

### Human Health Not Related to Water Quality

Two issues are treated in this connection: threats to human health from pesticide residues on food and from the handling of pesticides in the course of applying them.

Residues on food. The EPA and the Food and Drug Administration (FDA) share responsibility for regulating pesticide residues on food, the EPA dealing with unprocessed commodities and FDA with those which are processed. The two agencies are occasionally criticized for laxness in discharging their respective responsibilities. However, our review of the literature turned up little documented evidence that pesticide residues on food are in fact a serious threat to human health. The CAST report (1980) cites a study by the National Research Council showing that in the U.S. per capita consumption of pesticide residues in or on food was about 40 milligrams, over half of it being pesticides no longer in use at that time. The aggregate acute toxicity of these residues was roughly equivalent to the acute toxicity of one aspirin or one cup of coffee. However, the CAST report notes that longer term effects of chronic exposure to such small amounts of pesticides had not been satisfactorily resolved by the available scientific evidence.

A later report by the National Research Council (1987), addressed the longer term risk of pesticide residues on food, specifically the risk of cancer. The report concluded that the residues increase the expected lifetime risk of cancer for the average American by 0.4 percent. That is, over a 70 year life an individual has a 25 percent chance of contracting cancer, apart from cancers resulting from pesticide residues on food. The residues, according to the NRC report, would increase the probability of cancer to 25.1 percent, an increase of .4 percent. The report indicates that the procedures to derive this estimate were more likely to overstate