

**Initial Statement of Reasons
for
Proposed Building Standards Update
of
the Department of Water Resources
Regarding the 2007 California Building Code of Regulations
Title 24, Part 2**

The Administrative Procedure Act requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following provides the reasons for proposing this particular rulemaking action:

Statement of Specific Purpose and Rationale

(Government Code Section 11346.2(b)(1) requires a statement of specific purpose of each adoption, amendment or repeal and the rationale of the determination by the agency that each adoption, amendment or repeal is reasonably necessary to carry out the purpose for which it is proposed.)

The specific purpose of this rulemaking effort by the Department of Water Resources (DWR) is to act in accordance with the Health and Safety Code Section 50465 (HSC §50465), which requires DWR to propose for adoption and approval by the California Building Standards Commission (Commission) updated requirements to the California Building Standards Code for construction in areas protected by the facilities of the Central Valley Flood Protection Plan where flood levels are anticipated to exceed three feet for the 200-year flood event.

The actions described above are reasonably necessary to carry out the purpose for which it is proposed. The rationale for these actions is to establish minimum requirements to protect vulnerable demographics from likely, acute and potentially mortal key flood threats during deep flooding conditions in the Central Valley. DWR plans to propose additional building standards in the future to achieve the full intent of the HSC §50465.

The general purposes of the proposed actions are provided in the following.

Intended Protection

The proposed building standards are to provide public safety protection under deep flooding conditions in the Central Valley from two key flood threats: (1) entrapment and/or drowning due to the lack of a safe evacuation route or an evacuation location, and (2) serious injury or death caused by structural failure due to unbalanced hydrostatic pressures inside and outside of the building. DWR recognized that there could be many other flood threats that could be reduced by amending building standards fully or in part. However, for the initial proposal, the focus was placed on prioritized actions which improve public safety that are highly likely to occur and contribute directly to death and/or severe injury.

The proposed building standards provide protection to able-bodied persons and dependent persons that require assistance in their daily life. However, the emphasis is on the vulnerable demographics—including children, elderly, disabled, and otherwise assisted-living persons—that are either not able to rescue themselves in the event of an emergency or may not be awake or aware when the emergency occurs. DWR proposed the building standards apply to Educational (E), Residential (R), and Institutional (I) occupancy groups.

The specific purposes by element:

- **Evacuation Location and Route to the Location** – The purpose of an evacuation location is to provide the occupants a location that would allow for future rescue and thus, remove the threat of being trapped and drowning in the building while flood water rises. The route is to provide a reasonable means for occupants to reach the designated evacuation location. DWR determined that for each occupancy group, the existing regulations associated with accessibility will apply and thus, specifies no additional requirements.
- **Structural Stability** – This requirement is to prevent the structure from collapsing due to unbalanced hydrostatic pressure inside and outside of the building before the rescue can be made. While both dry proofing and wet proofing (allowing floodwater into the building) could be used for compliance, the purpose of this requirement mainly focuses on the protection of occupants in the building during deep flooding conditions before rescue, rather than flood damage reduction, which is an additional possible benefit.

Subsequent to the initial proposal, DWR plans to propose additional building standards in the future and address flood damage reduction to achieve the full intent of the HSC §50465.

Scope of Application

DWR proposed the building standards for new construction and some existing buildings of occupancy groups E, R, and I. Precisely, application of the proposed codes to existing buildings will be triggered by change of use or by substantial improvement and substantial damage defined in the existing Building Code Section 1612. DWR believes the use of existing defined triggers will help build consistency and reduce the burden of building officials in administering code compliance.

Note that DWR proposed an exception for the substantial improvement application to occupancy group R-3.1 when converted from R-3 (i.e., change of use). The consideration is due to the current shortage of R-3.1 facilities providing much needed assisted living service. DWR proposed the exception to avoid further impediment in developing additional R-3.1 facilities by conversion. After the initial conversion, additional substantial improvement of and/or repair for substantial damage to the established R-3.1 facilities would be subject to all building standards as proposed.

Geographic Area

DWR proposed the building standards to apply to areas in the Sacramento-San Joaquin watershed that receive protection of the facilities of the Central Valley Flood Protection Plan where flood levels are anticipated to exceed three feet for the 200-year flood event, as described in HSC §50465. The three feet reference targets areas prone to deep flooding that are commonly found in communities on the valley floor.

DWR is required to complete the Central Valley Flood Protection Plan by January 1, 2012 and the Central Valley Flood Protection Board is required to adopt the Central Valley Flood Protection Plan by July 1, 2012. The plan is to be updated every five years afterward. The plan is prepared under the authorization of Water Code Section 9600 – 9625. As part of the efforts in preparing the Central Valley Flood Protection Plan, the Department of Water Resources is conducting studies to update the flood planning hydrology for the major rivers and streams in the Central Valley. This effort will result in new river and stream flow-frequency curves. The new hydrology along with new topographic datasets and hydraulic models for the rivers, streams and floodplains will be used to determine the extent of flooding and flood depths for various return period flood events. This information will be used to prepare a reference map for the proposed building standards to show the applicable geographic area and expected flood depths. DWR is scheduled to complete the mapping efforts in 2012 and publish the maps online for public use. Therefore, DWR proposed the building standards with a deferred effective date, pending the availability of such reference maps.

Note that DWR proposes the continued application to deep ponding areas in the Central Valley even after communities achieve 200-year level of protection. The deep ponding areas are characterized as a basin-like location where, once flooded, floodwater does not have an apparent outlet for drainage. An example is the Natomas Basin in Sacramento, which is protected by levees from all sides. In the case of Natomas Basin, the basin is expected to have a 200-year level of protection by 2025. However, should the levee system fail, or should a flood occur that is greater than the 200 year event, the potential inundation depth is more than 20 feet, resulting in significant threats to human life and economic development in a heavily urbanized area. In addition, even with the state-of-the-art approach, significant uncertainties remain in flood frequency and flood depth estimation, especially due to our ability to estimate future precipitation patterns due to climate change. DWR considers the residual risk of flooding significant and proposes continued application to deep ponding areas even after 200-year level of protection is achieved. These areas will also be identified in the reference map.

Mandatory and Voluntary Requirements

DWR proposes mandatory compliance of these proposed Building Standards Code update for occupancy groups E, R-3, and R-3.1, and a voluntary compliance for occupancy groups I, R-1, R-2, and R-4. The purpose of this distinction is to acknowledge the complexity of applying this new regulation to occupancy groups I, R-1, R-2, and R-4 which requires additional flexibility and coordination. Furthermore, the use of such

buildings is significantly more diverse and requires licensing and permitting actions from other regulatory agencies, which are also more involved.

Technical, Theoretical, and Empirical Studies, Report, or Similar Documents

(Government Code Section 11346.2(b)(2) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).)

None.

Consideration of Reasonable Alternatives

(Government Code Section 11342.2(b)(3)(A) requires a description of reasonable alternatives to the regulation and the agency's reason for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate.)

None. There were no alternatives available to DWR. DWR is required by statute to propose Building Standards Code amendments per HSC §50465.

Reasonable Alternatives the Agency Has Identified That Would Lessen Any Adverse Impact on Small Business

(Government Code Section 11346.2(b)(3)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business. Include facts, evidence, documents, testimony, or other evidence upon which the agency relies to support an initial determination that the action will not have a significant adverse impact on business.)

DWR has concluded that this regulatory action would have no significant adverse economic impact on California small business. The economic analysis associated with DWR's proposal is included within the submittal package and supports DWR's conclusion.

Facts, Evidence, Documents, Testimony, or Other Evidence of No Significant Adverse Impact on Business

(Government Code Section 11346.2(b)(4) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies in to support an initial determination that the action will not have a significant adverse economic impact on business.)

DWR has concluded that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states. The economic analysis associated with DWR's proposal is included within the submittal package and supports DWR's conclusion.

Duplication or Conflicts with Federal Regulations

(Government Code Section 11346.2(b)(5) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues.

These agencies may adopt regulations different from the federal regulations upon a finding of one or more of the following justifications: (A) the differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment. It is not the intent of this paragraph to require the agency to artificially construct alternatives or to justify why it has not identified alternatives.)

These regulations neither duplicate nor conflict with federal regulations.