

# Lead Free – January 4, 2014

## General FAQs

### **What is the Reduction of Lead in Drinking Water Act?**

The Reduction of Lead in Drinking Water Act is a federal law that amends the Safe Drinking Water Act (SDWA) and sets new, lower standards for the amount of lead permissible in plumbing products that come into contact with potable (drinkable) water. The U.S. Environmental Protection Agency (EPA) has primary responsibility for interpreting the SDWA with individual states using health or plumbing codes or other standards consistent with the SDWA and EPA regulations to enforce those standards.

### **What does the law mandate, exactly?**

The new law reduces the permissible levels of lead in the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures to a weighted average of not more than 0.25%. In addition, the law retains the 0.20% lead limit for solders and flux first implemented in 1986 and stipulates a method for calculating the weighted average lead content. Products that meet this standard are referred to in the law as "Lead Free."

### **When does the law go into effect?**

The Reduction of Lead in Drinking Water Act goes into effect on January 4, 2014. However, new lead content restrictions are already in effect in California and Vermont since January 1, 2010 and in Maryland since January 2012. They will go into effect in Louisiana starting January 1, 2013.

### **What is the driving force behind the new law?**

Regulatory efforts at the state and federal level to minimize the lead content in drinking water are currently focused on reducing the lead content in drinking water system components and all other products that come in contact with potable water.

### **Are there any exceptions to the law?**

The new standard does not apply to pipes, pipe fittings, plumbing fittings or fixtures that are used exclusively for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where water is not anticipated to be used for human consumption. The law also specifically excludes toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger.

### **How does the law affect me?**

The law makes it illegal to sell or install pipes, fittings valves, and fixtures in applications providing water for human consumption which exceeds the 0.25% weighted average limit for

wetted surfaces. That means whether you sell or install these products, you will need to supply products compliant with the new law.

### **So, what happens on January 4, 2014?**

It will be illegal to sell or install products for use in potable water applications that are not Lead Free\*. This will dramatically reduce the available market for products made with traditional materials. Manufacturers are quickly working to bring their products into compliance, and obtaining the product certifications necessary to comply with specific federal and state regulations.

### **Who enforces this law?**

The U.S. EPA is tasked with implementing this law, but primary responsibility for enforcing the law is left to the states. Most states pass responsibility to cities, towns, and municipal utilities, which use health and plumbing codes to drive enforcement.

### **Do Lead Free products need to be third-party certified?**

California requires product certification by an independent third-party laboratory and certifying to NSF 61 standards is becoming common. As of today, Vermont, Maryland, Louisiana and the Federal Legislation do not require third-party certification.

### **How can I tell if a product is Lead Free\*?**

There is currently no industry standardization regarding the marking of Lead Free\* products. Manufacturers may vary in the ways in which they mark their products. Check the product nameplate, hang tag, body casting, part number and/or product packaging for a Lead Free\* designation. If in doubt, please consult the manufacturer for further clarification.

### **What if I don't comply?**

Failure to comply with the new law and these codes can result in fines or lawsuits.

*\*Lead Free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content  $\leq 0.25\%$  per the Safe Drinking Water Act (Sec. 1417) amended 1-4-2011 and other equivalent state regulations.*

## **Pipe and Fitting Specific FAQs**

### **It has been stated that a pipe size 2" and less must meet the law. What about larger pipe sizes?**

The Safe Drinking Water Act covers water collection all the way to the tap regardless of pipe diameter.

### **Are mop/service sink faucets or laundry valves exempt?**

Mop sink faucets and laundry valves are not specifically exempt and might not be anticipated to provide water for human consumption. If there is concern that these products might provide drinking water, they would be subject to interpretation by the local Authority Having Jurisdiction.

**If a brass well tank tee needs to be changed, but a brass insert fitting connecting the poly pipe to the tee must be disconnected, can the brass insert fitting be re-connected?**

This is an interpretation issue that would best be answered by the local Authority Having Jurisdiction.

**Are components in the hot water system also covered by the new law?**

The law covers water intended for human consumption, if it is anticipated to be drinking water, it will be included. Specific cases should be discussed with the local Authority Having Jurisdiction.

**Do water meter, sub-water meters, or meter setting devices have to meet this requirement also?**

The law covers water intended for human consumption, the application of the water passing through the meters or setting devices would be a consideration. Specific cases should be discussed with the local Authority Having Jurisdiction.

**Are galvanized products affected by this regulation?**

The changes being discussed are targeting brass products and reducing lead contents, therefore, this presentation has only considered the changes in brass products.

**Are backflow preventers being considered to isolate potable from non-potable systems or branches?**

Backflow prevention devices are required by the model codes to protect the potable water supply from hazardous conditions. Consult with local jurisdictions to determine if they may be considering increased application of these products.

**When a water main has a branch feeding the potable supply and another branch feeding a hydronic boiler heating system, would the backflow preventer require compliance to no-lead?**

Backflow prevention to devices such as hydronic heating boilers are prescribed by the plumbing code adopted by the jurisdiction. Consult with the local Authority Having Jurisdiction to determine the local requirements for these products.

## **Appliances, Fixtures and Devices FAQs**

**Is there a list of specific appliances that are exempt or a place to get this information?**

The language of the law provides a list of exempt items:

"(4) EXEMPTIONS.—The prohibitions in paragraphs (1) and (3) shall not apply to—  
(A) pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; or  
(B) toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches in diameter or larger."

Interpretation of this wording is open to the Authority Having Jurisdiction.

**What type of valve should be used when a 4" main supplies a high rise or multi-family?**

The Safe Drinking Water Act covers water collection all the way to the tap regardless of pipe diameter or if in a commercial or residential structure. If the 4" main supplies drinking water, LF requirements would apply.

**Are dishwashers considered devices that supply drinking water?**

Dishwashers are not specifically listed as an exempt product and as such should be discussed with the Authority Having Jurisdiction.

**Shower valves listed as an exemption; does this also include shower heads as exempt devices?**

Shower valves are specifically listed in the Senate Bill language, shower heads are not. While it seems intuitive that shower heads would be included, assuming this would not be wise. It would be best to verify any items that are believed to be in question with the local Authority Having Jurisdiction.

**Are hose thread valves exempt or would they be considered products that are anticipated to convey water for human consumption?**

Exemption A states:

"(A) pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for non-potable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; Hose thread valves are not specifically exempt. If they are used exclusively for nonpotable services, then the exemption could apply. In any case, the application should be verified with the Authority Having Jurisdiction."

**Do fixtures that connect to potable water lines but do not convey water meant for drinking (chemical dilution systems, dishwashers) fall under the "not anticipated to convey water For human consumption" exemptions?**

Piping that is used exclusively for non-potable uses is exempt. Interpretation of the document will ultimately lie with the local Authority Having Jurisdiction and as such, communication with these representatives is critical in determining acceptability of installed products.

**Will electronic (self-closing) sensor faucets used in public restrooms be affected?**

As these devices are not specifically exempted, it would be reasonable to assume they will be included if it is anticipated that they may provide drinking water. Check with the local jurisdiction for their compliance requirements.

**How much more expensive at the manufacturing level is lead free going to be?**

There is no information available related to costs as this would be an issue with anti-trust regulations and is also a manufacturer controlled variable.

**What products now contain the most lead?**

There is no information available as to what currently contains the most lead, today's products are in compliance with the current definition of "lead-free".

**Will the replacement of lead with other materials result in a harder or more brittle material?**

While the replacement alloys have individual characteristics that may differ from the previous alloys, much research has been done to provide materials with similar characteristics and that provide similar performance. If there are questions about specific alloys, please consult the manufacturer utilizing that alloy for additional information.

**Will new brass alloy threaded fittings need a different grade of tape dope or pipe joint compound?**

It is not anticipated that a change in sealing compound will be necessary provided the compound is compatible with the materials and delivered product. Check with the manufacturer of the sealing compound and the manufacturer of the fitting to verify this compatibility.

**What if anything is being done to restore the natural anti-bacterial properties that are being lost by removing the lead?**

Water quality is regulated and tested by municipalities on a regular basis. Those considerations were not a part of this program on reduced lead content in brass.

## **Complying with the Law**

**Is there a timeframe in which existing installed products must be replaced with lead free?**

The law requires new products, new installations, and repair work to comply with the regulation, there is no requirement to remove or retrofit existing products.

**If you repair a system or have a renovation that adds to a system, do you have to bring the entire system up to the new law?**

Materials installed must comply with the law after the effective date. There is no requirement to remove existing, functioning devices and replace with compliant products.

**What will be the enforcement practice for compliance and what does California currently do now?**

Enforcement practices will be through local jurisdictions either by construction inspections of products or water sampling at the tap. California currently requires independent third party verification that products comply with listed standards, local authorities may then verify the products compliance. In addition the California Department of Toxic Substances Control is to conduct annual field testing for compliance with the regulation.

**Does the federal law itself specify that the product must be third party certified?**

No, at this time the Federal Law does not require this but state, local jurisdictions, or national codes may require third party certification. Please check with the Authority Having Jurisdiction to ensure compliance.

**It looks like based on interpretation of cross-over uses that wholesalers will be more protected from fines or enforcement but contractors will have a greater risk exposure, is this correct?**

The Safe Drinking Water Act deems it unlawful to do the following:

"(A) for any person to introduce into commerce any pipe, or any pipe or plumbing fitting or fixture, that is not lead free, except for a pipe that is used in manufacturing or industrial processing;

(B) for any person engaged in the business of selling plumbing supplies, except manufacturers, to sell solder or flux that is not lead free; or (C) for any person to introduce into commerce any solder or flux that is not lead free unless the solder or flux bears a prominent label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption."

Determining who has greater risk is not always guaranteed, perhaps the contractor is the contact dealing with the consumer but perhaps not. All parties should work to ensure compliance with the regulations.

**Is there a federal resource that can give an 'official' interpretation?**

Official interpretations will be provided by the EPA and are expected after implementation of the law, January 4, 2014.

**Does the lead free act take effect universally in all states on Jan 4 2014, or does this require adoption by local/state codes similar to current adoption/modification of model national codes?**

The law is a modification of the Safe Drinking Water Act and as such will apply equally across the country. There is no local adoption or modification needed.

**What prompted this new legislation?**

The change was prompted by several states enacting different reduced lead levels in products. The industry acted to promote a federal law to unify the new level nationally allowing standardized manufacturing of products to comply.

## Appendix B: Sample Retail Service Agreement

- I. **PURPOSE.** The NAME OF WATER SYSTEM is responsible for protecting the drinking water supply from contamination or pollution which could result from improper system construction or configuration on the retail connection owner's side of the meter. The purpose of this service agreement is to notify each customer of the restrictions which are in place to provide this protection. The public water system enforces these restrictions to ensure the public health and welfare. Each retail customer must sign this agreement before the NAME OF WATER SYSTEM will begin service. In addition, when service to an existing retail connection has been suspended or terminated, the water system will not re-establish service unless it has a signed copy of this agreement.
- II. **RESTRICTIONS.** The following unacceptable practices are prohibited by State regulations.
- A. No direct connection between the public drinking water supply and a potential source of contamination is permitted. Potential sources of contamination shall be isolated from the public water system by an air-gap or an appropriate backflow prevention device.
  - B. No cross-connection between the public drinking water supply and a private water system is permitted. These potential threats to the public drinking water supply shall be eliminated at the service connection by the installation of an air-gap or a reduced pressure-zone backflow prevention device.
  - C. No connection which allows water to be returned to the public drinking water supply is permitted.
  - D. No pipe or pipe fitting which contains more than 0.25% lead may be used for the installation or repair of plumbing at any connection which provides water for human use.
  - E. No solder or flux which contains more than 0.2% lead can be used for the installation or repair of plumbing at any connection which provides water for human use.
- III. **SERVICE AGREEMENT.** The following are the terms of the service agreement between the NAME OF WATER SYSTEM (the Water System) and NAME OF CUSTOMER (the Customer).
- A. The Water System will maintain a copy of this agreement as long as the Customer and/or the premises is connected to the Water System.
  - B. The Customer shall allow his property to be inspected for possible cross-connections and other potential contamination hazards. These inspections shall be conducted by the Water System or its designated agent prior to initiating new water service; when there is reason to believe that cross-connections or other potential contamination hazards exist; or after any major changes to the private water distribution facilities. The inspections shall be conducted during the Water System's normal business hours.
  - C. The Water System shall notify the Customer in writing of any cross-connection or other potential contamination hazard which has been identified during the initial inspection or the periodic reinspection.
  - D. The Customer shall immediately remove or adequately isolate any potential cross-connections or other potential contamination hazards on his premises.
  - E. The Customer shall, at his expense, properly install, test, and maintain any backflow prevention device required by the Water System. Copies of all testing and maintenance records shall be provided to the Water System.
- IV. **ENFORCEMENT.** If the Customer fails to comply with the terms of the Service Agreement, the Water System shall, at its option, either terminate service or properly install, test, and maintain an appropriate backflow prevention device at the service connection. Any expenses associated with the enforcement of this agreement shall be billed to the Customer.

CUSTOMER'S SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

Texas Commission on Environmental Quality

Customer Service Inspection Certificate

Form TCEQ-20699 - Instructions



**General Instructions:**

The purpose of form TCEQ-20699 is to certify the identification and prevention of cross connections, potential contaminant hazards, and illegal lead materials as per *Title 30 of the Texas Administrative Code(30 TAC) 290.46(j)(4)*. The form can be completed one of two ways:

1. The form can be printed and completed manually, or;
2. The form can be completed electronically through an electronic medium (tablet, laptop computer, etc.). The yellow areas on the form can be completed electronically.

*NOTE: The form is intended to be completed on-site while the inspection is occurring. If the form is completed electronically, the electronic device must also be on-site for proper use of this form.*

The form must be printed and signed by the Inspector that performed the work. The hardcopy original or a copy must be provided to the Public Water System (PWS) for record keeping purposes as specified in *30 TAC 290.46(f)(3)(E)(iv)*.

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**Specific Instructions:**

Please follow these instructions when completing Form TCEQ-20699:

1. Check boxes: If completing the form electronically, all check boxes are highlighted in yellow and can be selected to make the desired indication. Selecting a box will insert an “X” in the box.
2. Remarks: The “Remarks” section of the form is expandable, which means your final report can be more than one page. Make sure to include all pages when submitting to the local water purveyor.



**Texas Commission on Environmental Quality  
Customer Service Inspection Certificate**

Name of PWS:	
PWS ID #:	
Location of Service:	

Reason for Inspection:      New construction .....    
    Existing service where contaminant hazards are suspected .....    
    Major renovation or expansion of distribution facilities .....

I \_\_\_\_\_, upon inspection of the private water distribution facilities connected to the aforementioned public water supply do hereby certify that, to the best of my knowledge:

Compliance	Non-Compliance		
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(1)	No direct connection between the public drinking water supply and a potential source of contamination exists. Potential sources of contamination are isolated from the public water system by an air gap or an appropriate backflow prevention assembly in accordance with Commission regulations.
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(2)	No cross-connection between the public drinking water supply and a private water system exists. Where an actual air gap is not maintained between the public water supply and a private water supply, an approved reduced pressure principle backflow prevention assembly is properly installed and a service agreement exists for annual inspection and testing by a certified backflow prevention assembly tester.
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(3)	No connection exists which would allow the return of water used for condensing, cooling or industrial processes back to the public water supply.
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(4)	No pipe or pipe fitting which contains more than 8.0% lead exists in private water distribution facilities installed on or after July 1, 1988 and prior to January 4, 2014.
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(5)	Plumbing installed after January 4, 2014 bears the expected labeling indicating ≤0.25% lead content. If not properly labeled, please provide written comment.
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	(6)	No solder or flux which contains more than 0.2% lead exists in private water distribution facilities installed on or after July 1, 1988.

I further certify that the following materials were used in the installation of the private water distribution facilities:

Service lines;      Lead        Copper        PVC        Other    
 Solder;              Lead        Lead Free       Solvent Weld        Other

I recognize that this document shall become a permanent record of the aforementioned Public Water System and that I am legally responsible for the validity of the information I have provided.

Remarks:	

Signature of Inspector:	Registration Number:	
Title:	Type of Registration:	
Date:		