

TABLE VI-9.—SUMMARY OF PRESENT VALUE MONITORING COSTS FOR INITIAL BIN CLASSIFICATION
(\$millions, 2000\$)

System Size	ICR (3%) A	ICR (7%) B	ICRSSL (3%) C	ICRSSL (7%) D	ICRSSM (3%) E	ICRSSM (7%) F
≤10K	\$34.6	\$29.7	\$25.7	\$22.2	\$29.2	\$25.1
10K	25.7	24.3	25.7	24.3	25.7	24.3
Total	60.3	54.0	51.4	46.5	54.9	49.4

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

b. *Filtered systems treatment costs.* The Agency calculated treatment costs by estimating the number of plants that will be adding treatment technologies and coupling these estimates with unit costs (\$/plant) of the selected technologies. Table VI-10 shows the number of plants estimated to select different treatment technologies; Table VI-11 summarizes the present value treatment costs and annualized present value costs for both filtered and unfiltered systems.

To estimate the number of filtered plants that would select a particular treatment technology, the Agency followed a two step process. First, the

number of plants that must make treatment changes to meet the proposed LT2ESWTR requirement was determined by the binning process. Second, EPA predicted the treatment technologies that plants would choose to meet the proposed requirements. The Agency used a “least-cost decision tree” as the basic framework for determining the treatment technology selection. In other words, EPA assumed that drinking water plants would select the least expensive technology or combination of technologies to meet the log removal requirements of a given action bin. However, these technology selections were constrained by maximum use

percentages, which recognize that some plants will not be able to implement certain technologies because of site-specific conditions. In addition, certain potentially lower cost components of the microbial toolbox, such as changes to the plant intake, were not included because the Agency lacked data to estimate the number of plants that could select it. These limitations on technology use may result in an overestimate of costs. An in-depth discussion of the technology selection methodology and unit cost estimates can be found in appendices E and F of the proposed LT2ESWTR EA (USEPA 2003a).

TABLE VI-10.—TECHNOLOGY SELECTION FORECASTS FOR FILTERED PLANTS

	Data set		
	ICR	ICRSSL	ICRSSM
Technology Selections			
Bag Filter 1.0 Log	1,545	1,236	1,441
Cartridge Filter 2.0 Log	190	17	52
CL02 0.5 Log	77	60	70
Combined Filter Performance 0.5 Log	16	12	14
In-bank Filtration 1.0 Log	5	3	4
MF/UF 2.5 Log	10	3	5
Technology Selections¹			
03 0.5 Log	26	17	21
03 1.0 Log	24	18	21
03 2.0 Log	9	1	2
Secondary Filter 1.0 Log	0	0	0
UV 2.5 Log	998	490	632
WS Control 0.5 Log	0	0	0
Total Plants Selecting Technologies	2,893	1,852	2,255

¹ Some plants are projected to select more than one technology to meet LT2ESWTR bin requirements; consequently, the value for total plants does not equal the sum of all technologies selected. Source: Chapter 6 of the LT2ESWTR Economic Analysis (USEPA 2003a).

c. *Unfiltered systems treatment costs.* The proposed LT2ESWTR requires all unfiltered plants to achieve 2 logs of inactivation if their mean source water *Cryptosporidium* concentration is less than or equal to 0.01 oocysts/L and 3 logs of inactivation if it is greater than 0.01 oocysts/L. For most systems, UV appears to be the least expensive technology that can achieve the required log inactivation of *Cryptosporidium*, and it is expected to be widely used by unfiltered systems to meet the rule requirement. However, as with filtered

systems, EPA estimated that a small percentage of plants would elect to install a technology more expensive than UV due to the configuration of existing equipment or other factors. Ozone is the next least expensive technology that will meet the inactivation requirements for some systems, and is estimated to be used by plants that do not use UV.

All unfiltered plants must meet requirements of the LT2ESWTR; therefore, the percent of plants adding technology is 100 percent. This also

assumes that no unfiltered systems currently use these additional treatment technologies. For this cost analysis, the Agency assumed 100 percent of very small unfiltered systems will use UV; for all other unfiltered system sizes, the Agency estimated that 90 percent would install UV and 10 percent would add ozone. This analysis is discussed in more detail in the LT2ESWTR EA (USEPA 2003a). Treatment costs for unfiltered systems are included in Table VI-11.