

INFORMATION COLLECTION RULE TECHNICAL SUMMARY

The final Information Collection Rule (ICR) was published in the *Federal Register* in May, 1996. This FR notice finalizes requirements for monitoring microbial contaminants and disinfection byproducts by large public water systems (PWSs). It also requires large PWSs to provide operating data and a description of their treatment plant design. Finally, it requires some large PWSs to conduct either bench or pilot scale testing of advanced treatment technologies.

Background

The rule is intended to provide EPA with a strong base of occurrence and treatment information for use in developing new regulations for controlling disinfection byproducts (DBPs) and disease-causing microorganisms in drinking water. These data, joined with the results of health effects and treatment technology research, will assist EPA in making complex decisions about the risk-risk tradeoff posed by the simultaneous control of DBPs and microbial contaminants. See the *Federal Register* for details of the final rule and for a summary of public comments and EPA responses.

EPA, not the states, has the responsibility for implementing this rule. EPA has developed and is providing to PWSs a data reporting software package to facilitate the reporting of data by the utilities. Laboratories are required to be approved by EPA prior to conducting analyses for the ICR. The data will be publicly available after EPA has completed review and validation, about six months after sampling. PWSs are not required to report the results of monitoring to their customers.

Schedule

Affected PWSs will receive a Notice of Applicability from EPA in June, 1996. Each PWS must reply to the notice within 35 days. PWSs will then receive a notice from EPA (tentatively scheduled for September 1996) to prepare a sampling plan; the sampling plan must be submitted for approval within 8 weeks. PWSs will begin 18 consecutive months of DBP and related monitoring and microbial monitoring in the month following receipt of EPA's approval of the sampling plan.

GENERAL MONITORING REQUIREMENTS			
TYPE OF PWS ¹	DBP AND RELATED MONITORING ²	MICROBIAL MONITORING ³	TREATMENT STUDIES AND APPLICABILITY MONITORING ⁴
PWS serving $\geq 100,000$	Yes - monthly for 18 months	Yes - monthly for 18 months	Yes
PWS serving 50,000-99,999, with $\geq 50,000$ served by ground water	NA	NA	Yes

¹ Population served includes both retail and wholesale customers. Specific instructions for calculating population served are in the rule.

² PWSs are also required to characterize treatment processes in the treatment plant.

³ Only at treatment plants using surface water or ground water under the direct influence of surface water.

⁴ Applicability monitoring required to begin not later than August 1996 at treatment plants serving $\geq 100,000$ (or largest plant in PWS if no individual plant serves $\geq 100,000$). Results will be used to determine need for study, which must begin not later than April 1998.

Microbial Monitoring and Surveys

PWSs that serve $\geq 100,000$ people and use surface water or ground water under the direct influence of surface water are required to conduct source water microbial monitoring. Microbial monitoring of water leaving the treatment plant is required only if *Giardia* or *Cryptosporidium* concentrations exceed 10/L or total culturable virus concentration exceeds 1/L in the source water during the first 12 months of monitoring. Monitoring will be monthly for 18 consecutive months and concurrent with DBP monitoring. Total coliforms and fecal coliforms or *E. coli* are being monitored to assess how well they predict the presence and levels of microbial contamination. EPA has included provisions for potentially avoiding source water virus monitoring (§141.143(a)(2)(iv)) and reduced finished water *Cryptosporidium* and *Giardia* monitoring (§141.143(a)(2)(iii)).

Microbial Sampling Parameters

Cryptosporidium
Giardia
Total Culturable Viruses
Total Coliforms
Fecal Coliforms or *E. Coli*

Disinfection Byproduct (DBP) Monitoring

PWSs that serve $\geq 100,000$ people are required to conduct monitoring for DBPs and other treatment parameters. PWSs affected by this requirement must conduct monthly monitoring for DBPs, DBP precursors, and other chemical parameters at each treatment plant and in the distribution system for 18 months, concurrent with microbial monitoring. These PWSs will also be required to characterize treatment processes in the treatment plant on a monthly basis for the same period. PWSs that receive all of their water from a supplier and do not further disinfect that water before distribution are not required to conduct any monitoring under this rule. PWSs that use disinfectants other than free chlorine (chloramines, hypochlorite solution, ozone, or chlorine dioxide) are required to conduct additional analyses for parameters associated with those disinfectants.

DBP Sampling Parameters¹

Disinfectant residual
Trihalomethanes
Haloacetic acids
Haloacetonitriles
Haloketones
Chloropicrin
Chloral hydrate
Ammonia
Bromide
Total organic carbon
Total organic halides
Water quality parameters (e.g., pH, alkalinity, hardness)

¹Additional monitoring required for systems using disinfectants other than chlorine

Bench- and Pilot-Scale Testing

PWSs that serve $\geq 100,000$ people are required to conduct treatment study applicability monitoring and treatment studies, unless certain criteria are met, at treatment plants serving at least 100,000 (or at the largest treatment plant in the PWS if no individual plant serves 100,000). PWSs that serve 50,000 to 99,999, with at least 50,000 people served by ground water, are also required to conduct treatment study applicability monitoring and treatment studies, unless certain criteria are met, at the largest treatment plant in the PWS. PWSs must conduct treatment study applicability (total organic carbon (TOC)) monitoring for 12 months at specified locations to determine at which treatment plants they must conduct treatment studies. Bench- or pilot-scale studies will determine the effectiveness of granular activated carbon or membranes in reducing the levels of DBP precursors and must be designed to yield representative performance data and to allow the development of treatment cost estimates for different levels of DBP control. EPA will provide technical manuals on the study protocols. EPA has included provisions for avoiding studies, conducting joint studies with other PWSs, using previous studies ("grandfathering"), and contributing to a research fund in lieu of conducting studies.

For More Information: Contact the Safe Drinking Water Hotline at 1-800-426-4791 or the AWWA A-Team at 1-800-200-0984 or ICR_A_Team at 103327.2057@compuserve.com.