

SITE-SPECIFIC HAZARD ASSESSMENT



HAZARDS ADDRESSED



HOW IT WORKS

When hazards are potentially present on a site or are known through previous mapping efforts, the community should require a **site-specific hazard assessment**. This type of assessment requires a qualified professional with specialized knowledge of the particular hazard of which they are assessing. The appropriate professional (e.g., geotechnical specialist, civil engineer, wildfire mitigation specialist, certified forester, and certified floodplain manager) will consider existing state and/or local hazard maps; prior evidence of hazard history; and on-site features such as topography, soils, forests, water channels, and other structures to determine risk level of or to the proposed development. When applicable, communities may have a specific assessment form that is used to rate the hazard. This information will typically be compiled into a site-specific hazard mitigation plan that will require specific mitigation actions to be performed prior to or as a condition of approving the application or issuing a development permit, building permit, or a certificate of occupancy. This may include recommendations or requirements to adjust the land use, alter construction and building design, or utilize (or protect) surrounding environmental features to minimize the degree of hazard. This information will be provided to the developer, contractors, and/or property owner, and may be included in the planner's staff report for the planning commission or governing body.

Ultimately, the purpose of a site-specific hazard assessment is to identify hazards, determine a path for hazard mitigation, increase public safety, and reduce the threat of future property damage or loss of life.

IMPLEMENTATION

Requirements for when to require site-specific hazard assessments vary by jurisdiction and hazard. In some cases, the state may provide additional agency oversight, resources, or guidance as to when

further site investigation is required for hazard mitigation, such as the oil and gas requirements for soils information and potential geological hazards. Local regulatory requirements are usually stated in the zoning code, subdivision code, building code, or a separate code (e.g., wildland-urban interface code).

Jurisdictions typically have flexibility in deciding when a site-specific hazard assessment is required. For example, a jurisdiction may choose to adopt a mapped hazard overlay zone that requires all new construction or retrofits within that zone to undergo a site-specific hazard assessment prior to granting development permit approval. Conversely, jurisdictions may find it more appropriate to require a site-specific hazard assessment for any permit, regardless of the location.

In any case, the applicability standards that trigger an assessment as well as the criteria for when and what type of mitigation is required should be clear. Planning staff should discuss this requirement with an applicant early in the development review process, such as at the pre-application meeting or when a sketch plan is first submitted.

WHERE IT'S BEEN DONE

In 2003, **Eagle County** adopted wildfire regulations that require new development (special use permit, planned unit development (PUD), and subdivision) and new building construction or exterior remodels to comply with wildfire regulations. Development involving subdivision or PUD must include a vegetation management plan submitted with the sketch plan that provides an initial site-specific evaluation prepared by a natural resource professional with expertise in the field of vegetation management and wildfire mitigation. The vegetation management plan submitted with the preliminary plan is required to contain a more detailed site-specific analysis as indicated by the regulations.

Wildfire hazard assessments are required based on criteria stated above. Other interested property owners may also request a wildfire hazard assessment from Eagle County to reduce their property's risk. Assessments are either initiated via an online request form or by calling the wildfire mitigation staff coordinator. The county's qualified mitigation staff will conduct an on-site hazard assessment utilizing a customized assessment form (based on a national model assessment standard). The on-site field observations and assessment criteria are considered in conjunction with the county's wildfire hazard map to determine a site's specific rating. Based on the rating, the applicant will then be given a set of mitigation requirements prior to the county issuing a building permit. Mitigation requirements may include fuel management (e.g., removal of trees and/or other vegetation) and the use of fire-resistant construction materials, such as a Class A roof assembly, Class A rated decking materials, and non-combustible siding. The assessments are free, but building permits that require additional review and on-site follow up will be charged fees. Requirements are identified early on in the process and publicly available on the county's wildfire mitigation website (*Wildfire Regulations*, 2003; *Overview*, 2015). **Boulder County** uses a similar approach to addressing their community's wildfire hazard (see Building Codes tool for more details).

The **Cordillera Community** in Eagle County takes their wildfire mitigation process one step further. They have their own local fire department that performs home assessments; every house is on a five-year rotation for re-assessment to ensure that vegetation is properly maintained.

The **Town of Vail** has adopted a requirement for a site-specific assessment for new construction and substantial remodels within avalanche hazard zones.

ADVANTAGES AND KEY TALKING POINTS

- Site-specific hazard assessments are the best (and in some cases the only) way to identify hazards on a site and determine the most effective methods for mitigation.
- Assessments can highlight potentially hazardous conditions prior to any development occurring.
- Assessment approaches that facilitate staff and applicant interaction regarding appropriate hazard mitigation requirements provide an important educational component for discussing solutions to addressing known hazards.
- Results in reduced risk to property and life.

CHALLENGES

- Site-specific hazard assessments require additional upfront time and resources for both the local government and the applicant. The process requires additional time to perform the assessment, create a mitigation plan, review the results with an applicant, and do a follow up site visit when necessary.
- A site-specific hazard assessment will also require specialized technical expertise that may result in additional costs borne by the applicant and/or local jurisdiction. If the local jurisdiction does not have qualified staff to perform the site-specific hazard assessment, consider maintaining a list of independent qualified contractors for referral.

KEY FACTS

Administrative capacity	High, requires technical expert
Mapping	Yes
Regulatory requirements	Yes, but varies by jurisdiction
Maintenance	N/A
Adoption required	Yes
Statutory reference	C.R.S. references relate primarily to general land use authority and administration and requirements for when site-specific assessments may apply, including but not limited to C.R.S. §§ 30-28-106, 30-28-133, 30-28-136, and 31-23-206.
Associated costs	Variable. Sometimes recovered by fees charged to applicant. Some fire districts may do these assessments for free

EXAMPLES

Boulder County Wildfire Mitigation	bouldercounty.org/property/forest/pages/wildfiremitigation.aspx
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Eagle County eaglecounty.us/Building/Documents/Wildfire_Regs_and_eaglecounty.us/Building/Wildfire/Overview
Wildfire Regulations

Town of Vail sterlingcodifiers.com/codebook/index.php?book_id=560 Chapter 21:
Municipal Code Hazard Regulations

FOR MORE INFORMATION

American Planning Association

Zoning Practice, February 2005 Issue Number Two: *Practice Better Site Visits*. Stuart Meck.

American Planning Association Report Number 560

Hazard Mitigation: Integrating Best Practices into Planning. Provides additional examples of state legislation and local codes for site-specific assessments.