FAQs ABOUT THE ENVIRONMENTAL IMPACT OF DRUGS IN RIVERS

Is the improper disposal of drugs really a problem in North Carolina?

The average North Carolinian fills 14 prescriptions annually, which adds up to 128,000,000 prescriptions filled statewide each year. Of the drugs dispensed, approximately 40 percent are never used, and in a recent survey, 89 percent of respondents disposed of medications in the garbage or flushed medications down the toilet or sink. Both practices lead to water contamination.

Are health professionals a part of the problem or a part of the solution?

The answer to both questions is "YES." Most health care professionals tell patients to flush unused drugs and flush medications themselves, practices which contribute to water contamination. One of the two methods of drug disposal advocated by the North Carolina Board of Pharmacy Investigations and Inspections is flushing drugs into our sewer systems. Every health care professional can be part of the solution if they educate themselves about safe disposal of drugs and teach their patients and clients about the safe disposal of drugs.

How does improper or unsafe disposal of drugs hurt our rivers and streams?

Our rivers and streams are particularly vulnerable to the effects of drug contamination. Aquatic life from the smallest plankton to our largest fish is harmed when exposure is constant and occurs during crucial times of their life cycles. Significant contamination is occurring in North Carolina and in over 80 percent of U.S. waterways that have been tested.

What kinds of drugs are in our streams and rivers? What harm do they do?

In 2004, the U.S. Geological Survey identified 100 different pharmaceuticals in rivers and streams. The list includes aspirin, caffeine, codeine, antibiotics and warfarin (a common blood thinner and sometimes a rat poison). They also found antibiotics, drugs used to treat mental illness and nicotine contaminated underground water because they leaked out of our landfills. Antibiotics in the environment are a real problem because bacteria can build up a resistance to them, which makes our medicine to treat infections less effective. Each year, 65,000 Americans die from antibiotic-resistant bacteria. Some of the drugs found in our water are linked to the development of diabetes, breast cancer and kidney problems.

What does the science and research tell us about the drugs in our rivers?

Scientists continue to investigate the environmental and human health consequences of drugs contaminating our rivers. Preliminary research has found that exposure to small amounts of drugs commonly found in our rivers and streams caused indicator species like earthworms and zooplankton to die. Other pharmaceuticals appear to be contributing to an increase in mussel mortality, accelerating reproduction in certain shellfish and stunting the growth of snails. Additionally, the compounds in birth

control pills and hormone replacement therapy can affect the sex characteristics of fish and reduce reproduction.

What good will Operation Medicine Drop do?
Operation Medicine Drop provides a way to inform communities, leaders and partners of the emerging threat of improper disposal of drugs. The take-back program and educational campaign offer a common sense way to reduce the amount of prescription drugs reaching our waters.