

# PLANNING BEST PRACTICES WILDFIRE RECOVERY AND REBUILDING

Experiences from other post-disaster planning efforts in other communities can be valuable for moving forward with recovery and rebuilding, and for ensuring resiliency to preclude, minimize risk of, and rebound from similar events in the future. What follows is a summary of planning-related efforts and lessons learned from similar wildfire events within the broader region, as well as best practices that have been examined or put into place within similarly affected areas. Best practices are those solid, prudent courses of policies, procedures, actions, or tools typically considered to be most effective at precluding or minimizing adverse impacts from a wildfire disaster.

For ease of use, best practices are loosely organized by type of user - governments, community-based partners, and households or property owners - with brief descriptions, web-links, and names of authors / publishing organizations.



**Example:** Best practices of actions to take for wildfire preparedness and recovery.  
Developed by Washington State Fire Adapted Communities Network  
([fireadaptednetwork.org/resources/](https://fireadaptednetwork.org/resources/)), accessed July 2021

## PLANNING BEST PRACTICES

### For Governments Leading Recovery Planning

#### Policies, Codes, Tools, Plans for Before and After Wildfire

##### **APA Planning the Wildland-Urban Interface**

<https://www.planning.org/publications/report/9174069/>

Planning Advisory Service report published by the American Planning Association in 2019. In-depth report for planning wildfire mitigation and recovery at the WUI, including a holistic planning framework and practical guidance on how to address wildfire challenges in plans, policies, and regulations. It highlights opportunities for collaboration with fire departments, federal and state agencies, and other key stakeholders and includes specific examples and strategies applicable to rural and resource-dependent communities. Case studies with practical planning lessons from South Dakota, Florida, Montana, Colorado, Washington, and Wasco County, Oregon.

##### **APA Hazard Mitigation Policy Guide**

<https://www.planning.org/publications/document/9203323/>

Ratified in 2020. APA's newly revised Hazard Mitigation Policy Guide position planners to champion a new approach to hazard mitigation, adaptation, and recovery thinking centered on equity and established research for resiliency standards, man-made disasters, and natural disasters. Includes APA's priorities for policy outcomes specific to planning for wildfires.

##### **Building a Wildfire-Resistant Home: Codes and Costs**

<https://headwaterseconomics.org/wildfire/homes-risk/building-costs-codes/>

Research paper published in 2018 by Headwaters Economics (consulting firm) examining the cost differences between a typical home construction and use of wildfire-resistant design and materials. "Decades of research and post-fire assessments have provided clear evidence that building materials and design, coupled with landscaping on the property, are the most important factors influencing home survivability during a wildfire." Includes comparison of common codes and recommendations for code modifications for wildfire-resistance.

##### **Colorado Post-Fire Recovery Playbook for Counties, Tribes, Municipalities, and Water Providers**

[https://aftertheflames.com/wp-content/uploads/2021/02/CO\\_Post\\_Fire\\_Playbook\\_2021\\_update-1.pdf](https://aftertheflames.com/wp-content/uploads/2021/02/CO_Post_Fire_Playbook_2021_update-1.pdf)

Prepared by volunteers from municipalities, state and federal agencies, water providers, watershed organizations, and consultants; published February 2021. Covers critical information for public agencies on ways to think through and plan for pre-fire, during the wildfire, and first 30-days after an event.

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### **Community Wildfire Safety Through Regulation: A Best Practices Guide for Planners and Regulators**

<https://nfpa92.nfpa.org/-/media/Files/Public-Education/By-topic/Wildland/WildfireBestPracticesGuide.ashx>

Published by the Wildfire National Fire Protection Association. A manual for planners and public officials with “sound technical and legal justifications for adoption of wildfire regulations. It provides tips on what planners should do before the community embarks on a formal wildfire safety regulation adoption process. It helps communities evaluate their wildfire safety needs and choose tools that fit those needs. It summarizes the best practices used around the country to address wildfire risk in the WUI.”

### **Disaster Recovery Guidance: Research Study**

<https://www.planning.org/nationalcenters/hazards/recoveryguide/>

Research study of the American Planning Association and Texas A&M Hazard Reduction and Recovery Center. Part of a multi-year project to develop a complete Disaster Recovery Guide for Planning Practitioners. The Research Study findings include information on planners’ needs and potential roles in short- and intermediate-term phases of recovery. **Extensive annotated bibliography** with case studies, articles, brochures, and other publications (<https://www.zotero.org/groups/2278263/recoveryguidancetamu/items/8SEPEHHJ/library>).

### **FEMA’s U.S. Fire Administration Wildland Urban Interface**

<https://www.usfa.fema.gov/wui/index.html>

Website for municipal fire departments and other wildfire responders. Resources for how to prepare for a safe wildland fire response and guide to becoming a fire-adapted community. Also has materials for community education and engagement, and reference materials for firefighters, including a technical case study of the Camp Fire in Paradise, California.

### **Firebreak: Wildfire Resilience Strategies for Real Estate**

<https://knowledge.uli.org/reports/research-reports/2020/firebreak-wildfire-resilience-strategies-for-real-estate>

Research report published by the Urban Land Institute in 2020. Information focused on guidance to developers and planners. Best practices broken down by practices for site-specific actions (siting, landscaping, construction, and maintenance methods) and district-scale (land use policy, wildland interface strategies, municipal incentive programs, ideas for codes, ordinances, funding, and other municipal policies). Report includes return on investment information for wildfire-resilience activities at both site and district scales, and wildfire resilience case studies from Idaho, Arizona, California, and Texas.

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### **International Code Council Wildland-Urban Interface Model Code**

<https://codes.iccsafe.org/content/IWUIC2021P1>

Updated in 2021. Model code with standards for defensible space, emergency access and water supply, fire suppression practices, and related technical reports.

### **Oregon's Post-Wildfire Flood Playbook**

[https://www.nwp.usace.army.mil/Portals/24/docs/flood/Post\\_WildFire\\_Playbook.pdf](https://www.nwp.usace.army.mil/Portals/24/docs/flood/Post_WildFire_Playbook.pdf)

Guide produced in 2018 by the Silver Jackets, a coalition of state and federal agencies working together to address flood challenges in Oregon. Information and resources for local governments facing the threat of increased flood risk and debris flows that can occur after large wildfires. It also serves as a guide to wildfire-affected communities "that need to navigate the complex web of federal and state programs."

### **Planning's Role in Wildfire Mitigation**

<https://www.planning.org/publications/document/9170741/>

Article in The Commissioner April 2019, a publication of the American Planning Association for planning commissioners and public officials involved in planning. Short background on wildfire mitigation planning with tips and a series of queries for consideration of planning commissions/boards as they seek to build resiliency into plans and codes.

### **Pocket Response Plan (PReP) - Disaster Preparedness Tool**

[https://www.oregon.gov/oprd/OH/Documents/OC2C\\_PReP.doc](https://www.oregon.gov/oprd/OH/Documents/OC2C_PReP.doc)

Provided by State of Oregon. Template to assist government agencies and municipalities in creating a pocket-sized contacts list that can be carried by all agency employees for use in an emergency event.

### **Recovering and Rebuilding from Oregon's 2020 Wildfires**

[https://www.oregon.gov/gov/policy/Documents/WERC-2020/Wildfire\\_Report\\_FINAL.pdf](https://www.oregon.gov/gov/policy/Documents/WERC-2020/Wildfire_Report_FINAL.pdf)

Published by the State of Oregon's Wildfire Economic Recovery Council, in January 2021. "The primary goals of the Governor's Wildfire Economic Recovery Council were to assess the impacts of the 2020 wildfires, understand the barriers and needs to start on the road to recovery and rebuilding, and make specific recommendations that would allow wildfire survivors and affected communities to get back on their feet, stronger than before." Report contains a compilation of immediate actions taken and recommended "Solutions for Oregonians", focused on three key areas of need: Housing and Sheltering, Debris and Cleanup, and Recovery and Rebuilding.

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### **Zoning Practice: Zoning and Disaster Recover (July 2021) & Wildfire Mitigation (May 2012)**

<https://www.planning.org/zoningpractice/previous/>

Zoning Practice is a publication of the American Planning Association. Research and guides with strategies to build wildfire mitigation and recovery into comprehensive plans and zoning codes. Considerations in the 2021 publication include equity in recovery, emergency housing, adaptation, and non-conformities. Includes specific recommendations on code incentives, design standards, enforcement, and zoning essentials.

### Case Studies

#### **After the Fire: Vulnerable Communities Respond and Rebuild**

<https://www.americanprogress.org/issues/green/reports/2019/07/25/472738/fire-vulnerable-communities-respond-rebuild/>

Research and policy paper from the Center for American Progress. Best practices and policy recommendations to help ensure vulnerable communities can recover from wildfires and other disasters. The research includes lessons learned from Camp Fire in Paradise, California. "As the Camp Fire demonstrated, vulnerable populations are too often left behind when it comes to planning for and recovering from catastrophic wildfires... This issue brief discusses how to ensure equal access to disaster response and recovery efforts, offering specific policy recommendations that would help ensure that the most vulnerable communities and populations receive the support they need."

#### **Austin Area Wildfire Hub**

<https://wildfire-austin.hub.arcgis.com/>

One-stop website for information on current incidents, preparedness, and links to local resources - "a portal for information sharing, cross-agency initiatives, and grass-roots coalition building to prepare our community for wildfire." City of Austin has implemented zoning and building ordinances, including code amendments in 2020 (<https://austintexas.gov/departments/wildland-urban-interface-code>) to incorporate the international code for wildland urban interface. City zoning map has multiple overlay zones that reflect wildfire risk level.

#### **Fire Adapted Ashland**

<https://www.ashland.or.us/SectionIndex.asp?SectionID=539>

Comprehensive approach to wildfire readiness, including land use ordinances, emergency communications, property owner / homeowner education. Ashland's **Wildfire Safety Ordinance** (<https://www.ashland.or.us/Page.asp?NavID=17670>) includes citywide regulations for fire-adaptive development, fencing/screening, landscaping, accessory structures, building siting, among others.

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### **Case Study: Hayman Fire, Hayman, Colorado**

<https://www.planning.org/research/postdisaster/casestudies/haymanfire.htm>

American Planning Association applied research article. Assessment and lessons learned from Colorado's largest and most devastating wildfire in 2002. Information includes policy guidance and "opportunities for improvement" to plans, codes, policies, and community education.

### **Road to Recovery website: Town of Paradise, California**

<https://www.townofparadise.com/recovery>

Central website with information and resources for recovery from the 2018 Camp Fire. Webpage that is a sort of one-stop resource with up-to-date information on actions government agencies and their partners are making toward recovery. Site includes an active blog, contact information, recovery plan, and resources for community members to find assistance with housing, wildfire preparedness, and connection to community services. Refer also to an **Urban Land Institute summary case study** of recovery planning in Paradise (<https://developingresilience.uli.org/case/paradise-long-term-recovery-plan/>).

### **Sonoma County Recovery & Resiliency Framework**

<https://sonomacounty.ca.gov/CAO/Policy-Grants-and-Special-Projects/Recovery-and-Resiliency/Recovery-Framework/>

Adopted by Sonoma County Board of Supervisors following the devastating 2017 wildfires; framework and accompanying action plan are available in English and Spanish. "It is our attempt to use the trauma and the intensity of what happened to us, to be a part of the state and nationwide movement for true preparedness and true resilience." The framework is a sort of strategic plan, organized around actions for Community Preparedness and Infrastructure, Housing, Economy, Safety Net Services, and Natural Resources. Through expansive community engagement over six months, the county created the framework and defined the community's top 10 priority projects for recovery. The framework emphasizes coordination between the five framework categories and among partners. Refer also to the **Sonoma County Resiliency Permit Center**, which provides specialized assistance and expedited permitting for residential reconstruction in unincorporated areas that were impacted by major wildfires (<https://sonomacounty.ca.gov/Rebuild/Permits/Resiliency-Permit-Center/>).



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### FOR COMMUNITY-BASED PARTNERS / ORGANIZATIONS SUPPORTING RECOVERY

#### **AIA Disaster Assistance Handbook, 3rd edition**

<https://www.aia.org/resources/71636-disaster-assistance-handbook>

Produced in 2017 by the American Institute of Architects Disaster Assistance Program, available in English and Spanish. Handbook is written for use by built environmental professionals and municipal governments, and includes best practices for risk reduction, building in community resilience, and approaches to designing adaptable buildings. Case studies for post-disaster building assessments.

#### **Oregon Guide to Emergency Preparedness Resources** [for institutions with historic, cultural, or art collections]

[https://www.oregon.gov/oprd/OH/Documents/oremergencyguide\\_11.6.15-1.pdf](https://www.oregon.gov/oprd/OH/Documents/oremergencyguide_11.6.15-1.pdf)

Prepared in 2015 by the Balboa Arts Conservation Center, a regional cooperative. The guide is written for collection-holding institutions in Oregon. It includes advice and information for how to prepare and update their emergency procedures, determination of collection priorities, and response and clean-up plans.

#### **Safer from the Start: Guide to Firewise-Friendly Developments**

<https://www.nfpa.org/-/media/Files/Training/certification/CWMS/SaferFromtheStart.ashx?la=en&hash=88F83AC1E1EDF5183B190C8BC188C7077F14825>

Published in 2009 by the National Fire Protection Association's Firewise Communities program. Guidance for residential developers and existing homeowners' associations to integrate Firewise concepts into design and development, as well as into property deeds or CC&Rs (covenants, conditions, and restrictions).

#### **Washington State Fire Adapted Communities Network**

<https://www.fireadaptedwashington.org/>

"Peer learning network that supports local action, connects people to resources, facilitates results, and influences and informs on-the-ground projects to help Washington better adapt to wildfire. Our members are leading the way to better prepare our communities before, during, and after fires by engaging communities, agencies, and organizations to develop and act on place-based strategies and priorities." Resources online include community conversation facilitation guides and videos in English and Spanish, resources on actions to take, ongoing webinars and engagement. Materials are relevant to Oregon. Refer also to the Fire Adapted Communities Learning Network (<https://fireadaptednetwork.org/>).

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### FOR HOUSEHOLDS / PROPERTY OWNERS IN WILDFIRE-IMPACTED AND HAZARD AREAS

#### Preparing Property and Landscape

##### **Combine Defensible Space and Best Management Practices**

<https://naes.agnt.unr.edu/PMS/Pubs/2008-3285.pdf>

Brochure published by the University of Nevada Cooperative Extension. Best practices and tips for residents on how to modify landscapes for wildfire defense.

##### **Make Your Home / Business Wildfire Ready**

<https://disastersafety.org/wildfire/>

Website of the Insurance Institute for Business & Home Safety. Includes how-to guides for businesses and residents on steps to prepare and protect properties with tips on roof and equipment maintenance, defensible space, and business planning.

**Retrofit guidance** for the Pacific Northwest region can be accessed through the site.

##### **Wildfire Defensible Space 101 - Protect Your Home**

<https://www.frontlinewildfire.com/wildfire-defensible-space/>

Online resource from Frontline Wildfire Defense System (commercial business). Specific examples of steps a property owner can take to create defensible spaces at 0-5 feet from the structure, 5-20 feet, and 30-100 feet.

#### Family and Household Preparations

##### **Household/Family Wildfire Action Plan: How-to guide**

<https://www.readyforwildfire.org/prepare-for-wildfire/get-set/wildfire-action-plan/>

CalFire webpage for families and individuals. How-to guide for creating a Wildfire Action Plan for households, including tips on how to think ahead for evacuation, emergency supplies lists, and insurance preparedness.

##### **Oregon Rising Stronger Together: Learn how to stay safe and find aid as we recover from wildfires across the state**

<https://wildfire.oregon.gov/>

State of Oregon's Wildfire Response and Recovery website for residents and business owners to access information and resources. Includes contacts for technical and funding assistance programs and information and guidance for cleaning up property, securing clean drinking water, filing insurance claims, and other similar recovery tasks. Biweekly Recovery Updates on the website.



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### **Wildfire Safety: Learn how to keep your family and home safe**

<https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/wildfire.html>

American Red Cross webpage. High level and easily accessible information about steps to take before and during a wildfire event.

### **Mobile Apps for smartphones**

Apps for mobile devices that may be useful after a wildfire or other natural disaster:

- **FEMA Mobile App** helps you plan for and respond to natural disasters
- **First Aid App** from the American Red Cross may help in response to natural disasters
- **ReUnite** helps connect lost family members and friends in a disaster situation
- **Wildfire** from the American Red Cross provides wildfire news and updates, and helps you prepare and respond