

Damage Assessment After Large-Scale HAZMAT Spills

After a large hazmat spill the spread of the material is contained and damage is assessed. The damage estimated is the extent of injury to natural resources and the monetary value of the impact of the spill. The goals of damage assessment are to determine the resources needed to restore injured resources and to compensate the public for interim losses. Federal and state laws allow only designated agencies to conduct a “Natural Resources Damage Assessment.” For coastal oil spills these are usually overseen by the National Oceanic and Atmospheric Administration (NOAA). For other hazmat spills and inland oil spills the Department of Interior (DOI) does damage assessments.

Formal methods for damage assessment are developed by the NOAA. The authorities are determined in the Oil Pollution Act, 43 CFR Part II under CERCLA. The Oil Pollution Act also allows immediate funding to be made available to assess the damages. Much of the money for these studies comes from taxes and levies placed on the oil industry. Two basic procedures are used: computer modeling and field studies. Computer studies (type A assessments) are best suited to estimate the physical fate of the chemicals, biologic effects, and economic damages. Field studies (type B assessments) are best suited for large-scale incidents in which injuries are complex and varied and services are lost. Often a combination of the two methods is used.

Table 11-5 Examples of damage that is assessed after large-scale hazmat incidents

Biologic injuries

Loss of wetlands

Mortality of fin fish, shellfish, birds, mammals, reptiles, amphibians, endangered species

Impaired use

Loss of recreational and commercial fishing, trapping, hunting, wildlife viewing, environmental studies, boating, park use, beach use

The NOAA has a national rapid assessment program that constantly monitors the U.S. coastline. It works closely with the U.S. Coast Guard at centers located at Silver Spring, Maryland; Anchorage, Alaska; Sandy Hook, New Jersey; St. Petersburg, Florida; Seattle, Washington; and Long Beach, California. The most common problem to which the NOAA responds is oil pollution. This pollution results from sludge and oil-containing water that is released from ships and accidents. In some cases contaminated sites are determined to be “Superfund” sites, which can be investigated in response to public concern and use federal funding.