

# Health Effects Profiling for Future Regulations

## Regulatory Impact Analysis

### Background:

The Safe Drinking Water Act (SDWA), as amended in 1996, requires the Environmental Protection Agency (EPA) to analyze the quantifiable and nonquantifiable health risk reduction benefits and monetary costs that are likely to occur as a result of compliance with a proposed maximum contaminant level (MCL) and the incremental benefits and costs of alternative MCLs. In order to develop quantifiable estimates for these benefits and costs, methods for evaluating dose-response relationships for critical and noncritical effects need to be developed. The new amendments also require the further analysis of subgroups of the population that are identifiable as being at greater risk of adverse health effects due to exposure to contaminants in drinking water than the general population. A framework for addressing sensitive populations within benefit/cost analysis is needed.

### Activities:

A number of projects are underway which have the following objectives: (a) to identify and characterize sensitive population groups, (b) to identify those factors that make a group sensitive (e.g., exposure factors, mechanisms of action, genetic susceptibility), and (c) to accommodate the knowledge in a risk assessment paradigm. Brief descriptions of some of these projects follow. The water intake project is designed to develop a profile of the population using tap water as their major source of drinking water, stratified by race, age, sex, socioeconomic status, region, rural/urban area, body weight, and for women, pregnant and lactating. The foodborne and waterborne illness project will provide a profile of mortality by age group and infectious organism (viral, bacterial, protozoan). The benefits project will develop a method for evaluating dose-response relationships for critical and noncritical effects of non-carcinogens. The demographics project will examine chronic diseases that might make groups sensitive.

### Schedule:

The water intake project is expected to be completed in the fall of 1998. The foodborne and waterborne illness project is near completion, with a draft report now submitted and under review. The benefits project was recently initiated and is expected to be completed by the end of Fiscal Year 1998. The demographics project is also expected to be completed by the end of Fiscal Year 1998.

### Questions for stakeholders:

1. Have sensitive populations been adequately described?
2. How can risks be described more effectively?