

# Sonar\*

*Humans who are exposed to sonar-treated water are at negligible risk*



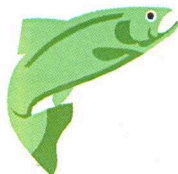
## **DRINKING SONAR-TREATED WATER**

A 70-kg adult (about 154 pounds) would have to drink over 1,000 gallons (child -285 gallons) of water daily, containing the maximum legally allowable concentration of Sonar in potable water (0.15 ppm), for a significant portion of their lifetime to receive a dose equivalent to the NOEL.



## **SWIMMING IN SONAR-TREATED WATER**

At the maximum allowable concentration of Sonar in water (0.15 ppm), an adult would have to swim for 24 hours every day for over 57 years to receive an amount equal to the NOEL.



## **EATING FISH FROM SONAR-TREATED WATER**

Adults would have to consume 2,467 pounds (child -705 pounds) of fish daily, at the maximum allowable tolerance limit in fish (0.5 ppm), for a significant portion of their lifetime to receive the dose equal to the NOEL.



## **EATING FOOD CROPS IRRIGATED WITH SONAR-TREATED WATER**

Adults would need to eat 25,000 pounds (child -7,000 pounds) of these foods daily, at the maximum allowable tolerance limit in meat, poultry, eggs, and milk (0.05 ppm), for a significant portion of their lifetime to receive the dose equal to the NOEL.



## **EATING LIVESTOCK EXPOSED TO SONAR FROM DRINKING TREATED WATER**

Adults would need to eat over 8,250 pounds (child -2,300 pounds) of these foods daily, at the maximum allowable tolerance limit (0.1 - 0.15 ppm), for a significant portion of their lifetime to receive the dose equal to the NOEL.

## **WHAT IS NOEL?**

No Observable Effect Level (NOEL) - the highest dose at which no adverse effects are observed in laboratory animals. The maximum non-toxic dose is usually established by laboratory studies in animals and is reported as the NOEL. The dietary NOEL for Sonar is approximately 8 milligrams per kilogram of body weight per day (8 mg/kg/day). This NOEL was determined from a study in rats that were fed Sonar in their regular diets every day for their entire two-year lifetime.

## **WHAT IS NEGLIGIBLE RISK?**

This term is used because it is beyond the capabilities of science to prove that a substance is absolutely safe, i.e., that the substance poses no risk whatsoever. Any substance, be it aspirin, table salt, caffeine, or household cleaning products, will cause adverse health effects at sufficiently high doses. Normal exposure to such substances in our daily lives, however, are well below those associated with adverse health effects. At some exposure, risks are so small that, for all practical purpose, no risk exists. We consider such risks to be negligible or insignificant.