

POST-DISASTER LONG-TERM RECOVERY PLAN GUIDE

Guidance document for the Cal OES
Long-Term Recovery Plan Template

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HOW TO USE THIS DOCUMENT

This guide was created by the California Governor's Office of Emergency Services (Cal OES) Recovery Support Function (RSF) Division to support swift recovery planning after a disaster. The RSF Division works collaboratively with traditional emergency management programs to coordinate resources, amplify messaging, and support local jurisdictions through long-term recovery efforts. The RSFs connect local departments and agencies to private, philanthropic, state, and federal programs and resources across six functional areas – Community Planning and Capacity Building (CPCB), Economic, Health and Social Services (HSS), Housing, Infrastructure Systems, and Natural and Cultural Resources (NCR).

TIP: Contact the [Cal OES RSF Team](#) for guidance and data to assist with the development of a Long-Term Recovery Plan.

This document was designed to assist local jurisdictions in developing a Long-Term Recovery Plan using the Cal OES [Long-Term Recovery Plan Template](#). The purpose of these companion documents is to provide a starting point for long-term recovery planning in communities recently affected by a disaster.

This document contains links to example products and resources to illustrate key recovery planning concepts. This is intended to increase capacity within local governments following the immediate aftermath of a disaster, when resources may be constrained. To address resource limitations, this guide contains the most critical information that planners will need to create a Long-Term Recovery Plan. Additional resources are available in **Appendix F: Additional Resources** for those seeking more detailed information.

GENERAL PLANNING GUIDANCE

This section provides an overview of the Local Disaster Recovery Framework concept, the six Recovery Support Functions (RSFs), recommended first steps, and capacity building ideas.

Federal and State Disaster Recovery Frameworks

The [National Disaster Recovery Framework \(NDRF\)](#) outlines a process for how the federal government works with state, local, tribal and territorial partners to build, sustain, and coordinate the delivery of recovery capabilities. It defines the roles

and responsibilities of all levels of government during the recovery phase and provides a common vocabulary describing the functions that should be developed and executed across the whole community to mount a successful recovery. The NDRF empowers local jurisdictions by identifying federal funding sources and outlining the federal recovery structure.

The [California Disaster Recovery Framework \(CDRF\)](#) establishes a state recovery coordination structure consistent with the federal model to facilitate the delivery of state and federal disaster assistance to impacted communities. The CDRF describes key state recovery coordination roles and structures; operational roles and responsibilities of all stakeholders in the recovery process; state and federal recovery processes; requirements and limitations of state and federal disaster assistance programs; and the capabilities of the various local, state, and federal recovery resources and disaster assistance programs available with and without a Presidential Disaster Declaration.

| | Federal | State |
|---|--|--|
| Policy/Legislation outlining responsibilities and subsequent planning | Robert T. Stafford Act ; Homeland Security Presidential Directive 5 ; Homeland Security Presidential Directive 8 | California Emergency Services Act |
| Threats and hazards planning, response, recovery and mitigation approaches | National Response Framework | California State Emergency Plan |
| Guides organizational structure and support for impacted jurisdictions | National Disaster Recovery Framework | California Disaster Recovery Framework |
| Implements the Disaster Recovery Frameworks | Response and Recovery Federal Interagency Operational Plan | California RSF Annexes and Standard Operating Procedures |

The above table outlines key state and federal policies and plans that inform local, state, and federal coordination efforts following a disaster. These references provide a roadmap for implementing disaster recovery at the state and federal levels.

TIP: Work with your local emergency management agency to determine the local equivalent of the above policies and plans.

Local Disaster Recovery Framework

In preparation for disaster recovery, communities are strongly encouraged to develop a Local Disaster Recover Framework prior to a disaster so that stakeholders are prepared to quickly implement recovery efforts. FEMA's [Pre-Disaster Recovery Planning Guide for Local Governments](#) provides guidance on how to develop a Local Disaster Recovery Framework leveraging existing resources. At the city and county level, disaster recovery frameworks can be incorporated into the jurisdiction's Emergency Operations Plan (EOP), maintained by the local emergency management agency, or serve as a standalone document.

The Local Disaster Recovery Framework should accomplish the following:

1. Identify the overarching recovery priorities of the local jurisdiction.
2. Define the local recovery organizational structure and the transition from response to recovery operations.
3. Outline anticipated departmental and agency roles and responsibilities during the recovery process.
4. Identify any capacity gaps or concerns where state, federal, non-profit, or private sector support might be needed.

Examples of Local Disaster Recovery Frameworks include:







- [Sacramento County Recovery Plan](#)
- [San Joaquin County Recovery Plan](#)
- [City of Seattle Disaster Recovery Framework](#)

Recovery Support Functions







At the federal level, [Recovery Support Functions](#) (RSFs) are designed to leverage the knowledge, experience, skills, and resources of federal agencies and supporting organizations to facilitate information-sharing and coordinate resource delivery to disaster-impacted communities. At the state and federal levels, the RSFs are organized into six functional domains according to core capability and are brought together through coordination with relevant stakeholders and experts to help facilitate pre- and post-disaster recovery planning and resource coordination. Federal RSFs may be activated after a Presidential Disaster Declaration, depending on the identified needs of the State(s) the disaster occurred in.

State Recovery Support Functions

In California, each RSF is led by a State Coordinating Agency and supported by a constellation of state agencies (called primary and supporting agencies), voluntary organizations, and private sector partners. The [State RSFs](#) are supported year-round by Cal OES to facilitate long-term recovery efforts around the state.

| Recovery Support Function | | State Coordinating Agency |
|--|---|--|
| Community Planning and Capacity Building |  | Governor's Office of Planning and Research |
| Economic |  | Governor's Office of Business and Economic Development |
| Health and Social Services |  | California Health and Human Services Agency |
| Housing |  | Business, Consumer Services and Housing Agency |
| Infrastructure |  | Governor's Office of Emergency Services |
| Natural and Cultural Resources |  | California Natural Resources Agency |

Federal Recovery Support Functions

| Recovery Support Function | | Federal Coordinating Agency |
|--|---|---|
| Community Planning and Capacity Building |  FEMA | Federal Emergency Management Agency |
| Economic |  | Department of Commerce |
| Health and Social Services |  | Department of Health and Human Services |
| Housing |  | Department of Housing and Urban Development |
| Infrastructure |  US Army Corps of Engineers | U.S. Army Corps of Engineers |
| Natural and Cultural Resources |  | Department of Interior |

TIP: Work with the California RSF team to connect with any activated state and federal RSF partners; invite the contacts to participate in local long-term recovery planning efforts.

Local Recovery Support Functions

At the county and municipal level, local governments are encouraged to identify agencies within their jurisdiction to lead each RSF and outline agency-specific roles and responsibilities within a Local Disaster Recovery Framework. RSF partners should be trained in emergency management principals and support activities throughout the recovery continuum so that they are positioned to quickly execute a post-disaster recovery strategy. For lists of recommended RSF members, training, and resources, review the [RSF Quick Start](#), a guidance document for the development of county/municipal RSF teams.

In the absence of a local RSF structure, communities are recommended to designate and/or hire a single point of contact to serve as a coordination point for the State and Federal RSFs and lead overall disaster recovery efforts at the local level. This local point of contact, often referred to as a [Local Disaster Recovery Manager \(LDRM\)](#), should be someone familiar with the community and local government structure as well as disaster-specific information pertaining to recovery needs and objectives that can inform the engagement of community members and local agencies, as needed.

| Recovery Support Function | Local Stakeholders and Partners |
|---|--|
| Community Planning and Capacity Building | Land use planners, first responder agencies, local hazard mitigation program/planners, community development departments, building departments, public/external affairs, zoning and permitting, geographic information systems (GIS) departments, advocacy groups, universities. |
| Economic | Economic development departments, chamber of commerce, tourism development organizations, industry and professional organizations, major employers, regional economic development organizations, councils of government, workforce development boards, universities, and community colleges. |
| Health and Social Services | Local emergency management agencies, local health departments, health care coalitions, environmental health agencies, behavioral health providers, continuum |

| | |
|---------------------------------------|---|
| | of care providers, elder care organizations, public school systems, social services providers. |
| Housing | Local housing authorities, planning and zoning departments, housing and community development agencies, building departments, community housing development organizations, long-term recovery group housing subcommittees, community/grassroots organizations, faith-based organizations. |
| Infrastructure | Public works department, planning and building departments, water systems, energy providers, internet service providers, transportation departments, government facilities, traffic management, landfills/recycling centers. |
| Natural and Cultural Resources | Local planning departments, parks districts, local historical societies/museums, regional conservation districts, local libraries, Native American Tribes, local fire safe councils, regional water quality management districts, local air pollution control districts. |

Adapted from: FEMA Pre-Disaster Recovery Planning Guide for Local Governments

Disaster Recovery Planning First Steps

This document is designed to be a comprehensive planning guide that applies to a wide range of disaster events and incidents. Independent of the scale of a disaster, the following three steps are recommended to inform local disaster recovery planning:

1. Review the [FEMA Long-Term Community Recovery Planning Process](#) guide. While this document is from 2005 and is a bit outdated, it contains an introductory overview of the long-term recovery planning process with many examples from around the country.
2. Contact the [Cal OES Recovery Support Function](#) team for data, recovery resources, and planning guidance. The RSF team remains available year-round to support California communities with pre- and post-disaster recovery activities. Email LongTermRecovery@CalOES.ca.gov to contact the RSFs.
3. Visit the [Colorado Post Disaster Recovery Planning Toolkit](#) for an interactive guide that walks the user through a series of questions, from disaster impact to long-term recovery. While designed for Colorado, this online tool provides step-by-step guidance that can assist any local jurisdiction with navigating the recovery process.

After reviewing the above resources, begin completing the **Appendix A: Long-Term Planning Process Checklist** to kickstart your recovery planning efforts.

Capacity Building

Assembling a Long-Term Recovery Plan requires strong coordination and investment by the local jurisdiction. To augment local capacity, jurisdictions may consider State or Federal planning support, regional planning organizations, the Governor's Office of Planning and Research, California Strategic Growth Council, or consultants. Below are long-term recovery planning activities that local personnel may decide can be facilitated with staff augmentation:

1. Resource/Funding Identification - Identifying and layering recovery resources that can work together to increase project success including funding opportunities, technical assistance opportunities, and equipment/supply donations. Assisting with navigating complexities of grant applications, leveraging best practices (e.g., demonstrating community/regional partnerships, linking to ongoing priorities and initiatives, layering programs while avoiding duplication of benefit).
2. Stakeholder Engagement and Coordination - Establishing interagency coordination structures that leverage local resources as part of a Whole Community approach and connect with local, state, and federal recovery stakeholders to address gaps and augment local capability/capacity. Engaging interagency partners to assist with challenges in navigating and implementing state and federal disaster assistance programs.
3. Community Resilience Planning - Providing information on best practices and lessons learned from other disaster affected jurisdictions on incorporating resilience into recovery projects across recovery domains.
4. Data Management and Analysis - Establishing and identifying essential elements of information needed to track recovery progress and articulating information within reports, dashboards, etc. to assist with prioritizing efforts and allocating resources.
5. Monitoring and Evaluating - Establishing a strategy for monitoring and evaluating progress toward meeting priorities, objectives, and milestones identified in local/regional recovery strategies.
6. Documentation and Reporting - Establishing a strategy for documenting progress of projects/initiatives over time and reporting the information to executive decisionmakers, government agencies, nonprofit/community-

based organizations, and members of the community to obtain feedback and support any changes in existing strategies.

7. Training and Capacity Building - Identifying and implementing training and capacity building resources to fully transition recovery support back to the local community.
8. Lessons Learned and Best Practices - Documenting lessons learned and best practices to address during future iterations of recovery plans or for future disasters as part of a summary report on assistance provided and follow-up needs to maintain momentum around local efforts.

WRITING THE PLAN

Acknowledgements

This section provides an opportunity to reference key stakeholders and partners that contributed to the development of the Long-Term Recovery Plan. This section may include a list of stakeholders, a foreword from a prominent stakeholder, and/or a description of the long-term recovery team. Below are three examples that illustrate the different formats.

- List of stakeholders example: [Galveston Long-Term Community Recovery Plan](#), pages ii-iii
- Foreword example: [Bay County Long-Term Recovery Plan](#), pages 3-4
- Recovery team example: [Aransas County Long-Term Recovery Plan](#), pages 10-12

Introduction, Purpose, and Scope

This section will introduce the plan and provide a brief description of the contents. If your community has a Local Disaster Recovery Framework, describe how this plan aligns with that Framework, the California Disaster Recovery Framework, and the National Disaster Recovery Framework.

The purpose describes the reason for the existence of the plan and outlines strategic goals. Examples of strategic goals may include:

- Address the unmet needs of disaster survivors, businesses, and the local government.
- Restore the community's physical, economic, and social infrastructure.
- Implement strategies, policies and projects that protect public health and safety, enhance community well-being, and create a resilient economy.

- Develop a walkable, bikeable, economically viable downtown area.

The scope explains the boundaries of the plan and any limitations. Examples include:

- Activation of only specific RSFs
- Jurisdictions involved
- Disaster incident period
- Disasters covered by this plan
- Community assets (historic landmarks, large employers, place-based economy)

Situation Overview

The Situation Overview may include details of the disaster, including historic context and a strengths, weaknesses, opportunities, and threats (SWOT) analysis. The level of detail may vary, based on available data sources and the extent of damage.

Once a disaster event occurs, the State RSFs and Federal RSFs (if activated) work together to perform an assessment of each community and county impacted by the event. This information is organized into County information profiles, compiled by Cal OES and/or FEMA. These are intended to inform state and federal partners of the current conditions of impacted jurisdictions and can be a helpful starting place for state and federal partners to help locals start with their long-term recovery planning efforts.

TIP: Request your jurisdiction's County information profile from Cal OES, if available.

Potential data sources for Long-Term Recovery Plan:

- Situation reports produced by the local emergency management agency
- FEMA Individual Assistance and Public Assistance dollar amounts
- SWOT analysis
- Fire: [CAL FIRE Incident Map](#)
- Earthquake: [California Geological Survey](#)
- Flood: [DWR California Data Exchange Center](#)
- [EPA Climate and Economic Justice Screening Tool](#)
- [FEMA National Risk Index](#)
- [U.S. Census Bureau OnTheMap for Emergency Management](#)

Examples of comprehensive situation overviews may be found in the following plans:

- [Kilauea Recovery and Resilience Plan](#)

- [Richmond County Resilient Redevelopment Plan](#)

COMMUNITY ENGAGEMENT

Residents, businesses, and community organizations should be engaged early and often in the recovery process. This ensures community buy-in and positions the recovery plan for success. A summary of community feedback should be included here, with the full results available as an appendix to the plan.

Whole Community Engagement

A key concept in Emergency Management is that community preparedness is strongest when it includes input from the whole community – representatives from every facet of the community. Guidance for including the whole community in emergency management is available from [FEMA](#). Examples of community members and groups include:

- Individuals and families, including those with access and functional needs
- Businesses
- Faith-based and community organizations
- Nonprofit groups
- Schools and academia
- Media outlets
- All levels of government, including state, local, tribal, and federal partners

Disasters significantly impact communities, leading to widespread displacement and disruption of people's lives. Residents may be temporarily or permanently displaced from their homes, neighborhoods, or even the entire community depending on the severity of the disaster. Local jurisdictions must keep this in mind as they plan community outreach events and adjust their activities to reach their target population. This may involve outreach events in neighboring communities where displaced residents reside, events at shelters or hotels, and online options for residents who can't attend events in person.

Access and Functional Needs

According to the U.S. Census Bureau, approximately 3.8 million of California's civilian non-institutionalized population has a disability, and over 5.7 million of the total population is over the age of 65. According to the California Department of Aging, California's elderly population is expected to grow more than twice as fast as the total population. According to projections, approximately 8.5 million people over the age of 60 will reside in the state by 2020 and almost 12.5 million people over the age of 60 by 2040.

Understanding how the Access and Functional Needs (AFN) population is disproportionately impacted during incidents and events is critical to ensure their needs are identified before, during and after disasters and integrated into recovery planning. Therefore, in recovery planning efforts, it is critical to include a focus on and establish priorities to address the needs of these individuals and to include disability stakeholders throughout the planning process. AFN individuals include those with:

- Developmental or cognitive impairments
- Sensory disabilities
- Mobility impairments
- Injuries
- Chronic conditions
- Older adults or children
- Living in institutionalized settings
- Low income
- Housing insecurity
- Limited English proficiency or are non-English speaking
- Limited access to transportation

When planning community engagement events, consider how to access these populations and include them in recovery planning efforts. The CalOES [Office of Access and Functional Needs](#) provides training, data, and resources related to inclusive emergency management. For additional AFN resources, see **Appendix F: Additional Resources**.

Meeting Types

To the greatest extent possible, community residents should be empowered to set the short, medium, and long-term recovery goals after a disaster. Meetings and visioning sessions are a great way to hear new recovery ideas from residents and challenges related to individual recovery that might be met through whole community recovery project development. Examples of community engagement activities include:

- **Surveys** – Mailed or online surveys provide an easy way for community members to submit feedback about recovery challenges. Consider working with nearby institutes of higher education to support survey design, distribution, and analysis; an example of a public-academic post-disaster partnership is the [Chico State Camp Fire Survivor survey](#). Surveys can be targeted or open and should follow [AFN communications best practices](#). Examples include:

- Open survey to all county residents about the effect of a disaster on their employment and commute pattern.
- Targeted survey to businesses about factors preventing the business from re-opening.
- Open survey to residents about recovery priorities.
- **Focus Groups/Listening Sessions** – A listening session gives community members an opportunity to voice their concerns and explain their challenges. Participants are encouraged to share their personal experiences and the effect of the disaster on their lives. For example:
 - City government wants to understand the impact of a flood on homeowners.
 - Economic developers host a listening session to hear the lingering effect of a wildfire on small businesses.
 - Environmental health agency wants to understand the health impacts of a wildfire (smoke, ash, water quality) on a nearby community.
- **Visioning Sessions** – A visioning session empowers residents to envision the redevelopment of their community. Participants provide suggestions, answers and feedback on a given recovery challenge. Sessions may be conducted in-person or online and may be issue-specific or broad. For example:
 - Neighborhood residents envision the reconstruction of a local park to determine equipment, use, and vegetation priorities.
 - A visioning session to revitalize a flooded main street in a historic area.
 - A city-wide visioning session to determine the best use for a special funding allocation.
- **Town Hall Meetings** – A town hall meeting provides a designated place for community members to meet with local politicians. Participants can ask community leaders about the long-term recovery vision and provide feedback about their priorities and concerns. For example:
 - City mayor hosts a town hall meeting with small business owners to review a plan to revitalize downtown area.
 - County Board of Supervisors hosts a town hall meeting to present a draft long-term recovery plan.
 - State representative hosts a town hall meeting with local farmers and USDA representatives to provide agricultural recovery resources and information.

Community Engagement Resources

Additional guidance for community engagement can be found here:

- [HUD Community Engagement Toolkit - Building Purpose and Participation](#): Developed by Community Places to support the participation of community and voluntary groups in community planning, this guide describes strategies for designing community engagement, implements quality standards for engagement activities, and includes tools to choose which community engagement method or technique is most appropriate.
- [American Planning Association – Public Engagement in Recovery Planning](#): Developed by the American Planning Association in collaboration with FEMA, this briefing paper illustrates key recovery planning issues with examples from Iowa, Texas, North Dakota and Kansas.
- [Opportunities and Challenges of Public Participation in Post-Disaster Recovery Planning - Lessons from Galveston, TX](#): An academic case study published in Natural Hazards Review focused on the successes and challenges of community engagement in Texas following Hurricane Ike. Challenges included the size of the recovery committee, compressed deadlines, involvement by dislocated residents, and limited involvement by subject-matter experts.
- The [Town of Paradise Long-Term Community Recovery Plan](#) appendices contains detailed results of feedback received from community engagement activities following the 2017 Camp Fire.

See **Appendix D: Trauma-Informed Recovery Planning** for trauma-informed post-disaster planning recommendations.

IMPACTS AND RECOVERY NEEDS

Prior to the development of the Long-Term Recovery Plan, the community should compile the social, physical, economic, cultural, and emotional impacts of the disaster. The impacts will come from community engagement events, media sources, or professional assessments. Federal agencies may produce Impact Analyses for major disaster events, such as the HUD Housing Impact Analysis, which can be obtained from the CalOES Long-Term Recovery Team.

Next, the community will develop a Recovery Needs Assessment (RNA) to inform the development of recovery projects and initiatives. The RNA is an inventory of unmet needs that manifest because of the disaster and helps right-size the level of support needed from the local, state, and federal government to meet those

needs. The purpose of an RNA is to identify recovery issues, challenges, priorities, and areas of concern. This will enable a community to scope and define their desired level of support from involved stakeholders and inform decision making.

A local community may choose to follow the State or Federal RSF structure, activate only relevant RSFs, or create a unique structure for the disaster. For example, the [Monroe County Post-Disaster Recovery Strategy](#) included a Financial Administration RSF and the [Missouri Joint Recovery Support Strategy](#) included an Agriculture RSF. Whatever methodology is used, it should be clearly defined in the introduction to this section.

TIP: Organize your recovery according to the RSFs identified in your jurisdiction's Local Disaster Recovery Framework or Emergency Operations Plan.

Potential unmet needs that may be included in an RNA:

- Community Planning and Capacity Building: Planning, training, partnership engagement, and technical assistance unmet needs.
- Economic: Small business, industry, workforce, and economic development unmet needs.
- Health and Social Services: Community health, mental health, behavioral health, education, and human services unmet needs.
- Housing: Affordable, multifamily, access and functional needs, and rental housing unmet needs.
- Infrastructure: Public and private roads, bridges, tunnels, and water supply unmet needs.
- Natural and Cultural Resources: Parks, waterways, museums, and historic building unmet needs.

Note: The data points identified in the following sections serve as examples – each community should evaluate their own data sources, partners, and capabilities.

Community Planning and Capacity Building (CPCB)

The Community Planning and Capacity Building (CPCB) RSF is focused on planning products, data collection, community training, and capacity gaps, which may include personnel shortages, subject-matter expertise, or skill gaps.

The State Coordinating Agency is the California Governor's Office of Planning and Research and the Federal Coordinating Agency for the CPCB RSF is FEMA.

CPCB Data to Collect

The following data may be included in the CPCB portion of the RNA:

- Does your jurisdiction have to following plans and when were they last updated?
 - Local Disaster Recovery Framework
 - Long-Term Recovery Plan
 - Local Hazard Mitigation Plan
 - Emergency Operations Plan
 - General Plan – Land Use, Housing, and Safety Elements
 - Climate Adaptation Plan
 - Comprehensive Economic Development Strategy
 - Energy Action Plan
 - Community Wildfire Protection Plan
 - Local Coastal Program/Plan
- Will this long-term recovery plan align with existing plans? (See the [ResilientCA Plan Alignment Toolkit](#) for guidance.)
- Will the General Plan need to be amended to address temporary housing, debris removal, or equipment staging needs?
- Does your jurisdiction need training on any of the following subjects and who is available to provide the training? (Contact longtermrecovery@caloes.ca.gov for support from the Cal OES RSF team on this topic.)
 - FEMA Programs (Public Assistance, Individual Assistance, Hazard Mitigation, etc.)
 - California Disaster Assistance Act
 - SBA Disaster Loans
 - USDA Disaster Programs
 - Long-Term Disaster Recovery
 - Disaster Recovery Processes and Procedures (damage assessment, IRC Group, Joint Field Office operations, etc.)
- Has your jurisdiction identified lead and supporting agencies and are they aware of their responsibilities?
- Has your jurisdiction identified existing gaps in personnel capacity and identified ways to close those gaps following a disaster?
 - How many personnel can your jurisdiction dedicate to recovery?

- How many planners are on staff and how many hours per week can they dedicate to recovery planning?
- What support is available from state and federal government or other sources to close capacity gaps?

CPCB Impact and Recovery Need Examples

The following examples are provided to illustrate potential impacts and recovery needs related to planning and capacity:

1. Impact: Residents unable to receive emergency communications due to a lack of cell phone service coverage and access to broadband.
 - Recovery Need 1.1: Develop scope for a broadband feasibility study.
 - Recovery Need 1.2: Identify and secure funding for the project.
 - Recovery Need 1.3: Procure services to complete the study.
2. Impact: The existing Local Disaster Recovery Framework conflicted with existing plans impacting the ability to implement temporary housing and debris removal operations.
 - Recovery Need 2.1: Identify existing plans that will align with new framework, including Hazard Mitigation Plan, General Plan, Emergency Operations Plan, Comprehensive Economic Development Strategy, etc.
 - Recovery Need 2.2: Form a planning team comprised of local partners.
 - Recovery Need 2.3: Draft framework and secure approval by elected officials.
3. Impact: A lack of GIS capacity limited the ability to map disaster impacts through the IDE/PDA process.
 - Recovery Need 3.1: Map current GIS capabilities and data sources across jurisdiction.
 - Recovery Need 3.2: Identify capability gaps in an action plan.
 - Recovery Need 3.3: Procure services to provide training and software access.
4. Impact: Residents expressed confusion about shelter locations, whether they accepted pets, and how late they could arrive.
 - Recovery Need 4.1: Review after action reports from recent disasters to identify lessons learned.
 - Recovery Need 4.2: Identify potential shelter locations and partners.
 - Recovery Need 4.3: Conduct training exercises to refine roles and responsibilities.
5. Impact: Volunteers were frustrated by lack of coordinating structure to train volunteers for emergency response.

- Recovery Need 1.1: Identify emergency management capacity gaps during disasters.
- Recovery Need 1.2: Develop roles, responsibilities and training regimen for volunteers.
- Recovery Need 1.3: Advertise CERT program to community.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

CPCB Planning Resources

The following resources may help guide the development of a CPCB assessment:

- [APA Planning for Post-Disaster Recovery: Next Generation](#), model recovery ordinances, pages 177-194
- [Waterbury Long-Term Community Recovery Plan](#), pages 42-48
- [ICMA Rebuilding after Disaster Strikes](#), local government leadership case studies

Economic

The Economic RSF is focused on returning economic and business activities to a healthy state that is resilient to future disasters. The State Coordinating Agency for the Economic RSF is the California Governor's Office of Business and Economic Development and the Federal Coordinating Agency is the U.S. Economic Development Administration.

Economic Data to Collect

The following data may be included in the Economic recovery needs assessment:

- How many businesses were impacted by the disaster? Were they closed, relocated, or open on altered hours?
- How many employees were laid off due to the disaster?
- What are the insured and uninsured loss amounts?
- What factors are keeping businesses closed?
- How many businesses applied for an SBA disaster loan?
- Were any business support organizations affected by the disaster?

- Was an SBA Business Recovery Center opened? Which organizations were present and what issues did they report?
- Does your jurisdiction have a local/regional economic development strategy? If so, how will this disaster affect that strategy?
- Are businesses aware of continuity planning and/or do they have continuity plans with alternatives to continue their business operations after disasters?

Economic Impact and Recovery Need Examples

The following examples are provided to illustrate potential impacts and recovery needs:

1. Impact: Damaged roads prevented trucks from accessing port to unload containers and cargo was rerouted to another state, resulting in losses to the local economy.
 - Recovery Need 1.1: Establish a task force to guide project.
 - Recovery Need 1.2: Identify ownership, potential funding sources, and planning needs.
 - Recovery Need 1.3: Procure services to complete a feasibility study.
2. Impact: Damaged businesses were prevented from re-opening in alternate locations by a shortage of commercial real estate available in the community.
 - Recovery Need 2.1: Develop a scope of work and plan to attract businesses.
 - Recovery Need 2.2: Identify potential funding sources.
 - Recovery Need 2.3: Secure buy-in from partners and elected officials.
3. Impact: There are several empty storefronts on Main Street that could diversify the economy if the area was redeveloped.
 - Recovery Need 3.1: Identify partner organizations and agencies.
 - Recovery Need 3.2: Develop scope of work.
 - Recovery Need 3.3: Identify potential funding sources.
4. Impact: Impacted businesses expressed an interest in the county identifying one point of contact for economic recovery and resilience activities.
 - Recovery Need 4.1: Develop position description for an Economic Recovery Coordinator and list of duties.
 - Recovery Need 4.2: Identify potential funding sources.
5. Impact: Trained workers moved away from community after the disaster and there is now a lack of trained workforce.

- Recovery Need 5.1: Conduct training needs survey and identify target industries.
- Recovery Need 5.2: Develop training regimen.
- Recovery Need 5.3: Identify potential funding sources.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

Economic Planning Resources

The following resources may help guide the development of an Economic assessment:

- [California Association for Local Economic Development Recovery and Resiliency Playbook](#)
- [Hurricane Irma Recovery Support Strategy](#), pages 47-67
- [Dominica Post-Disaster Needs Assessment](#), pages 46-64

Jurisdictions may choose to develop an economic impact analysis to further understand the impact of a disaster on the area's economy. The US Economic Development Administration may fund an economic impact analysis through disaster supplemental funding. Below are examples of economic impact analyses:

- [Camp Fire Regional Economic Impact Analysis](#)
- [Joplin Regional Disaster and Economic Recovery and Resiliency Strategy](#)
- [San Francisco Economic Recovery Task Force Report](#)
- [Kilauea Disaster Economic Recovery Plan](#)

Health and Social Services (HSS)

The HSS RSF is focused on restoring and improving health and social services to promote the well-being of the whole community. The state coordinating agency is the California Health and Human Services Agency and the Federal Coordinating Agency is the U.S. Department of Health and Human Services.

HSS Data to Collect

The following data may be included in the Health and Social Services recovery needs assessment:

- How many hospitals, schools, institutes of higher learning, foodbanks, and health facilities were impacted by the disaster?

- Will any facilities face long-term closure?
- Have any critical health services been disrupted?
- What is the status of children and youth in the impacted area including students that have been displaced and the availability of childcare?
- Was the community able to access the Disaster Supplemental Nutrition Assistance Program? If so, how many families participated?
- What is the status of public health and social services agencies?
- How was the unhoused population impacted by the event?

HSS Impacts and Recovery Needs Examples

The following examples are provided to illustrate potential impacts and recovery needs:

1. Impact: Lack of childcare facilities prevented workers from returning to their jobs after the disaster.
 - Recovery Need 1.1: Map current program availability and desire for services to determine unmet need.
 - Recovery Need 1.2: Identify partners at local, state and federal levels.
 - Recovery Need 1.3: Develop and action plan to utilize resources from all levels of government.
2. Impact: Closed healthcare facilities resulted in delayed access to medical care for survivors.
 - Recovery Need 2.1: Develop problem statement based on lack of health care access after previous disaster.
 - Recovery Need 2.2: Identify partner organizations and agencies.
 - Recovery Need 2.3: Develop strategic plan and memoranda of understanding.
3. Impact: Local schools required extensive flood prevention measures before the storm.
 - Recovery Need 3.1: Conduct survey of current school conditions and work required to bring them up to flood mitigation standards.
 - Recovery Need 3.2: Develop scope of work and prioritize projects.
 - Recovery Need 3.3: Identify potential funding sources.
4. Impact: Survivors struggled to access mental health services immediately after the disaster.
 - Recovery Need 4.1: Map existing mental health services available in jurisdiction to determine gaps.

- Recovery Need 4.2: Engage partners to determine capabilities and gaps.
 - Recovery Need 4.3: Develop an action plan to expand access.
5. Impact: Senior community center was destroyed in the disaster.
- Recovery Need 5.1: Develop scope of work.
 - Recovery Need 5.2: Identify potential funding sources.
 - Recovery Need 5.3: Create public communication campaign to advertise progress to community.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

HSS Planning Resources

The following resources may help guide the development of an HSS assessment:

- [Hurricane Sandy Federal Recovery Support Strategy](#), pages 42-58
- [Galveston Long-Term Community Recovery Plan](#), pages 77-87
- [U.S. Department of Health and Human Services Division of Community Mitigation and Recovery website](#)

Housing

The Housing RSF is focused on implementing housing solutions to support the whole community and make it resilient to future disasters. The State Coordinating Agency is the California Business, Consumer Services and Housing Agency and the Federal Coordinating Agency is the U.S. Department of Housing and Urban Development.

Housing Data to Collect

The following data may be included in the Housing Recovery Needs Assessment:

- How many homes were damaged by the disaster? Owner-occupied, rental, or multi-family?
- What was the pre-disaster condition of housing in the jurisdiction?
- What is the age of current housing stock?
- How many homes are currently available?
- What is median home price compared with median income?
- Are any critical infrastructure systems affecting the availability of housing?

- Have emergency housing programs been activated? If so, what do they provide?

Housing Impacts and Recovery Needs Examples

The following examples are provided to illustrate potential impacts and recovery needs:

1. Impact: A small fraction of the homes impacted were constructed to withstand wildfire/flood impacts.
 - Recovery Need 1.1: Conduct a vulnerability assessment of existing housing stock.
 - Recovery Need 1.2: Identify property mitigation actions in partnership with insurance adjustors and local contractors.
 - Recovery Need 1.3: Identify incentive options in partnership with local agencies and organizations.
2. Impact: Residents of repetitive loss homes in flood zone would like to sell home but flood damage makes homes unattractive to buyers.
 - Recovery Need 2.1: Execute a grant agreement with US Department of Housing and Urban Development CDBG-DR program for a Voluntary Home Buyout program.
 - Recovery Need 2.2: Develop unmet needs assessment and CDBG-DR action plan.
 - Recovery Need 2.3: Develop advertising campaign to ensure program information reaches eligible residents.
3. Impact: Local jurisdiction would like to target housing needs but there is no data available to determine needed housing units.
 - Recovery Need 3.1: Identify partner organizations and agencies to conduct a housing market study.
 - Recovery Need 3.2: Develop scope of work.
 - Recovery Need 3.3: Identify potential funding sources.
4. Impact: Most homes damaged by disaster did not have flood insurance.
 - Recovery Need 4.1: Identify potential funding sources or partner agency capabilities to host a National Flood Insurance Protection awareness event.
 - Recovery Need 4.2: Host kickoff meeting and set up planning committee.
 - Recovery Need 4.3: Initiate public awareness campaign to advertise events.
5. Impact: Some businesses cannot re-open after the disaster due to a lack of trained workers.

- Recovery Need 5.1: Conduct training needs survey and identify target industries to develop workforce training program at local college.
- Recovery Need 5.2: Develop training regimen.
- Recovery Need 5.3: Identify potential funding sources.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

Affordable Housing Considerations

Housing is unaffordable for millions of Californians, particularly among those with the lowest incomes. The housing insecurity and instability impacts people and communities in many ways, including harming people's physical and mental health, limiting education outcomes, and restricting access to good jobs and economic opportunity.

Research has consistently shown that lower-income households are not only more likely to suffer damage in a natural disaster, but they are more likely to take much longer to recover. Neighborhoods have a life cycle. As they age, they are either redeveloped or gentrified, or they decline. As a neighborhood declines, homes are more likely to be occupied by renters. They also become more affordable, and they tend to be less well maintained. Apartment buildings that are designed for renters go through a similar life cycle. Because most affordable housing becomes affordable by becoming old and dilapidated, rebuilding the same size home will also be more expensive than the original.

Post-disaster housing recovery strategies are dependent on local housing conditions, population characteristics, disaster housing impacts, and local hazard vulnerabilities. Communities can prepare for housing recovery by familiarizing themselves with housing and community development funding and financing options, understanding their most vulnerable populations, and adopting pro-housing processes and policies.

Renters have less access to disaster assistance than homeowners, and lower income renters who lose their homes in a disaster struggle to find affordable replacements. Disaster housing losses exacerbate regional housing gaps and affordability challenges. Enabling greater housing production and enacting tenant protections pre-disaster can help ease the post-disaster housing shortages and displacement risks. California's [Statewide Housing Plan](#) details causes of the state's housing shortage and affordability crisis, while offering goals and strategies at the state, regional, and local levels to fill in the housing gap.

Local Housing Elements must be approved by HCD every eight years and identify sites that can reasonably accommodate future housing development that is affordable to residents at all income levels. Adopting a Housing Element that both sufficiently plans for future growth needs and considers sustainable communities and climate resilience goals gives jurisdictions a head start in recovery planning.

TIP: Review the housing element in your jurisdiction's General Plan for disaster housing guidance.

To support affordable rental options, counties and cities can identify locally-owned excess sites for affordable housing production. HCD provides match funding for certain affordable housing predevelopment and development costs on excess state-owned lands through the [Excess Sites Local Government Matching Grants Program](#).

HCD's [Prohousing Incentive Pilot Program](#) provides state funding incentives to jurisdictions that adopt processes and policies that facilitate increased housing production. Prohousing policies include streamlining permitting, reducing/eliminating parking minimums, establishing standardized ADU guidelines, and allowing a greater density and diversity of housing types in central and/or high opportunity areas.

Housing Planning Resources

The following resources may help guide the development of a Housing assessment:

- [Missouri Joint Recovery Support Strategy](#), pages 65-100
- [Aransas County Long-Term Recovery Plan](#), pages 39-68
- [Paradise, California: Rebuilding Resilient Homes after the Camp Fire](#)

Infrastructure Systems

The Infrastructure RSF is focused on stabilizing critical infrastructure systems, such as roads, bridges, water systems, telecommunications, utilities, and ports of entry. The State Coordinating Agency is the California Governor's Office of Emergency Services, and the Federal Coordinating Agency is the U.S. Army Corps of Engineers.

Infrastructure Data to Collect

The following data may be included in the Infrastructure Systems RNA:

- How did the disaster impact infrastructure in the jurisdiction?
- Who owns the following systems within the jurisdiction:
 - Electrical
 - Telecommunications
 - Water treatment
 - Natural gas
- What are in-progress and planned public works projects within the jurisdiction that have been impacted?
- What are the current mitigation projects in development to protect infrastructure systems?
- What are the historic climate factors (subsidence, coastal erosion, etc.) affecting infrastructure systems?

Infrastructure Impacts and Recovery Needs Examples

The following examples are provided to illustrate potential impacts and recovery needs:

1. Impact: Critical water infrastructure was destroyed by disaster.
 - Recovery Need 1.1: Conduct a project scoping meeting with public works and water utility to discuss resilient alternatives.
 - Recovery Need 1.2: Develop scope of work.
 - Recovery Need 1.3: Identify potential funding sources.
2. Impact: Jurisdiction expressed desire to inventory critical infrastructure assets.
 - Recovery Need 2.1: Identify stakeholders and conduct a resource mapping project.
 - Recovery Need 2.2: Analyze existing critical infrastructure for vulnerabilities and gaps.
 - Recovery Need 2.3: Draft strategic plan to mitigate vulnerabilities and close gaps.
3. Impact: Lift station stopped working when power failed during flood.
 - Recovery Need 3.1: Meet with public works and water utility to collect system challenges and opportunities for improvement, such as installing backup bypass pumps and/or generators at all lift stations.
 - Recovery Need 3.2: Explore remote sensing options and identify potential points of failure.
 - Recovery Need 3.3: Prepare pilot project to test remote sensing capabilities.

4. Impact: Municipal electric facility sustained heavy damage during disaster.
 - Recovery Need 4.1: Meet with public works department and facility staff to understand capabilities, gaps, and opportunities to harden facility.
 - Recovery Need 4.2: Draft scope of work with hardening measures such as elevated infrastructure, storm doors, and flood-proofing.
 - Recovery Need 4.3: Determine eligibility for federal grants and identify potential funding sources.
5. Impact: Residents complained of gridlocked traffic on evacuation route away from the disaster.
 - Recovery Need 5.1: Conduct vulnerability assessment based on recent disaster evacuations to evaluate need to widen main highway, which is an evacuation route.
 - Recovery Need 5.2: Develop scope of work.
 - Recovery Need 5.3: Identify potential funding sources.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

Infrastructure Planning Resources

The following resources may help guide the development of an Infrastructure assessment:

- [Bay County Long-Term Recovery Plan](#), pages 32-44
- [Joplin Community Phase II Recovery Plan](#)

Natural and Cultural Resources (NCR)

The NCR RSF is focused on conserving, rehabilitating, and restoring resources and historic properties in compliance with applicable environmental and historic preservation laws. The State Coordinating Agency is the California Natural Resources Agency and the Federal Coordinating Agency is the U.S. Department of Interior.

NCR Data to Collect

The following data may be included in the Natural and Cultural Resources recovery needs assessment:

- Were any parks, wildlife management areas, watersheds, or recreational green spaces damaged by the disaster? If so, how has the damage affected the community?

- Were any museums, libraries, or areas of cultural significance damaged by the disaster? If so, how has the damage affected the community?
- Were any endangered species or habitats impacted? Are there ongoing to rehabilitate an endangered species or habitat within the impacted area?
- Were any historic buildings impacted? Are there historic zones or special building codes for historic buildings?
- Were tribal lands or sites impacted? Who will be key partners for repairs?
- How will the community process downed or burned trees?
- Are any long-term closures anticipated?

NCR Impacts and Recovery Needs Examples

The following examples are provided to illustrate potential impacts and recovery needs:

1. Impact: The boat ramp used for public recreational and commercial access was destroyed during the disaster.
 - Recovery Need 1.1: Determine eligibility for PA grant funds to replace boat ramp.
 - Recovery Need 1.2: Conduct a feasibility study for new ramp location.
 - Recovery Need 1.3: Identify stakeholders and host a kick-off meeting.
2. Impact: Residents expressed a desire for more public spaces with water capture features to mitigate monsoon flooding.
 - Recovery Need 2.1: Map existing recreational trails in jurisdiction.
 - Recovery Need 2.2: Identify opportunities to connect the trails and waterways.
 - Recovery Need 2.3: Develop strategic plan for increasing trail access.
3. Impact: A historic cemetery was severely damaged by disaster.
 - Recovery Need 3.1: Identify damage and scope of work to return site to pre-disaster condition and mitigate against future disasters.
 - Recovery Need 3.2: Identify mitigation measures that will prevent damage during future disasters.
 - Recovery Need 3.3: Identify potential funding sources.
4. Impact: Historic society expressed a desire for mitigation guidelines for historic buildings.

- Recovery Need 4.1: Identify challenges faced by historic buildings during disaster.
 - Recovery Need 4.2: Convene meeting of subject-matter experts to review challenges and make recommendations.
 - Recovery Need 4.3: Develop guidance and advertising campaign.
5. Impact: Coast sustained heavy shoreline erosion during disaster.
- Recovery Need 5.1: Identify erosion and sand dune depletion challenges.
 - Recovery Need 5.2: Develop scope of work with mitigation measures.
 - Recovery Need 5.3: Identify potential funding sources.

For more examples of Impacts and Recovery Needs, view the Long-Term Recovery Plan Examples in **Appendix F: Additional Resources**.

NCR Planning Resources

The following resources may help guide the development of an NCR assessment:

- [Monroe County Post-Disaster Recovery Strategy](#), pages 36-41
- [EPA Recovery and Resiliency Partnership Projects](#) Florida Panhandle Regional Recreational Economy

RECOVERY PROJECTS

The recovery projects list should be developed to address the unmet needs identified above. Each project should directly tie back to a disaster impact and the list should be prioritized, with the most critical projects listed first. Funding whole community recovery will require a layered approach that incorporates government, philanthropic, and private funding sources.

Projects may be community-led or government-led; for example, government will usually lead infrastructure projects through the county public works department and a community organization or nonprofit will usually lead mental health projects.

For additional guidance about which projects to include in the Long-Term Recovery Plan, see **Appendix C: Project Development Questions**.

Funding Recovery Projects

A recovery funding strategy requires creative thinking and capacity in the form of full-time grant writers and managers. Each funding opportunity will have different eligible entities, activities, and requirements. Connecting recovery projects to potential funding sources provides a roadmap for communities to understand which projects may be eligible for certain funding streams and identify gaps in funding needs.

Each disaster is unique and the disaster-specific funding streams available will change based on conditions. Recovery costs can often be funded through the FEMA Public Assistance program, although this is not always the case. The CalOES Recovery programs will be knowledgeable about FEMA recovery funding streams activated for a particular disaster.

In addition to FEMA, several state and federal agencies fund recovery activities. This is why it is critical to have a disaster recovery team comprised of many local departments - public works may be aware of USDOT and Caltrans opportunities, economic development may be aware of EDA and GO-Biz opportunities, housing may be aware of HUD and HCD opportunities, social services may be aware of HHS and CDPH opportunities, etc.

Finally, unique opportunities exist in California to partner with Community Foundations or Philanthropic Organizations to fund recovery activities. An example of this type of collaboration was the [Butte Strong Fund](#), a partnership between the North Valley Community Foundation, Sierra Nevada Brewing Co., and the Aaron Rodgers NorCal Fire Recovery Fund that assisted survivors of the 2018 Camp Fire. Butte Strong Fund provided the funding for staff positions at Butte County and the Town of Paradise, and funded a series of recovery plans, including an LTRP.

For additional information about funding recovery projects, see **Appendix E: Sourcing Grant Opportunities** and the [FEMA Effective Coordination of Recovery Resources Guide](#).

Recovery Project Template

| | [Recovery Project Title] |
|--------------------------------------|--|
| Goal | Purpose or objective of the recovery project. |
| Description | Overview of project's activities and outputs needed to reach the goal. |
| Timeline | Estimated amount of time to implement project and start and end dates if possible. |
| Estimated Cost | Approximate costs of labor, materials, equipment, and other expenses related to implementation. Consider direct costs, indirect costs, management costs, administrative costs, monitoring costs, procurement costs, and closing costs. |
| Champion | Organization or individual leading project. |
| Supporting Partners | Additional organizations, agencies, and individuals involved in project. |
| Community Capacity | Describe the community's relevant skills, knowledge, and ability to mobilize resources to implement the project. |
| Need | What issue or problem does the project address? Why is this project necessary? |
| Action Items | Immediate steps needed to advance project. |
| Challenges | Obstacles that may arise at any point in the project cycle. |
| Potential Resources | Possible grants, technical assistance, other resources that could support project, see Appendix E: Sourcing Grant Opportunities. |
| Resilience and Sustainability | How project makes your county more resilient and sustainable. |

Recovery Project Examples

| | Broadband Feasibility Study |
|--------------------------------------|--|
| Goal | Expand broadband access to entire jurisdiction. |
| Description | Map existing broadband access, identify gaps, and develop recommendations to close gaps; present to Board of Supervisors for approval. |
| Timeline | Anticipated project length: Six months |
| Estimated Cost | \$500,000-700,000 |
| Champion | County Planning Director |
| Supporting Partners | County Community Development Director, municipal utility co-op, Verizon |
| Community Capacity | County ArcGIS software contains base maps of entire jurisdiction; County Planning Director can devote 5 hours per week to this project. |
| Need | High-speed broadband access is critical to equitably distribute safety measures to all residents, including emergency alerts during disasters. This study is the first step towards ensuring all residents have access to broadband. |
| Action Items | <ol style="list-style-type: none"> 1. Develop scope of work 2. Identify and secure grant funding 3. Develop RFP 4. Execute contract 5. Approve and adopt study |
| Challenges | While most existing broadband infrastructure in the county is owned by Verizon, there are areas owned by a municipal utility co-op that are not currently mapped. Funding for planning projects is often topic-specific and broadband studies may not be an eligible activity. |
| Potential Resources | The California Broadband for All website lists current state and federal funding opportunities. Neighboring county completed a broadband feasibility study last year and is willing to share lessons learned and best practices. Verizon Foundation may be available to pay for the study or implementation. |
| Resilience and Sustainability | The study is the first step in making the whole community more resilient by increasing internet access to residents. |

| Railroad-Port Connection | |
|--------------------------------------|--|
| Goal | Extend railroad to connect to the port. |
| Description | The port conducts \$27 million in cargo annually. Currently, all product is transported via truck and during the recent flood, the roads were impassable. The California Railroad passes 1.6 miles from the port. Connecting the railroad to the port would allow for cargo to be transported via rail even when roads are flooded, which would exponentially expand the amount of cargo that can be transported through the port. |
| Timeline | May 2026-December 2027 |
| Estimated Cost | \$15 million railroad construction \$20 million port construction \$5 million indirect costs |
| Champion | County Economic Development Director |
| Supporting Partners | Port, railroad, major cargo companies, Main Street program |
| Community Capacity | There is significant support from economic and community development organizations for this project. Existing railroad lines travel part of the projected path, but they have not been maintained for 30 years. There is a working train station along that stretch, located on the community Main Street, and the local Main Street Organization is in support of this project. |
| Need | This project would increase the number of high-paid and union jobs available within the jurisdiction. These jobs are resilient to future disasters because they need to be completed on-site and in this location, the nearest port of similar size is 700 miles away. |
| Action Items | <ol style="list-style-type: none"> 1. Establish a task force to guide project development with public and private stakeholders and partners 2. Identify ownership, potential funding sources, and planning needs. 3. Procure services to complete a feasibility study. |
| Challenges | Funding is the main challenge because most of the project costs will be ineligible for federal grants. |
| Potential Resources | The port and railroad owners will provide the majority of the funding and the project task force will investigate public-private partnership opportunities. |
| Resilience and Sustainability | This project will increase the number of well-paid jobs in the area. In addition, trains can move much more cargo for less fuel than trucks. |

| Wastewater Treatment Plant | |
|--------------------------------------|---|
| Goal | Replace destroyed wastewater treatment plant with resilient alternative. |
| Description | Existing wastewater treatment plant was destroyed during tropical storm, although is currently functioning in emergency capacity with 25% capacity. Repairs would cost more than a new facility. County is prioritizing this project to bring back displaced residents and allow for economic growth. |
| Timeline | Estimated project kick-off: Spring 2025 Estimated project length: 3 years |
| Estimated Cost | County will develop a detailed proposal using bids from three contractors; current estimate is \$30-40 million. |
| Champion | County Public Works Director |
| Supporting Partners | Municipal utility company, County Economic Development, County Planning, County Housing and Social Services, County Board of Supervisors |
| Community Capacity | County agencies will prioritize this project and dedicate all necessary staff until completion. A grant writer/manager will need to be hired to facilitate funding for this project. |
| Need | The community cannot function with a population 25% of pre-disaster population. The wastewater treatment plant needs to be replaced as quickly as possible and hardened to be resilient to future disasters. |
| Action Items | <ol style="list-style-type: none"> 1. Conduct a project scoping meeting with public works and water utility. 2. Develop scope of work. 3. Identify potential funding sources. |
| Challenges | The existing system may fail at any time. |
| Potential Resources | Potential funding sources include the USDA Revolving Loan Fund, USDA Rural Facilities Program, HUD Community Development Block Grant – Disaster Recovery, EDA Disaster Supplemental Funding, and a special appropriation by the state legislature. |
| Resilience and Sustainability | The Public Works Department will collaborate with Infrastructure RSF to investigate sustainable wastewater treatment using resources from USACE and EPA. |

Alternate Project Description Formats

The above table format is a suggestion; projects may also be described in a narrative or illustrated format. The format will depend upon the data described (qualitative vs. quantitative), overall plan format, presentation needs, and potential uses of project descriptions. For example, a jurisdiction may decide that landscape orientation meets their needs better than portrait orientation. Alternative project description formats may be found in the following plans:

- [Town of Paradise Project Descriptions](#)
- [Greensburg Long-Term Community Recovery Plan](#)
- [Denham Strong Strategy for the Future](#)

IMPLEMENTATION AND MAINTENANCE

Upon completion, the Long-Term Recovery Plan should be adopted by the governing body and the implementation can begin. Jurisdictions may choose to create an accompanying action plan to detail the next steps for each project and they may choose to create a website to track the plan's progress.

Implementation steps examples:

- [Sonoma County Recovery and Resiliency Framework](#), pages 57-139
- Action Plan for long-term recovery: [Oakland Long-Term Disaster Recovery Plan](#)
- Implementation steps in a Long-Term Recovery Plan: [Baker United Strategic Recovery Plan](#), pages 62-64

Implementation website examples:

- [Sonoma County Recovery Framework](#) website
- [Town of Paradise Long-Term Recovery Plan](#) website
- [Plumas County Long-Term Recovery](#) website

Roles and Responsibilities

Disaster recovery is an enormous undertaking that requires input from multiple agencies and organizations. The roles and responsibilities of each agency and organization should be clearly defined in this section.

It is recommended that a lead agency be designated for each RSF and supporting organizations identified. This not only creates a clear chain of responsibility, it allows for direct coordination with State and Federal RSF leads.

Refer to the Local Partners and Stakeholders table in the Recovery Support Functions section for examples of supporting organizations.

TIP: Hire a [Local Disaster Recovery Manager](#) to facilitate the execution of recovery strategies and tactics.

Plan Monitoring

To ensure forward movement on the plan, an update cadence among stakeholders should be adopted during implementation. This may include regular meetings with partners, status reports, or a project management tool.

In addition to stakeholder updates, residents should continue to be updated about the plan's progress. Updates may be provided through a variety of media outlets including a website, social media, telecommunications and communicate milestones, anniversaries, and measures of success.

For an example of an action plan website and update tracker, visit [Greater Miami Resilient305](#), Miami's strategy to effectively tackle emerging global challenges and trends.

TIP: Celebrate recovery milestones! They serve as a reminder to the public about the plan and highlight the progress the community has made since the disaster.

APPENDICES

Appendix A: Long-Term Planning Process Checklist

For the latest version, visit the Cal OES [Long-Term Recovery Resources website](#).

LONG-TERM RECOVERY PLANNING CHECKLIST

Disaster

Date

Step 1. Assess Recovery Needs and Scope of Plan

- Survey extent of damages
- Identify potential long-term impacts of damages
- Separate recovery needs into functional categories (i.e., RSF)
- Conduct SWOT analysis

Step 2. Establish Planning Team

- Select a planning project manager
- Establish a planning team
 - Core planning team
 - Recovery sub-committees, working groups, etc.
- Determine sub-committee leads
- Establish roles and responsibilities
- Select regular meeting cadence for core planning team and sub-committees

Step 3. Develop Scope of Work

- Determine plan structure (i.e., RSF, functional categories, geographic)
- Review relevant plans for alignment (i.e., Hazard Mitigation, General, Climate Action, Emergency Operations)
- Outline planning process and timeline
- Select community engagement events and dates

Step 4. Develop Public Information Campaign

- Appoint public information manager
- Establish contact with local media (i.e., newspapers, radio, TV)
- Establish contact with community organizations (i.e., schools, Chambers of Commerce, faith-based groups)
- Determine appropriate communication methods (i.e., email, social media, mailing list, flyers, traditional media)
- Establish contact with special populations (i.e., minorities, low-income areas, access and functional needs)

Step 5. Identify Recovery Needs

- Conduct meetings to identify issues, needs and potential projects
 - Community resident engagement
 - Local government leaders
 - Community groups, organizations and agencies
- Identify mitigation and resilience opportunities

Step 6. Draft Long-Term Recovery Plan

- Define vision statement for plan
- Establish plan objectives
- Evaluate objectives using community and support organization feedback
- Identify projects to address issues and achieve vision
 - Assign priority and establish timeline for each project
 - Evaluate project partnership opportunities (i.e., state/federal agencies, private sector, community organizations)
 - Select a champion for each project
 - Develop funding strategy for each project
 - Identify opportunities to merge or phase projects to maximize funding leverage
- Ensure alignment with other plans

Step 7. Secure Outside Support

- Government support
 - Adjacent jurisdictions
 - State agencies
 - Federal agencies
- Community organization support
 - Planning boards/commissions
 - Professional organizations
 - Academic institutions
 - Nonprofit groups

Step 8. Present Plan to Community

- Present draft plan to community
- Solicit public comments for first draft of long-term recovery plan
 - Host public meeting
 - Advertise through public information campaign
 - Publish public comments
- Revise plan using public comments
- Present final draft and implementation steps to community
- Distribute the plan

Step 9. Enacting the Plan

- Secure approval from jurisdictional governing body
- Hire Disaster Recovery Manager to implement plan
- Create website to track plan progress
- Establish regular update schedule for stakeholders and community members
- Publish and advertise update reports

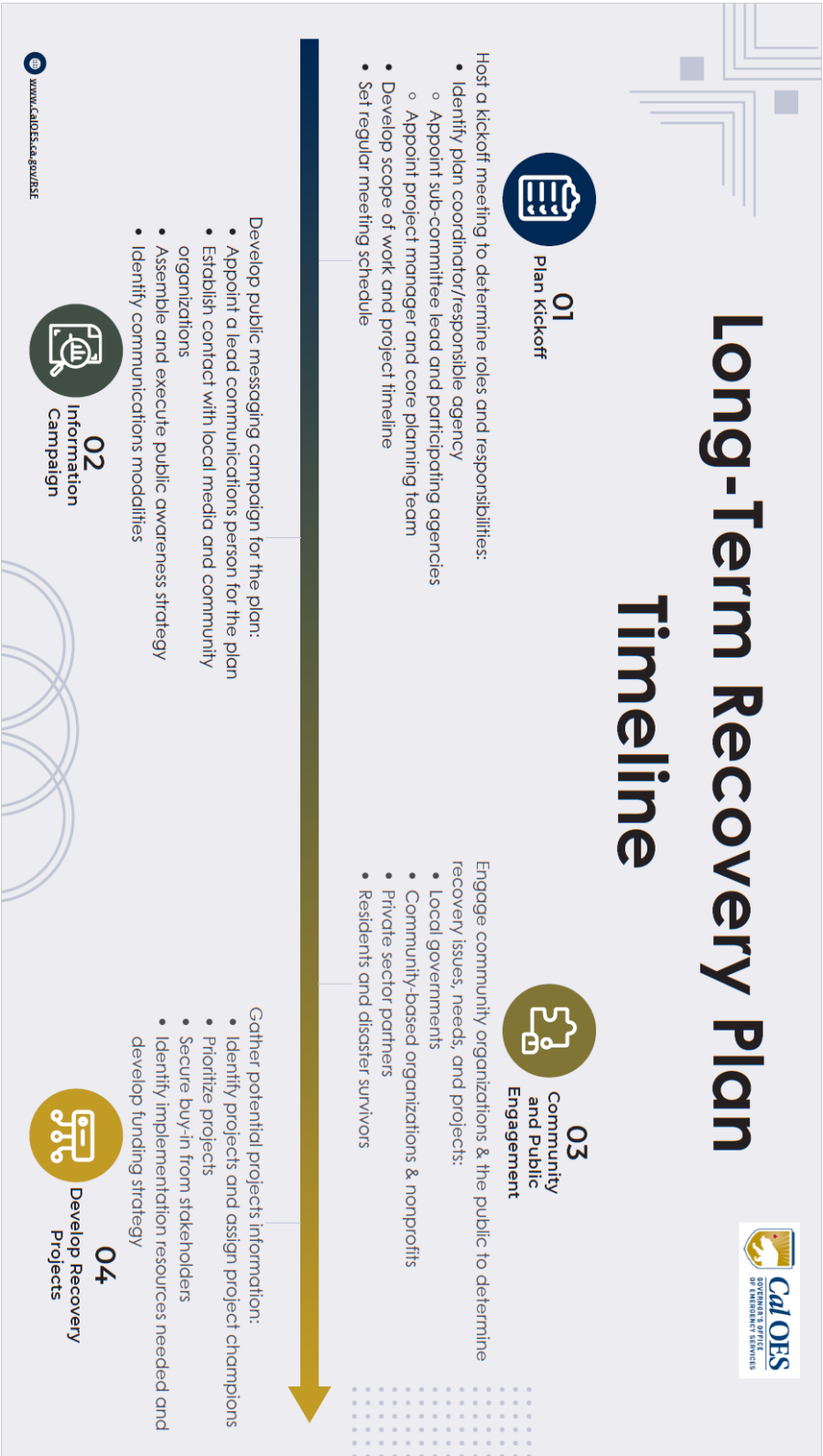
Step 10. Prepare for Next Disaster

- Maintain regular contact with partner agencies and organizations
- Participate in emergency management and long-term recovery training
- Conduct long-term recovery tabletop exercises
- Update jurisdiction's Disaster Recovery Framework with best practices and lessons learned



Appendix B: Long-Term Planning Timeline

For the latest version, visit the Cal OES [Long-Term Recovery Resources website](http://www.caloes.ca.gov/BSE).



Long-Term Recovery Plan Timeline



05 Draft Plan

Assemble projects in a plan and draft remaining sections:

- Professional cover and table of contents
- Introduction, scope and objectives
- Align objectives with existing plans using ResilientCA Map
- Review of stakeholder and resident input from meetings
- Projected implementation and update schedule



07 Implement Plan

Set a regular strategy to review the plan and report on progress:

- Set a cadence for plan review and plan progress reports
- Hire a Disaster Recovery Manager to implement plan
- Develop a communication strategy to share updates with stakeholders and residents

Use public messaging and communications to advertise and socialize the plan:

- Display recovery plan in public place
- Solicit feedback from community
- Incorporate feedback into final version of the plan
- Submit plan to local jurisdiction governing body



06 Socialize Plan

Maintain a regular schedule of evaluation and updates to measure plan progress:

- Distribute final plan to stakeholders and post on public website
- Evaluate plan progress on regular basis
- Develop progress reports for governing body and the public



08 Evaluate and Update Plan

Appendix C: Project Development Questions

Questions to guide the development of recovery projects:

A. PROJECT OR PROGRAM DESCRIPTION

- Background (include disaster impacts associated with the project or program).
- Project or program description.
- Project or program type (e.g., program, policy, capital project, technical assistance).
- Scope of work (include implementation steps).
- Project or program benefits.
 - How does the project or program stimulate the community's economy or create economic opportunities?
 - How does the project or program illustrate recovery activity?
 - How does the project or program provide connections to other activities, sectors, or resources?
 - How does the project or program benefit the community as a whole?
 - How does the project or program contribute to the community's quality of life?
 - How does the project or program increase resilience to future disasters?
- What are options/alternatives for this project or program? What makes this option preferred?
- Identify development and implementation timeframe(s). If implementation has begun, identify start date and provide a brief description of work to date.

B. PROJECT OR PROGRAM IMPACT

- Describe relevant community demographics.
- What other stakeholders might impact this project or program?
- Describe geographic area of impact.
- Is this project or program a precondition for any other activities?

C. IMPORTANCE FOR RECOVERY

- How would the project or program help achieve the post disaster community vision?
- How does the project or program incorporate best practices for reducing future losses?
- How does the project or program support sustainable development or efficient use of resources?

- How does the project or program or project increase recovery benefits such as through connections to other recovery activities?
- How does the project or program increase recovery capacity?
- Does the project or program tie to any State/federal requirements or funding eligibility?

D. COMMUNITY SUPPORT AND COORDINATION

- Is there an agency or organization whose approval is required?
- Is this project a multiagency effort? Are there memoranda of understanding/agreement between agencies?
- Does this project require multiple resource partners (i.e., for technical assistance, funding sources)?
- What support by the community has been documented?
- Does the community have the capacity to implement or sustain the project or program over time?
- If additional capacity is needed to implement and/or sustain the project or program, what steps can be taken to increase the community's capacity?

E. PHASING

- Does the project or program have any prerequisites?
- Identify implementation phases that have been established.
- Is the project or program achievable within a 3-to-5-year timeline? What is the timeline for implementation?

F. COST ESTIMATES AND FINANCIAL CONSIDERATIONS

- Anticipated project/program costs (attach sheet if necessary)
- What other funding is committed or expended toward the project or program?
- Identify a detailed operational budget (attach sheet if necessary)
- Identify any resource gaps (funding, technical expertise, etc.)
- If resource gaps exist, are there any alternative sources of funding?

G. FEASIBILITY

- Is the project or program feasible (high, medium, low likelihood of becoming a reality)
- Are there any significant constraints or challenges to implementation?

H. RELATIONSHIP TO OTHER PROGRAMMING

- How does the project/program align with other programs, projects, or recovery activities (recovery or non-recovery)?

- How will this project be prioritized versus other recovery projects, programming, and activities?
- How will the avoidance of duplication of efforts with other recovery projects and activities be coordinated for this project?
- How is the timeline for the implementation of this project sequenced with other recovery projects, programming, and activities?
- Will efforts be taken to tier this project against other recovery projects, programming, and activities?
- What disaster recovery program areas or recovery support functions does the program/project align with?

I. NEXT STEPS

- What are the next steps for the development and implementation of the project?

Appendix D: Trauma-Informed Recovery Planning

Adapted from [Working with Disaster-Affected Communities to Envision Healthier Futures: A Trauma-Informed Approach to Post-Disaster Recovery Planning](#).

Recommendations to guide the implementation of a trauma-informed recovery planning approach:

1. Understand historical context, including community history with traumatic events; other cultural/historic issues (e.g. racial or class tensions, land use, immigration), potential strains with government/authority, and points of community strength and pride.
2. Ensure access for all groups by focusing outreach on historically vulnerable or marginalized populations, designing process to ensure access and equipping groups with decision-making processes to support empowerment and control.
3. Review the physical site of any client or community meetings and point out emergency exits, resources and procedures at the beginning of sessions.
4. Acknowledge trauma and provide space for sharing. Understand that some content may be triggering to the audience, have referrals for support and counselling, and partner with mental health practitioners.
5. Actively listen and put community voices first; stay calm and do not become defensive.
6. Support community partners to facilitate communication and deliver messages. Be respectful of people's time and compensate community-based organizations or other partners serving as intermediaries.
7. Be candid about the actor's role and capability; do not overpromise. Do not try to be the hero – empower community heroes.
8. Support peer-to-peer interactions by working with a trained facilitator; designing stakeholder engagement for maximum participation and collaboration; allowing time for story sharing among participants; and providing links to resources.
9. Promote local resources by partnering with local practitioners on projects, and with mental health providers and public health practitioners.
10. Support active leadership by the local community to support ownership and control.
11. Provide meaningful alternatives in an accessible language to enable community participation and direction. Allow time for local decision making.

12. Support community decision making and visioning for long-term recovery by clarifying and disclosing how decisions will be made and how community input will be used. Present alternatives in simple and clear language. Lay out implications for short-, medium- and long-term decisions. Support community visions for long-term recovery.
13. Value community experience by building in time for input and story-sharing and honoring and seeking local knowledge and expertise.
14. Acknowledge that the actor does not have all the answers and be clear about the practitioner's role and scope. Engage people as active partners and participants.

Appendix E: Sourcing Grant Opportunities

Funding long-term recovery is a challenge that requires creative and insightful leadership. There are endless options for federal, state, private and philanthropic funding opportunities, all with different requirements and eligible activities. It is highly recommended that local jurisdictions hire both a Local Disaster Recovery Manager and at least one full time grant writer. The list of funding opportunities in Appendix D is a starting point for applicable funding options and is not intended to be an exhaustive list of disaster recovery and resiliency funding.

The [FEMA Roadmap to Federal Recovery](#) is a helpful resource for Long-Term recovery Plans because it separates federal funding opportunities by RSF and by common recovery challenges.

OPR hosts a [technical assistance website](#) dedicated to helping organizations find, apply for, and manage federal grants. The website contains trainings, reports, webinars, and regulations that will help local jurisdictions understand the federal grant process.

TIP: Contact the [Cal OES RSF Team](#) to learn about the latest special appropriations and subject-specific funding opportunities.

Grant Repositories

The [Grants.gov system](#) houses information on more than 1,000 grant programs and vets grant applications for federal grant-making agencies. Federal funding opportunities published on Grants.gov are for organizations and entities supporting the development and management of government-funded programs and projects. This platform centralizes more than 1,000 different grant programs across federal grant-making agencies awarding more than \$500 billion annually. Applicants can create an account, search for grants, and learn how to apply for grants on this platform.

The [California Grants Portal](#) was created to house all grants and loans offered on a competitive or first-come basis by California state agencies. State grantmaking agencies input and update their information into prescribed data fields to make all state grant opportunities searchable on the platform. The Grant Information Act requires state agencies to provide summaries of each of their grant or loan opportunities, including, among other items, information about how to apply and links that grantseekers can follow for more details. In 2021, a total of 487 funding opportunities were published on the platform.

[Philanthropy California](#) is an alliance of Northern California Grantmakers, Southern California Grantmakers, and Catalyst of San Diego and Imperial Counties. The combined membership represents more than 600 foundations, corporate funders, philanthropic individuals, and families, giving circles, and government agencies who invest billions every year to support communities across the state, the country, and worldwide.

Disaster-Specific Funding

The FEMA [Public Assistance Program](#) provides supplemental grants to state, tribal, territorial, and local governments, and certain types of private non-profits so communities can quickly respond to and recover from major disasters or emergencies. After an event like a hurricane, tornado, earthquake or wildfire, communities need help to cover their costs for debris removal, life-saving emergency protective measures, and restoring public infrastructure. FEMA also encourages protecting these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

As the result of a Presidential Disaster Declaration, FEMA's Hazard Mitigation Grant Program (HMGP) funds plans and projects that reduce the effects of future natural disasters. In California, these funds are administered by the [Cal OES Hazard Mitigation Branch](#). Eligible subapplicants include state agencies, local governments, special districts, and some private non-profits. The HMGP funding opportunities provide support for communities to implement mitigation activities to reduce risk to life and property from natural hazards. In California, natural hazards include wildfire, earthquake, drought, extreme weather, flooding, and other natural hazards as defined in the State Hazard Mitigation Plan. HMGP funding can also support the development of Local Hazard Mitigation Plans, and project scoping activities referred to as Advanced Assistance. For eligible socially vulnerable and high hazard risk communities, the PrepareCA Initiative provides additional support for capacity building and to cover the local cost share for eligible mitigation activities. Applications are submitted to Cal OES for review.

The HUD [Community Development Block Grant – Disaster Recovery \(CDBG-DR\)](#) can fund a variety of recovery activities, including housing, infrastructure, economic development, administration, and planning. In California, HCD conducts an unmet needs assessment to determine the most critical funding needs and activates CDBG-DR programs based on those needs. Applications are submitted to HCD.

EDA provides support to communities impacted by Presidentially-declared disasters through [Disaster Supplemental Funding](#). Funding helps communities devise and implement long-term economic recovery strategies to recover and become resilient to future disasters through a variety of construction and non-construction projects. EDA expects every project it funds to be resilient to future disruptions, to the greatest extent possible, including the impacts of climate change. Applications are submitted to EDA.

Infrastructure Grants

The [California Infrastructure State Revolving Fund](#) Program is authorized to directly provide low-cost public financing to state and local government entities. Financing is available in amounts ranging from \$1 million to \$65 million with loan terms for the useful life of the project up to a maximum of 30 years. A few examples of ISRF financed projects include water and wastewater treatment plant upgrades or construction, venue or airport construction or street repair and upgrades. Eligible applicants must be located in California and include any subdivision of a local government, including cities, counties, special districts, assessment districts, joint powers authorities and nonprofit organizations sponsored by a government entity.

The FEMA [Building Resilient Infrastructure and Communities \(BRIC\)](#) program is an annual, nationally competitive, hazard mitigation grant program that aims to shift the federal focus away from reactive disaster spending and toward consistent, research-supported, proactive investment in community resilience. The BRIC program makes federal funds available to states, U.S territories, federally recognized tribal governments, and local communities for hazard mitigation activities. It does so with a recognition of the growing hazards associated with climate change, and of the need for natural hazard risk mitigation activities that promote climate adaptation and resilience with respect to those hazards.

The FEMA [Flood Mitigation Assistance \(FMA\)](#) program provides annual funding for activities that protect properties insured by the National Flood Insurance Program. Local governments, including cities, townships, counties, special district governments, and tribal governments (including federally recognized tribes who choose to apply as subapplicants), are considered subapplicants and must submit sub-applications to Cal OES.

The HUD [Community Development Block Grant \(CDBG\)](#) is an annual allocation of funds administered by HCD. The primary federal objective of the CDBG program is the development of viable urban communities by providing decent

housing and a suitable living environment and through expanding economic opportunities, principally, for persons of low- and moderate-income. “Persons of low and moderate income” are defined as families, households, and individuals whose incomes do not exceed 80 percent of the county median income, adjusted for family or household size. Funding can be used for a variety of community and economic development activities including housing, public improvements, community facilities, public services, planning, technical assistance, enterprise funds, and creation or retention of jobs for low-income workers.

The USACE [Continuing Authorities Program \(CAP\)](#) is a group of nine legislative authorities under which USACE can plan, design, and implement certain types of water resources projects without additional project specific congressional authorization. The purpose of the CAP is to plan and implement projects of limited size, cost, scope, and complexity. All projects in this program include a feasibility phase and an implementation phase. Planning activities, such as development of alternative plans to achieve the project goals, initial design and cost estimating, environmental analyses, and real estate evaluations, are performed during the feasibility phase, to develop enough information to decide whether to implement the project. The feasibility phase is initially Federally funded up to \$100,000. Any remaining feasibility phase costs are shared 50/50 with the non-Federal sponsor after executing a feasibility cost sharing agreement. The final design, preparation of contract plans and specifications, permitting, real estate acquisition, project contracting and construction, and any other activities required to construct or implement the approved project are completed during the implementation phase.

The USDA [Water and Waste Disposal Loan and Grant Program](#) provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas with populations of 10,000 or less. Funding is provided in long-term, low-interest loans and, if funds are available, a grant may be combined with a loan to keep user costs reasonable.

Natural and Cultural Resource Grants

The DOI [Land and Water Conservation Fund](#) supports increased public access to and protection for federal public lands and waters — including national parks, forests, wildlife refuges and recreation areas — and provides matching grants to state governments for the acquisition and development of public parks and other outdoor recreation sites. Agencies also partner with landowners to support voluntary conservation activities on private lands. These grants can be used for a range of projects from establishing baseball fields and community green spaces; to providing public access to rivers, lakes and other water

resources; to protecting historic and cultural sites; and conserving natural landscapes.

The [Institute of Museum and Library Services](#) provides annual grant opportunities for museums and libraries across a range of subjects. Grants typically support lifelong learning, community engagement, institutional capacity, and collections stewardship and access.

The National Fish and Wildlife Foundation (NFWF) [National Coastal Resilience Fund](#) restores, increases and strengthens natural infrastructure to protect coastal communities while also enhancing habitats for fish and wildlife. Established in 2018, the National Coastal Resilience Fund invests in conservation projects that restore or expand natural features such as coastal marshes and wetlands, dune and beach systems, oyster and coral reefs, forests, coastal rivers and floodplains, and barrier islands that minimize the impacts of storms and other naturally occurring events on nearby communities.

The NFWF [America the Beautiful Challenge](#) is a public-private grant program for locally led ecosystem restoration projects that invest in watershed restoration, resilience, equitable access, workforce development, corridors and connectivity, and collaborative conservation. The America the Beautiful Challenge coordinates funding from multiple Federal agencies and private philanthropy into one competitive grant program. This streamlines the application process, enabling larger, more impactful cross-boundary projects, while making it easier for states, Tribes, territories, local groups, non-governmental organizations, and others to apply for multiple funds with one application.

[Our Town](#) is the National Endowment for the Arts creative placemaking grants program. Through project-based funding, the program supports activities that integrate arts, culture, and design into local efforts that strengthen communities over the long term. Our Town projects engage a wide range of local stakeholders in efforts to advance local economic, physical, and/or social outcomes in communities. Competitive projects are responsive to unique local conditions, authentically engage communities, center equity, advance artful lives, and lay the groundwork for long-term systems change. These projects have a required partnership component. Grants range from \$25,000 to \$150,000, with a minimum non-federal cost share/match equal to the grant amount.

The U.S. Fish and Wildlife Service [National Coastal Wetlands Conservation Grants Program](#) annually provides grants of up to \$1 million to coastal and Great Lakes states, as well as U.S. territories to protect, restore and enhance coastal wetland

ecosystems and associated uplands. Eligible projects include the acquisition of real property interest in coastal lands or waters and the restoration, enhancement, or management of coastal wetlands ecosystems.

Military Community Grants

The Department of Defense (DOD) [Readiness and Environmental Protection Integration Program](#) facilitates long-term, collaborative partnerships that improve resilience, preserve important habitats and natural resources, and promote sustainable land uses near military installations and ranges. REPI is focused on advancing efforts that preserve key mission capabilities of strategic importance to DOD and enhance installation and range resilience to climate change and severe weather events (e.g., drought, increased wildfires, thawing permafrost).

The DOD The Office of Local Defense [Community Cooperation Installation Resilience](#) program activities presents states and communities with the opportunity to partner with their local installations (including testing and training ranges, special use airspace, military operations areas, and/or military training routes) and the Military Departments to support installation resilience. Projects may include the following: a comprehensive review of natural and man-made threats and vulnerabilities; targeted studies or plans concerning, but not limited to, transportation, land use/encroachment, utility services, housing, stormwater management, sewer, and communications; and table-top exercises with local military and civilian (public and private) leadership to review capacities of hard infrastructure and public services to respond to natural and/or man-made disruptions.

The DOD [Defense Community Infrastructure Pilot Program \(DCIP\)](#) is designed to address deficiencies in community infrastructure, supportive of a military installation, in order to enhance military value, cadet training at covered educational institutions, installation resilience, and military family quality of life. Eligible community infrastructure projects are any complete and useable transportation project, school, hospital, police, fire, emergency response, or other community support facility; or water, wastewater, telecommunications, electric, gas, or other utility project that supports a military installation or the training of cadets enrolled in an independent program at a covered educational institution.

Appendix F: Additional Resources

General Resources

- California Recovery Support Functions <https://www.caloes.ca.gov/office-of-the-director/operations/recovery-directorate/interagency-recovery-coordination/recovery-support-functions/>
- FEMA Case Study Library <https://www.fema.gov/emergency-managers/practitioners/case-study-library>
- FEMA Adaptation Planning Guide https://www.fema.gov/sites/default/files/documents/fema_climate-adaptation-planning-guide_2024.pdf
- FEMA Recovery Support Functions <https://www.fema.gov/emergency-managers/national-preparedness/frameworks/recovery/recovery-support-functions>
- Institute for Local Government Understanding the Basics of Land Use and Planning https://www.ca-ilg.org/sites/main/files/file-attachments/2010_-_landuseplanning.pdf
- OPR's ResilientCA Adaptation Clearinghouse <https://resilientca.org/>

Planning Resources

Pre-Disaster Planning

- American Planning Association Planning for Post-Disaster Recovery: Next Generation https://www.fema.gov/sites/default/files/2020-06/apa_planning-for-post-disaster-recovery-next-generation_03-04-2015.pdf
- California Disaster Recovery Framework <https://www.caloes.ca.gov/wp-content/uploads/Recovery/Documents/2019-California-Disaster-Recovery-Framework.pdf>
- FEMA National Disaster Recovery Framework https://www.fema.gov/sites/default/files/2020-06/national_disaster_recovery_framework_2nd.pdf
- FEMA Pre-Disaster Recovery Planning Guide for Local Governments https://www.fema.gov/sites/default/files/2020-06/pre-disaster_recovery_planning_guide_local_governments.pdf
- Harvard Kennedy School Before Disaster Hits: Top Items a Local Government Needs in Place to Launch Effective Community Recovery https://abag.ca.gov/sites/default/files/1.a_before-disaster-hits-and-launching-community-recovery.pdf

- North Central Texas Council of Governments Local Disaster Recovery Framework and Toolkit
<https://www.nctcog.org/ep/resources/toolkits/local-disaster-recovery-framework-and-toolkit>
- Pre-Disaster Planning for Post-Disaster Recovery: Case Studies
https://redevelopment.net/wp-content/uploads/2010/09/CRS-Case-Studies_Final.pdf

Post-Disaster Planning

- Achieving Equitable Recovery: A Post-Disaster Guide for Local Officials and Leaders
https://www.fema.gov/sites/default/files/documents/fema_rr-508_EquityGuide_20231108_508Final.pdf
- Colorado Post Disaster Recovery Planning Toolkit:
<https://www.coresiliency.com/postdisaster-step-1>
- FEMA Long-Term Community Recovery Planning Process Guide
<https://www.fema.gov/pdf/rebuild/ltrc/selfhelp.pdf>
- ICMA Rebuilding after Disaster Strikes <https://icma.org/blog-posts/rebuilding-after-disaster-strikes>

Data Tools

- Cal-Adapt Local Climate Change Snapshot <https://cal-adapt.org/tools/local-climate-change-snapshot/>
- FEMA Flood Map Service Center <https://msc.fema.gov/portal/home>
- FEMA National Risk Index <https://hazards.fema.gov/nri/>
- FEMA Resilience Analysis and Planning Tool
<https://fema.maps.arcgis.com/apps/webappviewer/index.html?id=90c0c996a5e242a79345cdbc5f758fc6>
- HCD Interactive Maps and Graphics <https://www.hcd.ca.gov/planning-and-community-development/housing-open-data-tools>
- NOAA Disaster Cost and Frequency
<https://www.ncei.noaa.gov/access/monitoring/billions/mapping>
- U.S. Census Bureau <https://www.census.gov/en.html>

Disaster Recovery Guidance

- American Planning Association Post-Disaster Recovery Briefing Papers
<https://www.planning.org/resources/disaster/>

- FEMA Community Recovery Management Toolkit
<https://www.fema.gov/emergency-managers/practitioners/recovery-resources/community-toolkit>
- FEMA Effective Coordination of Recovery Resources for State, Tribal, Territorial and Local Incidents
https://www.fema.gov/sites/default/files/2020-07/fema_effective-coordination-recovery-resources-guide_020515.pdf
- FEMA Recovery and Resilience Resource Library
<https://www.fema.gov/emergency-managers/practitioners/recovery-resilience-resource-library>

Long-Term Recovery Plan Examples

- Aransas County Long-Term Recovery Plan
<https://www.aransascounty.org/happenings/wp-content/uploads/2018/12/FINAL-COPY-12.10.181-1.pdf>
- Baker United Strategic Recovery Plan <https://cityofbakerla.com/wp/wp-content/uploads/2018/12/City-of-Baker-Resiliency-Plan.pdf>
- Bay County Long-Term Recovery Plan <https://recoverbaycounty.com/wp-content/uploads/2019/09/LTRC-Plan-Final-Version-070919-reduced.pdf>
- Denham Strong Strategy for the Future <https://denhamstrong.com/wp-content/uploads/2017/12/Denham-Springs-Recovery-Plan-121217-Final.pdf>
- Dominica Post-Disaster Needs Assessment
https://www.gfdrr.org/sites/default/files/publication/Dominica_mp_012418_web.pdf
- EPA Recovery and Resiliency Partnership Projects Florida Panhandle Regional Recreational Economy <https://r2p2.skeo.com/>
- Galveston Long-Term Community Recovery Plan
<https://www.galvestontx.gov/DocumentCenter/View/192/Galveston-Long-Term-Community-Recovery-Plan-April-9-2009?bidId=>
- Greensburg Long-Term Community Recovery Plan
https://icma.org/sites/default/files/301552_Greensburg_KS_recovery_plan.pdf
- Hurricane Irma Recovery Support Strategy
https://www.eda.gov/archives/2021/files/programs/disaster-recovery/RSS_DR_4337_Hurricane_Irma-report-support-strategy.pdf
- Hurricane Sandy Federal Recovery Support Strategy
<https://www.hud.gov/sites/documents/RSSNEWYORKRECOVERS09132013.PDF>

- Joplin Community Phase II Recovery Plan
<https://www.joplinmo.org/DocumentCenter/View/2475/Joplin-Roadmap-to-the-Future---Phase-II-Recovery-Plan?bidId=>
- Kilauea Recovery and Resilience Plan
<https://recovery.hawaiicounty.gov/home/showpublisheddocument/302781/637426801080730000>
- Missouri Joint Recovery Support Strategy
<https://recovery.mo.gov/sites/recovery/files/media/pdf/2020/05/Recovery-Support-Strategy.pdf>
- Monroe County Post-Disaster Recovery Strategy
https://drive.google.com/file/d/1QjfWWreQxwqikumiS3cWVgBC_Hy2HwXP/view?pli=1
- Richmond County Resilient Redevelopment Plan
https://files.nc.gov/rebuildnc/documents/matthew/rebuildnc_richmond_plan_combined.pdf
- Town of Paradise Long-Term Community Recovery Plan
https://www.townofparadise.com/sites/default/files/fileattachments/recovery/page/2071/6.24.19_long_term_community_recovery_plan.pdf
- Waterbury Long-Term Community Recovery Plan
<https://www.waterburyvt.com/departments/zoning/flood/waterbury-long-term-community-recovery/plan>

Disaster Recovery Framework Examples

- City of New Orleans Comprehensive Recovery Framework
<http://ready.nola.gov/NOLAReady/files/d9/d9b9bfeb-8e5f-40a4-b6bd-2a9fd1d35d58.pdf>
- City of Seattle Disaster Recovery Framework
<https://www.seattle.gov/Documents/Departments/Emergency/PlansOEM/Recovery/SeattleDisasterRecoveryFramework7-7-15v2.pdf>
- Fairfax County Pre-Disaster Recovery Plan
<https://www.fairfaxcounty.gov/emergencymanagement/sites/emergencymanagement/files/assets/documents/pdf/2.%20pdrp%202020%20final.pdf>
- Sacramento County Recovery Plan
<https://sacoes.saccounty.gov/EmergencyManagement/Documents/Planning/Sacramento%20County%20Recovery%20Plan%20FINAL%202020%20ECEMBER.pdf>
- San Joaquin County Recovery Plan <https://www.sjgov.org/docs/default-source/office-of-emergency-services-documents/emergency->

[plans/support/long-term-recovery-annex-\(072220\)-final.pdf?sfvrsn=4c8b4581_3](https://plans/support/long-term-recovery-annex-(072220)-final.pdf?sfvrsn=4c8b4581_3)

Action Plan Examples

- Greater Miami Resilient305 <https://resilient305.com/>
- Oakland Action Plan: https://abag.ca.gov/sites/default/files/oakland_long_term_disaster_recovery_plan.pdf
- Sonoma County Recovery and Resiliency Framework https://sonomacounty.ca.gov/Main%20County%20Site/Administrative%20Support%20%26%20Fiscal%20Services/Emergency%20Management/Documents/Archive/Documents/12-11-2018%20CAO%20Recovery%20Framework%20Adoption_AttA_English_Fully%20Remediated.pdf

Climate Mitigation and Resilience Resources

- American Planning Association Climate Change Resources <https://planning.org/resources/climatechange/>
- California Coastal Commission Critical Infrastructure at Risk – Sea Level Rise Planning Guidance for California’s Coastal Zone https://documents.coastal.ca.gov/assets/slr/SLR%20Guidance_Critical%20Infrastructure_12.6.2021.pdf
- California Climate Investments <https://www.caclimateinvestments.ca.gov/>
- California Strategic Growth Council Planning Tools <https://www.sgc.ca.gov/tools/>
- OPR Climate Resilience Planning Resources <https://opr.ca.gov/climate/planning-resources.html>
- OPR Wildfire Planning Resources <https://opr.ca.gov/news/2022/08-17.html>
- US EPA Smart Growth Tools – Disaster Resilience and Recovery <https://www.epa.gov/smartgrowth/smart-growth-tools#Disaster>
- USDOT Transit Resilience Guidebook <https://www.transit.dot.gov/sites/fta.dot.gov/files/2024-05/TPE-FTA-Resilience-Guidebook-05-29-2024.pdf>

Wildfire Recovery Resources

- CAL FIRE's Land Use Planning Program <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/land-use-planning>

- Fire Adapted Communities learning Network Post-Fire Graphic and Facilitators Guide <https://fireadaptednetwork.org/new-resource-fac-nets-post-fire-graphic-facilitators-guide/>
- Fire Adapted Communities Self-Assessment Tool <https://fireadaptednetwork.org/resources/fac-assessment-tool/>
- Multihazard Planning Framework for Communities in the Wildland-Urban Interface <https://www.planning.org/publications/document/9155699/>
- Nature Conservancy Landscape Fire and Resource Management Planning Tools <https://www.conservationgateway.org/ConservationPractices/FireLandscapes/LANDFIRE/Pages/landfire.aspx>
- USDA/USFS Wildfire Risk to Communities tool <https://wildfirerisk.org/>

Nature-Based Climate Solutions and Land Conservation Resources

- CRNA Expanding Nature-Based Solutions <https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions>
- FEMA Nature-Based Solutions <https://www.fema.gov/emergency-managers/risk-management/nature-based-solutions>
- Georgetown Climate Center Managed Retreat Toolkit <https://www.georgetownclimate.org/adaptation/toolkits/managed-retreat-toolkit/conservation-land-trusts.html>
- Greenbelt Alliance The Critical Role of Greenbelts in Wildfire Resilience <https://www.greenbelt.org/research/the-critical-role-of-greenbelts-in-wildfire-resilience/>
- Supporting Land Conservation in California: A Toolkit of Financial Incentives for Landowners and Communities <https://innovation.luskin.ucla.edu/wp-content/uploads/2021/06/Supporting-Land-Conservation-in-California.pdf>

Housing Recovery Resources

- HUD Extreme Heat Quick Guide <https://files.hudexchange.info/resources/documents/Extreme-Heat-Quick-Guide.pdf>
- HUD Housing Counselling Disaster Recovery Toolkit <https://www.hudexchange.info/programs/housing-counseling/housing-counseling-disaster-recovery-toolkit/>
- HUD Office of Fair Housing and Equal Opportunity Disaster Toolkit https://www.hud.gov/sites/documents/DISASTER_TOOLKIT.PDF

- Paradise, California: Rebuilding Resilient Homes after the Camp Fire https://www.fema.gov/sites/default/files/documents/fema_paradise-california-rebuilding-resilient-homes_case-study.pdf

Economic Disaster Recovery and Resilience Planning

- California Association for Local Economic Development Recovery and Resiliency Playbook <https://www.paperturn-view.com/caled/economic-development-recovery-and-resiliency-playbook?pid=MjU258625&v=2.1>
- Camp Fire Regional Economic Impact Analysis <https://3coreedc.org/wp-content/uploads/2021/03/Camp-Fire-Regional-Economic-Impact-Analysis-January-2021.pdf>
- HUD Economic Recovery and Resilience Toolkit <https://files.hudexchange.info/resources/documents/Economic-Recovery-and-Resilience-Toolkit.pdf>
- Joplin Regional Disaster and Economic Recovery and Resiliency Strategy <https://joplincdbg.com/DocumentCenter/View/42/2014-Economic-Recovery-Strategy-PDF>
- Kilauea Disaster Economic Recovery Plan <https://recovery.hawaiicounty.gov/home/showpublisheddocument/302779/637426801061170000>
- San Francisco Economic Recovery Task Force Report https://www.onesanfrancisco.org/sites/default/files/2021-11/EconomicRecoveryTaskForceReport_10.08.20.pdf
- USDA-EDA Joint Planning Resource Guide https://www.rd.usda.gov/sites/default/files/508F_RD_EDA_JointPlanningResourceGuide.pdf

Whole Community and Equity in Recovery

- American Planning Association – Public Engagement in Recovery Planning <https://planning-org-uploaded-media.s3.amazonaws.com/document/post-disaster-paper-1-public-engagement.pdf>
- CDC Public Health Workbook to Define, Locate, and Reach Special, Vulnerable, and At-Risk Populations in an Emergency https://emergency.cdc.gov/workbook/pdf/ph_workbookfinal.pdf
- HUD Community Engagement Toolkit <https://www.hudexchange.info/resources/community-engagement-toolkit/>

- FEMA Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action
https://www.fema.gov/sites/default/files/2020-07/whole_community_dec2011_2.pdf
- Groundwork USA Advancing Equity in Land Reuse Planning and Visioning
https://groundworkusa.org/wp-content/uploads/2024/07/GWUSA-Equitable-Guide_071024-final.pdf
- OPR Defining Vulnerable Communities in the Context of Climate Adaptation https://opr.ca.gov/docs/20180723-Vulnerable_Communities.pdf
- Opportunities and Challenges of Public Participation in Post-Disaster Recovery Planning - Lessons from Galveston, TX
<https://ascelibrary.org/doi/pdf/10.1061/%28ASCE%29NH.1527-6996.0000399>
- U.S. Department of Health and Human Services Division of Community Mitigation and Recovery website
<https://aspr.hhs.gov/HealthCareReadiness/Recovery/Pages/mitigation-recovery.aspx>
- Urban Sustainability Directors Network Guide to Equitable, Community-Driven, Climate Preparedness Planning
usdn_guide_to_equitable_community-driven_climate_preparedness_high_res.pdf

Appendix G: Acronyms

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| AFN | Access and Functional Needs |
| APA | American Planning Association |
| BRIC | Building Resilient Infrastructure and Communities |
| Cal OES | California Office of Emergency Services |
| Caltrans | California Department of Transportation |
| CAP | Continuing Authorities Program |
| CDBG-DR | Community Development Block Grant – Disaster Recovery |
| CDRF | California Disaster Recovery Framework |
| CERT | Community Emergency Response Team |
| CNRA | California Natural Resources Agency |
| CPCB | Community Planning and Capacity Building |
| DOD | U.S. Department of Defense |
| DOI | U.S. Department of Interior |
| EDA | U.S. Economic Development Administration |
| EOP | Emergency Operations Plan |
| EPA | U.S. Environmental Protection Agency |
| FEMA | Federal Emergency Management Agency |
| FMA | Flood Mitigation Assistance |
| GIS | Geographic Information System |
| GO-Biz | California Office of Business and Economic Development |
| HCD | California Department of Housing and Community Development |
| HHS | U.S. Department of Health and Human Services |
| HMGP | Hazard Mitigation Grant Program |
| HSS | Health and Social Services |
| HUD | U.S. Department of Housing and Urban Development |
| ICMA | International City/County Managers Association |
| IRC | Interagency Recovery Coordination |
| LDRF | Local Disaster Recovery Framework |
| LTRP | Long-Term Recovery Plan |
| NCR | Natural and Cultural Resources |
| NDRF | National Disaster Recovery Framework |
| NFWF | National Fish and Wildlife Foundation |
| OPR | California Office of Planning and Research |
| SBA | U.S. Small Business Administration |
| SWOT | Strengths, Weaknesses, Opportunities and Threats |
| RSF | Recovery Support Function |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |



Cal OES

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