



## Reference Guide for Public Water Systems Lead and Copper Rule Proposal Comparison

EPA’s proposed Lead and Copper Rule (LCR) includes a suite of actions to reduce lead exposure in drinking water where it is needed the most. The proposed rule will identify the most at-risk communities and ensure systems have plans in place to rapidly respond by taking actions to reduce elevated levels of lead in drinking water. For more information on the proposed rule, please visit: [www.epa.gov/safewater/LCRproposal](http://www.epa.gov/safewater/LCRproposal)

The following table compares the major differences between the current Lead and Copper Rule (LCR) and proposed Lead and Copper Rule revisions (LCRR). In general, requirements that are unchanged are not listed. For existing rule requirements please visit: <https://www.epa.gov/dwreginfo/lead-and-copper-rule>

CURRENT LCR	PROPOSED LCRR
<i>Action Level (AL) and Trigger Level (TL)</i>	
<ul style="list-style-type: none"> <li>90<sup>th</sup> percentile (P90) level above lead AL of 15 µg/L or copper AL of 1.3 mg/L requires additional actions.</li> </ul>	<ul style="list-style-type: none"> <li>90<sup>th</sup> percentile (P90) level above lead AL of 15 µg/L or copper AL of 1.3 mg/L requires more actions than the current rule.</li> <li>Defines trigger level (TL) of P90 &gt; 10 and ≤15 µg/L that triggers additional planning, monitoring, and treatment requirements.</li> </ul>
<i>Lead and Copper Tap Monitoring</i>	
<p><b>Sample Site Selection</b></p> <ul style="list-style-type: none"> <li>Prioritizes collection of samples from sites with sources of lead in contact with drinking water.</li> <li>Highest priority given to sites served by copper pipes with lead solder installed after 1982 but before the ban on lead pipes and/or lead service lines (LSLs).</li> <li>Systems must collect 50% of samples from LSLs, if available.</li> </ul>	<p><b>Sample Site Selection</b></p> <ul style="list-style-type: none"> <li>Changes priorities for collection of samples with a greater focus on lead service lines.</li> <li>Prioritizes collecting samples from sites served by LSLs.</li> <li>No distinction in prioritization of copper pipes with lead solder by installation date.</li> <li>Systems must collect all samples from sites served by LSLs, if available.</li> </ul>
<p><b>Collection Procedure</b></p> <ul style="list-style-type: none"> <li>Requires collection of a one-liter sample after water has sat stagnant for a minimum of 6 hours.</li> </ul>	<p><b>Collection Procedure</b></p> <ul style="list-style-type: none"> <li>Adds requirement that samples must be collected in wide-mouth bottles.</li> <li>Prohibits sampling instructions that include recommendations for aerator cleaning/removal and pre-stagnation flushing prior to sample collection.</li> </ul>

CURRENT LCR	PROPOSED LCRR
<p><b>Monitoring Frequency</b></p> <ul style="list-style-type: none"> <li>• Samples are analyzed for both lead and copper.</li> <li>• Systems must collect standard number of samples based on population semi-annually unless they qualify for reduced monitoring.</li> <li>• Systems can qualify for annual or triennial monitoring at reduced number of sites. Schedule based on number of consecutive years meeting the following criteria:               <ul style="list-style-type: none"> <li>○ Serves <math>\leq 50,000</math> people and <math>\leq</math> lead &amp; copper ALs.</li> <li>○ Serves any population size, meets State-specified optimal water quality parameters (OWQPs), and <math>\leq</math> lead AL.</li> </ul> </li> <li>• Triennial monitoring also applies to any system with P90 and copper 90<sup>th</sup> percentile levels <math>\leq 0.005</math> mg/L and <math>\leq 0.65</math> mg/L, respectively, for 2 consecutive 6-month monitoring periods.</li> <li>• 9-year monitoring waiver available to systems serving <math>\leq 3,300</math>.</li> </ul>	<p><b>Monitoring Frequency</b></p> <ul style="list-style-type: none"> <li>• Some samples may be analyzed for lead only when lead monitoring is conducted more frequently than copper.</li> <li>• Copper follows the same criteria as the current rule.</li> <li>• Lead monitoring schedule is based on P90 level for all systems as follows:               <ul style="list-style-type: none"> <li>○ <b>P90 &gt; 15 <math>\mu\text{g/L}</math>:</b> Semi-annually at the standard number of sites.</li> <li>○ <b>P90 &gt; 10 to 15 <math>\mu\text{g/L}</math>:</b> Annually at the standard number of sites.</li> <li>○ <b>P90 <math>\leq 10</math> <math>\mu\text{g/L}</math>:</b> <ul style="list-style-type: none"> <li>▪ Annually and triennially at reduced number of sites using same criteria as current rule except copper 90<sup>th</sup> percentile level is not considered.</li> <li>▪ Every 9 years based on current rule requirements for a 9-year monitoring waiver.</li> </ul> </li> </ul> </li> </ul>
<b>Corrosion Control Treatment (CCT) and Water Quality Parameters (WQPs)</b>	
<p><b>CCT</b></p> <ul style="list-style-type: none"> <li>• Systems serving <math>&gt; 50,000</math> people were required to install treatment by January 1, 1997 with limited exception.</li> <li>• Systems serving <math>\leq 50,000</math> that exceed lead and/or copper AL are subject to CCT requirements (e.g., CCT recommendation, study if required by Primacy Agency, CCT installation). Can discontinue CCT steps if no longer exceed both ALs for two consecutive 6-month monitoring periods.</li> <li>• Systems must operate CCT to meet any Primacy Agency-designated OWQPs that define optimal CCT.</li> <li>• There is no requirement for systems to re-optimize.</li> </ul>	<p><b>CCT</b></p> <ul style="list-style-type: none"> <li>• Specifies CCT requirements for systems with P90 level <math>&gt; 10</math> to <math>\leq 15</math> <math>\mu\text{g/L}</math>:               <ul style="list-style-type: none"> <li>○ <b>No CCT:</b> must conduct a CCT study if required by Primacy Agency.</li> <li>○ <b>With CCT:</b> must follow the steps for re-optimizing CCT, as specified in the rule.</li> </ul> </li> <li>• Systems with P90 level <math>&gt; 15</math> <math>\mu\text{g/L}</math>:               <ul style="list-style-type: none"> <li>○ <b>No CCT:</b> must complete CCT installation regardless of their subsequent P90 levels.</li> <li>○ <b>With CCT:</b> must re-optimize CCT.</li> </ul> </li> <li>• Community water systems (CWSs) serving <math>\leq 10,000</math> people and non-transient water systems (NTNCWSs) can select an option other than CCT to address lead. <i>See Small System Flexibility.</i></li> </ul>
<p><b>CCT Options:</b> Includes alkalinity and pH adjustment, calcium hardness adjustment, and phosphate or silicate-based corrosion inhibitor.</p>	<p><b>CCT Options:</b> Removes calcium hardness as an option and specifies any phosphate inhibitor must be orthophosphate.</p>

CURRENT LCR	PROPOSED LCRR
<p><b>Regulated WQPs:</b></p> <ul style="list-style-type: none"> <li>• <b>No CCT:</b> pH, alkalinity, calcium, conductivity, temperature, orthophosphate (if phosphate-based inhibitor is used), silica (if silica-based inhibitor is used).</li> <li>• <b>With CCT:</b> pH, alkalinity, and based on type of CCT either orthophosphate, silica, or calcium.</li> </ul>	<p><b>Regulated WQPs:</b></p> <ul style="list-style-type: none"> <li>• Eliminates WQPs related to calcium hardness (i.e., calcium, conductivity, and temperature).</li> </ul>
<p><b>WQP Monitoring</b></p> <ul style="list-style-type: none"> <li>• Systems serving <math>\geq 50,000</math> people must conduct regular WQP monitoring at entry points and within the distribution system.</li> <li>• Systems serving <math>\leq 50,000</math> people conduct monitoring only in those periods <math>&gt;</math> lead or copper AL.</li> <li>• Contains provisions to sample at reduced number of sites in distribution system less frequency for all systems meeting their OWQPs.</li> </ul>	<p><b>WQP Monitoring</b></p> <ul style="list-style-type: none"> <li>• Systems serving <math>\geq 50,000</math> people must conduct regular WQP monitoring at entry points and within the distribution system.</li> <li>• Systems serving <math>\leq 50,000</math> people must continue WQP monitoring until they no longer <math>&gt;</math> lead and/or copper AL for two consecutive 6-month monitoring periods.</li> <li>• To qualify for reduced WQP distribution monitoring, P90 must be <math>\leq 10 \mu\text{g/L}</math> and the system must meet its OWQPs.</li> </ul>
<p><b>Sanitary Survey Review:</b></p> <ul style="list-style-type: none"> <li>• Treatment must be reviewed during sanitary surveys, no specific requirement to assess CCT or WQPs.</li> </ul>	<p><b>Sanitary Survey Review:</b></p> <ul style="list-style-type: none"> <li>• CCT and WQP data must be reviewed during sanitary surveys against most recent CCT guidance issued by EPA.</li> </ul>
<p><b>Find and Fix:</b> No required follow-up samples or additional actions if an individual sample exceeds <math>15 \mu\text{g/L}</math>.</p>	<p><b>Find and Fix:</b> If individual tap sample <math>&gt; 15 \mu\text{g/L}</math>, systems must:</p> <ul style="list-style-type: none"> <li>• Collect a follow-up sample at each location <math>&gt; 15 \mu\text{g/L}</math>.</li> <li>• Conduct WQP monitoring at or near the site <math>&gt; 15 \mu\text{g/L}</math>.</li> <li>• Perform needed corrective action.</li> </ul>
<i>LSL Inventory and LSLR Plan</i>	
<p><b>Initial LSL Program Activities:</b></p> <ul style="list-style-type: none"> <li>• Systems were required to complete a materials evaluation by the time of initial sampling. No requirement to update materials evaluation.</li> <li>• No LSLR plan is required.</li> </ul>	<p><b>Initial LSL Program Activities:</b></p> <ul style="list-style-type: none"> <li>• All systems must develop an LSL inventory or demonstrate absence of LSLs within first 3 years of final rule publication.</li> <li>• LSL inventory must be updated annually.</li> <li>• All systems with known or possible LSLs must develop an LSLR plan.</li> </ul>

CURRENT LCR	PROPOSED LCRR
<p><b>LSLR:</b></p> <ul style="list-style-type: none"> <li>• Systems with LSLs with P90 &gt; 15 µg/L after CCT installation must annually replace ≥7% of number of LSLs in their distribution system when the lead action level is first exceeded.</li> <li>• Systems must replace the LSL portion they own and offer to replace the private portion at the owner’s expense.</li> <li>• Full LSLR, partial LSLR, and LSLs with lead sample results ≤15 µg/L (“test-outs”) count toward the 7% replacement rate.</li> <li>• Systems can discontinue LSLR after 2 consecutive 6-month monitoring periods ≤ lead AL.</li> </ul>	<p><b>LSLR:</b></p> <ul style="list-style-type: none"> <li>• Rule specifies replacement programs based on P90 level for CWSs serving &gt; 10,000 people:               <ul style="list-style-type: none"> <li>○ If P90 &gt; 15 µg/L: Must fully replace 3% of LSLs per year (mandatory replacement) for 4 consecutive 6-month monitoring periods.</li> <li>○ If P90 &gt; 10 to 15 µg/L: Implement an LSLR program with replacement goals in consultation with the Primacy Agency for 2 consecutive 1-year monitoring periods.</li> </ul> </li> <li>• Small CWSs and NTNCWSs that select LSLR as their compliance option must complete LSLR within 15 years if P90 &gt; 15 µg/L. <i>See Small System Flexibility.</i></li> <li>• Annual LSLR rate is based on number of LSLs when the system first exceeds the action level plus the current number of service lines of unknown materials.</li> <li>• Only full LSLR (both customer-owned and system-owned portion) count toward mandatory rate or goal-based rate.</li> <li>• All systems must replace their portion of an LSL if notified by consumer of private side replacement within 3 months of the private replacement.</li> <li>• Following each LSLR, systems must:               <ul style="list-style-type: none"> <li>○ Provide pitcher filters/cartridges to each customer for 3 months after replacement. Must be provided within 24 hours for full and partial LSLRs.</li> <li>○ Collect a lead tap sample at locations served by replaced line within 3 to 6 months after replacement.</li> </ul> </li> </ul>
<p><b>LSL-Related Outreach:</b></p> <ul style="list-style-type: none"> <li>• When water system plans to replace the portion it owns, it must offer to replace customer-owned portion at owner’s expense.</li> <li>• If system replaces its portion only:               <ul style="list-style-type: none"> <li>○ Provide notification to affected residences within 45 days prior to replacement on possible elevated short-term lead levels and measures to minimize exposure.</li> </ul> </li> </ul>	<p><b>LSL-Related Outreach:</b></p> <ul style="list-style-type: none"> <li>• Inform consumers annually that they are served by LSL or service line of unknown material.</li> <li>• Systems subject to goal-based program must:               <ul style="list-style-type: none"> <li>○ Conduct targeted outreach that encourages consumers with LSLs to participate in the LSLR program.</li> <li>○ Conduct an additional outreach activity if they fail to meet their goal.</li> </ul> </li> </ul>

CURRENT LCR	PROPOSED LCRR
<ul style="list-style-type: none"> <li>○ Include offer to collect lead tap sample within 72 hours of replacement.</li> <li>○ Provide test results within 3 business days after receiving results.</li> </ul>	<ul style="list-style-type: none"> <li>● Systems subject to mandatory LSLR include information on LSLR program in public education (PE) materials that are provided in response to P90 &gt; AL.</li> </ul>
<i>Small System Flexibility</i>	
<p>No provisions for systems to elect an alternative treatment approach but sets specific requirements for CCT and LSLR.</p>	<p>Allows CWSs serving <math>\leq 10,000</math> people and all NTNCWSs with P90 &gt; 10 <math>\mu\text{g/L}</math> to elect their approach to address lead levels at P90 &gt; 15 <math>\mu\text{g/L}</math> with Primacy Agency approval:</p> <ul style="list-style-type: none"> <li>● Systems can choose CCT, LSLR, or provision and maintenance of point-of-use devices.</li> <li>● NTNCWSs can also elect to replace all lead-bearing materials.</li> </ul>
<i>Public Education and Outreach</i>	
<ul style="list-style-type: none"> <li>● All CWSs must provide education material in the annual Consumer Confidence Report (CCR).</li> <li>● Systems with P90 &gt; AL must provide public education and outreach (PE) to customers about lead sources, health effects, measures to reduce lead exposure, and additional information sources.</li> <li>● Systems must provide lead consumer notice to individuals served at tested taps within 30 days of learning results.</li> </ul>	<ul style="list-style-type: none"> <li>● CWSs must provide updated health effects language and information regarding LSLR program in the CCR.</li> <li>● If P90 &gt; AL:               <ul style="list-style-type: none"> <li>○ Current PE requirements apply.</li> <li>○ Systems must notify customers of P90 &gt; AL within 24 hours.</li> </ul> </li> <li>● In addition, CWSs must:               <ul style="list-style-type: none"> <li>○ Improve public access to lead information including LSL locations and respond to requests for LSL information.</li> <li>○ Deliver notice and educational materials to customers during water-related work that could disturb LSLs.</li> <li>○ Provide increased information to healthcare providers.</li> <li>○ Provide lead consumer notice to customers whose individual tap sample is &gt; 15 <math>\mu\text{g/L}</math> within 24 hours.</li> </ul> </li> <li>● <i>Also see LSL-Related Outreach in LSLR section of table.</i></li> </ul>
<i>Change in Source or Treatment</i>	
<p>Systems on a <b>reduced</b> tap monitoring schedule must obtain prior Primacy Agency approval before changing their source or treatment.</p>	<p>Systems on <b>any</b> tap monitoring schedule must obtain prior Primacy Agency approval before changing their source or treatment.</p>
<i>Source Water Monitoring and Treatment</i>	

CURRENT LCR	PROPOSED LCRR
<ul style="list-style-type: none"> <li>• Periodic source water monitoring is required for systems with:               <ul style="list-style-type: none"> <li>○ Source water treatment; or</li> <li>○ P90 &gt; AL and no source water treatment.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Primacy Agencies can waive continued source water monitoring if the:               <ul style="list-style-type: none"> <li>○ System has already conducted source water monitoring for a previous P90 &gt; AL;</li> <li>○ Primacy Agency has determined that source water treatment is not required; <i>and</i></li> <li>○ System has not added any new water sources.</li> </ul> </li> </ul>
<b>Lead in Drinking Water at Schools and Child Care Facilities</b>	
<ul style="list-style-type: none"> <li>• Does not include separate testing and education program for CWSs at schools and child care facilities.</li> <li>• Schools and child cares that are classified as NTNCWSs must sample for lead and copper.</li> </ul>	<ul style="list-style-type: none"> <li>• CWSs must conduct lead in drinking water testing and PE at 20% of K-12 schools and licensed child cares in service area every year.</li> <li>• Sample results and PE must be provided to each sampled school/child care, Primacy Agency and local or State health department.</li> <li>• Excludes facilities built after January 1, 2014.</li> </ul>
<b>Primacy Agency Reporting</b>	
<p>Primacy Agencies must report information to EPA that includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• All P90 levels for systems serving &gt; 3,300 people, and only levels &gt; 15 µg/L for smaller systems.</li> <li>• Systems that are required to initiate LSLR and the date replacement must begin.</li> <li>• Systems for which optimal corrosion control treatment (OCCT) has been designated.</li> </ul>	<p>Expands current requirements to include:</p> <ul style="list-style-type: none"> <li>• All P90 values for all system sizes.</li> <li>• The current number of LSLs and service lines of unknown material for every water system.</li> <li>• OCCT status of all systems including Primacy Agency-specified OWQPs.</li> </ul>