



## WATER-RELATED ENVIRONMENTAL PUBLIC HEALTH

### WHAT IS THE PUBLIC HEALTH PROBLEM?

Environmental conditions greatly influence the relation between water and human health. Challenges to the healthfulness of U.S. water include (1) pathogens resistant to standard water treatment methods, (2) chemical and biological contaminants, (3) aging or inadequate water system infrastructure, and (4) emergency- or disaster-related events. During 1999–2000, 25 states reported 39 drinking water-related outbreaks that caused 2,068 cases of illnesses and 2 deaths. Of the 22 outbreaks for which a cause was identified, 20 were associated with pathogens (parasites, bacteria, or viruses) and 2 were associated with chemical poisonings (nitrate and sodium hydroxide) (MMWR November 22, 2002;51[SS08]:1–28). There are concerns that some substances in water, such as disinfection byproducts and toxins released by marine algae, are associated with health effects.

### WHAT IS CDC DOING TO ADDRESS THESE CONCERNS?

CDC is working to

- identify, investigate, and track health hazards associated with water,
- measure exposure of people to these hazards,
- prevent health effects from these hazards.

CDC conducts water-related environmental public health activities in the following areas:

- **Chemical Contaminants in Water:** measuring people's exposure to chemical contaminants (e.g., disinfection byproducts and arsenic) in water, studying the effect on health of those exposures, and preventing and mitigating any adverse effects of those exposures
- **Concentrated Animal Feeding Operations (CAFOs):** investigating migration of contaminants from CAFOs into ground and surface water, and determining whether and how the contaminants might be affecting health
- **Emergency Preparedness and Response:** investigating human health effects associated with exposure to water contaminated as a result of natural or technological disasters, and preventing and mitigating any adverse health effects
- **Harmful Algal Blooms:** investigating the effects of microscopic algae, such as cyanobacteria, algae associated with red tides, and *Pfiesteria piscicida*, on health
- **Water Treatment:** studying the effectiveness of household water treatment devices in homes with private wells

### For more information, please contact:

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