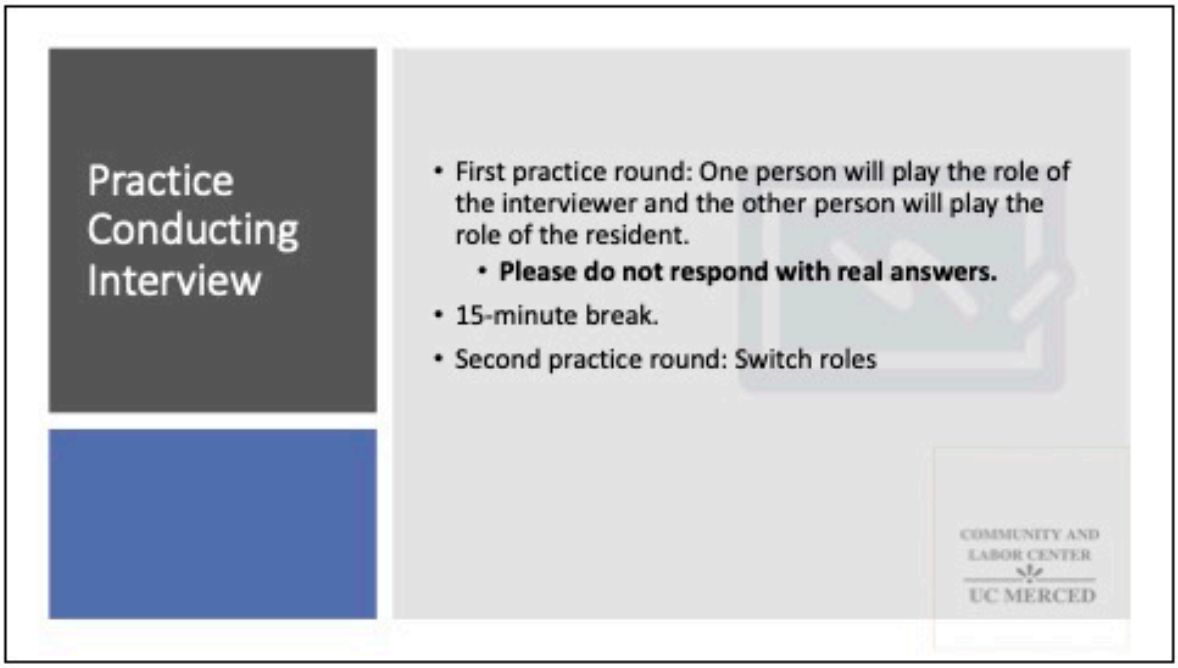
○ No (21)
○ Yes (22)

Display This Question:
If For person #____ aged 18 to 65, please tell me if they worked for salary or wages in 2022: = Yes

Q12 For person #____ aged 18 to 65, please tell me:

	No (21)	Yes (22)
If they were paid all or part in cash (3)	○	○
In which industry they worked in (4)	○	○
How many days of work they have missed due to flooding in 2023 (5)	○	○
If they qualified for unemployment insurance (6)	○	○
How much in weekly benefits did they qualified for? (7)	○	○

14


Practice Conducting Interview
• First practice round: One person will play the role of the interviewer and the other person will play the role of the resident.
• Please do not respond with real answers.
• 15-minute break.
• Second practice round: Switch roles
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15


Discussion
• Questions
• Concerns
• Feedback
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16

APPENDIX F

Supply List

Surveyor Training
❑ Tables and chairs
❑ Name tags
❑ Sign-in sheet
❑ Slide deck
❑ Laptop computer, fully charged, with charger
❑ Projector and screen
❑ Tablets with uploaded survey for every participant
❑ Printed handouts
❑ Pens and paper for notetaking
❑ Butcher paper and tape
❑ Easels
❑ Markers in various colors
❑ Breakfast
❑ Snacks
❑ Lunch
❑ Bottled water
❑ First aid kit
❑ Facial tissue
❑ Hand sanitizer

Field Canvassing
❑ A canopy (if headquarters is outside)
❑ Tables and chairs
❑ Sign-in sheet
❑ Laptop computer, fully charged, with charger
❑ Gift cards (if using as a survey incentive)
❑ Tablets with uploaded survey for every canvasser
❑ Equipment sign-out sheet
❑ Printed maps for every canvasser plus extras
❑ Pens and paper
❑ Butcher paper and tape
❑ Easels
❑ Markers in various colors
❑ Breakfast
❑ Snacks (for in the headquarters and to take to the field)
❑ Lunch for each day of the survey field work
❑ Bottled water
❑ First aid kit
❑ Facial tissue
❑ Hand sanitizer
❑ Contact list for all canvassers and support staff

APPENDIX G

Job Action Sheets

Position:	**Survey Coordinator**
Role:	In charge of coordinating field survey operations
Before Field Work:	
• Ensure that the survey area has been sectioned and mapped	
• Print maps and any other relevant materials	
• Create a contact list with information of surveyors and all support staff	
• Create a safety plan for surveyors	
During Field Work:	
• Coordinate surveyor check in process	
• Welcome surveyors and provide overview of the day, timeline, and points of contact	
• Review survey instructions and safety plan with surveyors	
• Distribute maps and assign survey teams to various sections of survey area	
• Distribute and track gift cards, if using as a survey incentive	
• Serve as the initial point of contact for surveyors and dispatch any support they may need in the field	
• Track survey numbers and progress	
After Field Work:	
• Lead staff debriefing	
• Make any necessary adjustments to maps and future surveyor assignments based on response rates in different sections of the survey area	

Position:	**Logistics Team Lead**
Role:	Coordinate resources for training and in the field survey efforts and ensure headquarters and training facilities are in order. Supervise any other members of the logistics team.
Before Field Work:	
• Assess supply inventory and reorder supplies as necessary	
• Coordinate purchase of food and drinks	
• Coordinate delivery of supplies and equipment	
During Field Work:	
• Ensure facility utilities (i.e., heat, air conditioning, water, lighting, refrigeration) are operational and functioning properly	
• Ensure accessibility to facility (i.e., doors unlocked, obstacles removed from entrances and parking lots)	
• Coordinate restocking of supplies and food and drinks, as needed	
• Coordinate facility setup and teardown	
• Serve as troubleshooter for any logistics or supply needs	
After Field Work:	
• Lead teardown and cleanup of facility	
• Attend staff debriefing	
• Prepare facility for next day operations, as needed	

Position:	Information Technology Coordinator
Role:	Ensure surveyors have access to necessary technology in working order and trouble-shoot any hardware or software malfunctions
Before Field Work:	
• Acquire sufficient tablets or other computing hardware for survey effort	
• Download necessary software on all tablets or other hardware to be used in survey effort	
• Download survey to all tablets and other hardware as needed	
• Ensure all electronic equipment is fully charged	
During Field Work:	
• Check out tablets to surveyors and track the inventory	
• Review how to use the equipment with all surveyors including what to do in case equipment is not working properly	
• Trouble-shoot any hardware or software malfunctions	
• Track any equipment that needs replacement	
• Charge equipment as necessary	
• Collect all tablets or other hardware from surveyors	
After Field Work:	
• Attend staff debriefing	
• Ensure survey data from tablets or other hardware is properly saved and uploaded	

Position:	Interpreter/Translator (can be broken up into separate positions)
Role:	Ensure that surveyors understand spoken presentations and written materials in the language that is most comfortable for them
Before Field Work:	
• Translate any written instructions or other written material in the languages spoken by surveyors	
• If using simultaneous interpretation equipment, ensure the equipment is functioning, charged, and set to the correct channel	
During Field Work:	
• Announce the availability of interpretation services and ascertain who may need them	
• Check out simultaneous interpretation equipment to surveyors and track the inventory	
• Interpret any instructions, presentations, and questions and answers as needed by surveyors	
• Provide interpretation services to surveyors who may need to communicate with members of the research/IT/or logistics team	
• Collect all simultaneous interpretation equipment from surveyors	

Position:	Mobile Team Members
Role:	Assist surveyors with any needs and supplies in the field
Before Field Work:	
• Ensure access to functional vehicle	
• Ensure access to functional and charged phone	
• Load gift cards, water, snacks, first aid kit, portable chargers, and replacement equipment in vehicles	
During Field Work:	
• Circulate to survey teams throughout the day to provide water, snacks and check in on any	

additional needs
• If using gift cards, distribute them in small batches to survey teams
• Regularly check in with the survey coordinator to report any issues encountered in the field
• Provide mobile response to requests for support from surveyors in the field
After Field Work:
• Attend staff debriefing

APPENDIX H

Community Voting Process

Community Voting Process
• Break into small groups of between 6-10 residents.
• One staff person or community volunteer facilitates each small group discussion
• Provide three to five stickers (or votes) to each participating resident
• Prompt residents to ask questions and discuss any initial thoughts on the findings in the small groups
• Provide each group with butcher paper with potential funding categories listed (i.e. vehicle replacement, home inspections, etc.)
• Have each resident mark or vote for the funding categories that best aligns with their top priority community needs
• Tally the votes within each small group and then with the entire audience
• Announce the voting totals and allow for follow-up discussion

This report was prepared by Ingrid Brostrom, Rodrigo Alatriste-Diaz and Edward Orozco Flores.

Mission Statement

The UC Merced Community and Labor Center conducts research and education on issues of community, labor and the environment, in the San Joaquin Valley and beyond.