

Kentucky Division of Water

Drinking Water Quality

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To Protect and Enhance Kentucky's Environment



Safe Drinking Water Act

- United States Environmental Protection Agency is the federal agency responsible for protecting the United States' drinking water
 - Since 1990, EPA has passed 20 drinking water regulations
 - Currently regulates 90 contaminants
 - Requires compliance with contaminant levels, monitoring, reporting and notification



Kentucky Drinking Water Regulations

- Kentucky's Division of Water administers and enforces the Safe Drinking Water Act
 - EPA develops a new drinking water regulation
 - KY then adopts the federal regulation
 - The KY regulation must be presented at a public meeting and must be approved by both the House of Representatives and the Senate
 - EPA approves KY's regulation and program (this is known as "primacy")

Kentucky Drinking Water Regulations

- KY has Statutes (laws) that give the state the authority to regulate drinking water systems
- Regulations are then developed to implement these laws
 - 401 KY Administrative Regulations Chapter 8: Public Water Supply and Chapter 11: Certified Operators

Drinking Water Quality

- Primary goal of the Safe Drinking Water Act is to protect human health by regulating drinking water
 - Compliance with maximum limits for contaminants
 - Monitoring and reporting requirements
 - Public notification and awareness requirements

Source Water Quality

- Raw water must meet “Drinking Water Standards” set by KY regulations
 - These are set at the finished drinking water limits established by the Safe Drinking Water Act
 - Raw water quality also regulated by the Clean Water Act
- 457 Public Water Systems for Drinking Water
 - 255 treat water for drinking
 - 144 from surface water and 111 from groundwater
 - 202 purchase treated water from another system

Water System Approvals

- Water systems must get approval from DOW for:
 - New construction
 - Modification to existing construction
 - Treatment Chemicals
- DOW uses established criteria for the approvals
 - “10 States Standards”, KY Design Criteria, EPA guidance, best professional judgment

Finished Drinking Water Quality

- There are 90 regulated contaminants
 - 6 microbiological
 - 1 turbidity
 - 3 disinfectants
 - 4 disinfectant by-products
 - 1 disinfection by-product precursor
 - 16 inorganics (metals and nutrients)
 - 53 volatile and synthetic organics
 - 4 radiological
 - 2 lead and copper

Finished Drinking Water Quality

- Monitoring and Reporting
 - Monitoring can occur as frequently as every 4 hours or as long as every 3 years
 - Acute contaminants are monitored more frequently such as microbiological and turbidity
 - Chronic contaminants or those not often detected are monitored less frequently such as organic contaminants and radiologicals
 - Monitoring occurs in the water treatment plant and in the distribution system
 - Compliance data reports are submitted at least on a monthly basis

KY Drinking Water Reports and Data

- Data comes to DOW both on paper and electronically
 - Over 6000 microbiological results are submitted to the Division of Water each month
 - Approximately 20,000 turbidity results are submitted each month
 - On an annual basis, over 1million analytical results are submitted for compliance
- 7 staff are involved with compliance data
 - EPA database that stores data and determines compliance

KY Drinking Water Reports and Data

- All drinking water data must be analyzed in labs certified by KY
 - The KY Division of Water audits and certifies all in-state drinking water labs
 - In KY there are
 - 45 certified microbiological laboratories and
 - 18 certified chemistry laboratories
 - There are 34 certified chemistry and radiological labs located in other states
 - These are all commercial (not state-operated)

KY Certified Laboratories

- KY lab certification involves
 - EPA Drinking Water Lab Certification Manual
 - Established test methods (approved by EPA)
 - On-site lab audits
- 6 full-time staff are involved with lab certification
 - 4 are approved by EPA to conduct audits
- Daily process control tests are performed at the treatment plant by certified operators

- EPA Drinking Water Laboratory Certification Manual
 - http://www.epa.gov/ogwdw/methods/pdfs/manual_labcertification.pdf
- EPA approved laboratory methods
 - 40 CFR Part 136 GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS

Consumer Notification

- The public must be notified of
 - Safe Drinking Water Act violations
 - Potential health issues such as lead or contamination due to breaks
- Consumers also receive an annual report that provides information on the water system, including violations, detected contaminants and health effects

Related Drinking Water Regulations

- Drinking water systems must also show compliance with
 - Any discharges back to receiving streams or lakes
 - Occupational health and safety (safety of workers)
 - Disposal of any solid material removed during treatment (such as filtration)
 - Air quality (such as chlorine gas releases)
 - Local laws

Questions or Comments

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