



---

## Controlling Microbial Contaminants and Disinfectants/ Disinfection By-products: *Benefits and Costs*

### Benefits

Microbial contaminants and disinfectants and disinfectant by-products (D/DBPs) can have adverse affects on public health. Microbial contaminants can cause diarrhea, dysentery, and hepatitis, and may even be fatal for individuals with weakened immune systems. Chronic exposure to disinfectants and disinfection by-products may cause cancer, liver and kidney damage, heart and neurological effects, and effects to unborn children.

The proposed D/DPB rule and the proposed enhanced surface water treatment (ESWT) rule for controlling microbial contaminants would significantly reduce public health risks associated with drinking water.

- Disinfectants and disinfection by-products would be controlled for all systems for the first time.
- The level of exposure to chlorinated disinfection by-products would be reduced on average by 20%-30% for an individual currently being exposed. Exposure to other non-chlorinated by-products would also be reduced.
- Hundreds of thousands of cases of disease associated with microbial contamination could be eliminated each year.
- Controls on the potentially deadly parasite, Cryptosporidium, would be implemented for larger systems serving more than 10,000 people.

- Enhancing surface water treatment to further reduce microbial contamination would have the added benefit of removing organic matter, the material which combines with chlorinated compounds during disinfection to form harmful by-products.

### Costs

#### Disinfectants/Disinfection By-products Control:

- Total annualized costs are estimated at \$1 billion per year.
- About 50% of all households would incur no costs to modify existing treatment.
- About 1% of households would experience costs of over \$16 per month.
- Of the remaining 49% of households, the average cost would be less than \$2 per month.

#### Enhanced Surface Water Treatment:

- Total annualized costs will depend on which of the proposed treatment options are selected in the final rule-making; however, the cost of one option being proposed would be less than \$500 million per year.
- Based on this option, for systems serving 10,000 people or more, the average cost per household would be less than \$20 per year.