



PROMOTING RESILIENCE

Zoning Strategies and Approaches

As climate change precipitates events such as devastating storms, intense wildfires, and severe droughts, municipalities are revising their zoning to guard against future disasters.

Common resilience goals of zoning updates include the following:

- **Protecting the health and safety of the public;**
- **Incentivizing development in areas at comparatively low risk** of climate impacts;
- **Ensuring service continuity** in the face of events precipitated by climate change, including by influencing the siting of critical infrastructure;
- **Promoting more equitable development** to mitigate climate-driven displacement;
- **Supporting social cohesion and community resilience** by promoting investment in community amenities and gathering spaces; and
- **Bolstering community economic health** by guarding residents against avoidable losses from climate impacts.

In 2021 alone, an estimated \$2.155 trillion in damages and costs resulted from weather and climate disasters within the United States and, according to a report published in the same year by CoreLogic, one in 10 U.S. residential properties were affected by natural disasters.

Examples of zoning reforms to promote resilience are as follows:

- **Comprehensive zoning overhauls** can afford communities the opportunity to identify and respond to known risks and to seamlessly integrate zoning with administrative rules, plans, and other governing documents to support community resilience.
- **By-right zoning** can be crafted to protect development against risks, including flooding, storm surge, erosion, and wildfire.
- **Overlays** can incentivize or require mitigation for development in hazard-prone areas without completing an overhaul of the municipal code.
- **Floating zones** can allow developers to achieve economically viable outcomes for larger projects while exceeding or complying with standards that improve resilience.
- **Zoning incentives** can encourage development that exceeds minimum hazard mitigation requirements specified in base zoning.

Supporting Resilience through Zoning

PROFILE: Minimizing Losses from Wildfire Damage in Summit County, Colorado

In 2016, Summit County, Colorado, changed its base zoning requirements to establish criteria for by-right development to reduce structural ignitability and improve defensible space around development.

The *Land Use and Development Code* contains special requirements for by-right development within designated Wildfire Hazard Areas. These include the following:

- Special considerations for locations of permitted uses,
- Use-specific standards,
- Landscaping requirements, and
- Requirements for outdoor storage in at-risk areas.

When Summit County updated its plan in 2016, it helped attract \$1 million in federal aid and local funding for mitigation, and it prevented a 2018 wildfire from destroying 2,600 homes and property worth about \$1 billion.



PROFILE: Comprehensively Addressing Community Vulnerabilities in Norfolk, Virginia

A 2013 comprehensive plan update in Norfolk, Virginia, prompted a major revision to the city zoning ordinance in 2018. The revision, referred to as ZoneNorfolk, “considered the risks of sea-level rise on the built environment.”



Under this code, all new development is to meet a “resilience quotient” that encompasses risk reduction, stormwater management, and energy resilience. In addition, ZoneNorfolk added resilience-specific overlay zones, including the Coastal Resilience Overlay (CRO), which encompasses areas of the city with high risk of flooding. CRO regulations require the following:

- All development within the 1 percent annual chance flood zone must be elevated three feet above base flood elevation; the district restricts construction of basements in residential construction, limits impermeable area, and requires use of native and salt-tolerant plants.
- A site’s zoning determined “resilience quotient” must be met. One method for earning points toward this quotient is through designation of a conservation easement within the low-risk CRO district.