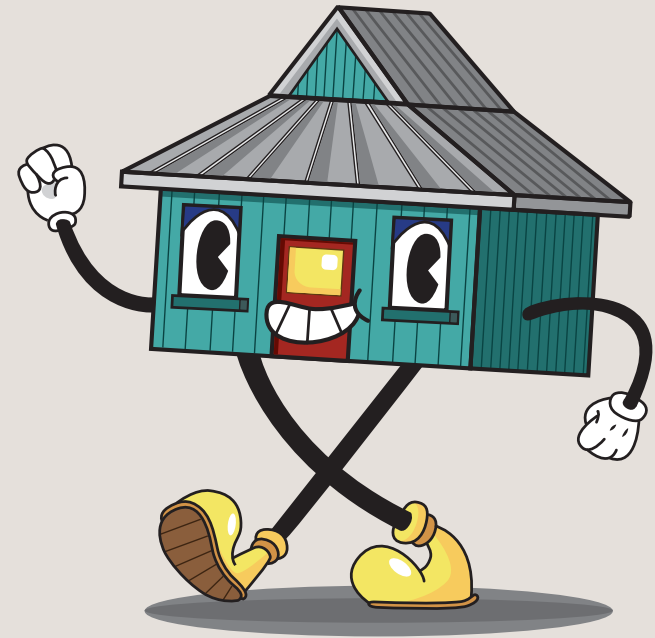


The Resilient Housing Planning Workbook

A Planning Process that Leads to Change

FINAL DRAFT



MISSISSIPPI STATE UNIVERSITY
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DESIGN STUDIO

Table of Contents

Resilient Housing Planning Process Diagram i

1. Assessing Your Needs

Where to Begin? + Assessment 1

Exercise 1.0 + Prompting Questions 2

2. Assembling Your Participants

Defining Your Participants 3

Exercise 2.0-2.2 + Prompting Questions 4-6

3. Analyzing + Envisioning

Existing Housing Assessment + Prompting Questions 7-8

Exercise 3.1-3.2 9-12

Housing Disaster Recovery Plan + Prompting Questions 13

4. Defining Goals + Objectives

Moving from Goals to Objectives + Exercise 4.0 14

Exercise 4.1 15

5. Recommending Actions

Planning for Change 16

Exercise 5.0 17

6. The Path Forward

Next Steps + Exercise 6.0 18

Resources 19

What is this Workbook?

This workbook has two primary goals:

- To help you identify a **series of goals and related objectives** that you can pursue **to promote resilience** in your community
- To prepare you for participating in the full Resilient Housing Planning Process as outlined in the Guide

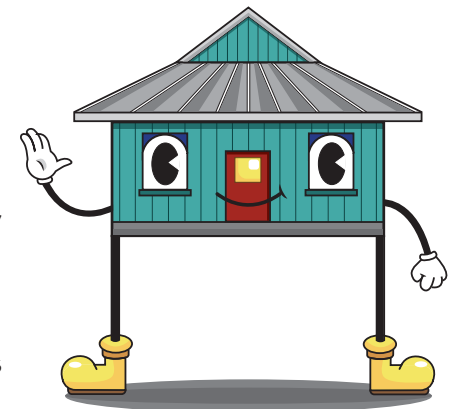
The need for a Resilient Housing Plan is dramatically revealed after every hurricane, wildfire, and earthquake. Following a natural disaster, thousands of people are often left without the leadership, assurance, and financial assistance needed to begin the difficult work of repairing and rebuilding.

By engaging in the Resilient Housing Planning Process, municipalities put themselves in a stronger position to receive and make use of critical resources in times of crisis.

Even if you do not decide to pursue the full Resilient Housing Plan, this workbook will leave you better prepared to apply for federal, state, and philanthropic funding opportunities and tackle resilience challenges in your municipality. **By the end of this workbook, you will have identified several goals, objectives, and relevant action items to begin addressing the challenges you have identified in your community.**

Meet Rez!

As you find your way through these pages, keep an eye out for your resilient housing friend, Rez. He'll guide you toward a more resilient future, offering notes and reminders to make sure you get the most out of this workbook.



The Resilient Housing Planning Process



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Remember!

This process is by design visionary. Your goals should not be limited by how you have done things in the past, but instead envision new ways of progressing into the future.

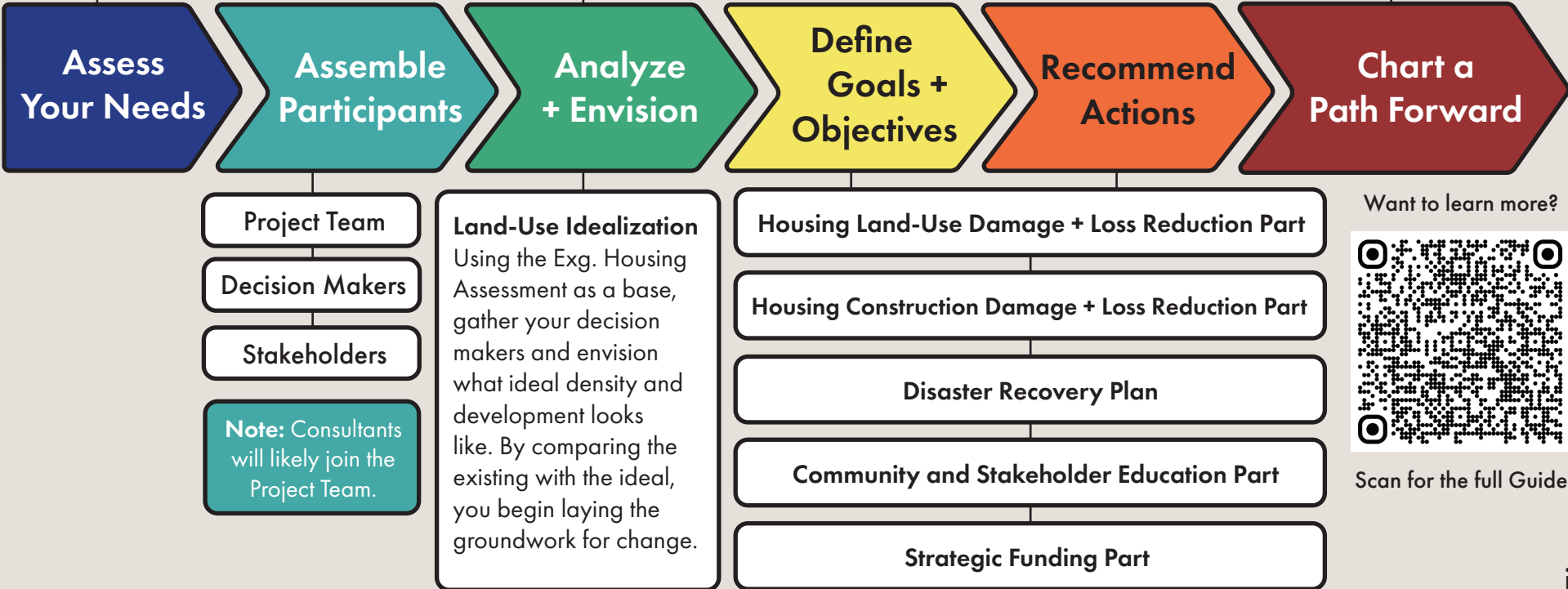
Potential Outcomes

- Resilient land-use plans for housing development location, density and type.
- Improved housing building standards with FORTIFIED construction.
- Informed and engaged community, decision makers and housing providers.
- Readiness to effectively apply for, receive and use funding.
- Analysis of how housing is included in existing plans.
- Assessment of vulnerabilities of existing housing stock.
- Preparedness for all phases of disaster and replacement housing.

Start by taking inventory of what plans already exist as you build the foundation for addressing community needs. How do your plans incorporate housing? Reflect on both successes and shortcomings in how housing has responded to disaster challenges in your municipality.

Existing Housing Assessment

A two part assessment addressing:
1. Housing Land-Use
2. Housing Construction Standards
Are you happy with your current building standards? By mapping housing density and structural conditions in your municipality and overlaying risk data, you will identify vulnerabilities as well as opportunities to become more resilient.



1 Assessing Your Needs

Evaluating Successes + Challenges

Where to Begin?

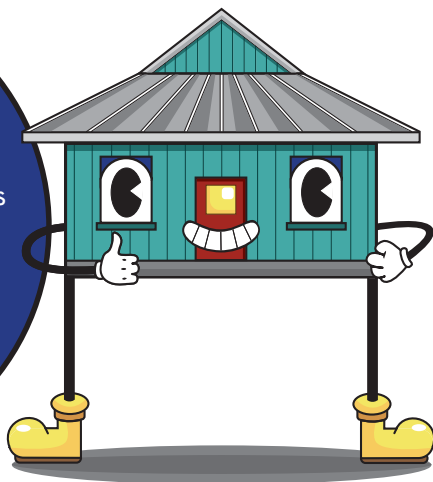
The disaster challenges facing your municipality are likely daunting and complex, making it easy to get overwhelmed when you begin working toward solutions. As you work toward a more resilient future for your community, it is best to start by taking inventory. **Has your municipality already done the work of creating a broad resilience plan? If so, how does the plan focus on housing?**

Use this space to consider both successes and shortcomings that your municipality has experienced. In order to work toward substantive change, it is **critical to educate various decision-makers and stakeholders across your municipality on why things are the way they are.** By understanding the past, you will lay the groundwork for future success.

The full Resilient Housing Planning process will lead to a summary report of existing planning documents and policies that can be used to get planning participants on the same page. Even if you are not interested in pursuing that process, this workbook will help you reflect as you move forward.

Note!

While this workbook will prepare you for tackling resilience challenges in your community, it is not a shortcut for the full Resilient Housing Planning Process. You will always need community + stakeholder engagement to achieve robust outcomes!



Assessment

Use the chart below to identify what types of disaster challenges your municipality faces. If not applicable, just rank it as low concern.

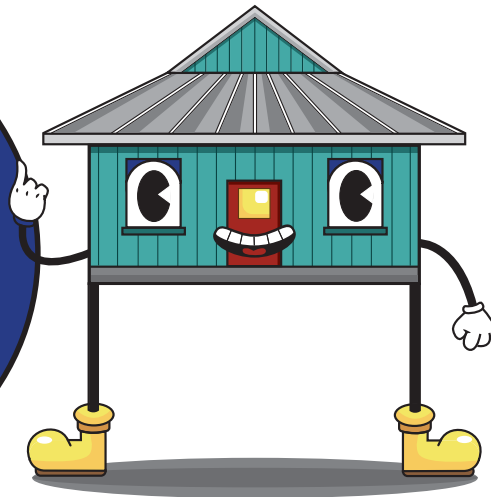
Challenge	High Concern	Low Concern
Coastal Flooding		
Riverine Flooding		
Rainfall Flooding		
Hurricanes		
Tornadoes		
Wildfires		
Drought		
Earthquakes		
Mudslides		
Hailstorms		
Blizzards		
Extreme Heat		

Exercise 1.0: Taking Inventory

Does my plan address housing?	Yes	No	I Don't Know
Comprehensive Plan			
Consolidated Housing Plan			
Hazard Mitigation Plan			
Community Resilience Plan			
Are there any relevant plans missing? Write in below.			
Ask Yourself: How often do your municipal departments coordinate regarding the update, maintenance, and implementation of these documents?			

Note!

If you answer "I Don't Know" for any of the above plans, take a moment and make a note to yourself to find your municipality's relevant plans after this workshop. You'll need this information to be successful in working toward a more resilient community!



Prompting Questions

Use the space below to jot down thoughts and ideas.

In recent years, what was your municipality's most successful planning effort? What lessons can be learned from previous planning efforts like that one?

Do you feel that your existing building code reflects the resilient construction standards your community needs? Why or why not?

What lessons has your municipality learned from previous disaster experiences?

Has your municipality addressed high level hazard resilience goals? If so, summarize them here.

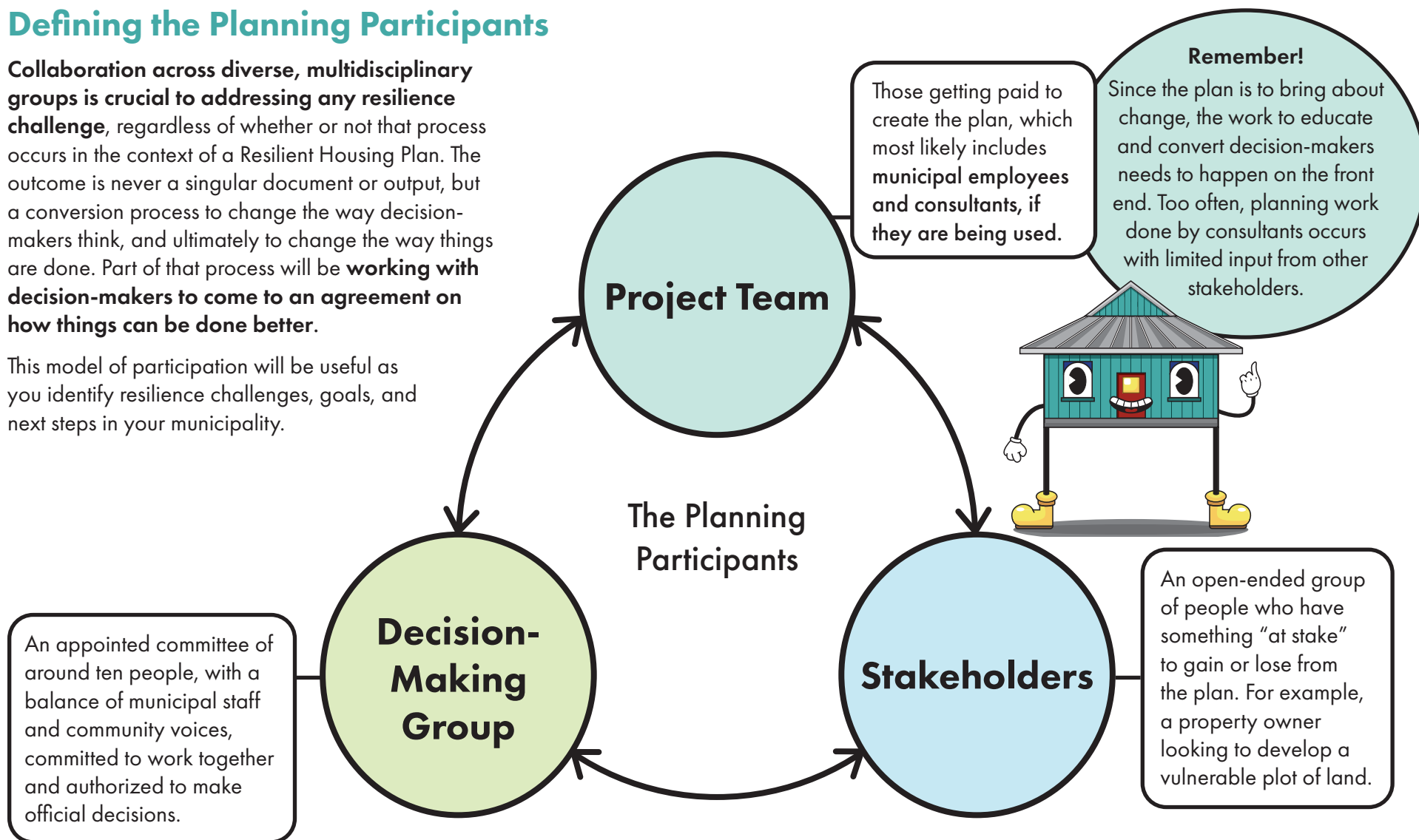
2 Assembling Your Participants

Planning a Process that Leads to Change

Defining the Planning Participants

Collaboration across diverse, multidisciplinary groups is crucial to addressing any resilience challenge, regardless of whether or not that process occurs in the context of a Resilient Housing Plan. The outcome is never a singular document or output, but a conversion process to change the way decision-makers think, and ultimately to change the way things are done. Part of that process will be **working with decision-makers to come to an agreement on how things can be done better.**

This model of participation will be useful as you identify resilience challenges, goals, and next steps in your municipality.



Ask Yourself: What will you do to reach out to stakeholders and ensure that they can participate in your efforts to address resilience challenges in your community?

Exercise 2.0: Meet Your Neighbors

Use the chart to get to know your fellow workshop participants. You just might work together in the future!

Name	Affiliation	Contact Information

Exercise 2.1: Assemble Your Participants

Use the chart to identify potential contacts as part of a potential project team, decision-making group, or as a stakeholder.

Participant	Name	Why are they on the team?	Potential Role
Planning & Zoning			
Building Code			
Flood Management			
Federal & State Grants			
Public or Non-Profit Housing Provider			
Private Housing Developer			
Homeowner in High Risk Area			
Real Estate			
Insurance			
Community Advocacy Organization			
Other:			

Prompting Questions

Use the space below to jot down thoughts and ideas.

What decision-makers and community members do you need to educate and engage in order to get community buy-in?

How do you anticipate this plan being implemented? How do elected officials need to be involved in order to be successful?

What is your municipality's plan to better inform and promote for your community's most vulnerable areas?

Exercise 2.2: The Role of the Consultant

There are three possible roles for consultants:

Facilitating the Planning Process

This option can offer the advantage of helping all members in the decision-making group participate effectively without the influence of hierarchical relationships that could impact open discussions.

Gathering, Analyzing, and Presenting Relevant Data

If the jurisdiction does not readily have GIS skills available or the capacity with their current workload, a consultant is a good solution.

Producing the Resilient Housing Document

Producing a professional planning document is a specialized task that may be better suited for a consultant in some cases.

Regardless of whether or not you choose to engage in the full Resilient Housing Planning Process, will you require a consultant to help you achieve your resilience goals? How would you go about selecting one?

3 Analyzing + Envisioning

Laying the Groundwork for Success

The Existing Housing Assessment

Before jumping into the details of goals and recommendations, you first need to lay the foundation for that process. The Existing Housing Assessment is a critical opportunity to better understand your municipality's current overall and geographically defined housing resilience.

Specifically, the Existing Housing Assessment is an analysis and mapping of:

1. Housing construction standards
2. Housing land use

Risk data is then overlaid on this mapping to visualize areas of vulnerability, and opportunities for enhancing housing resilience in your municipality.

The data should include the following factors

- Housing distribution
- Simplified hazard zones (flooding, seismic, wildfire, etc.)
- Wind hazard zones
- Housing wind vulnerability based on building code adoption
- Housing flood vulnerability based on foundation types
- Social and economic resilience ([FEMA's National Risk Index](#), [CDC Social Vulnerability Index](#))
- Other factors relevant to the municipality (vacant property, buildings that do not meet elevation requirements, etc.)

Prompting Questions

Use the space below to jot down notes, thoughts, and ideas.

What would simplified disaster boundaries look like for your municipality that clarify the hazard into high, medium, and low risk?

Has your municipality implemented building standards with requirements above high wind requirements? If so, what year were such standards implemented?

Are there vulnerable communities that exist within your municipality that may not be represented in Census tract-based mapping applications?

Existing Housing Assessment

The Construction Component: an analysis of **existing housing construction, specifically related to hazard resistance** (e.g. wind and flood resistance). To do so requires the definition of districts that represent distinct differences in the age and foundation type of houses.

Prompting Questions

Use the space below to jot down notes, thoughts, and ideas.

What is the history of building code implementation for your jurisdiction? For example, what was the year a basic building code was implemented?

With the years of code implementation in mind, what is the average age of the housing units in different parts of the jurisdiction, which correspond to the house's expected wind resistance?

Considering flood vulnerability, what is the typical house foundation for different parts of the jurisdiction? i.e. slab on grade, conventional pier foundation that raises the house around 30 inches, or elevated foundation to meet FEMA base flood elevation?

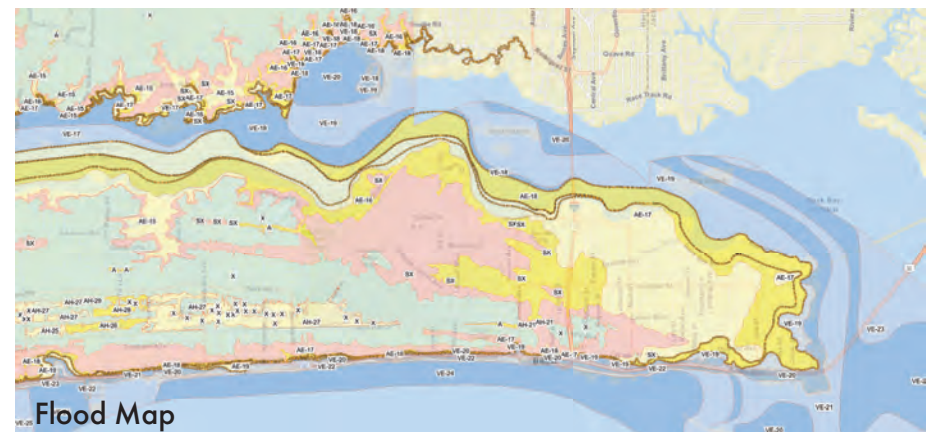
Considering the economic impact of housing loss, what is the average size of the houses in different parts of the jurisdiction? i.e. small, medium, large?

The Land-Use Component: an analysis of housing distribution and density across your municipality.

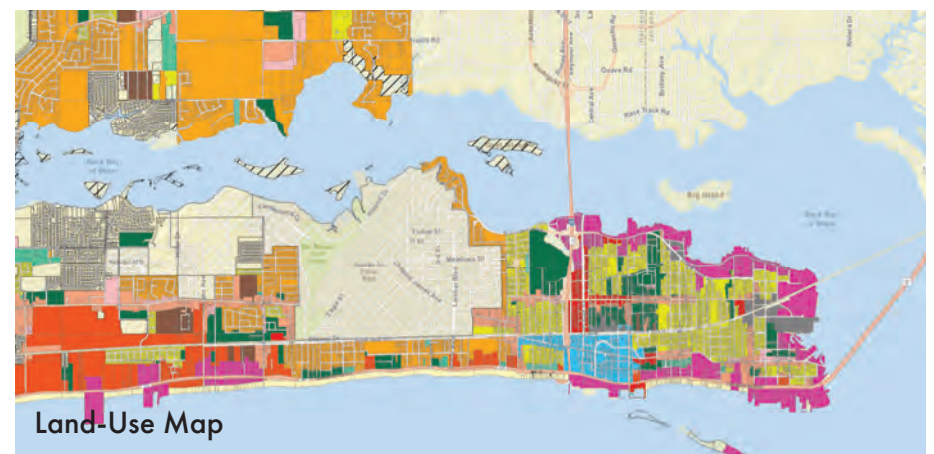
For the following exercise, make sure you have the following:

- A flood map of your municipality
- A zoning or land-use map of your municipality

The maps below are examples of the types of maps you should reference.



Flood Map



Land-Use Map

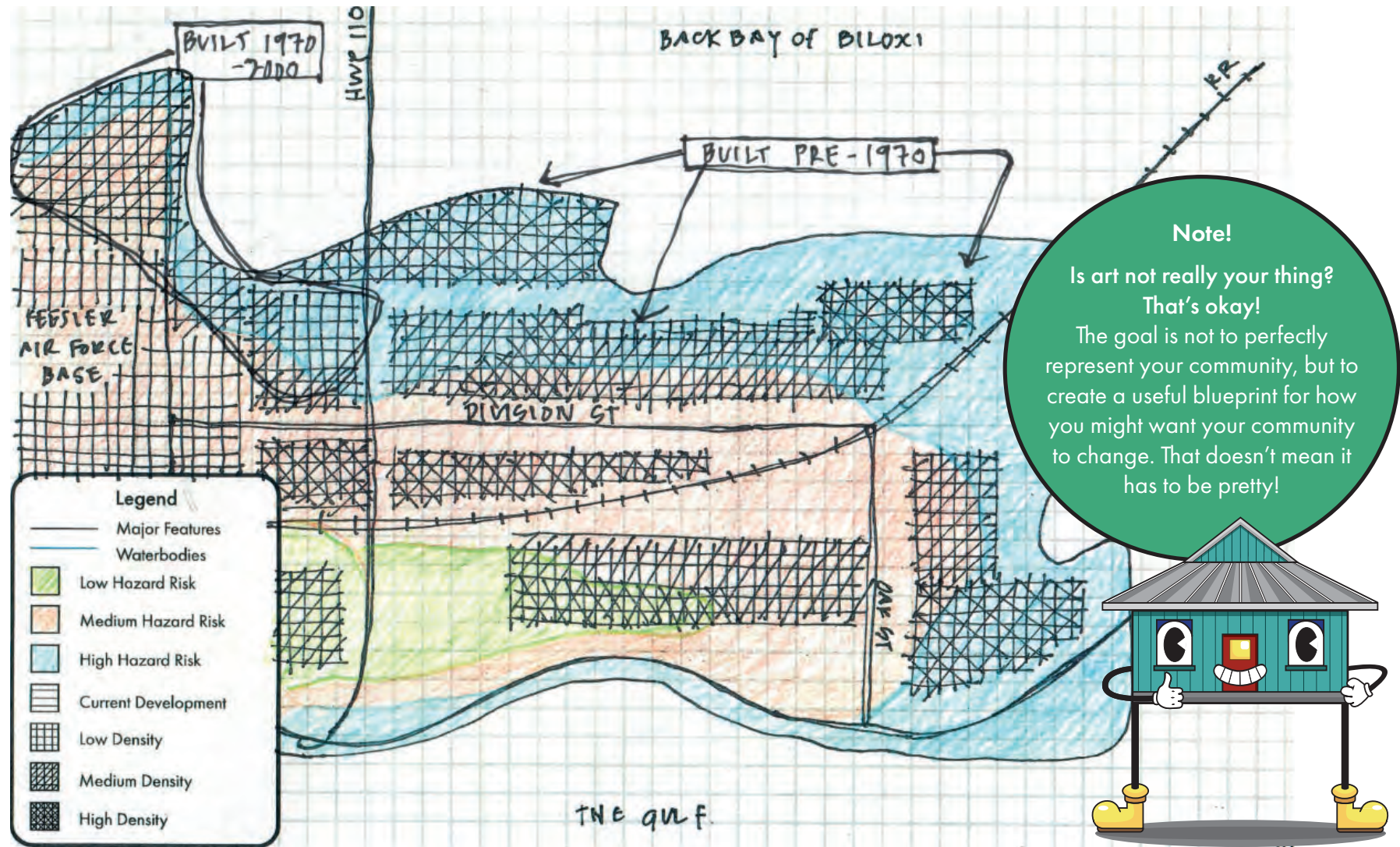
Maps courtesy of the City of Biloxi

Exercise 3.1 Example: Existing Housing Assessment

Using your printed maps as a reference, sketch an outline of your municipality, including major landmarks (label waterbodies, highways, etc.) It may be helpful to partner up or break into groups to complete this exercise.

To the best of your ability, use the provided legend to mark:

- low, medium, and high risk disaster-prone areas (flooding, seismic, wildfires, etc.)
- neighborhoods, label age (pre-/post-building code) and foundation
- density of current housing development



Exercise 3.1: Existing Housing Assessment

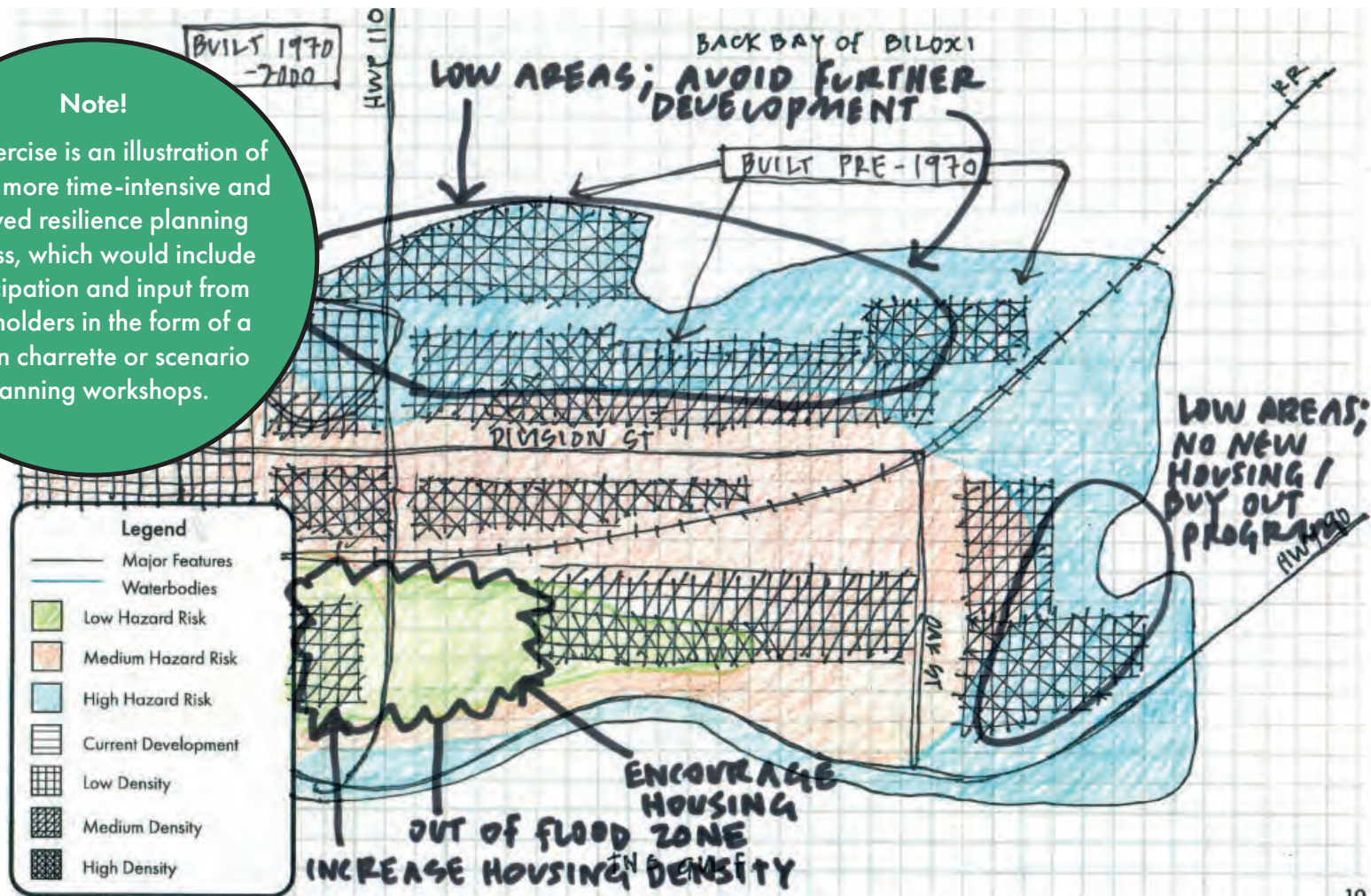


Exercise 3.2 Example: Visioning Map

If your workshop has a copier available, scan your existing conditions map and print a second map to draw on top of. If you do not have that technology available to you, that's alright. To the best of your ability, redraw your existing conditions map on the next page so that you can work on top of it. This time, from a resilience point of view, use this second map to mark areas where you think housing development should be happening. **Do not worry about what would need to be done to shift development to these areas, simply focus on where you think the housing should be located.**

Note!

This exercise is an illustration of a much more time-intensive and involved resilience planning process, which would include participation and input from stakeholders in the form of a design charrette or scenario planning workshops.



Exercise 3.2: Visioning Map

The Visioning Mapping will show the distribution of desired housing density for increased resilience throughout the municipality. **The resulting comparison between idealized housing density and existing housing density will reveal valuable information as you move toward defining goals and action items.**



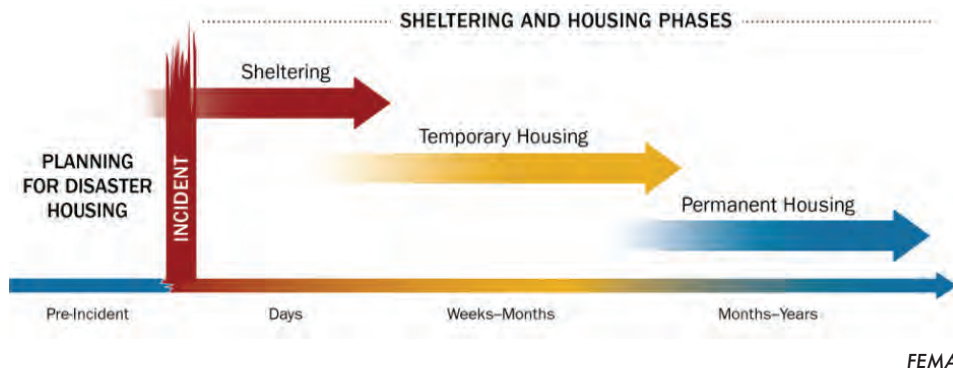
Housing Disaster Recovery Plan

Purpose

The purpose of the Disaster Recovery Housing Plan is to be prepared to direct the **housing-related work** of your municipality in the case of a disaster. The plan should include the four stages of housing needs: storm shelters, temporary housing, repair to existing housing, and replacement housing.

The product is a Disaster Recovery Housing Plan, following FEMA recommendations and utilizing the plan that a municipality might already have developed. The product might improve or replace the housing component of a municipality's Emergency Response Plan.

The first step is to determine what disaster housing plans are already in place. Then, you will analyze the existing disaster housing situation. The completed Existing Housing Assessment will provide most of the information needed to analyze the disaster housing situation and to determine a worst case disaster scenario to plan for.



Prompting Questions

Use the space below to jot down notes, thoughts, and ideas.

Does your jurisdiction have temporary housing resources (e.g., temporary housing units, trailers)?

Does your jurisdiction have an inventory of potential areas that could support group sites?

Exercise 3.3: Assess Your Needs

What needs to be done to increase the effectiveness of your Disaster Recovery Housing Plan?

4 Defining Goals and Objectives

Laying the Groundwork for Success

The Importance of Goals

The real effectiveness of this planning work depends on a clear set of goals that offer direction through the often complicated nature of the resilience challenges you are trying to address.

Goals grow out of your analysis, which has been laid out in your Existing Housing Assessment and Housing Land-Use Idealization. However, there are additional resources you can reference if you are having trouble clarifying your goals. **For example, the goals of the National Disaster Housing Strategy is a good start:**

- Support individuals, households, and communities in returning to self-sufficiency as quickly as possible.
- Affirm and fulfill fundamental disaster housing responsibilities and roles.
- Increase our collective understanding and ability to meet the needs of disaster victims and affected communities.
- Build capabilities to provide a broad range of flexible housing options, including sheltering, interim housing, and permanent housing.
- Better integrate disaster housing assistance with related community support services and long-term recovery efforts.
- Improve disaster housing planning to better recover from disasters, including catastrophic events.

Source: FEMA National Disaster Housing Strategy 2009

Exercise 4.0: Pause + Reflect

Take a moment to **reference your answers in Section 1, Assessing Your Needs, as well as the maps completed in the previous section.** Using the space below, write down your major takeaways from the analysis that you have built up throughout this workbook. Consider high priority needs, identified areas for improvement, and potential ways to move forward.

[illegible]

Exercise 4.1: Goal Setting

Once you have gathered your takeaways from your previous workbook answers, write down a series of goals organized by these three categories:

- Housing Land-Use
- Housing Construction Standards
- Housing Disaster Recovery

Do not worry about action items at this point, just focus on identifying intended solutions to the problems you have been analyzing throughout this process. We will continue to build on these goals as we move throughout the workbook.

Housing Land-Use

Housing Construction Standards

Housing Disaster Recovery

5 Recommending Actions

Identifying Next Steps

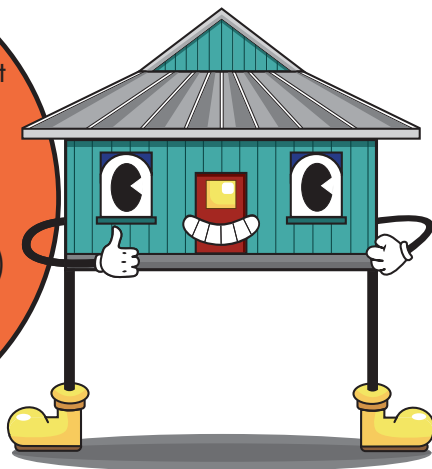
Planning for Change

As you have progressed through this workbook, you have built a strong foundation of relevant data, critical maps, and useful analysis. Combining that background with a strong set of goals and objectives has put you in a prime position to approach recommendations. As you consider what actions to recommend for your municipality's future, they will likely take shape in the form of plans.

The Resilient Housing Planning process addresses different aspects of housing development and municipal buy-in. Post-disaster recovery can be hampered by the fact that funds are often made available, not as quickly as property owners need, but often still more quickly than jurisdictions can put together a plan for funding usage. **Participation in the Resilient Housing Planning Process ensures that municipalities are in a position to receive and make use of federal, state, and philanthropic funding opportunities.**

Note!

The Existing Housing Assessment and Vision Plan can be considered the **inventory and analysis** parts of the Resilient Housing Plan. The **planning parts** (in the outline on the right) provide a strategic framework for accomplishing resilience goals.



Outline of a Resilient Housing Plan

Housing Land-Use Damage + Loss Reduction Part

Based on your findings from the Existing Housing Assessment and Vision Plan, this part focuses on reducing damage and loss through changes to where and what kind of housing is built and can be used to inform a municipality's other established plans, such as a Comprehensive Plan.

Housing Construction Damage + Loss Reduction Part

This part focuses on improving a municipality's building standards and their enforcement by providing direction and incentives for resilient housing construction (such as FORTIFIED construction).

Disaster Recovery Plan

This planning component may take different forms depending on a municipality's existing Emergency Response Plan. It can address housing beyond current planning documents, considering the resilience of housing that survives.

Community and Stakeholder Education Part

This part has two aims: to plan short-term outreach activities to educate the community about the Resilient Housing Plan and plan long-term programming to promote resilient land use and construction practices.

Strategic Funding Part

This part puts the municipality in a strong position to receive and make use of federal funding for mitigation and recovery. However, it will also be useful for other housing-related funding opportunities.

The effectiveness of planning work that will lead to actionable recommendations depends upon advancing a plan from goals to objectives. Goals are broad, general statements to describe the intended solutions to identified problems. Objectives are specific and measurable and lead to actions to be carried out.

Some examples of action items developed for St. John the Baptist Parish in Louisiana (a pilot community who completed the Resilient Housing Planning Process) can be found below.

(Objective)			
RESILIENCE FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Development of low-risk sites	Buyout highest risk properties	Identify funding for buyouts in VE zones	Grants and Planning and Zoning Depts.
Limit development in high-risk areas	Preserve wetlands from development	Expand ECD zoning to areas that are functioning as wetlands	Planning and Zoning Dept.
Building practices	FORTIFIED Construction Training	Coordinate with the State of Louisiana or Regional entities to host workforce development programs that result in more licensed contractors who are trained in FORTIFIED construction	Economic Development Dept. and Planning and Zoning Dept., and Home Builders Association

Exercise 5.0: Action Items

For this exercise, choose one of your goals from Exercise 4.1 and further develop it into an objective and action items.

Goal	Objective	Who will work on this?	Action Items

6 The Path Forward

A Future of Resilient Communities

Congratulations!

With the essential components of your resilient housing strategy now in place, you are equipped to move forward with confidence and clarity. While there is still work to be done, the Resilient Housing Planning Guide will serve as a useful resource as you lay the groundwork for funding disaster mitigation and response.

Beyond securing resources, this plan positions your community to implement solutions more effectively, build stakeholder trust through transparent preparedness, and adapt to emerging challenges within established frameworks.

Exercise 6.0: Next Steps

Use the exercise below in one of two ways:

- If you are considering participating in the full Resilient Housing Planning process, identify your next action items to initiate that process.
- If you want to pursue the goals and action items you identified in this workbook, write out what you need to do in order to get started.



Additional Resources



[Community Development
Block Grants via HUD
Exchange](#)



[FEMA Grants](#)



[Pre-Disaster Planning
for Permanent Housing
Recovery](#)



[FORTIFIED Home Solutions](#)



[Rural Development
Programs via USDA](#)



[Resilient Housing Planning
Guide](#)

Great Work!

It has been a pleasure working with you throughout this process! These resources are here if you need some additional guidance on funding opportunities. When in doubt, you can always reference the Resilient Housing Guide. Till next time!

