

primary enforcement authority for a new or revised regulation during the period in which EPA is making a determination with regard to primacy for that new or revised regulation. This interim enforcement authority begins on the date of the primacy application submission or the effective date of the new or revised State regulation, whichever is later, and ends when EPA makes a final determination. However, this interim primacy authority is only available to a State that has primacy (including interim primacy) for every existing NPDWR in effect when the new regulation is promulgated.

As a result, States that have primacy for every existing NPDWR already in effect may obtain interim primacy for this rule, beginning on the date that the State submits the application for this rule to USEPA, or the effective date of its revised regulations, whichever is later. In addition, a State that wishes to obtain interim primacy for future NPDWRs must obtain primacy for this rule. As described in Section IV.A, EPA expects to oversee the initial source water monitoring that will be conducted under the LT2ESWTR by systems serving at least 10,000 people, beginning 6 months following rule promulgation.

VI. Economic Analysis

This section summarizes the economic analysis (EA) for the LT2ESWTR proposal. The EA is an assessment of the benefits, both health and non-health related, and costs to the regulated community of the proposed regulation, along with those of regulatory alternatives that the Agency considered. EPA developed this EA to meet the requirement of SDWA section 1412(b)(3)(C) for a Health Risk Reduction and Cost Analysis (HRRCA), as well as the requirements of Executive Order 12866, Regulatory Planning and Review, under which EPA must estimate the costs and benefits of the LT2ESWTR. The full EA is presented in Economic Analysis for the Long Term 2 Enhanced Surface Water Treatment Rule (USEPA 2003a), which is available in the docket for today's proposal (www.epa.gov.edocket/).

Today's proposed LT2ESWTR is the second in a staged set of rules that

address public health risks from microbial contamination of surface and GWUDI drinking water supplies and, more specifically, prevent *Cryptosporidium* from reaching consumers. As described in section I, the Agency promulgated the IESWTR and LT1ESWTR to provide a baseline of protection against *Cryptosporidium* in large and small drinking water systems, respectively. Today's proposed rule would achieve further reductions in *Cryptosporidium* exposure for systems with the highest vulnerability. This economic analysis considers only the incremental reduction in exposure from the two previously promulgated rules (IESWTR and LT1ESWTR) to the alternatives evaluated for the LT2ESWTR.

Both benefits and costs are determined as annualized present values. The process allows comparison of cost and benefit streams that are variable over a given time period. The time frame used for both benefit and cost comparisons is 25 years; approximately five years account for rule implementation and 20 years for the average useful life of the equipment used to comply with treatment technique requirements. The Agency uses social discount rates of both three percent and seven percent to calculate present values from the stream of benefits and costs and also to annualize the present value estimates (see EPA's Guidelines for Preparing Economic Analyses (USEPA 2000c) for a discussion of social discount rates). The LT2ESWTR EA (USEPA 2003a) also shows the undiscounted stream of both benefits and costs over the 25 year time frame.

A. What Regulatory Alternatives Did the Agency Consider?

Regulatory alternatives considered by Agency for the LT2ESWTR were developed through the deliberations of the Stage 2 M-DBP Federal Advisory Committee (described in section II). The Committee considered several general approaches for reducing the risk from *Cryptosporidium* in drinking water. As discussed in section IV.A.2, these approaches included both additional treatment requirements for all systems

and risk-targeted treatment requirements for systems with the highest vulnerability to *Cryptosporidium* following implementation of the IESWTR and LT1ESWTR. In addition, the Committee considered related factors such as surrogates for *Cryptosporidium* monitoring and alternative monitoring strategies to minimize costs to small drinking water systems.

After considering these general approaches, the Committee focused on four specific regulatory alternatives for filtered systems (see Table VI-1). With the exception of Alternative 1, which requires all systems to achieve an additional 2 log (99%) reduction in *Cryptosporidium* levels, these alternatives incorporate a microbial framework approach. In this approach, systems are classified in different risk bins based on the results of source water monitoring. Additional treatment requirements are directly linked to the risk bin classification. Accordingly, these rule alternatives are differentiated by two criteria: (1) The *Cryptosporidium* concentrations that define the bin boundaries and (2) the degree of treatment required for each bin.

In assessing regulatory alternatives, EPA and the Advisory Committee were concerned with the following questions: (1) Do the treatment requirements adequately control *Cryptosporidium* concentrations in finished water? (2) How many systems will be required to add treatment? (3) What is the likelihood that systems with high source water *Cryptosporidium* concentrations will not be required to provide additional treatment (i.e., be misclassified in a low risk bin)? and (4) What is the likelihood that systems with low source water *Cryptosporidium* concentrations will be required to provide unnecessary additional treatment (i.e., misclassified in a high risk bin)?

The Committee reached consensus regarding additional treatment requirements for unfiltered systems and uncovered finished water storage facilities without formally identifying regulatory alternatives. Table VI-1 summarizes the four alternatives that were considered for filtered systems.