

## CLEAN WATER ACT | 1972

*Works to monitor water quality standards and control discharge from point sources*

**GOVERNING BODY:** EPA

**AMENDMENTS:** 1977, 1987 (original Federal Water Pollution Act passed 1948)

**POWER TO REGULATE LEAD:** The power to set water quality standards, which are monitored by the states and the EPA. States can classify bodies of water by designated use and create a plan to make sure water meets the standards for use. The EPA must approve this plan set by the states. The CWA also included Code 301, which made the discharge of pollutants from point sources illegal without an NPDES permit. These permits must be renewed every five years.

**SUCCESSSES:** The regulation of mine drainage, as well as reducing pollution that enters lakes and rivers from point sources.

**FAILURES:** Include a shortcoming of assessment, as only half of US waters have been assessed to date. Also, groundwater discharge isn't consistently regulated, and the CWA does not regulate nonpoint source pollution at all.

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  3. US EPA, OW. "What EPA Is Doing to Reduce the Adverse Impacts of Surface Coal Mining in Appalachia." Overviews and Factsheets, July 1, 2016. <https://www.epa.gov/sc-mining/what-epa-doing-reduce-adverse-impacts-surface-coal-mining-appalachia>.
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  5. Federal Register. "Interpretive Statement on Application of the Clean Water Act National Pollutant Discharge Elimination System Program to Releases of Pollutants From a Point Source to Groundwater," April 23, 2019. <https://www.federalregister.gov/documents/2019/04/23/2019-08063/interpretive-statement-on-application-of-the-clean-water-act-national-pollutant-discharge>.
  6. Minnesota Department of Health. "Lead in Soil." MN Dept. of Health, April 26, 2019. <https://www.health.state.mn.us/communities/environment/hazardous/docs/leadinsoil.pdf>.
  7. "How does mine drainage occur?" USGS.gov. Accessed January 4, 2023. <https://www.usgs.gov/faqs/how-does-mine-drainage-occur>.

## SAFE DRINKING WATER ACT | 1974

*Regulation of water supply and drinking water quality*

**GOVERNING BODY:** EPA

**AMENDMENTS:** 1986 (increased EPA power and regulations ), 1996 (increased funding, regulations, education)

**POWER TO REGULATE LEAD:** The “Primary Drinking Water Regulations” include regulations on water contamination and treatment, while “Secondary Drinking Water Regulations” include regulations on non-health related qualities of drinking water or aesthetic effects. This is supplemented by a mandated report and public notification of contamination in water supply to release for public use as well as academia-intended purposes.

**SUCCESSSES:** The USA saw a *threefold* increase in the number of contaminants being regulated. This reduced the risk of naturally occurring chemicals, including microbial and chemical contamination, and improved taste, odor, and appearance of drinking water on a national level. The act also reduced corrosion in pipes. Overall, these benefits lifted the economic burden off many constituents, including the costs of boiling water, buying bottled water, purchasing a water filter, etc.

**FAILURES:** This act does not regulate fracking (since it is regulated by states themselves) which negatively affects the safety of water extracted through fracking. There is also a lack of adequate staffing and funding, which prevents states from fully implementing regulations. Certain smaller systems are not covered under SDWA regulations which creates holes in the larger scheme of safe drinking water. More specifically, there is a lack of location or context-specific resolutions. As a result, we find this act generally places a blanket solution over every issue in every community leading to inadequate solvency in those situations.

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1. “President Signs Safe Drinking Water Act Amendments.” EPA, Environmental Protection Agency, 11 Aug. 2016. <https://www.epa.gov/archive/epa/aboutepa/president-signs-safe-drinking-water-act-amendments.html>.
  2. Congressional Research Service. (1999, February 8). “Safe drinking water act amendments of 1996: Overview of P.L. 104-182.” EveryCRSReport.com. <https://www.everycrsreport.com/reports/96-722.html>
  3. Weinmeyer, Richard, Annalise Norling, Margaret Kawarski, and Estelle Higgins. “The Safe Drinking Water Act of 1974 and Its Role in Providing Access to Safe Drinking Water in the United States.” AMA Journal of Ethics 19, no. 10 (October 1, 2017): 1018–26. <https://doi.org/10.1001/journalofethics.2017.19.10.hlwl1-1710>.
  4. Tulane. “EPA’s Report on Fracking and Water Quality,” October 25, 2021. <https://online.law.tulane.edu/blog/epa-fracking-report-water-quality>.
  5. “State of Connecticut Department of Public Health Public Water System ...” Accessed January 4, 2023. [https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/drinking\\_water/pdf/DPH\\_PWS\\_Screening\\_Form\\_Instructions.pdf](https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/drinking_water/pdf/DPH_PWS_Screening_Form_Instructions.pdf).
  6. “The Safe Drinking Water Act - GovInfo.” Accessed January 4, 2023. <https://www.govinfo.gov/content/pkg/CPRT-106SPRT67528/pdf/CPRT-106SPRT67528.pdf>.
  7. US EPA, OP. “Summary of the Safe Drinking Water Act.” Overviews and Factsheets, February 22, 2013. <https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act>.
  8. An Act To reauthorize and amend title XIV of the Public Health Service Act (commonly known as the “Safe Drinking Water Act”), and for other purposes. Pub. L. No. 116-92
  9. Duhigg, Charles. “Clean Water Laws Are Neglected, at a Cost in Suffering.” The New York Times, 12 Sept. 2009. NYTimes.com, <https://www.nytimes.com/2009/09/13/us/13water.html>.

## PUBLIC ACT 099-0922 | 2017

*Required all Illinois schools constructed before 2000 to test all sources of potable water for lead and submit results*

**GOVERNING BODY:** Illinois General Assembly

**AMENDMENTS:** Sections 9-246, 5.9, 35.5, 19.3, 17.11

**POWER TO REGULATE LEAD:** Requires school districts and chief school administrators to test for lead in the drinking water of school buildings. Therefore, there would be a minimum of two samples of 250 ml for each potable water source. From there, the samples would be sent to an Illinois Environmental Protection accredited laboratory for analysis. If any of the samples exceed 5 parts per billion, school districts/chief school administrators would be required to provide written notification of the lead sample test results to the parents or legal guardians of the students. Along with this, the owner or operator of each community water system in the state must develop a water distribution material inventory to be submitted in written and/or electronic form to the EPA on an annual basis. The Agency may conduct separate audits to identify the progress that the community water system has made.

**SUCCESSSES:** School buildings constructed prior to January 1, 1987 and December 31, 2018 were sampled by December 31st, 2017 and buildings constructed between January 2 1987 and January 1, 2000 were sampled by December 31, 2018. This was a success as it allowed for the furthering of eliminating contaminated water from many young children's source of water. The Department of Health posted mitigation actions for lead in drinking water and advice on ongoing water management, which led to success in these schools.

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1. "Public Act 099-0922." Public act 0922 99th general assembly. Accessed November 20, 2022. <https://www.ilga.gov/legislation/publicacts/99/099-0922.htm>.

## LEAD AND COPPER RULE (LCR) | 1991

*A set of rules that specifically tackle reducing lead and copper levels in pipes*

**GOVERNING BODY:** EPA

**AMENDMENTS:** Lead and Copper Rule Improvements (LCRI) (2021)

**POWER TO REGULATE LEAD:** Allows for sampling of lead lines and water quality; gives EPA enforcement and legal precedence.

**SUCCESSSES:** Allowed stricter regulations on lead concentration levels allowed in water; standardizes the expectations across the country. Gives EPA the power to regulate state and local lead service line replacement (LSLR) plans, as well as their progress

**FAILURES:** The largest issue is exemplified by how there is no “safe” level of lead in drinking water. LCR still allows “permissible levels” meaning it doesn’t really eradicate lead or copper in water systems. Other issues include the many exceptions allowing groups to apply to be held to *different* standards. To illustrate this, many sections of the legislation redirect the reader to additional exceptions highlighted later on that allow them to be exempt from certain restrictions. Optimal corrosion control treatment (OCCCT) includes options that are not lead service line replacement (LSLR). If you test that there’s a lot of lead in the water, the LCR gives you options to not replace the pipe itself for a different material, and gives you the option to do other smaller-scale treatment methods that still could keep bad pipes in the circulation. This could include treating the pipes with solutions that reduce erosion into the waterflow, without replacing the pipe itself. Large-scale solutions often automatically warrant slow progress, however the LCR doesn’t come to the forefront of the scientific community as necessarily very prominent and generally spends most of its space expanding upon rules within the Clean Water and Safe Drinking Water acts. The LCR allows for many exceptions and still allows copper and lead to be present in drinking water, therefore progress in completely eradicating these metals in water sources can be seen as currently slow. Another present problem is the economic burden that falls directly on the states to deal with pipes despite federal enforcement regardless of budget (i.e. Chicago has a dwindling water pipe replacement budget due to focus on the municipal pension plan; much focus often is directed towards pressing issues instead of compounding issues like contaminated water.)

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1. “40 CFR Part 141 Subpart I -- Control of Lead and Copper.” Accessed January 3, 2023. <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-141/subpart-I>.
  2. US EPA, OW. “Revised Lead and Copper Rule.” Overviews and Factsheets, December 21, 2020. <https://www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule>.