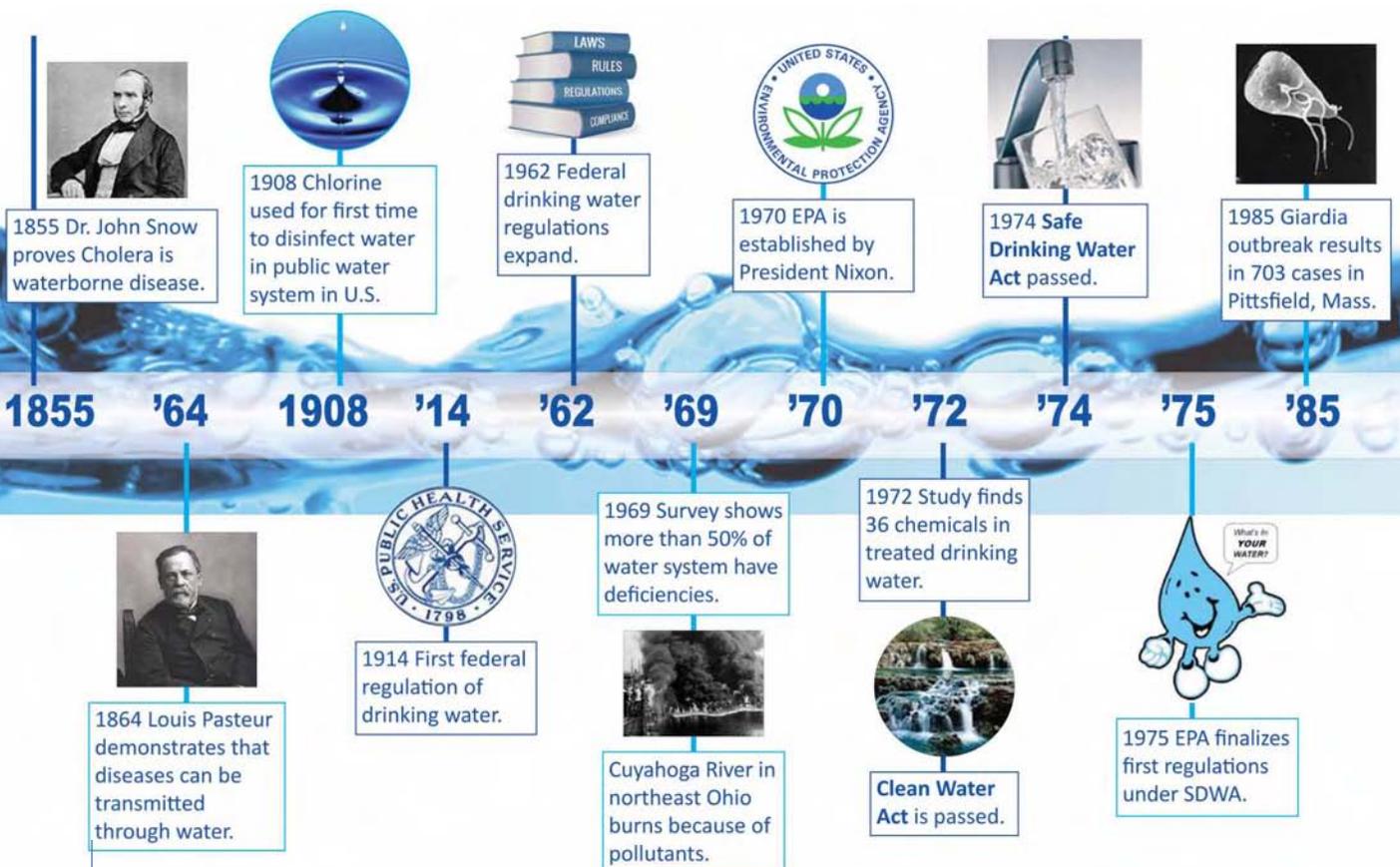


Forty Years of the Safe Drinking Water Act

On December 16, 1974, the United States Congress passed the Safe Drinking Water Act (SDWA) to protect public health by regulating public water supplies. The SDWA directed the Environmental Protection Agency (EPA) to develop and implement standards for drinking water quality from source to tap. Today the EPA has drinking water regulations in place for more than 90

contaminants and the U.S. is considered a world leader in providing safe drinking water, but 40 years ago America's drinking water wasn't as safe. The following timeline identifies milestones that led to the passage of the SDWA and events that have occurred in the last 40 years since the SDWA has been in place.

1855 – Dr. John Snow proves that Cholera is a waterborne disease: During this time, the Soho



district of London, England was not tied into London's sewer system. Cesspools of human waste under basements started to overflow and the London government decided to dump the waste in the River Thames. This contaminated the drinking water supply and led to the cholera outbreak. Dr. Snow made the connection by mapping locations of cholera cases and identifying a large cluster of cases near a public water pump.

1864 – Louis Pasteur substantiates “germ theory”: The French scientist's work in the 1860s demonstrated that some diseases are the result of microorganisms which can be transmitted through media like water.

1908 – First time chlorine is used as a disinfectant in U.S. public water supply: Jersey City, New Jersey was the first municipal water supply to use chlorine as a primary disinfectant of drinking water in the U.S. The practice of chlorine disinfection was conceived by physician, John L. Leal. After the successful use of chlorine in Jersey City, the practice quickly spread to water treatment facilities across the U.S.

1914 – First federal regulation of drinking water: The U.S. Public Health Service was the first federal agency to establish standards for drinking water. The regulations covered bacteriological contaminants and only applied to interstate carriers such as ships and trains.

1962 – Federal regulation of drinking water expands: The U.S. Public Health Service revised and

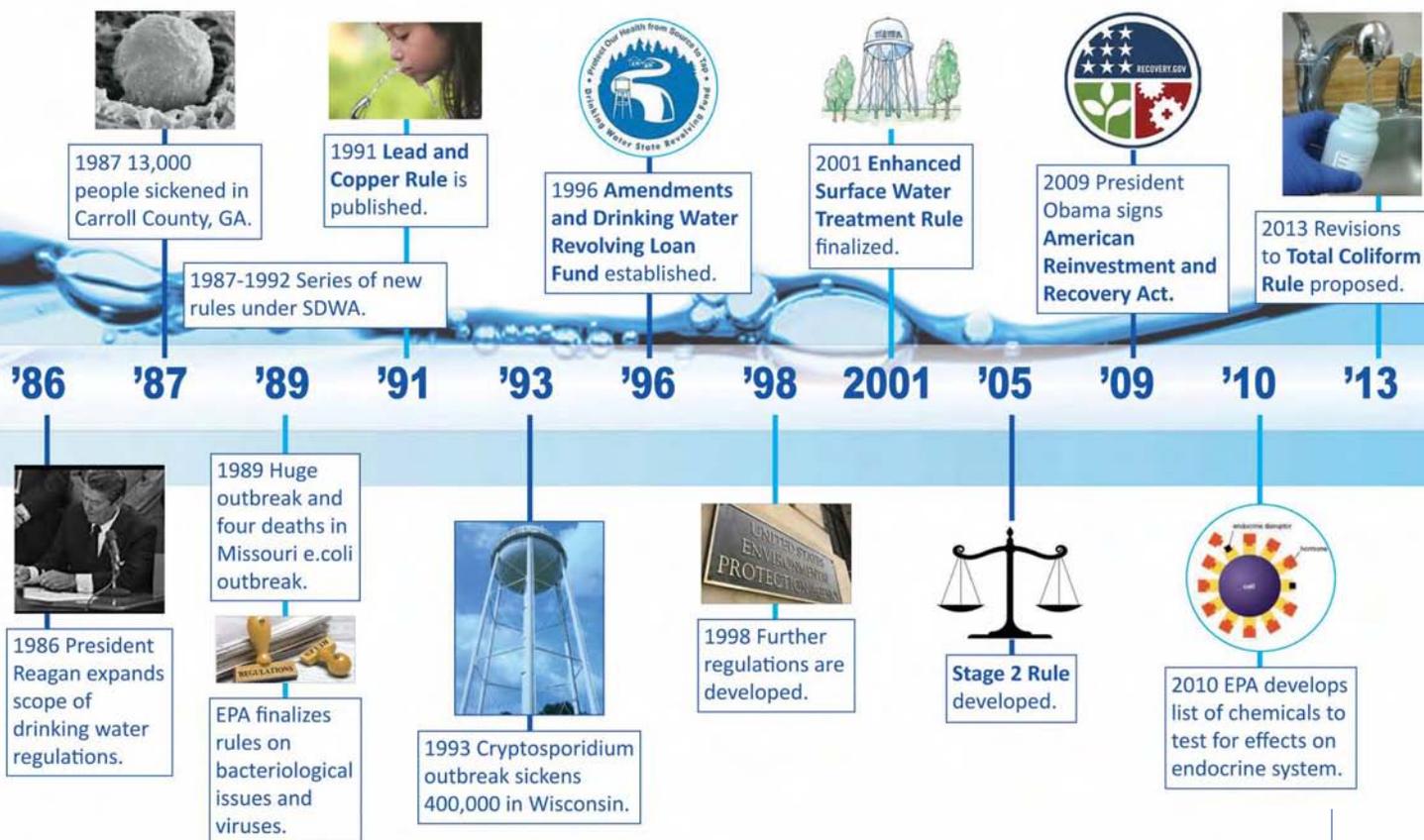
expanded regulations in 1925, 1946 and 1962 to cover 28 contaminants. All 50 states adopted the standards, with minor modifications.

1962 – Silent Spring: Rachel Carson's book “Silent Spring” documented the use of pesticides and the effects on the environment and jump-started the environmental movement in the U.S.

1969 – Public Health Service study: The Public Health Service conducted a survey of water systems and found that only 60% of systems surveyed delivered water that met standards. More than 50% of the systems surveyed had major deficiencies involving disinfection, clarification, or pressure in distribution systems.

June 29, 1969 – Fire on the Cuyahoga River: In the 1960s, the lower Cuyahoga River in Northeast Ohio was used for waste disposal and became clogged with oils, sludge, industrial waste, sewage and debris. The river was so polluted it was devoid of live fish and on June 29, 1969 the river caught fire. The fire received national attention, including Time magazine, which described the river as one that “oozes rather than flows”.

December 2, 1970 – The Environmental Protection Agency is established: President Nixon reorganized federal agencies and consolidated research, monitoring and enforcement activities into a single agency called the Environmental Protection Agency. The agency's mission is to protect human health by safeguarding the air we breathe, water we drink and land on which we live.



1972 – Public Health Service study: Study found 36 chemicals in treated drinking water from treatment plants that drew water from the Mississippi River, leading Congress to introduce and debate a federal safe drinking water law in 1973.

October 18, 1972 – Clean Water Act Passed: Congress passed the Federal Water Pollution Control Act, more commonly known as the Clean Water Act, to restore and maintain our nation's waters by preventing pollution, providing assistance to publicly-owned wastewater treatment facilities, and maintaining the integrity of wetlands.

December 16, 1974 – Safe Drinking Water Act Passed

1975 – First drinking water regulations under SDWA: EPA finalized the National Primary Drinking Water Regulations, which included new standards for Coliform Bacteria and Turbidity. In 1977, the regulations went into effect and public water suppliers were required to routinely test their water and notify customers if water was not up to EPA standards.

1985 – Massachusetts Giardia Outbreak: 703 cases of giardiasis were reported in Pittsfield, Massachusetts.

1986 – First amendment to the SDWA: President Reagan signed an amendment to the SDWA to expand the scope of drinking water regulations.

1987 – Georgia Cryptosporidium Outbreak: Approximately 13,000 people were sickened with Cryptosporidiosis in Carroll County, Georgia.

July 1987 – July 1992 – Chemical Contaminant Rules Promulgated: The EPA developed a series of regulations that covered three contaminant groups: Inorganic Chemicals (IOCs), Synthetic Organic Chemicals (SOCs), and Volatile Organic Chemicals (VOCs).

1989 – Bacteriological Rules Developed: The EPA finalized the Total Coliform Rule and the Surface Water Treatment Rule to address bacteriological contamination and viruses such as Legionella and Giardia lamblia.

1989 – Missouri E.coli Outbreak: 243 infections and 4 deaths were the result of an E.coli outbreak in Cabool, Missouri.

June 7, 1991 – Lead and Copper Rule Published: The EPA finalized a regulation to limit the amount of lead and copper in drinking water by establishing action levels

for each of the contaminants.

1993 – Wisconsin Cryptosporidium Outbreak: 400,000 people were sickened and 100 people were killed by a Cryptosporidium outbreak in Milwaukee, Wisconsin.

August 6, 1996 – SDWA Amendments & Drinking Water State Revolving Fund established: President Clinton signed an amendment to the SDWA to further expand the scope of the Act and to emphasize a more science-based decision-making process. The amendments also established the Revolving Loan Program, a grant to

**December 16, 1974
– Safe Drinking
Water Act Passed**



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states to provide low interest financing to systems in need of infrastructure improvements.

1998 – Further regulation of disinfectants, disinfection byproducts, and microbial contaminants: The EPA develops the Stage 1 Disinfectants and Disinfection Byproducts Rule and the Interim

Enhanced Surface Water Treatment Rule (IESWTR). The IESWTR applied to larger systems and increased protection from microbial contaminants like Cryptosporidium.

2001 – Increased control of microbial pathogens: The EPA finalized the Long Term 1 Enhanced Surface Water Treatment Rule to address microbial pathogens, specifically Cryptosporidium, in small surface water systems.

2005 – Balancing protection from pathogens and disinfection byproducts: The EPA developed the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) and the Long Term 2 (LT2) Enhanced Surface Water Treatment Rule to complement each other. The LT2 rule requires further protection from microbial pathogens, while the Stage 2 DBPR builds upon previous rules and tightens compliance monitoring requirements. In 2006, the Ground Water Rule was also promulgated to address ground water systems susceptible to fecal contamination.

February 17, 2009 – American Reinvestment and Recovery Act: To aid in the American economy in the recovery of the Great Recession (2007-2009), President Obama signed The American Recovery and Reinvestment

February 13, 2013 – Revisions to the Total Coliform Rule

Act which provided \$2 billion to states to finance high priority water infrastructure projects.

2010 – Testing for Endocrine Disruptors: The EPA developed a list of 134 chemicals that will be tested for their potential effects on the endocrine system. Endocrine disruptors are chemicals that interact with and

sometimes disrupt the hormones produced by the human (or animal) endocrine system, which regulates growth, metabolism and reproduction. The list includes chemicals that may be found in sources of drinking water.

February 13, 2013 – Revisions to the Total Coliform Rule: The SDWA requires the EPA to review and revise, if necessary, regulations every six years. The EPA developed a committee to revise the 1989 Total Coliform Rule and the final Revised Total Coliform Rule aims to increase public health protection by reducing the potential for fecal contamination in distribution systems.

Source: <http://www2.epa.gov/safedrinkingwater40/evolution-safe-drinking-water-act>

Monica Wurtz began work with KRWA in October 2013. She previously worked at the Kansas Department of Health and Environment and also worked at US EPA Region 7 for four years. Monica is considered a national expert on various drinking water regulations.



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