

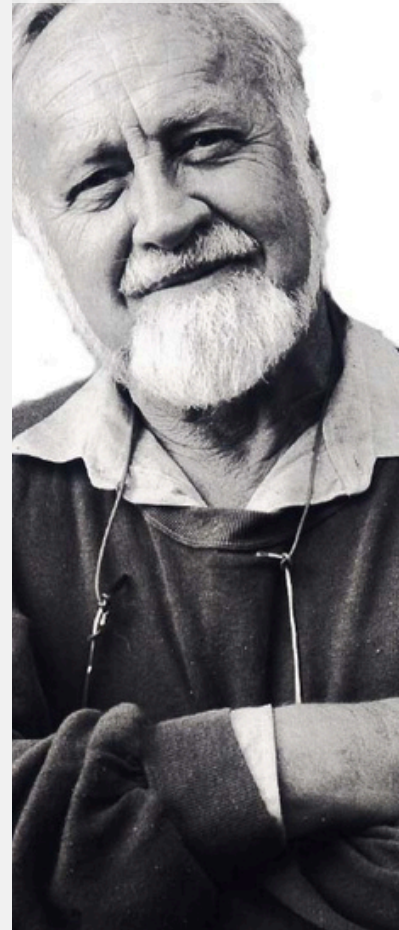
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Introduction Guide

**PERMACULTURE AND REGENERATIVE
SOLUTIONS TO DISASTER RESPONSE AND
RECOVERY**

Welcome

Are you concerned about the impact of disasters such as fire, flood, earthquake or hurricane on yourself, your family, your home or your community?

There's a lot you can do to protect yourself. We've created a series of Guides that help you to do this step-by-step, from simple first moves to more involved preparations.

Our focus is not only on prevention and recovery, but on building greater long-term ability to avoid disasters entirely. Wherever you're starting from, these guides can assist you.

Start here - this introduction orients you to the guides and how to get the most out of them, so please read it first!

Our Approach: What is a holistic disaster resiliency approach?

Why do we need guides for disasters?

Disasters are becoming more frequent and more costly. Over the last 10 years, billion dollar disasters in the US have cost a total of \$1.4 trillion. (Source: NOAA) Most households and communities are not adequately prepared — and many only learn what to do after living through a disaster.

These guides help you be more prepared. Whether you live in a wildfire-prone area, a flood zone, or a region prone to severe storms, there are concrete steps you can take now to reduce risk, protect your household, and recover faster when disaster does strike.

Resilience means that individuals, households and communities are able to weather disasters with less disruption and damage when they do occur, and recover faster. Ecosystem resilience means that healthy natural systems such as wetlands and native vegetation can reduce the size and intensity of disasters themselves, limiting flooding, fire spread, and wind damage before they reach our homes and communities.

Our guides share techniques for both
Our goal is to help you:

- **Prepare before disaster strikes.** Many people learn disaster lessons the hard way. These guides can help you avoid the worst of them.
- **Reduce risk proactively.** By taking practical steps now, you can reduce the likelihood and impact of disasters where you live.
- **Make intentional choices that increase resilience** for yourself and your family, in ways that are also beneficial for the environment, your neighbors and your community.

When you have a plan based on what has actually worked for others, it can bring peace of mind - the anxiety of “what if” becomes much more manageable.

Our guides include practical, usable step-by-step processes, checklists, information and examples for use by individuals, local organizations and local communities.

What makes these guides unique?

Most disaster guides cover the basics: evacuation routes, emergency kits, shelter-in-place protocols. Ours go further.

We use an approach called regenerative design — a way of thinking about disasters that asks not just “how do we survive this?” but “how do we come back stronger?” or “how can we prevent the disaster completely?” The focus is preparing for and recovering from disasters in ways that create multiple benefits - improving quality of life and healing damaged ecosystems.

You may have heard this approach called permaculture, nature-based solutions, ecological design, systems thinking — but the core idea is the same.

The opposite of this is degenerative design, and unfortunately, it's common. When we fill in wetlands to build subdivisions or pave over land that once absorbed rainfall, we create new vulnerabilities. For instance, communities across Florida and beyond that have never flooded before have experienced catastrophic flooding because the natural systems that protected them before have been removed, covered up or damaged.

Degenerative design can cause disasters that otherwise wouldn't happen. The costs to homes, infrastructure, finances, and peace of mind are enormous.

Disasters show us where our communities are fragile, but they also reveal opportunities. Nature is

extraordinarily resilient, and we have the knowledge and tools to design and build our households and communities the same way. Building smarter, cleaner, and more ecologically sound isn't just a good idea — it's the most effective way to reduce the cost and impact of future disasters.

We are all designers. We design our lives by our daily choices, sometimes habitual or unexamined. Our actions and choices can make us more resilient or less resilient.

The power of community

One of the most powerful but often overlooked disaster resources is your community. Research consistently shows that neighborhoods with strong social ties recover faster from disasters than those without them.

A practical example: in the aftermath of Hurricane Katrina, residents of the Lower Ninth Ward who had established neighborhood networks before the storm were better able to locate missing neighbors, share resources, and coordinate cleanup. Communities that lacked those relationships struggled far longer.

You don't need a formal organization to start. Simple steps such as meeting your neighbors, joining a local preparedness group, or organizing a block-level communication plan can make a profound difference when it matters most.

A regenerative solution at home

There are many steps you can take where you live that can increase your safety in a disaster while also contributing to your quality of life.

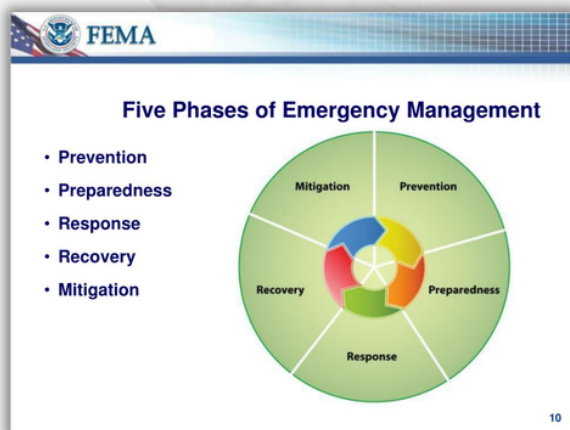
Example: People who have control over property in a fire-prone area, you might plant a mixed hedge of fire-resistant, edible native shrubs away from buildings along the property edge. This hedge acts as a windbreak, reduces ember intrusion, provides habitat for birds and beneficial insects, requires little maintenance once established, it provides food, and looks beautiful year-round. It protects the home, improves quality of daily life, and improves the land.

In regenerative design, every solution is designed to serve multiple functions and leave the system healthier than before.

Our approach to disaster management

Regenerative design follows a cycle of major phases that is both similar to and distinct from the current disaster management practices.

Current Approaches to Disaster Management



The five phases of emergency management design.

Disaster management traditionally covers five phases: **prevention, preparedness, response, recovery, and mitigation.**

Prevention takes action to stop a disaster from happening or reduce the likelihood. Example: zoning that prevents homes from being built in a flood plain

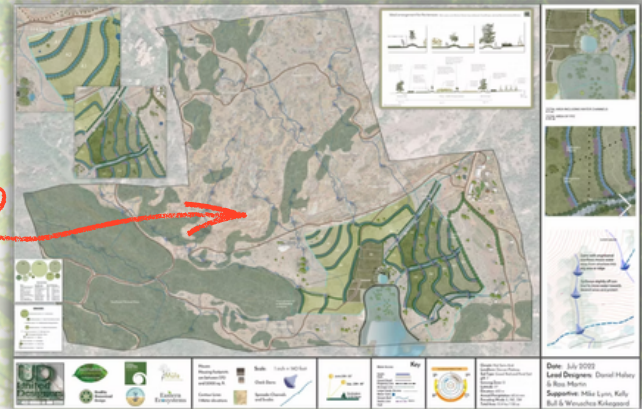
Preparedness focuses on actions like planning and stocking supplies

Response is what you do when the disaster is happening and shortly after to protect lives and property and meet basic needs.

Recovery is everything done to rebuild and heal after a disaster; this includes things like clean up and housing

Mitigation strives to lessen the harm from disasters that can't be prevented, through acts such as strengthening buildings.

Regenerative Approaches to Disaster Management



United Designers, Daniel Halsey

Occidental Arts and Ecology Center,
<https://oaec.org/our-work/resilient-community-design/>

Regenerative design is a circular process, similar to the FEMA disaster management cycle. Observation is a key component in creating more resilience. (This can be applied to anything, though here we're applying it to disaster management, harmonious) *How is the whole system working for your lifestyle, home, the land around you, and relationships between all of these? Where is it not working? What principles or tools can be applied to increase the workability of the design?*

Observe
Vision
Design
Implement

Our guides address these phases within a regenerative design framework, so that each phase also contributes to long-term resilience and quality of life.

For example:

- Prevention might mean adding wetlands that reduce fire and flood risk, improve water quality and water storage (reducing drought damage), provide wildlife habitat, and get incorporated into a park that people can enjoy.
- Preparedness might mean building neighborhood relationships before a disaster, so coordination happens naturally when one occurs.
- Recovery might mean rebuilding with materials and methods that are more resilient to future events, environmentally friendly and improve quality of life, not just replacing the same thing that was lost.

The goal is not just to survive disasters — it's to build lives and communities that are less vulnerable to them in the first place.

Who are these guides for?

These guides are meant to be scalable from individual/family to groups and policymakers and are designed to serve:

- **Individuals** who would like accessible, step by step ways to be more prepared for disasters in their region.
- **Frontline groups** that help people prepare, respond and recover from disasters.
- **Communities, Organizations or other groups** that would like to prepare together.
- **Professionals** striving to include more disaster resilience in their projects and designs.
- **Policy makers** who would like to help their communities be more resilient.

There are additional variables about your situation to consider in your planning that the guides provide a range of tailored information for, such as:

- Location: Rural, Suburban and Urban settings
- Relationship to the Property: Property owners and renters
- Type of Housing: Single home, apartment building, manufactured home
- Resources Available: Income, assets, tools/equipment, knowledge/skills

What Is Permaculture?

Permaculture is a contraction of the words ‘permanent’ and ‘agriculture’ which reconceives annual tillage and soil disturbance-based agriculture into a **perennial-plant based agriculture** favoring tree crops, cover crops, and minimal soil disturbances. From agriculture comes fibers, fuels, medicines, foods, and other essential requirements for culture to persist and thrive. Permaculture has come to now mean ‘**permanent culture**’. As a design science, permaculture studies and catalogues **natural solutions** to flood, fire, extreme heat, droughts, climate adaptation, and ecosystem management techniques both old and new. Using permaculture design, we can build **landscapes, buildings, and communities** that resist disasters by their very design.

What is included in the guides?

The guides are organized into four main components: a **Start Here introduction**, a **Risk Assessment**, a series of **Specialty Guides** by disaster type, and **Toolkits and Deep Dives** for each type of disaster.

Item	What's in it	Who is this For
Essential Guides	<ul style="list-style-type: none"> ✔ Start Here! ✔ Risk Assessment ✔ General Guide: Tool Kit ✔ Community Guide Tool Kit ✔ Glossary, Resources 	Everyone
Specialty Guides - by type of disaster	<p>Guides for specific disaster types:</p> <ul style="list-style-type: none"> ✔ Drought ✔ Earthquakes ✔ Fire ✔ Floods ✔ Heat ✔ Hurricanes ✔ Landslides ✔ Thunderstorms ✔ Toxins ✔ Wind ✔ Winter storms 	<p>Choose the guide(s) for the disasters that apply to you/your community and geographic area(s) based upon Risk Assessment.</p> <p>Tip: consider also where you work, live seasonally, or travel</p>
Toolkits - first section of the general guide and all specialty guides	For each type of disaster, Toolkit covers: Last minute preparation and short term recovery	Everyone
Deep Dives - second section of general guide and all specialty guides	For each type of disaster, Deep Dive covers: More in depth preparation and examples of regenerative approaches	Everyone, sections for both individuals and community groups

Each guide includes:

- Understanding and assessing your risk
- Step-by-step preparation and recovery actions
- Checklists for individuals and households
- Simple mitigation and prevention actions
- In-depth regenerative strategies for prevention, mitigation, preparation, and recovery
- Case studies of successful regenerative approaches
- Sources, credits, and additional resources

The Essential Guides

Start Here

This introduction orients you to the full guide series — how it's organized, where to begin, and how to get the most out of it.

Risk Assessment

Before diving into specific guides, it helps to understand what you're most at risk for. How vulnerable is the location that you live in? What disasters are you most vulnerable to? This questionnaire will help you determine which guides are most appropriate for you.

General Guide

WHAT: Preparation and recovery steps that are the same for most types of disasters. For instance:

- What should you keep on hand if you shelter in place without electricity? or
- The best way to document damage after a disaster.

WHY: These steps will give you a solid foundation for almost any emergency.

Community Guide

The Community Guide is in its own category. It's designed to be useful to everyone, regardless of circumstance or housing situation. Strong, connected communities, by statistic, are more resilient and recover faster from disasters. This guide covers how communities have built mutual aid networks that reduced damage and accelerated recovery — and offers simple, doable steps on how yours can too.

Additional Resources

- **Glossary** — definitions of specialty terms used in disaster management and technical terms for specific disaster types.
- **Footnotes** — links to sources and websites with more in-depth information on specific topics.
- **Appendices** — detailed data on specific points covered in the guides.

Specialty Guides: Tailored to Your Risks

We have created specialty guides for major disaster categories, including fire, flood, hurricane, earthquake, and winter storms. Each covers the steps and considerations unique to that type of disaster — which is why doing a Risk Assessment first is so helpful.

Example, there are steps you can take to protect yourself from life-threatening heat that are quite different than those needed for life-threatening cold.

Example: if you're at risk from wildfires, there are specific steps you can take during evacuation that may help protect your belongings or home — steps that are very different from those for a flood or winter storm.

A note on overlapping disasters: Some disasters create multiple types of damage. Hurricanes, for instance, can bring flooding, high winds, landslides, and saltwater intrusion. To address this, we have created separate guides for flooding, wind damage, and landslides, while the Hurricane Guide focuses on what is unique to hurricanes. This way, you can focus on the specific risks that apply to you without wading through information that doesn't.

Specialty guides:

- Drought
- Earthquakes
- Fire
- Floods
- Heat
- Hurricanes
- Landslides
- Thunderstorms
- Toxins
- Wind
- Winter storms

Two parts to each guide

Each specialty guide is organized into two sections: a **Toolkit** and a **Deep Dive**.

Toolkit: When You Need to Act Now

The Toolkit focuses on immediate, life-saving actions to take when a disaster is approaching and time is short. This is the section to turn to when you're not fully prepared and need to act fast.

WHAT: The Toolkit covers how to:

- Survive a disaster
- Evacuate safely
- Shelter in place
- Protect your home and belongings
- Care for animals
- Begin recovery after the disaster

Each section includes a clear explanation of every step, plus a separate checklist you can print out and work through on the spot.

FOR WHO:

- While many of the steps apply mainly to people living in single family homes, the strategies can be adapted to any type of building.
- Renters and apartment dwellers may want to share relevant sections with their building owners or managers.
- Organizations can use the Toolkit to help members prepare or to support recovery efforts.

WHY:

While potential disasters can be frightening or destabilizing, having a clear plan based on proven successful actions can bring a great deal of peace of mind. Our goal is to give you the simplest, most accessible path to protecting your life and the lives of the people, animals, and property around you.

WHAT'S UNIQUE:

You can find much of this information in various online resources. We've found that while still quite useful, it is preferable to compile this information in one place. We also strive to provide environmentally friendly options where we can in this section.



A note on printed copies: All guides are designed to be printed. When phones and internet go down, a printed checklist is invaluable. We recommend printing and storing key sections somewhere accessible before disaster strikes.

Deep Dive: Building Long-Term Resilience

The Deep Dive takes a holistic, regenerative approach to disaster preparation that can create more resilience in your life from multiple angles.

Most Deep Dive steps require time and resources to implement, so they are best tackled well before a disaster.

Recovery after a disaster is an ideal time to put them into practice: rebuilding has to happen anyway, and why not rebuild for much more future resilience?

The Deep Dive is organized into two sections:

For individuals and households: This section focuses on hardening your landscape and property against disaster damage. These solutions are most useful to people who own or control their property — or who work with those who do. Most are long-lasting: once implemented, they don't need to be repeated. Many are also environmentally friendly, cost-saving, and improve quality of life in multiple ways.

→ *If you don't own your property*, the Community Guide offers accessible ways to connect with local support and find community-based paths to resilience.

For groups and communities: This section addresses broad-scale solutions for neighborhoods, organizations, businesses, condo associations, apartment buildings, and local governments. Not every step will be applicable in every location, but they are included because of their value across many settings — and to inspire creative, collaborative thinking.

The individual sections are of value to groups as well: In many cases, the more people in a neighborhood who implement Deep Dive strategies, the more resilient the entire area becomes. Working together, a community can achieve a level of protection that no individual household could manage alone.

Let's get started

We recommend the following

1. **Read this Start Here Guide!** Navigate the information to get what you need for your situation
2. **Complete the Risk Assessment:** What disasters are most concerning in your area? What are your vulnerabilities to those types of disasters? What are your strengths?
3. **Read the Community Guide.** The single most important action, based upon substantial evidence from past disasters, that determines outcome in disaster is strong community - the relationships and networks of our lives.
4. **Complete the General Guide Toolkit.** Everybody can benefit from doing the steps in our General Guide Toolkit regardless of where you live or what types of disasters you may encounter. While it may seem like there is a lot to do, a good way to approach it is to use the checklists provided, and begin checking off items - as many as you can - with the time and resources you have. This will give you a sense of progress while making your family and property safer every season.
5. **Complete Disaster-specific Toolkit(s)** based upon the risks you identified in your Risk Assessment, as is appropriate for your situation. You know your needs better than anybody and can determine that. Don't worry if you don't get every single step done. Get done what is within reach to get done, and gradually work on the rest of it. Getting any of it done is far better than doing nothing. Complete Deep Dive(s) for the disaster(s) you identified in the Risk Assessment. The Deep Dive is important for maximum resilience. It will guide you based on your biggest vulnerabilities and risks, to create a step by step plan to address each one of those, based on your resource and time availability.

So let's get started!

Continue on to the next Guide: Risk Assessment ([link](#))

About the Disaster Resilience Initiative

Who we are

Three organizations have come together to create the Disaster Resilience Initiative. They are:

- Association for Regenerative Culture (pina.in)
- Permaculture Institute of North America (arculture.org)
- WeRegenerate.earth

We are collaborative and inclusive, and have created ways to interact with like minded individuals and groups.

What we do

In addition to the guides, we:

- ✓ Host monthly free town halls covering disaster response topics across various regions and modalities.
- ✓ Engage dozens of professionals in the fields of ecological design, fire mitigation, food sovereignty, and crisis intervention.
- ✓ Continue to expand a research library of regenerative disaster resources.
- ✓ Build and manage an Advisory Council and Working Groups to expand our efforts.
- ✓ Hold yearly Disaster Regeneration Summits featuring real-world case studies, regenerative aid models, and decentralized toolkits.

What we do

This project was originally conceived as a result of Hurricane Helene, when the project leader, Lee R Barnes, began collecting resources and pulling together a work group to address these issues. This founding group includes members from North Carolina, Florida, and Texas, all of whom have personally experienced "next level" hurricane devastation. The initiative is focused not just on resources, but on organizing and sharing the experience and wisdom of front lines groups, as well as systems thinkers and designers, and making this widely available to disaster-prone communities.

In the aftermath of Hurricane Helene, which affected so many aspects of life in Western North Carolina and in other areas of impact, it was clear that there was a need for more information about how to prepare for and recover from such events. For example, many people didn't know when to evacuate, what they might need if they do, how long they might not have access to their home, that they might be without power or water for a significant time period if they do have access, or how to communicate to loved ones or others.

How you can help

We're actively seeking:

- Collaborators for guide development
- Advisory Council members
- Regional design leaders
- Funders & foundations aligned with our mission
- Voices from the frontlines of disaster who want to share their wisdom

👉 To get involved, support, or learn more, visit this working group space to come and say hi

Additional Resources

Web resources

- [The Guides](#)
- [The Library](#) - a searchable collection of supporting research, expanded information, and region-specific resources (such as fire- or flood-resistant plant lists for your area).
- [Partner Directory \(We Regenerate\)](#) - a searchable directory of professionals, businesses, nonprofits, and community resources that can support your journey toward disaster resilience.

Community

- Online forum for the Disaster Resilience Initiative: [The Permaculture Crossing \(PcX\)](#), a free continental permaculture social networking site with nested bioregions
- [Disaster Advisor and Working Group](#): Plug in and share your knowledge/resources with our core team
- [PINA Membership](#): Join the continental permaculture membership organization to support permaculture's growth, capacity, and bioregional hubs