

Priority Problem Six:

TOXIC SUBSTANCES

There are many possible sources of toxic substances in the Barataria-Terrebonne estuary. These include pesticides and herbicides, storm and urban runoff, agricultural practices, industry, fallout from atmospheric pollution, drilling fluids and chemicals from the oil and gas industry, accidental spills (both oil and hazardous materials), and contaminants in the Mississippi and Atchafalaya rivers, which originate not only in Louisiana but also in a large portion of the United States within the Mississippi drainage basin.

These sources introduce metals, radionuclides, organic contaminants (including PCBs and DDT), polycyclic aromatic hydrocarbons (PAHs), and other toxins. All of these contaminants have different properties and therefore may affect the health of the estuary in various ways. Some are toxic at low concentrations. Some are very stable in the environment and don't break down easily over time. Some toxic substances accumulate in sediments and are consumed by bottom-dwelling organisms and thus enter the food chain, and some cause cancer.

The way pollution (excessive nutrient loading, toxins, and pathogens) enters the estuary varies. Sources such as industries along the Mississippi River are called point-source pollution, because the exact point of discharge can be located. Other pollution sources are more difficult to determine because they come from an accumulation of sources within a drainage area. This is called nonpoint-source pollution. Examples are urban and agricultural runoff.



**Barataria-Terrebonne
NATIONAL ESTUARY PROGRAM**
P.O. Box 2663 • Thibodaux, LA 70310 • (800) 259-0869

Text and Illustration: Diane Baker



Nonpoint-Source Pollution

Nonpoint-source pollution is a term that refers to sources of pollution that are hard to locate. For example, homeowners in a subdivision might use pesticides and fertilizers on their lawns and gardens. These chemicals can be washed into a local bayou by a thunder shower. This source of pollution may seem insignificant, but it becomes significant when you multiply it times the number of people in a subdivision or the number of people in the Barataria-Terrebonne estuary.

Point-Source Pollution

Point-source pollution is a term that refers to pollution that enters the environment at an exact point or location. Emissions from an industrial plant discharge pipe are a good example of point-source pollution.