

costs for procuring a new source of water that may result in lower overall treatment costs.

In addition, the Agency was unable to predict the usage or estimate the costs of several toolbox options. These options include intake management and demonstrations of performance. They have not been included in the quantified analysis because data are not available to estimate the number of systems that may use these toolbox options to comply with the LT2ESWTR. Not including these generally low-cost options may result in overestimation of costs.

#### *E. What Are the Household Costs of the Proposed Rule?*

Another way to assess a rule's impact is to consider how it might impact residential water bills. This analysis considers the potential increase in a household's water bill if a CWS passed the entire cost increase resulting from this rule on to its customers. It is a tool to gauge potential impacts and should not be construed as precise estimates of potential changes to individual water bills.

Included in this analysis are all CWS costs, including rule implementation, initial and future monitoring for bin classification, additional *Cryptosporidium* treatment, and treating or covering uncovered finished water

storage facilities. Costs for small systems *Cryptosporidium* monitoring, additional *Cryptosporidium* treatment, and uncovered finished water storage facilities are assigned only to the subset of systems expected to incur them. Although implementation and monitoring represent relatively small, one-time costs, they have been included in the analysis to provide a complete distribution of the potential household cost. A detailed description of the derivation of household costs is in section 6.10 and Appendix J of the LT2ESTWR EA (USEPA 2003a).

For purchased systems that are linked to larger nonpurchased systems, the households costs are calculated based on the unit costs of the larger system but included in the distribution from the size category of the purchased system. Households costs for these purchased systems are based on the household usage rates appropriate for the retail system and not the system selling the water. This approach for the purchased systems reflects the fact that although they will not face increased costs from adding their own treatment, whatever costs the wholesale utility incurs would likely be passed on as higher water costs.

Table VI-15 shows the results of the household cost analysis. In addition to mean and median estimates, the Agency calculated the 90th and 95th percentile.

EPA estimates that all households served by surface and GWUDI sources will face some increase in household costs due to implementation of the LT2ESWTR (except for those few served by systems that have already installed 5.5 logs of treatment for *Cryptosporidium*). Of all the households subject to the rule, from 24 to 35 percent are projected to incur costs for adding treatment, depending on the *Cryptosporidium* occurrence data set used.

Approximately 95 percent of the households potentially subject to the rule are served by systems serving at least 10,000 people; these systems experience the lowest increases in costs due to significant economies of scale. Over 90 percent of all households will face an annual cost increase of less than \$5. Households served by small systems that install advanced technologies will face the greatest increases in annual costs. EPA expects that the model's projections for these systems are, in some cases, overstated. Some systems are likely to find alternative treatment techniques such as other toolbox options not included in this analysis, or sources of water (ground water, purchased water, or consolidating with another system) that would be less costly than installing more expensive treatment techniques.

TABLE VI-15.—POTENTIAL ANNUAL HOUSEHOLD COSTS IMPACTS FOR THE PREFERRED REGULATORY OPTION (2000\$)

System: type/size	Households	Mean	Median	90th Percentile	95th Percentile	Percent of systems with household cost increase < \$12	Percent of systems with household cost increase < \$120
<b>All Systems—ICR</b>							
All CWS .....	65,816,979	\$1.68	\$0.13	\$4.06	\$7.57	98.37	99.99
CWS ≤ 10,000 .....	3,318,012	4.61	1.34	13.04	14.92	87.88	99.88
<b>All Systems—ICRSSL</b>							
All CWS .....	65,816,979	\$1.07	\$0.03	\$3.24	\$5.43	98.31	100.00
CWS ≤ 10,000 .....	3,318,012	2.68	0.80	6.10	9.39	95.71	99.95
<b>All Systems—ICRSSM</b>							
All CWS .....	65,816,979	\$1.28	\$0.03	\$3.48	\$6.47	99.07	100.00
CWS ≤ 10,000 .....	3,318,012	3.27	0.80	6.62	13.04	93.90	99.93

Source: Chapter 6 of the LT2ESWTR Economic Analysis (USEPA 2003a).

#### *F. What Are the Incremental Costs and Benefits of the Proposed LT2ESWTR?*

Incremental costs and benefits are those that are incurred or realized in reducing *Cryptosporidium* exposures from one alternative to the next. Estimates of incremental costs and benefits are useful in considering the economic efficiency of different

regulatory options considered by the Agency. Generally, the goal of an incremental analysis is to identify the regulatory option where incremental benefits most closely equal incremental costs. However, the usefulness of this analysis is limited because many benefits from this rule are unquantified and not monetized. Incremental

analyses should consider both quantified and non-quantified (where possible) benefits and costs.

Usually an incremental analysis implies increasing levels of stringency along a single parameter, with each alternative providing all the protection of the previous alternative, plus additional protection. However, the