

STATE OF COLORADO

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Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

Water Supply Safety

• INTRODUCTION

- For 27 years, since the passage of the federal Safe Drinking Water Act of 1974, federal, state and tribal governments have worked in partnership with public water systems to ensure tap water safety.
- Drinking water standards are part of a “**multiple barriers**” approach to drinking water safety:
 - ✓ Protect drinking water **sources** to prevent contamination;
 - ✓ Establish finished water **standards** and assure water **treatment** meets standards;
 - ✓ Ensure water systems are run by **qualified operators**;
 - ✓ Ensure public water systems have the **capacity** to function properly and that they distribute safe drinking water; and
 - ✓ Provide **information** to the public on the quality of drinking water and system capacity.
- Actual events of serious drinking water contamination are relatively infrequent and usually of short duration.
- Colorado has 2,084 “public water systems” in the state serving approximately 4.1 million people.
 - ✓ *Public water systems* are sources of piped water for human consumption that are publicly or privately owned and have at least 15 taps or service connections, with regular service to at least 25 individuals for 60 days or more per year.

• RISK ANALYSIS

- **By water source:**
 1. Ground water sources are less vulnerable to intentional threats than surface water sources.
 2. Distribution systems for surface and ground water public water systems are equally vulnerable.
 - ✓ *Surface water* is the water that is collected in reservoirs, lakes and streams. Surface water is the source of drinking water for about 80 percent of Colorado’s population.
 - ✓ *Ground water* is supplied from aquifers under the earth’s surface. Ground water is the source for about 80 percent of the public water systems in Colorado that all combined, serve about 20 percent of the state’s population.
- **By size:**

Larger water collection and treatment systems generally have better security and are less vulnerable than smaller systems.

 - ✓ In Colorado, 93 percent of public water systems are classified as either “*small*” or “*very small*.”
 - 1,618 *Very Small* systems each serve 25-500 people
 - 293 *Small* systems each serve 501-3,300 people
 - 73 *Medium* systems each serve 3,301-10,000 people
 - 54 *Large* systems each serve 10,001-100,000 people
 - 9 *Very Large* systems each serve 100,001+ people
- **By system component:**

Distribution systems for surface and ground water public water systems are vulnerable.

- **WATER QUALITY CONTROL DIVISION SECURITY MEASURES FOR WATER SYSTEMS**
 - **Division Role.** The Colorado Department of Public Health and Environment’s Water Quality Control Division performs a technical assistance and regulatory advisory role in support of the primary responders during water-related emergencies. The division may play an emergency financial assistance role depending upon the availability of funds.
 - **Emergency Preparedness Role**
 - ✓ Distributed a security checklist to all 832 community public water systems on September 14, 2001, to help them evaluate the security of their infrastructure.
 - ✓ Recommended that water providers develop their own emergency response plans and contingency plans for alternative water supplies.
 - ✓ Expanded scope of the Source Water Assessment and Protection (SWAP) project to address emergency and disaster incidents.
 - ✓ Developing an “Incident Evaluation and Response Checklist” to anticipate questions and provide appropriate guidance for systems in crisis.
 - **Emergency Response Role**
 - ✓ Provide prompt notifications to appropriate local, state and federal agencies in accordance with adopted emergency communication protocols.
 - ✓ Supply timely and accurate technical information to primary incident responders about relevant water quality processes and the capabilities of water treatment systems in Colorado.
 - ✓ Provide technical support and guidance to primary incident responders (e.g., water sampling and analysis procedures, procedures for on-site assessments).
 - ✓ Identify and redirect available funding to communities for water-related emergency response.
 - **Emergency Recovery Role**
 - ✓ Conduct evaluation monitoring and site inspections.
 - ✓ Secure funds and other available resources for required infrastructure financing.
- **PUBLIC HEALTH PARTNERS**
 - **Colorado Board of Health.** Adopts drinking water-related rules; establishes policy to assure safe drinking water is served from public water systems in Colorado.
 - **Governor’s Expert Emergency Epidemic Response Committee.** Assesses the adequacy and potential contamination of water supplies, among other roles, in a bioterrorism event.
 - **U.S. Environmental Protection Agency.** Develops regulations for individual chemical contaminants and for drinking water treatment technologies; oversees Colorado’s compliance with drinking water regulations, treatment plant operator certification and other regulations.
 - **Colorado Water Resources and Power Development Authority.** Provides funding for infrastructure improvements through the State Drinking Water and Water Pollution Control revolving loan funds.
 - **2,084 Local Public Water Systems.** Provide safe drinking water to their customers on a day-to-day basis through vigilant treatment plant operations and careful maintenance of collection, storage and distribution systems.
 - **31 Local Health Agencies.** Assure that non-community water systems have the technical, financial and managerial capacity to comply with the state’s primary drinking water regulations.
- **STATUTORY AUTHORITY**
 - **Water quality control responsibilities.** Section 25-1-107, C.R.S.
 - **Water Quality Control Act.** Section 25-8-307, C.R.S.
 - **Colorado Disaster Emergency Act of 1992.** Section 24-32-2101 to 2115, C.R.S.
- **FOR MORE INFORMATION**
 - Contact the Water Quality Control Division at (303) 692-3500.
 - In emergencies, water system administrators are directed to call 1-877-518-5608 (toll-free).