



Article-Based Observation: Q

Describe and summarize ideas:

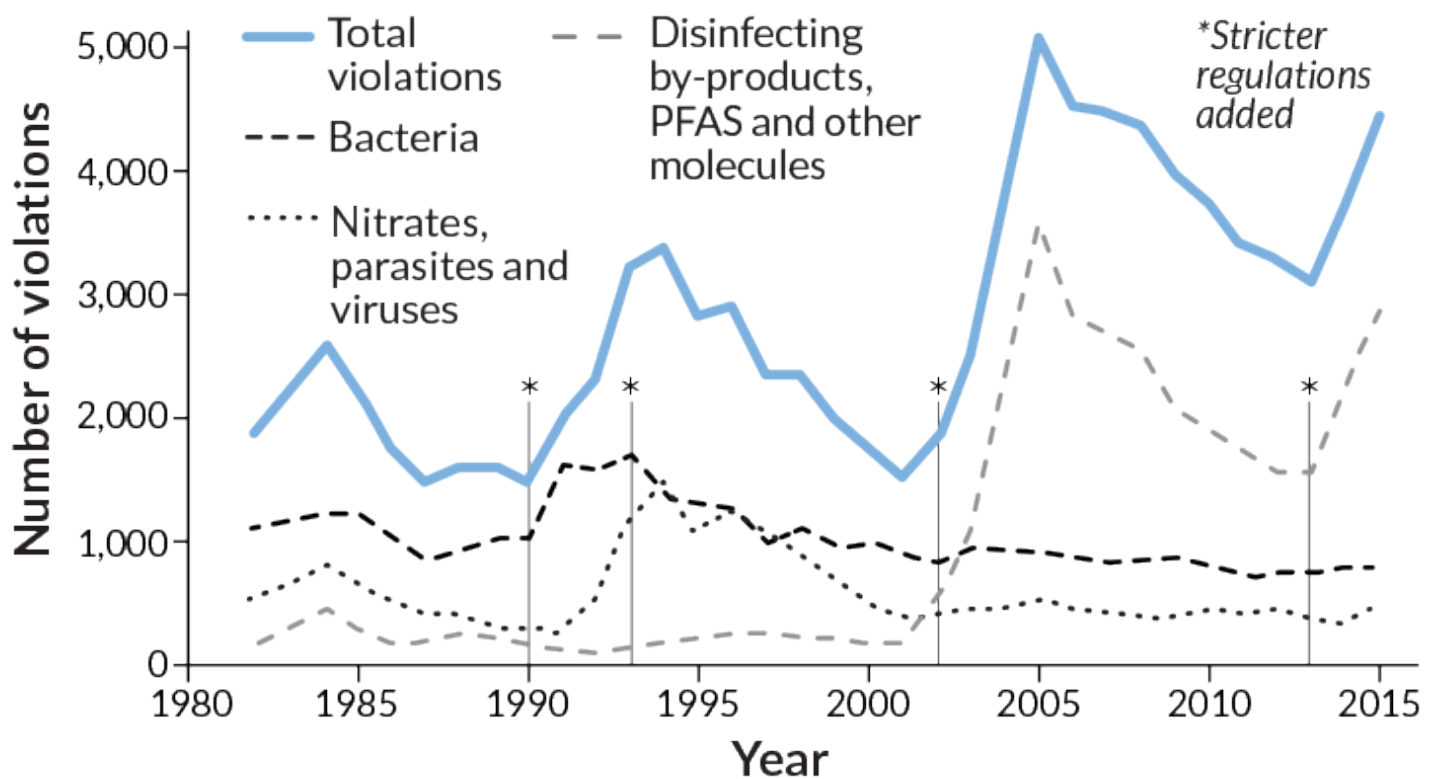
1. Explain the article's central idea in three sentences or less.
2. What are some potential drinking water contaminants?
3. How many U.S. residents were served by drinking water systems that violated Environmental Protection Agency (EPA) standards in 2015?
4. How many U.S. residents obtain their water via lead pipes? How can communities prevent the lead leaching from pipes and contaminating drinking water?
5. What percent of U.S. residents get their drinking water from private wells instead of public water systems? What contaminant is of particular concern when consuming well water?

6. What are some existing methods of purifying drinking water from private wells?

7. List the existing methods of public drinking water purification discussed in the article.

8. What are some new methods of purifying drinking water?

Read and analyze the graph “New rules boost violations:”



The Safe Drinking Water Act regulates levels of contaminants in public water supplies. This graph tracks violations of the act over time. Spikes in violations often coincide with new, more stringent rules. Source: M. Allaire, H. Wu and U. Lall/*PNAS* 2018, Adapted by E. Otwell.

9. In the graph “New rules boost violations,” what information is displayed on the x-axis and the y-axis?

10. What do the different lines represent in the graph?

11. When have total water-quality violations spiked over time, and why might those spikes have occurred? What do the vertical lines with an asterisk represent?

12. What types of contaminants did the 1990, 1993, 2002 and 2013 rules likely cover? Hint: Refer to the vertical lines with asterisks for those years and look at the trends in data for different contaminants.

Think critically and discuss:

13. What would you like to see happen to the U.S. drinking water system based on the information presented in the *Science News* article?

14. What student research projects related to this article could potentially be conducted?