EXECUTIVE SUMMARY

This report provides results of qualitative interviews with experienced disaster recovery practitioners as part of an overarching project to develop evidence-based guidance for planning practitioners on this topic. The findings, in turn, will influence the contents of guidance materials that will be designed and tested in the next stage of a Federal Emergency Management Agency (FEMA) project titled, “Disaster Recovery Guide for Planning Practitioners.” In coordination with the American Planning Association’s (APA) Hazards Planning Program, the Hazard Reduction and Recovery Center at Texas A&M University provided technical expertise on research design, execution, and analysis. The overarching research project included a comprehensive annotated bibliography, qualitative interviews with 33 people, and an online survey of APA membership. This report focuses on the results of the qualitative interviews.

Interview subjects were all experienced recovery professionals, volunteers, or scholars and had participated in a variety of disaster situations and locations. The intent of the interviews was to assess what resources planners need to support them as they help their community recover from disasters. The interviews were structured in four parts:

- The interviewee’s roles and experiences in disaster recovery.
- Their observations during post-disaster recovery planning.
- Their observations during pre-disaster recovery planning.
- Their preferences on how and what they needed to learn about planning for recovery.

Interviewees represented nonprofit, for-profit, civil society, and public sectors in city, county, state, and/or national government.

Results from the qualitative interviews include the following 10 themes to support the development of further recovery guidance for planners and allied professionals:

1. Planners did not perceive themselves, or were not perceived by others, as central to the disaster recovery process, even though their skillsets are important to recovery efforts.
2. There is a need for wider coordination and collaboration between planners and other professionals, agencies, and communities working in disaster recovery.

3. Learning about disaster recovery should take various forms but be centered on best practices through coaching and mentorship.

4. Planners benefited most when learning about disaster recovery from fellow professionals who had been through recovery elsewhere.

5. Planners navigated policy options for recovery by learning on their own, improvising, and applying best practices to maximize efforts.

6. Planners are overwhelmed by general recovery information but felt that they had limited access to specific information that would accelerate community-level disaster recovery processes.

7. Lack of coordination for volunteer planning advisory teams, technical support teams, external volunteers, and additional resources and donations hinders local recovery planning processes.

8. Recovery funding processes were frustrating due to the lack of clear guidelines, the conditionalities of various funding streams, and the optimal use of available funding to support disaster recovery planning.

9. Translating indicators and goals for equity and inclusivity into tangible outcomes in the disaster recovery planning process at the community level is difficult.

10. Public participation in disaster recovery planning was still primarily expert-led, rather than community-centered and used traditional, and less inclusive, methods of obtaining public feedback.

Overall, based on analysis of the interviews, it is recommended that recovery guidance developed emphasize, develop, synthesize, and support local communities in these manners:

- **Emphasize** the importance of recovery planning as a knowledge area for all planners and allied professionals.
- **Emphasize** how recovery and resilience should be integrated into all planning efforts.
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- Emphasize the importance of soft skills in recovery planning, which include a combination of interpersonal skills, communication, and leadership.
- Emphasize social networking and collaboration across sectors and agencies during “blue skies.”
- Emphasize the importance of equity and social vulnerability during disasters.
- Develop formal peer-to-peer learning between planners in need and experienced recovery planners.
- Develop various learning and training methods.
- Develop immediately useful, short guidance information, such as checklists, pull outs, brochures, that can be used quickly during early- and mid-recovery.
- Develop guidance to increase public participation during pre- and post-disaster recovery planning.
- Develop guidance on the management of external aid.
- Synthesize available recovery information.
- Synthesize guidance on funding options.
- Synthesize academic research that can be integrated into practice.
- Synthesize use of best practices and documented lessons.
- Support local communities to collect and analyze data that is needed during disaster recovery planning.
INTRODUCTION

Planners bring considerations surrounding land-use, density, and infrastructure development patterns to the forefront of community discussions. Planners are also vital in ensuring that elected officials, community leaders, and a myriad of stakeholders are aware of the importance of making sound decisions that reduce future community risks. These are just a couple of skills that planners can bring to bear upon the inherent complexity of disaster recovery management to influence pre- and post-disaster public decision making, particularly from the perspective of long-term risk reduction.

While there are multiple recovery guidance documents available, few, if any, are designed specifically for planners to harness their education and professional training. Most resources tend to focus on the recovery process without specific guidance on integration and alignment with a community's network of plans and implementation processes. This research project was designed to generate the evidence base needed to guide planners and planning departments on how to leverage existing planning activities and programs for recovery and resilience.

To develop this guidance, the American Planning Association (APA) worked with the Hazard Reduction and Recovery Center at Texas A&M University to undertake a research project that would provide the evidence base for guidance to be created. Team members from APA’s Hazards Planning program included Shannon Burke; Joseph DeAngelis, AICP; Troy Brundidge; Alexsandra Gomez; and Richard Roths, AICP. Team Members from the Hazard Reduction and Recovery Center at Texas A&M University included Shannon Van Zandt, PhD, AICP; Michelle Meyer, PhD; Joy Semien, PhD student; Siyu Yu, PhD; Juddane Lennox-Morrison, Master of Urban Planning student; Abrina Williams, Master of Urban Planning student; Carlee Purdum, PhD; and Haley Yelle, undergraduate urban planning student from the Hazard Reduction and Recovery Center.

This research involved three interrelated phases: an annotated bibliography (completed in December 2018), qualitative telephone interviews with professionals experienced in recovery (April–July 2019), and an online survey of 1,000 randomly selected APA members (June–August
2019). This report contains the results of the qualitative interviews and is formatted as follows. First, we reviewed the data collection methods and data analysis and then discussed the findings from the interviews, which include 10 broad themes. In the end, we concluded with a discussion and recommendations based on our review of these findings. Appendices include the interview guide (Appendix A) and team member biographies (Appendix B).
METHODS

The purpose of the qualitative interviews was to gain a more in-depth understanding of the experiences of urban planners and allied professionals who had previously undertaken disaster recovery efforts. Qualitative research generally involves the collection of data (in this case, interviews), followed by a process of analysis based on searching for patterns or themes. Qualitative interviews were chosen for several reasons. First, the open-ended nature of qualitative interviews allowed for participants to both respond to the topics pre-identified by the researchers and express challenges and needs that were not expected by the research team, thus pointing the research into new directions.1 Second, qualitative interviews provided more context and in-depth understanding of the needs of planners and allied professionals in recovery planning. In the words of one leading expert in the field of qualitative disaster research, qualitative research allows for “interpretations within a deep contextual foundation emphasizing the time, place, and circumstances within which a disaster event, response, or process occurs. Contextualizing enables readers to better understand how analysis arises and supports the researcher’s theoretical explanation.”2 Third, qualitative interviews were conducted prior to survey data collection to allow the use of the information garnered from the interviews to design the online survey. Finally, qualitative interviews were useful for smaller samples of experts who have a broad range of expertise to offer to a project. Random sampling for this population using standardized measures, central components of survey or other statistical research, would be unfeasible for this sample as a list of recovery professionals is lacking and the range of expertise across professionals make standardization of measurement tools difficult.

SAMPLING

The sampling frame for these interviews included planners, scholars, and allied professionals, such as floodplain managers, city managers, and nonprofit recovery leaders, among others, who were experienced in disaster recovery processes. We chose to undertake purposive sampling, a nonprobability sampling method, in order to establish a diverse sample. Purposive sampling

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involves selecting participants based on a particular trait such as being well-informed about the topic of interest, in our case, with disaster recovery practices.³ Purposive sampling, compared with random or probability sampling, allowed us to deliberately include individuals with experience in various disaster types, geographic locations, and professions. We specifically attempted maximum variation sampling especially by profession and included planners and allied professionals, as well as practitioners in the nonprofit, for-profit, and public sectors. Interviewees also worked at various community levels, including municipal, county, state, and federal. Some interviewees also had international experience. We complemented this purposive approach with snowball or referral sampling. Once interviews began, interviewees recommended other professionals who would have specific expertise on the topic.

The resulting list of potential interviewees included 47 individuals. All these individuals were contacted at least once to request their participation in a telephone interview. Two individuals declined. Sixteen people were unresponsive. Interviews were completed with 33 people, including 19 women and 14 men.⁴ There were 11 planners and 22 allied professionals interviewed. Allied professionals included resilience coordinators, academics, historic preservationists, city managers, neighborhood services practitioners, flood specialists, sustainability directors, federal FEMA⁵ and Department of Housing and Urban Development (HUD) employees, community leaders, and emergency managers. Figure 1 below shows the geographic distribution of interviewees and the disaster recoveries represented within this final sample.

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⁴ Three interviewees invited additional participants from their organization to their interview.
⁵ Federal Insurance and Mitigation Administration staff interviewed included representatives from the Planning and Safety, Building Science, Disaster Operations, and Floodplain Management Branches as well as representatives from Community Planning and Capacity Building in FEMA’s Office of Response and Recovery.
Figure 1. Geographic Distribution of Interview Participants and Their Disaster Experiences

INTERVIEW GUIDE DEVELOPMENT

A systematic literature review of disaster recovery information informed the development of questions used in the qualitative interviews. The full interview guide is available in Appendix A. Interviews were structured in four broad parts:

1. The interviewee’s role and activities undertaken in disaster recovery
2. The interviewee’s experiences and observations in post-disaster planning
3. The interviewee’s experiences and observations in pre-disaster planning
4. What the interviewee felt was important to learn about recovery planning and their preferred learning methods
DATA COLLECTION AND ANALYSIS

Interviews were conducted over the phone and were recorded. Six members of the research team conducted the interviews. The interviews were transcribed verbatim and qualitatively coded to identify themes, commonalities, and disagreements across the participants’ experiences. Analysis of interviews was geared towards identifying information that would be useful in the development of a recovery guide. ATLAS.ti software was used to code and track recurring themes. A codebook was developed prior to coding but was expanded upon after coding began and more patterns were observed. Then, codes were grouped into categories, for example, “funding.” Coded text was examined across interviews to further gain insights on recurring themes. Two members of the research team coded the interviews and two additional team members reviewed transcripts to ensure accuracy of coding processes.

TIMELINE

From November 2018 to January 2019, a literature review was conducted and used to develop a list of interview questions. From January to March 2019, interview questions were fine-tuned, and a preliminary list of interviewees was identified. From April to June 2019, interviews were conducted and transcribed. July and August 2019 were dedicated to analyzing qualitative data.

Table 1. Qualitative Research Component Timeline

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<tr>
<td>November 2018–January 2019</td>
<td>Formulate research design; collect academic literature; develop annotated bibliography; collect state, local, and regional case studies; collect white papers pertaining to recovery; published annotated bibliography on APA’s website.</td>
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<tr>
<td>January–March 2019</td>
<td>Develop interview questionnaire; identify interview subjects.</td>
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<tr>
<td>April–June 2019</td>
<td>Execute interviews; transcribe interviews; develop codebook for qualitative analysis.</td>
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<tr>
<td>July 2019</td>
<td>Qualitative analysis of interviews</td>
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<tr>
<td>August 2019</td>
<td>Prepare research execution report</td>
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<tr>
<td>September 2019</td>
<td>Finalize and deliver research execution report</td>
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RESULTS

Disaster recovery includes repair of damaged structures and the “continuation and restoration of services critical to supporting the physical, emotional, and financial well-being of impacted community members.” The disaster recovery experts we consulted had often been through recovery with their own communities and/or they supported other communities post-disaster with needed expertise and resources. Most respondents had extensive experience in post-disaster recovery planning with large disasters such as Hurricanes Katrina, Ike, Irene, Maria, Michael, and Harvey; the September 11, 2001, attacks; the 2010 BP oil spill; the 2011 Japanese earthquake and tsunami, and more. These interviewees’ foci centered on needs of the communities in the affected area. Other respondents, mainly scholars, were involved in policy-level decision making regarding recovery planning. These interviewees had limited post-disaster recovery experience and were more extensively involved in pre-disaster recovery planning and policymaking. This included the compilation of resources that were developed for practitioners within community-led recovery planning efforts.

We found many commonalities across the interviewees, even with their diverse experiences in disaster recovery. Our analyses integrate both pre-disaster recovery planning and post-disaster recovery planning. Pre-disaster recovery planning is the process of enabling local, state, and tribal governments to effectively strategize so that they can direct recovery activities and expedite a unified recovery effort in the event of a disaster. Post-disaster recovery planning is defined as developing a set of strategies, tasks, and activities to assist a community in rebuilding after a disaster occurs. Many of the themes discussed below apply to both pre- and post-disaster recovery planning processes. The main difference noted in the discussions was that post-disaster recovery period made everything seem more urgent.

We discuss 10 interrelated themes below that were drawn inductively from the interviews. These themes capture how the respondents’ roles and experience with pre- and/or post- disaster recovery planning varied.

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recovery have influenced how they think, as experts, the disaster recovery process could be better supported by the American Planning Association (APA) and Federal Emergency Management Agency (FEMA) in tandem with other organizations. These 10 themes are:

1. Planners did not perceive themselves, or were not perceived by others, as central to the disaster recovery process, even though their skillsets are important to recovery efforts.
2. There is a need for wider coordination and collaboration between planners and other professionals, agencies, and communities working in disaster recovery.
3. Learning about disaster recovery should take various forms but be centered on best practices through coaching and mentorship.
4. Planners benefited most when learning about disaster recovery from fellow professionals who had been through recovery elsewhere.
5. Planners navigated policy options for recovery by learning on their own, improvising, and applying best practices to maximize efforts.
6. Planners are overwhelmed by general recovery information but felt that they had limited access to specific information that would accelerate community-level disaster recovery processes.
7. Lack of coordination for volunteer planning advisory teams, technical support teams, external volunteers, and additional resources and donations hinders local recovery planning processes.
8. Recovery funding processes were frustrating due to the lack of clear guidelines, the conditionalities of various funding streams, and the optimal use of available funding to support disaster recovery planning.
9. Translating indicators and goals for equity and inclusivity into tangible outcomes in the disaster recovery planning process at the community level is difficult.
10. Public participation in disaster recovery planning was still primarily expert-led, rather than community-centered and used traditional, and less inclusive, methods of obtaining public feedback.
THEME 1: Planners did not perceive themselves, or were not perceived by others, as central to the disaster recovery process even though their skillsets are important to recovery efforts.

Respondents identified a central question in disaster recovery: Who should lead? Respondents felt there was a disconnect between the understanding or acceptance of how planners and other allied professionals fit into both pre- and post-disaster recovery processes. Correspondingly, the linkage between hazard mitigation, pre-disaster recovery planning, and long-range planning is not fully understood and/or undertaken in some jurisdictions. “Our planning department ... they’re being drug along kind of as advisors rather than being the ones who are at the front conversation,” one local resilience officer said. This quote was grounded in the belief that local elected officials must push the agenda of resilience, so it is more entrenched in the workload of planners and other associated municipal staff positions. It is this respondent’s perception that planners do not see themselves as critical to the disaster recovery, although the processes are similar to or should be done in tandem with other comprehensive planning efforts.

Interviewees attributed this lack of involvement of planners to several factors. It may be explicitly linked to the planning departments or the planner’s limited experience with disasters, and consequently, disaster recovery planning. This is exacerbated by the fact that pre-disaster recovery planning processes are difficult to advocate for in communities that have not been affected by various hazards. A lack of regular disasters or recent disasters, participants felt, left many planning professionals unprepared to work in the recovery space. As such, planners had not familiarized themselves with the various processes and workflows that are often seen as intrinsic to recovery processes. An emergency manager described this issue during an interview: “The actual planners themselves, I think, don’t see this as a responsibility of theirs even though when we look at the types of activity that would take place as part of recovery planning a lot of it is very similar to the type of work they do day-to-day.” Similarly, other respondents felt a lack of awareness of what planners could do in recovery if a community had not been affected by a major disaster recently. Many of the respondents themselves never expected to do recovery work until they found their community in need.
Another factor explaining the lack of planner engagement in recovery was the lack of overall capacity, especially in jurisdictions with smaller planning departments. Already understaffed and underfunded, planning departments felt unable to take on disaster recovery with their current obligations.

Furthermore, funding for pre-disaster planning may be situated differently in various jurisdictions, with mitigation or other hazard funding coming through emergency management departments rather than planning departments. The isolation of funding from general planning practices indicated that pre-disaster recovery planning efforts were not included in day-to-day comprehensive planning efforts. Pre-disaster recovery planning in some cases was siloed within emergency management as discussed by a local planner:

_Honest to God, planners need to know how to get in touch with their emergency managers! They need to stop planning in a freaking bucket! They need to get out there and talk to people that are on the ground and doing repair and emergency work to understand what they do so that when they do their plans, [the plans are] better off. Emergency managers need to get together with their planners and need to stop thinking we live in freaking Ivory Towers...._

This quote emphasizes **the need for more coordination between emergency management and planning departments in planning processes such as setting goals for hazard mitigation and pre-disaster recovery to ensure that post-disaster recovery goes much smoother**. It alludes to the centering of common goals while infrastructure repair and rebuilding is occurring to better support comprehensive planning for the community.

In summary, planners did not easily understand their role in recovery processes. This is possibly due to inexperience, lack of capacity, or the isolation of disaster funding away from planning departments. Greater emphasis is needed to encourage planners to understand their important role in both pre-and post-disaster recovery processes.
THEME 2: There is a need for wider coordination and collaboration between planners and other professionals, agencies, and communities working in disaster recovery.

As foreshadowed above in Theme 1, interviewees identified a general lack of coordination and collaboration across agencies and organizations on disaster recovery. While coordination is desired, interviewees also noted that it is quite difficult to achieve. For example, when asked, “What have you found to be the most pressing issues during post-disaster recovery planning?”, one participant responded:

Well, I think kind of on a general level: information and coordination. The bottom line of the problem of recovery is [that] the government is an important factor, but it's not the only one. ... Various organizations, homeowners, utilities, large businesses—all of these people are working on recovery in some way.

Another participant, who is a principal planner, highlighted the need to step outside of the realm of planning to gain key insights on recovery planning processes:

I don't know if APA already does this, but I guess maybe—and I haven't looked hard enough—but in trying to learn about the recovery process, I'm hoping that we don't just talk to planners, that we are talking to engineers, the emergency operation folks, things outside of our usual realm of professional contacts.

While interviewees acknowledged collaboration was important, they also noted that it can be quite difficult to coordinate different agencies and communities. One local resilience official stated, “It was a challenge to weave together the various plans that our organizations and communities had to come up with a unified vision.” This quote suggests that many organizations operate and plan in silos, and then try to integrate the completed products. Collaboration with emergency managers was noted to be especially difficult, and it was suggested that this might be attributed to different levels of urgency and timeframes between planners and emergency
managers. One interviewee explained, “One of the biggest challenges I think has just been those lack of relationships between emergency managers and the wide range of entities that they want to or should want to interact with in disaster recovery.” The same interviewee went on to articulate:

The biggest challenge that I saw time and time again was emergency management’s either unwillingness to really engage across the full spectrum of the community, or lack of understanding of what that looked like. And so there’s the model with the recovery support functions. They really each require engagement across not just government departments and agencies, but partners in the community. And repeatedly, I’ve just seen a lack of folks at the table, often because they weren’t invited, other times because they didn’t see the value. [It is] a lot of the same challenges you see with planning in this space.

Conversely, one allied professional who works directly with communities complained that collaborating with planners was difficult because they often did not understand the urgency of the recovery process. The interviewee explained, “First responders, they are in and out, they work with a sense of urgency like that. As planners, we don’t. And we need to have a collective sense of urgency and speed because again, that’s the pace at which recovery is actually occurring.” These experts pointed out that these barriers make the two groups unnatural collaborators, even though they have useful information for one another for recovery planning processes.

Overall, planners could benefit from a better understanding of realities on the ground for their allied professionals, such as emergency management. Communication and coordination tools and tactics can be honed to provide understanding on how to better collaborate with and understand the needs and operations of different agencies such as emergency managers, as well as other professionals, organizations, and communities.

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8 Recovery Support Functions (RSF) is one function outlined by FEMA to describe coordination for recovery tasks. RSF follow the Emergency Support Function (ESF) model that organizes almost all emergency management coordination of operations and delineation of tasks and responsibilities. See FEMA for more information [here](https://www.fema.gov/recovery-support-functions). We note that the ESF or RSF model of coordination is quite different than planners’ usual methods of coordination.
THEME 3: Learning about disaster recovery should take various forms but be centered on best practices through coaching and mentorship.

This theme captured respondents’ understanding of the complexity and variability in recovery processes across different types of communities and different disaster contexts. Respondents differed in how they wanted to learn about disaster recovery and what they wanted to learn. Yet, they maintained that any learning mechanisms must focus on best practices and mentorship of individuals who may find themselves in similar situations. These best practices should ensure that decision making for long-term disaster recovery needs is emphasized and can be achieved through sharing stories of success and failure.

One respondent spoke to the importance of recognizing official disaster recovery planning as an important facet of urban planning through certification by the American Institute of Certified Planners (AICP). This would formalize the importance of professional development in disaster recovery planning process. A local planning official said:

> It would be interesting to put something in AICP. Like certification. I think if you’re a certified planner, they’re asking you to know development review and history, etc. ... every city has something that is a hazard for them! And just to not even include that as part of your planning process seems really short-sighted to me.

This quote captures the perception that the importance of disaster recovery should be more officially emphasized as part of the regular practice of planners.

Without this official designation of what recovery knowledge is needed by planners, the methods of learning about disaster recovery was varied. The use of conferences and other educational training activities is prevalent but did not seem to be the most useful to respondents—although these have value and it should not be discontinued. This absence of officially recognized curriculum or identified areas of expertise around disaster recovery has led to the pervasiveness of
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peer-to-peer learning about disaster recovery (discussed in the next theme), and more specifically, the variance of solutions that can be experienced post-disaster. A local planner detailed that:

*Individual consultations and the informal networking of planners has been really helpful [in recovery]. I know that after the disasters I've been through, you talk to planners in other places that have been through this and then ask, “What did you do about septic assistance in your area? Or how did you deal with debris removal and whatnot?” It’s just great being able to have a network of people who've been through it you can rely on, but it’s very informal, too, at the same time.*

The importance of mentors who can provide examples of best practices in addressing disaster recovery issues was discussed by respondents.

Further, this mentorship centered around the “soft skills” needed to handle what is described as a “rigorous, long-term recovery process.” The ability to exchange ideas and discuss their usefulness was outlined by some respondents who were more critical to the coordination of recovery efforts rather than the execution of it. One local government official said:

*But my concern on the toolkit side is that you gotta make management decisions and these management decisions have long-term implications. What would be great, is a toolkit for managers or for executives in public sector agencies that focuses on preparedness, response and recovery from a management perspective. I think there are plenty of really skilled technicians and whole industry that is geared to support you through it but how do you start to conceive of this within the particular confines of your community and how do you approach your job (...). So I think, to me, the biggest thing that is missing out there is, there are a lot of great case studies, there’s a lot of particular views but how do you get away from right and wrong answers to how do you evaluate things that you need to be thinking about in terms of preparedness and response and recovery.*
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The quote above details management-level decision making to promote the building of resilience through the processes of preparedness, response, and recovery. This view was novel because the respondent was involved in all the phases of the disaster management cycle from preparedness to recovery. As such, they required more focus within decision making and policy directives to support a recovery process. The respondent alluded to the importance of coaching and support in these recovery situations as shown in the quote below:

*I will say the space that helped me the most ... again came from being able to talk to colleagues ... that I had in New York, some guys who had talked to me about management decisions without telling me what that answer should be. So that coaching to say ok, here's the path that you're likely to be on, right? You are gonna have to figure out these things and you know you're gonna have to assess the situation and figure [out] what is the highest priority. And you're gonna need to make decisions about how do you structure your organization during a recovery process? There's no right answer here, that one of the things that keeps needing to be repeated but you're gonna have to ask questions about “Is your team able to manage workloads?” “Do you have the resources to bring somebody under contract?” “Do you need to ask for resources?” You know, traditionally, this what the county and the state will traditionally support you on but there is gonna be a series of things that they won’t.*

The respondent stated that the most beneficial exchanges during the recovery process was with management-level mentors who could assist with issues such as financing, human resources, and organizational support. While the state and the county were able and mandated to assist with certain activities in recovery, many of the far-reaching decisions were left to respondents that were also in high-level, local government positions. The use of best practices described through mentorship and coaching can offer another means of sharing disaster recovery experience among professionals.

In summary, there was an identified gap in education and training for planning professionals around disaster recovery. As such, best practices were shared through mentorship and coaching
processes. Coaching needed to include not just lists of activities or tactics, but also soft skills and management decision-making support.
THEME 4: Planners benefited most when learning about disaster recovery from fellow professionals who had been through recovery before elsewhere.

Best practices and mentorship highlight the most common method of learning about recovery identified in the interviews: peer-to-peer learning. Many respondents agreed that there is no better way to learn about disaster recovery than from a fellow professional in a similar position who had experienced recovery before. In fact, nearly two-thirds of participants said peer-to-peer learning or mentorship with a similar professional who had recovery experience was one of their preferred ways of learning about recovery planning. This theme captures the importance of peer-to-peer learning and sharing experiences.

Even with the presence of existing reports and written guidance on disaster recovery, personal connection and discussion with experienced colleagues were still highly valued. This was due to two latent factors. First, the value in this approach can be found in the ease of obtaining information—once a peer is found—and evaluating benefits and consequences to decisions as needed with the peer. A common problem, as discussed later in this report, was that respondents often did not know where to find detailed information. Thus, a peer could be asked specific questions and then direct the respondent to relevant information or sources. Secondly, this method was easily accessible, as peers could be called, texted, or emailed as needed. A consultant who specializes in resilience and hazard mitigation said, "I think hearing people share their experiences from other communities is something that is very helpful and different efforts that have been made to compile resources and programs and try to make some sense out of a mess of things." The respondent continued by placing high value on shared experiences in different communities. The respondent accepts that the various documents, tools, and resources that are currently available are not compiled enough for them to provide value to individuals struggling in fast-paced, time-compressed, ongoing disaster recovery efforts. This finding was also supported by an interviewee who had experience in recovery from the federal level. He said, “The best

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information I found most useful in understanding recovery is informal dialogue with colleagues to understand their programs, their resources, what they have available for recovery.” This quote clearly illustrated that recovery efforts are not prescriptive and each person desired discussion about their community and the organizations’ situation to find solutions. Another local leader in recovery, who participated in the international disaster recovery operations in Japan after the earthquake and tsunami in 2011, sought to identify common recovery issues that they faced in order to inform recovery planning in their jurisdiction. The respondent said,

“One of the most constructive things for me—I went to Japan three times after the tsunami to visit the coastal communities there. I was trying to look at these areas and try and focus on what the issues were instead of what the decisions were. Because the issues are what we have in common.

By analyzing the issues present in during recovery after the tsunami in Japan, the respondent was able to find common recovery issues and how they were addressed. The respondent also admits to not focusing on the decisions made in these issues as the situation is different from that of recovery in the United States or for the specific hazard.

In summary, sharing experiences with a similarly situated peer provided many professionals with best practices and options, and in turn, they were able to share these with their peers. Informal dialogue offered both the speed and specificity that respondents desired. Finding the appropriate peers, who are knowledgeable and available, can be challenging.
THEME 5: Planners navigated policy options for recovery by learning on their own, improvising, or applying best practices to maximize efforts.

Participants felt that existing prescriptive guidelines on recovery did not always apply to their situation or fit their community’s needs and assets. Policy and funding options varied across jurisdictions, disasters, and roles in disaster recovery. A scholar and practitioner reflected the reality that often planners and communities must navigate their way through disaster on their own. The respondent said:

But after a disaster, communities are going to have to feel their way through recovery. Often times, they don’t experience disasters often and so having the capacity in place to answer questions and having the capacity in place to say, you know, okay we’re gonna look at best practices ... we’re going to look at housing recovery now, we’re going to be able to come back to you in a week and tell you, you know, here’s the major milestones, here’s the timelines, here’s good examples of how different communities approach similar problems.

Planners then sought ideas from social networks, but when unavailable, they improvised or adapted existing models. A few novel approaches were highlighted by the interviewees to expand capacity: embedding additional professionals or using example documents. A long-range planner spoke of the process, post-disaster, of allowing another planner who had been actively involved in a different disaster recovery to assist their organization. The respondent said:

He asked if someone from their department who had been integral in their response could come up to our [planning] department and sort of embed themselves and kind of shadow us around, as we went to meetings. And I thought that was very valuable because even though this person really didn’t know you or your county, he knew the sort of the evolution that we were undertaking, and sort of all this stuff that was happening all around us.
The quote details how capacity was lacking in a community and was filled in by having another person shadow them. The planner was serving as a resource within the organization to shadow other professionals who were actively engaged in that area’s disaster recovery. The same principle was applied to the use of post-disaster recovery tools such as plans and ordinances that have already been initiated and tested in disaster recovery at a community level. A local planner discussed the ease of using ordinances from other communities:

You find a jurisdiction that has recently gone through a disaster and they’ve dealt with issues like temporary housing, for example. Get a copy of their ordinance, see if it works for you, and copy as much as you need to. There’s no sense in reinventing the wheel on that kind of stuff.

In summary, planners and allied professionals knew they had to improvise their way through disaster recovery. They did this by finding new ways to use information, or from people within other communities.
THEME 6: Planners are overwhelmed by general information but felt that they had limited access to specific information for community-level disaster recovery planning.

Respondents found an immense amount of informational resources on disaster recovery. But these resources are not synthesized to readily assist with disaster recovery needs in real time. The existing resources were not seen as easily adaptable to specific community needs and across various types of communities and disasters, especially in a post-disaster scenario.

Respondents also complained that many existing resources were lengthy and time consuming to digest. These included guidance by FEMA, as well as recovery guidance provided in APA’s Planning Advisory Service (PAS) reports. Digesting information takes time, which again is compressed or felt to be limited during post-disaster. A local resiliency professional said, “Well I think right now we are pretty information rich at the moment, we just need ... we’ve just got so much information to work with.”

There are multiple existing resources on disaster recovery, however, respondents felt that these resources did not fully support disaster recovery on the ground, that is, while they were going through the recovery process. The availability and adequacy of the resources were not being questioned, in other words, but that these documents were not easily applied to short- to medium-term disaster recovery planning needs. A transit professional described this issue:

*There is a lot of information out there already and a lot of resources expended. If APA could bring together some of the FEMA information with, say, the Federal Transit Administration, the Federal Highway Administration, they're all—and the EPA [Environmental Protection Agency]—they are all working on this topic but next to each other, and some of this information could naturally sit together.*

The respondent, like many others, knew that there are numerous sources available on disaster recovery and that an extensive amount of human and financial resources went into each document. **The need is for a synthesis of this information so that they can better support**
each other, as well as the practitioners and communities that may use them. This respondent suggested that APA and FEMA take the lead on synthesizing disaster recovery information that is being produced in other sector-specific organizations such as the Federal Highway Administration and the EPA. Each agency was described as looking at disaster recovery through the lens of its mission and therefore not seeing the commonalities across different areas such as transportation, planning, and environmental protection that local planners must address. A more comprehensive resource that succinctly synthesizes various topical areas for disaster recovery was requested by interviewees.

While overwhelmed with general recovery information, respondents felt they lacked specific data to do the recovery planning for their community. The abundance of lengthy recovery guidelines contrasted with what respondents saw as a paucity of detailed data on their community that would support recovery situation awareness. Various respondents lamented how the unavailability of baseline data before the disaster affected their ability to respond and initiate disaster recovery after the event. Resources that were unavailable in the pre-disaster recovery phase included items such as risk assessments, updated community plans, recent topographic and/or community scale maps, and historic resource registers. This lack of current data affected respondents’ ability to identify recovery needs or priorities. This was especially true in areas such as historic preservation and housing where damage assessment processes were hindered because there was no pre-disaster recovery baseline data to inform rebuilding. The unavailability of these specific data resources in some cases may also have contributed to the creation of unrealistic recovery timelines as respondents didn’t know how far from baseline their community had changed or how much funding it would take to return it to normal.

These two information problems collided for respondents. Specifically, the absence of baseline data made it difficult for many respondents to use the available recovery guidelines or fully benefit from mentorship or other educational opportunities. Respondents stated that they were less able to benefit from planning advisory groups, think tanks, consultants, and technical teams that arrived post-disaster to provide support. External professionals’ expertise would be better leveraged if local recovery leadership had relevant data ready for review, rather than spending
valuable time with experts collecting data. A planning scholar commented on the haphazard way professionals seek to acquire information post-disaster: “It sounds like after every disaster people are always scrambling, and they are looking for those models. We should have a repository of these data somewhere but then it is hard because every community is unique.” The respondent admitted that there is a “scrambling” for data and models that can inform their disaster recovery process and advocates for a repository of information. The respondent, however, conceded this process may be difficult because each community is affected differently and has unique socio-cultural, environmental, and financial realities.

In summary, respondents found a plethora of general disaster information, but felt it wasn’t always digestible in the post-disaster timeframe or easily adaptable to their specific community situation. Further, they lacked specific data and information about their communities necessary to make general recovery plans and decisions. This is evidence that best practices, case studies, and models have to be supported by information and data collection support that is adaptable to various communities.
THEME 7: Lack of coordination of volunteer planning advisory teams, technical support teams, external volunteers, and additional resources and donations hinders local recovery planning processes.

The coordination and deployment of volunteer groups was mentioned in many interviews. Mostly in the context of planning departments and other professionals not being able to benefit from some of these groups, including those from APA as well as Voluntary Organizations Active in Disasters (VOADs), which are networks of nonprofits that address disaster needs. Appropriately using volunteer labor, whether technical or layperson (such as debris removal volunteers from religious groups), takes a great deal of community time and management skills, and most local communities were unable to manage these processes. Affected communities had to divide their attention between doing their own recovery planning and managing external aid. The influx of volunteer and donated resources into disaster affected communities is referred to as convergence, and it is an overwhelming problem for every disaster-affected area.10 11

Respondents felt that their agencies had limited human resource personnel to coordinate these groups and support them in achieving recovery needs, whether long-term or short-term. Interviewees, especially allied professionals, expressed that, in the timeframe given, they could not immediately assist with short-term recovery needs and manage volunteers and donations. One interviewee articulated this phenomenon by saying that “… after a major disaster like that you get lots of volunteers that want to come in and help. So, one of the huge issues was how to manage those volunteers and to get them where they need to go and to make sure they are providing the right type of assistance.” The participant went on to explain how the lack of management of volunteers and donations could derail community desires and plans:

For instance, for historic buildings there were many volunteer groups that came in and were not adequately trained on dealing with historic buildings. So, they would go in and they would rip out original material.

This quote exemplifies how volunteers can hinder recovery efforts if not managed appropriately. There is a need to provide practitioners with tools and processes on how to efficiently and effectively accept all types of help and donations.

Untrained volunteers were not the only problem. The timing of various planning advisory groups and think tanks pursuing their own recovery agendas also caused problems for local communities. This influx of planning professionals created “planning fatigue” as described by one respondent who went on to say that at various points community members were over-engaged regarding recovery issues. The respondent further elaborated that while the window for recovery was important to galvanize support for mitigation and future resilience building, planners and other professionals must also be aware that community members are undergoing what may be a difficult household recovery process. Efforts to streamline and manage these processes to not overburden communities is needed.

Overall, support planners and allied professionals with managing the influx of resources and volunteers is an overlooked aspect of recovery. Any efforts to support a community need to ensure that the community is ready and able to accept such support and not be a burden or negatively impact recovery.
THEME 8: Recovery funding was frustrating due to lack of clear guidelines, the conditionalities of various funding streams, and the optimal use of available funding to support disaster recovery planning.

Frustration about funding was a common theme among interviewees. While some reported that there was too much information to sift through, others said it was difficult to understand the rules and guidelines attached to funding and to keep up with changing criteria. Many interviewees explained that they were not able to optimally spend their funding because the objectives of funders did not meet the needs of communities. Observe how one planner expressed their experience:

…it’s hard for people to go through all this information and find out what’s useful. For example, there are grants out there from FEMA through the public works agencies. The understanding of what can be used for planning grants, what could be used in implementation grants, I think that’s probably harder. Especially if you are, say, in a smaller jurisdiction or you’re a local planner who doesn’t have the resources of a larger county government. I think that [information on funding] would be helpful to people.

This quote indicates that the information available may be overwhelming, and that there is a need for concise and quick ways to gain relevant information on funding rules and guidelines. Furthermore, information needs to be up to date, as detailed in this insight from one resilience professional:

One of the challenges in my eyes that we have is federal guidelines about reimbursement and documentation, and all of that: It’s always changing. So even when we have these plans and policies in place that line up really nicely with the feds or the state, you know, a year, two years down the line, they may not be relevant anymore because the policies at the federal level have changed.
Disaster Recovery Guidance: Qualitative Interview Report

In some instances, there was a mismatch between community needs and funding rules. The rules and guidelines attached to funding were inhibiting to recovery, as was the case for this interviewee:

... we couldn’t convince FEMA to spend the money on stabilization versus demolition. We worked for a long time to show that that could be an acceptable option for the money. It is a federal agency and they couldn’t use the money this way and demolition was the only option. And in that respect, we failed with the program but we did get maybe eight or so buildings stabilized eventually through the grant money we repaired and put back in use now. But anyways, I was using that as an example about being creative in addressing issues like that.

As the quote indicates, recovery professionals needed to be creative to match the objectives of funding to their actual needs on the ground. This was a recurrent theme among participants.

In addition to rules being inhibiting, the relatively slow process of receiving funds made recovery difficult. Several federal programs for funding take months, or even years, to be approved, such as funding from the Community Development Block Grant-Disaster Recovery funds through the Department of Housing and Urban Development (HUD). One participant, a city employee with post-disaster recovery experience, reported that, “It took HUD three years to issue us (a local government) the money to do the buyout program. Three years! And so, think about sitting on a house and paying a mortgage for three years.” Instead, the municipality fronted its own money to begin a buy-out program while waiting for federal money to be released. The interviewee reported that:

[This process] saved hundreds, if not a thousand, people from financial ruin. It allowed them to move on, you know, we’re taking care of this property they couldn’t do anything with while we’re all waiting, waiting, waiting for the grants to come through from HUD. And then, they were able to move on and settle into new houses.
This municipality was rather affluent and had the opportunity to be creative and use local funds for housing recovery. The interviewee cautioned that less affluent communities would likely not have that option—further driving home the point that practitioners need to understand how to apply for and receive funds in an efficient manner.

While several participants reported that funding objectives did not dovetail into their needs on the ground, others explained that the efforts of federal funding organizations were also not well matched to other federal agencies. One academic expressed, “I just don’t see any evidence that those two agencies (FEMA and HUD) are working together after the disaster or in trying to change some of their procedures so that they can smoothly coordinate some of the things they do with each other.”

Overall, interviewees reported that funding processes were difficult to figure out, especially under the time constraints of post-disaster recovery. There was too much information and not enough time (especially post-disaster) to sift through documents to find relevant sections. When participants took the time to understand funding processes and plan based around them, they complained that plans soon became irrelevant because of the ever-changing criteria, guidelines, and processes of funding organizations. Interviewees also noted that recovery efforts were sometimes curtailed by the slow release of funds. In addition, interviewees reported that funding organizations had room for improvement in the area of coordination. Specifically, funding agencies need to coordinate their funding objectives with recovery needs on the ground. Furthermore, funding organizations need to coordinate with one another, in order to complement each other’s recovery funding efforts.
THEME 9: Translating indicators and goals for equity and inclusivity into tangible outcomes in the disaster recovery planning process at the community level is difficult.

Equity was an important concern in this project because research shows that the most marginalized populations often are affected the most by disaster impacts, have the most difficulty recovering, and also have the least voice in post-disaster community recovery decisions.\textsuperscript{12 13 14 15} We asked interviewees how equity was incorporated into their pre- and post-disaster recovery planning. For both, equity was not a central area of focus, even as most respondents said that was a good question to ask. One city planner went so far as to say, “To be blunt, we don’t talk about social justice ...” Other interviewees reported that equity was discussed, but that it was difficult to turn words into actions. Practitioners did not know how to successfully incorporate equity into their work, despite attempts to do so. When asked about incorporating equity into recovery planning, one interviewee explained that:

I think in practice, it’s a difficult thing to achieve. Simply ensuring that a range of voices is at the table—I mean, that alone isn’t always done. And addressing the pre-event inequality in history and context that exacerbates certain vulnerabilities for certain portions of the community, I very rarely see that talked about.

This quote indicates that, in this individual’s 15-plus years working in the field, it was uncommon for equity, and histories of racial and economic inequality especially, to be acknowledged in the recovery planning process. Furthermore, it was difficult to put equity into practice, as they witnessed difficulty in getting diverse backgrounds “at the table,” which was the only current—albeit limited—redress option.

Another interviewee, who served as a planner in a post-disaster situation, expressed that the feeling of time compression resulted in sidelining of equity concerns. In the intense timeline in which they were working, equity was not a central issue:

[Interviewer asks]: How was equity incorporated into the recovery planning process?

[Interviewee responds]: It wasn’t an issue that really came up as something to address. In the thick of things that we just, you know, wanted to provide housing in the quickest manner possible.

This quote suggests that, **if equity is to be addressed, planners both need to understand the value in it and need fast and effective solutions for implementing it**. Another planner echoed the sentiment that issues of equity were overlooked, but further explained that efforts for equity are sometimes siloed in other work:

Vulnerable populations and equity? That’s probably one [recovery subject] that has seen less attention ... vulnerable populations are something that probably doesn’t get enough attention in terms of recovery, because usually that’s already something special we need to do.

This quote suggests that, in order to incorporate equity into their work, planners and allied professionals need special skills or that equity is something additional to planning processes. This could mean that planners may need to be better about coordinating and cooperating with agencies or organizations already doing equity work.

While equity was reported to be a secondary concern in many instances of pre- and post-disaster recovery planning, there were exceptions. Sometimes, though rare, the needs of vulnerable populations were directly addressed in the recovery planning process as witnessed by one interviewee:
At least in their goals and metrics, they made an impact on vulnerable households, especially low-income, elderly, single [parent] households. If you look at the recovery plan of what projects were prioritized, they really prioritized the needs of vulnerable populations and tried to think about equity as an important driver of recovery decision-making. But, sort of getting past that, certain programs or certain recovery projects ... even though they appear highly in the plans, the actual process of getting them done required other political processes.

This quote provides an instance of equity being directly prioritized and driving recovery decisions, but also highlights the limitations of planning processes in that without broad community support, the mentioned plans can be sidelined. This indicates the need to have equity in recovery processes be coordinated with other efforts, be they with communities and nonprofits working in the field of social justice, or government agencies trying to address equity from angles outside the realm of recovery planning.

To sum up, equity was not a central theme in either pre- or post-disaster recovery. In some instances, interviewees did not see value in addressing equity directly, while at other times interviewees wanted to incorporate equity into their work but could not successfully do so given their perceived time or resource constraints. Participants pointed out that equity is sometimes considered a “separate process” and is siloed into other planning efforts or within other government or civil organizations. Generally speaking, while equity was not a key objective in recovery planning, there were exceptions. Several interviewees reported instances of equity being incorporated into their work, whether it be prioritizing the needs of vulnerable populations in their plans or walking door-to-door in low-income neighborhoods to collect feedback from households. Asking questions about how equity was addressed in pre- and post-disaster recovery planning illuminated a need to provide practitioners with effective and efficient tools for incorporating equity into their work.
THEME 10: Public participation in the disaster recovery planning was primarily expert-led, rather than community-centered, and used traditional methods of obtaining public feedback.

Interviewees were asked how public participation was incorporated into their pre- and post-disaster recovery processes. Public participation was uncommon in pre-disaster recovery planning. While it was reported to be more common in post-disaster recovery planning, interviews detailed that it was mostly in the form of expert-led public meetings. When questioned about public participation, several other interviewees described standard public meeting processes, such as:

> Every time we have a plan, we have to go through public participation and public meetings. We go through the public participation part when we’re drafting the plan, then we bring the draft plan to the public for review, then when it goes before the planning commission, there’s another public hearing there, and then there’s public input available all the way up to the data that gets final reading from city council.

Engagement outside of public meetings was far less common, though there were instances of planners meeting with community members household-by-household or going door-to-door to educate the public and get feedback on plans. For example, one participant explained:

> When we asked for input, you know, we had 350 people come to that first meeting and we were afraid that we weren’t hearing all the voices. ... And so, we had the temporary housing unit, our trailer community, we sent representatives to the temporary housing units to go door-to-door to ask for input. We posted representatives at the university in front of the bookstore to try to get a younger demographic. So, we tried to hear, you know, in those ways to make sure that we were trying to catch everyone.”

Overall, public participation was far more prevalent in post-disaster than pre-disaster recovery planning. When participation was incorporated into recovery planning, it often did not extend
past the mandatory requirements posed by funding agencies or local governments. However, creative efforts were noted in a few interviews. **There is a need for continued innovation in public participation practices in disaster recovery.**
DISCUSSION

These recovery professionals highlighted central concerns across recovery planning and planning in general. From lack of coordination across sectors and agencies (Theme 2), need for increased public participation and equity (Themes 9 and 10), to creativity in policy and planning options (Theme 5), and the need for better information and baseline data (Theme 6), many of these results are not specifically unique to the disaster recovery scenario. But other results were unique to disaster recovery planning.

The lack of understanding of planners’ roles and the importance of their skills to recovery processes (Theme 1) was an expected result, and one catalyst for this research and report, but still an unfortunate finding. The overwhelming importance of peer networks to learning was an unexpected finding (Theme 3 and 4), but understandable considering the fast-paced disaster context and lack of previous recovery education that most planners have.

The fact these professionals were aware of many recovery guidelines (Theme 6) was encouraging, but these were critiqued as unusable or unadaptable to local community contexts at all (especially without detailed data) highlights a true need for adaptation in the recovery education space. The lack of support or training on management of external volunteer and physical resources is a crucial missing component for recovery training (Theme 7) as well as identifying the need to ensure that communities are not further overwhelmed by the aid that arrives, even planning aid.

Finally, the confusion of recovery funding options was an expected finding (Theme 8). While finding funding opportunities for various community goals is something planners and allied planners regularly face, they were not prepared for handling this issue in the time compressed and urgent post-disaster environment, nor able to keep pace with changes in funding requirements during that crucial time period.
The analysis of results from the interviews yielded that there is no shortage of disaster recovery information and research. There is, however, a disconnect in the translation and access of this research and information into real processes that can be impactful in the community disaster recovery planning process. This is exacerbated in the confusion, melee, and time compression that arises in the immediate aftermath of a disaster.

These results point to the need for all additional recovery guidance to be accessible, process oriented, and inclusive of best practices. It should be synthesized enough that it is a convenient choice for planners, practitioners, and community members to support the recovery planning process. It should provide comprehensive, yet digestible information.

The guidebook, in other words, should be an actionable document and provide ways in which users can access training teams and/or planning assistance teams for support in pre-disaster recovery planning. The topics of importance to include but are not limited to the following:

- Funding and its applicability in recovery activities
- Community recovery planning process
- Incorporating other planning practices into recovery such as hazard mitigation for building resilience
- Building interdisciplinary and/or collaborative relationships to aid recovery
RECOMMENDATIONS

The report authors offer the following set of recommendations to support the development of future educational and training materials for planners doing disaster recovery. We group these into several task considerations during guidance development: items that need to be emphasized, items that need to be developed, items that need to be synthesized, and ways to support local communities.

EMPHASIZE

1. **Emphasize the importance of recovery planning as a knowledge area for all planners and allied professionals.**
   
   Because of the lack of awareness of planners’ role in recovery or how their skillsets contribute to recovery efforts, attempts should be made to better integrate disaster recovery into general planning education and training. One respondent suggested that including recovery in certification processes would provide an official recognition of disaster recovery planning as an important facet of urban planning.

2. **Emphasize how recovery and resilience should be integrated into all planning efforts.**
   
   Greater awareness of how general planning activities relate to resilience and recovery is needed. For example, how different planning documents correspond is one avenue of discussion. The Resilience Scorecard, developed by Philip Berke, PhD, and Jaimie Masterson, AICP, and colleagues is one avenue of education and training to showcase the importance of integrating recovery and resilience into all planning efforts. This guidance provides a method to highlight conflicts between different siloed plans, especially when a hazard mitigation or resiliency plan directly conflicts with development or comprehensive plans. See more here: [http://ifsc.tamu.edu/getattachment/News/July-2017/Plan-Integration-for-Resilience-Scorecard-Guideboo/Scorecard-(1).pdf.aspx](http://ifsc.tamu.edu/getattachment/News/July-2017/Plan-Integration-for-Resilience-Scorecard-Guideboo/Scorecard-(1).pdf.aspx)
3. **Emphasize the importance of soft skills in recovery planning.**
Guidance developed should also focus on not only technical knowledge, but the improvement and/or incorporation of soft skills needed to facilitate the recovery planning process. Some of these include but are not limited to the following: advocacy, building partnerships, decision making, public participation.

4. **Emphasize the need for social networking and collaboration across sectors and agencies during “blue skies.”**
As noted by respondents, there is a need for better coordination during recovery. Emergency management calls all activities that happen outside a disaster context to be “blue skies” planning, referencing that the best planning and preparedness happens when a disaster is not happening. Research indicates that during disasters agencies draw upon their existing social networks and collaborations for support.16 17 18 Thus, increasing the interaction between planners and other sectors around recovery during non-disaster times is imperative. Guidance could include activities or workshops for local communities to build these networks, with example knowledge that each agency should collaborate.

5. **Emphasize the importance of equity and social vulnerability during disasters.**
Respondents were either unaware of equity issues, allowed equity to be sidelined as a separate concern, or felt unable to adequately and quickly integrate the subject into recovery processes. Planners and allied professionals should be made aware of the extreme equity issues during disasters, especially how disasters make inequalities worse in nearly every community, and they should be prepared to address these concerns. Support for equity training and development of guidance on ways to increase equity are both needed. Building partnerships with national and local organizations that address equity in disaster is one path forward. For example, the National

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Association for the Advancement of Colored People (NAACP) has a guide on equitable recovery. For more information: https://www.naacp.org/climate-justice-resources/in-the-eye-of-the-storm/

DEVELOP

6. Develop formal peer-to-peer learning mechanisms.
Many respondents spoke about the importance of learning from other colleagues who have gone through recovery before. This was advocated for because of the ease of implementing planning processes that were already tested in other communities. The importance of mentorship in the decision-making process post- and even pre-disaster can greatly help professionals. Suggested options include creating a disaster recovery mentor list or social networking space where a variety of experienced recovery practitioners are available to talk, text, or email with community professionals in need. Providing a list of identified and knowledge individuals who are willing to do long-term mentoring for others is one novel method. Other options include funding in-situ mentors who shadow communities going through recovery to provide guidance and support for several months of the recovery process.

7. Develop a variety of learning and training methods.
While peer-to-peer learning was preferred, respondents also read and researched a lot of information and attended various conferences and other events. Thus, learning methods should be used in tandem. Webinars, online workshops, and podcasts were some suggested options. Incorporate the use of APA podcasts: https://www.planning.org/podcast/.

8. Develop immediately useful, short guidance information.
All methods of learning delivery should include concise and actionable informational sources. Current recovery guidance was critiqued as too long to digest during early- and mid-recovery. Items to develop could include short items such as checklists and brochures with topics such as “10 Things to Start Your Recovery.” The importance of concise documents with best practices and action-oriented steps cannot be stressed enough. The majority of disaster recovery information is in the form of academic literature or lengthy recovery guidebooks that are, in many cases, difficult to translate to a practitioner and/or a community.

Public participation in disaster planning is very low overall, but especially in terms of mitigation planning. These interviews support previous research that disaster planning is often expert led, with limited emphasis on public engagement. Guidance on ways to integrate public feedback and the importance of such feedback is needed. Recovery periods are challenging as residents desire quick return to “normal” even as resilience may require changes to community design and land use. APA could highlight ways of public engagement for pre- and post-disaster recovery planning that go beyond traditional open public information meetings, such as community science data collection or participatory mapping.

10. Develop guidance on management of external aid.

Local communities are overwhelmed with information, ideas, support, and both professional and unprofessional aid post-disaster. Management of this influx of resources can occupy planners and community members’ time, removing them from the strategic planning processes they should attend to. Providing planner-specific guidance on the use and management of external resources is needed. This guidance should include how to manage general volunteers post-disaster, and ways to ensure that they support community goals rather than work at cross-purposes. This guidance should also showcase how to best use or manage professional external resources such as APA’s Community Planning Assistance Teams (CPAT) or other technical teams. Conversely, technical teams or support should enter communities only with an invitation and ensure that they are not overburdening already tired local planners. External support processes, if offered from different organizations or levels, should be coordinated into singular processes such that communities are not expected to attend to redundant planning processes.


SYNTHESIZE

11. Synthesizing available recovery resources.
Many resources related to disaster recovery are currently available from various agencies that have put emphasis on different aspects of disaster recovery. This information needs to be synthesized so that decision making is not done in silos, especially after a disaster where the interrelationships of many community characteristics become clearer and should be incorporated across recovery and general planning processes. One suggestion is to provide an annotated bibliography with very short summaries of different recovery guides or materials that helps planners find detailed information they need more easily.

12. Synthesize guidance on funding options.
Funding is a large challenge in disaster recovery. Finding appropriate funding sources and ensuring eligibility takes an extraordinary amount of community officials’ time. APA could support this process by providing up-to-date information that is synthesized and concise on all the funding sources, requirements, and timelines available both and post- and pre-recovery.

13. Synthesize academic research to help integrate research into practice.
Efforts should be made to more directly connect the work of academics and practitioners. While not a specific theme identified by respondents, we noticed that much of the knowledge about recovery processes was not implemented into recovery practice. Finding ways to connect practitioners with scholarship is needed.

Although the way disasters impact communities can vary, there have been similar issues that have been expressed across the interviews regarding recovery issues. Building from existing resources such as APA’s Planning for Post-Disaster Recovery: Next Generation and FEMA’s Community and the Community Recovery Management Toolkit, concise documents could be generated for short- to medium-term recovery needs. The emphasis to build back faster often overshadows the importance of building back better, and so concise documents with best practices already being
employed at the community-scale can prove to be more beneficial to planners and professionals on the ground who are actively involved in the processes.

**SUPPORT**

15. **Support local communities to collect and analyze data that is needed during disaster recovery planning.**

Finally, interviewees described needs for specific, local-level data about their communities. Especially for smaller and rural communities, regular data collection is often unavailable. APA could support local communities by identifying data sources, listing common data needs, and providing technical teams that collect and provide data for recovery. These data teams could support communities before the entrance of CPAT teams or other planning support professionals. This could provide low-cost services to assess and measure community disaster impacts and needs, collate secondary data, and develop data reports.
INTRODUCTION

1) Thank you for agreeing to talk to us today about your experience with disaster recovery planning. To help ground our discussion, would you mind describing some of the disaster impacts to your community from [INSERT DISASTER NAME OF INTEREST]?
   i. Probes: Approx. number of houses damaged? number of business damaged? Approx. number of lives lost? Approx. cost of the disaster? Approx. timeline of recovery activities? Did you receive a federal disaster declaration? Did you receive a state disaster declaration?

RECOVERY PLANNING ROLE

Next, we would like to know about your role in recovery planning.

2) Would you describe your role in the community recovery planning process in the aftermath of that disaster?

3) What aspects of the recovery process did you lead?
   i) Probes: Housing, unmet needs, infrastructure, land use, building codes, funding, etc.

4) What aspects of the recovery process did you contribute to?
   i) Probes: Housing, unmet needs, infrastructure, land use, building codes, funding, etc.

5) Who led the overall recovery process in your community?

6) At what point in the recovery did you contribute the most?

7) How were you involved in recovery planning in the immediate response period, say the first few days, after the disaster happened?

8) What is your role in pre-disaster recovery planning?
   i) Probes: What do you lead?
   ii) Probes: What do you contribute to?

RECOVERY PLANNING PROCESSES

Next, we would like to know more about the recovery planning process in your community.

9) What was the areas of focus for the recovery planning?
i) Probes: Housing, infrastructure, economic, transportation, land use, parks, building codes, etc.
10) What specific recovery activities did your community implement from the local government?
   i) Probes: Building moratorium, Building code changes, land use changes, education campaigns, etc.
11) What risk reduction or hazard mitigation elements were incorporated in recovery activities?
   i) Probes: Buy-outs, buffer zones, zoning changes, base-flood elevation changes, setback zones, etc.
12) What were the major milestones of the recovery planning process?
13) What aspects of equity were incorporated into your recovery planning process?
14) How did your community gather public participation in the recovery planning process?
15) How did you gather participation from marginalized populations such as low-income, racial and ethnic minorities, female-headed households, elderly, and others?
16) What organizations or individuals were your main collaborators during the recovery planning process?

RECOVERY PLANNING NEEDS
17) How did you learn about recovery planning processes or what were your main sources of information to help you do recovery planning?
18) What information would have been most useful for you to do recovery planning in the immediate aftermath of the disaster?
19) What information would have been most useful for you to conduct recovery planning during short-term recovery (the first 1-3 months post-disaster)?
20) What information would have been most useful for you to conduct long-term recovery (4 months to 3 years)?
21) What aid or support would be helpful to you immediately after a disaster and later in the recovery?
   i) Probes: Additional planning staff, temporary planning assistance teams, example guidelines, etc.
22) What information or support would be useful to do pre-disaster recovery planning?
23) What would be the way you would like to learn more about recovery planning?
   i) Probes: Online tutorials, podcasts, online videos, guidebooks, templates, etc.

Thank you so much for your time. Is there anything else we should know to help other planners who have not been through recovery processes before?