

**BUILDING STANDARDS COMMISSION**

2525 Natomas Park Drive, Suite 130  
Sacramento, California 95833  
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**Adoption of Statewide Regulations  
Allowing the Use of PEX Tubing**

**Notice of Preparation**

Prepared for the Lead Agency:

California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833

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Prepared with the assistance of:

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2022 J Street  
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Date: October 31, 2007<sup>1</sup>  
To: Responsible Agencies, Interested Parties, and Organizations  
Subject: Notice of Preparation and Initial Study  
Lead Agency: The California Building Standards Commission  
Contact: Ms. Valerie Namba, Senior Environmental Planner  
California Department of General Services, Real Estate Services Division  
Professional Services Branch, Environmental Services Division  
707 Third Street, Suite 3-400  
West Sacramento, CA 95605  
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### **Purpose of Notice**

The California Building Standards Commission will be the lead agency for preparation of an environmental impact report (EIR) for statewide regulations that would allow the use of cross-linked polyethylene (commonly abbreviated “PEX”) tubing as described in this Notice of Preparation (NOP). Responsible agencies, each of which will be relying on this EIR for the adoption of regulations, will be the Department of Housing and Community Development, Division of the State Architect, Office of Statewide Health Planning and Development, Department of Public Health, and the Department of Food and Agriculture. The purpose of the scoping process is to solicit the views of the responsible and affected agencies and interested members of the public. The principal goal of this NOP is to inform agencies and the public about issues related to the project and request information on the scope and content of the EIR. We encourage recipients of this notice to inform others who may have an interest or responsibility regarding the adoption of PEX regulations that this NOP is available for review.

### **Project Title**

Adoption of Statewide Plumbing Regulations Allowing the Use of PEX Tubing

**Project Location:** Statewide

### **Deadline for Submitting Comments**

Comments must be received no later than 5:00 p.m. on November 30, 2007.

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<sup>1</sup> Please note that an earlier administrative draft version of the Notice of Preparation may have been inadvertently distributed to a few recipients. This version, dated October 31, 2007, constitutes the formal Notice of Preparation for the PEX environmental review process. If you did receive an earlier version of this document please disregard it. Comments on the scope of issues the environmental document should address need to be based on this document.

### **Project Description**

The California Building Standards Commission proposes the adoption of new state plumbing code regulations that would allow the use of cross-linked polyethylene (PEX) tubing in various cold and hot water plumbing (including potable water) applications. PEX tubing is a high-density material that is an alternative to ferrous and non-ferrous piping for water distribution. The adoption of new regulations is considered a project as defined in Section 21065 of the California Environmental Quality Act (CEQA) and must therefore comply with the provisions of the Act.

The proposed regulations would apply to all occupancies, including commercial, residential, and institutional building construction, rehabilitation, and repair in all areas of the State. Residential buildings include single-family dwellings, apartment houses, hotels, and motels. Institutional buildings would include schools, hospitals, and other uses.

PEX tubing is currently allowed and is used in California for potable water pipe in hydronic heating systems and manufactured homes. For the majority of existing and residential buildings in California, potable water pipe is made of metal, though chlorinated polyvinyl chloride (CPVC) plastic pipe has recently been approved for use in residential buildings.

The project is limited to the consideration and possible adoption of plumbing regulations to allow use of this alternative water-distributing piping material in applications under the jurisdiction of all California cities, city and county, counties and state agencies. The EIR will not involve the assessment of any specific project that involves direct construction or modification to structures. Therefore, the environmental review process is not location-dependent relative to the boundaries of the State of California. In addition, the EIR will not evaluate the use of PEX/Aluminum/PEX (also known as PEX-AL-PEX).

The following table and text are excerpted from "The Express Terms for the Building Standards of the Building Standards Commission Regarding the Adoption of Amendments into the 2007 California Plumbing Code (CPC) California Code of Regulations, Title 24, Part 5." The proposed changes to the regulations are as follows, with proposed deletions shown in strikeout and proposed additions in underline.

<b>UPC TABLE 6-4</b>			
<b>Material</b>	<b>Water Distribution Pipe and Fittings</b>		<b>Building Supply Pipe and Fittings</b>
	<b>Hot</b>	<b>Cold</b>	
Asbestos – Cement			X
Brass	X	X	X
Copper	X	X	X
Cast Iron	X	X	X
CPVC	X	X	X
Galvanized Malleable Iron	X	X	X
Galvanized Wrought Iron	X	X	X
Galvanized Steel	X	X	X
PE			X

UPC TABLE 6-4			
Material	Water Distribution Pipe and Fittings		Building Supply Pipe and Fittings
	Hot	Cold	
PE-AL-PE	X	X	X
PEX	X	X	X
PEX-AL-PEX 1	X	X	X
PVC			X

1. [BSC, HCD, DSA] The use of PEX and PEX-AL-PEX in potable water supply systems is not adopted for applications under the authority of the California Building Standards Commission, the Division of State Architect and the Department of Housing and Community Development.

### 604.1

*Exceptions:*

~~(2) [For OSHPD 1, 2, 3 & 4] Use of PEX piping is not permitted for applications under the authority of the Office of Statewide Health Planning and Development.~~

~~(4) [For BSC] Use of PEX piping is not adopted for applications under the authority of the Department of Health Services and the Department of Food and Agriculture.~~

**604.11 PEX.** ~~[Not Adopted by BSC, HCD, DSA/SS, DHS, AGR & OSHPD 1, 2, 3 & 4]~~ Cross-linked polyethylene (PEX) tubing shall be marked with the appropriate standard designation(s) listed in Table 14-1 for which the tubing has been listed or approved. PEX tubing shall be installed in compliance with the provisions of this section.

**604.11.1 PEX Fittings.** ~~[Not Adopted by BSC, HCD, DSA/SS, DHS, AGR & OSHPD 1, 2, 3 & 4]~~ Metal insert fittings, metal compression fittings, and cold expansion fittings used with PEX tubing shall be manufactured to and marked in accordance with the standards for the fittings in Table 14-1.

**604.11.2 Water Heater Connections.** ~~[Not Adopted by BSC, HCD, DSA/SS, DHS, AGR & OSHPD 1, 2, 3 & 4]~~ PEX tubing shall not be installed within the first eighteen (18) inches (457mm) of piping connected to a water heater.

### ***Environmental Effects to be Examined in the Program EIR***

The purpose of an EIR is to examine a project for potentially significant environmental consequences and to identify measures that can reduce or avoid (mitigate) potential adverse impacts. The EIR will focus on aspects of the project with the potential to cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment. Environmental factors identified as important for the proposed adoption of statewide regulations allowing the use of PEX tubing including the following:

### **Water Quality**

The EIR will evaluate the potential for permeation of chemicals through PEX tubing, and the leaching of chemicals from PEX tubing.

### **Solid Waste**

The use of PEX tubing could result in an increase in solid waste generation if it is not recycled. Assuming PEX tubing is not recycled or somehow reused, it would likely be sent to a landfill for disposal. Therefore, the use of PEX tubing could potentially increase the volume of waste material requiring disposal in landfills. The EIR will evaluate this issue.

### **Air Quality**

The installation and repair of PEX tubing does not require the use of welding, primers, solvent-based adhesives, or glues, and this issue will be documented in the EIR. However, the manufacture and incineration of PEX tubing has the potential to release toxic compounds into the environment which may violate air quality standards, and these issues will be evaluated in the EIR. The EIR will also examine potential emissions of toxic smoke from PEX tubing in the event of fires.

### **Public Health**

The EIR will evaluate the formation of biofilm in PEX tubing. The term "biofilm" is used to describe a layer of microorganisms in an aquatic environment held together in a matrix attached to a surface. All forms of water distribution pipe, including PEX, contribute to biofilm formation. Biofilm in PEX piping could potentially contain Legionella. Because Legionella is a human pathogen, the growth of biofilm in PEX piping could cause a substantial adverse effect on human beings. The EIR will also examine the extent to which the use of PEX tubing may affect fire hazards.

In addition, other potentially adverse environmental impacts may arise as the proposed project is examined and evaluated and would also be addressed in the EIR. The purpose of this NOP is to encourage interested parties to submit recommendations on the scope, focus and content of the EIR to the lead agency for consideration.

This NOP is being circulated for a 30-day public review period. Because of time limits mandated by state law, comments should be submitted as soon as possible and must be received no later than November 30, 2007.

Please send written comments concerning the scope and content of the EIR to:

California Department of General Services, Real Estate Services Division  
Professional Services Branch, Environmental Services Division  
707 Third Street, Suite 3-400  
West Sacramento, CA 95605  
Attn: Valerie Namba, Senior Environmental Planner  
Telephone: (916) 376-1607  
Email: [valerie.namba@dgs.ca.gov](mailto:valerie.namba@dgs.ca.gov)

When responding to the NOP, please identify a contact person who would be available to answer any questions regarding your comments. Documents related to the proposed project are available for review at the DGS RESD address listed above.

DGS will be hosting several public scoping meetings to give the public an opportunity to appear and comment on the scope, focus, and content of the EIR. The public scoping meetings have been scheduled at the following locations and times:

<b>Public Scoping Meetings</b>				
City	Location	Address	Date	Time <sup>2</sup>
Sacramento	Public Meeting Room	915 Capital Mall Room 587 Sacramento, CA 95814 City Parking Lot at 10th & L Parking Garage at 9th & L	November 13	1–5 p.m.
San Diego	Public Auditorium	1350 Front Street Auditorium -Room B-109 San Diego, Ca 92101	November 14	9 a.m.–12 p.m.
Riverside	Cesar Chavez Community Room	2060 University Avenue Riverside, CA 92522	November 15	1–3 p.m.
Burbank	City Council Chamber	275 Olive Ave Second Floor Burbank, CA 91502	November 16	9 a.m.–1 p.m.
Redding	Redding Public Library	1100 Parkview Avenue Redding, CA 96001	November 19	1–3 p.m.
Fresno	Public Meeting Room	2550 Mariposa Mall Room 1036 Fresno, CA 93721	November 20	1–3 p.m.
Santa Clara	Redwood Room	Central Park Library 2635 Homestead Rd Santa Clara, CA 95051	November 29	1–5 p.m.

**NOTE:** The meeting rooms for the scoping meetings are accessible to people with disabilities. If translation services are needed or if additional accommodations for the disabled are needed, please notify Ms. Valerie Namba (at 916-376-1607 or [valerie.namba@dgs.ca.gov](mailto:valerie.namba@dgs.ca.gov)) no later than 2 business days prior to the meeting.

Those persons wishing to participate further in the CEQA process or learn more about the agenda for each of the proposed meetings can contact Valerie Namba at (916) 376-1607 or [valerie.namba@dgs.ca.gov](mailto:valerie.namba@dgs.ca.gov).

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<sup>2</sup> **Start times are firm, but meetings may conclude early based upon attendance.**