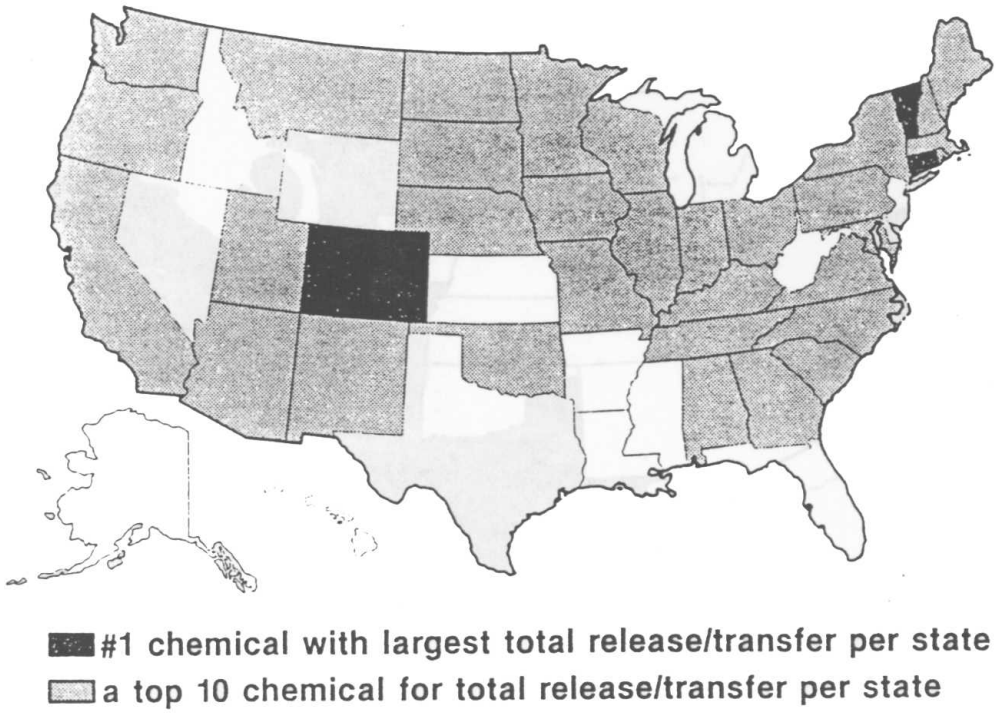

Figure 6.—Releases and transfers of 1,1,1-trichloroethane.

Figure 7 illustrates how you can look at the geographic distribution of carcinogens at a state level. In 1989, about 123 carcinogens out of the 300 chemicals were on the list. Seven percent (411.5 million pounds) of TRI total releases and transfers were comprised of carcinogens. Another interesting statistic is that 25 of those carcinogens account for about 98 percent of the total carcinogen emissions.

Since the data are reported by chemical and facility, you can then focus on which facilities are releasing the largest amount. Individual facilities can be targeted as candidates for cleanup action or enforcement. The top 50 facilities accounted for over a 100 million pounds or 26 percent of the carcinogen totals. Much of the emissions are in the Texas–Louisiana area.

The TRI database allows you to continue focusing your microscope further and further down, analyzing multiple layers of data.

We cover 20 sectors of the manufacturing industries in the United States. Figure 8 shows the carcinogen releases by those sectors. When you cross the carcinogen data with the industry information, you can see that the chemical industry ranks first with most carcinogens released — a total of about 135 million pounds or about 33 percent of the total. The primary metals and plastic industries rank second.

You can also examine population distributions surrounding three different TRI facilities in a state (Fig. 9). The first facility is in a heavily populated urban area, the second in a rural area, and the third in a suburban neighborhood. By using population figures, the risks versus the population size of the surrounding areas can be analyzed. A chemical release from traffic in high density urban areas with heavy population can have a different effect on health than a release produced in a sparsely populated area. You then can take other data and integrate them with the TRI.

Conclusion

In conclusion, I would say that the uses of TRI are endless. These data can be examined on a national scale, by state, region, city, county, or by individual facility. Individual chemicals or classes of chemicals, such as carcinogens, can be examined and analyzed for one, two, three, soon to be four years, to look at the overall trends to determine the overall increases or decreases.

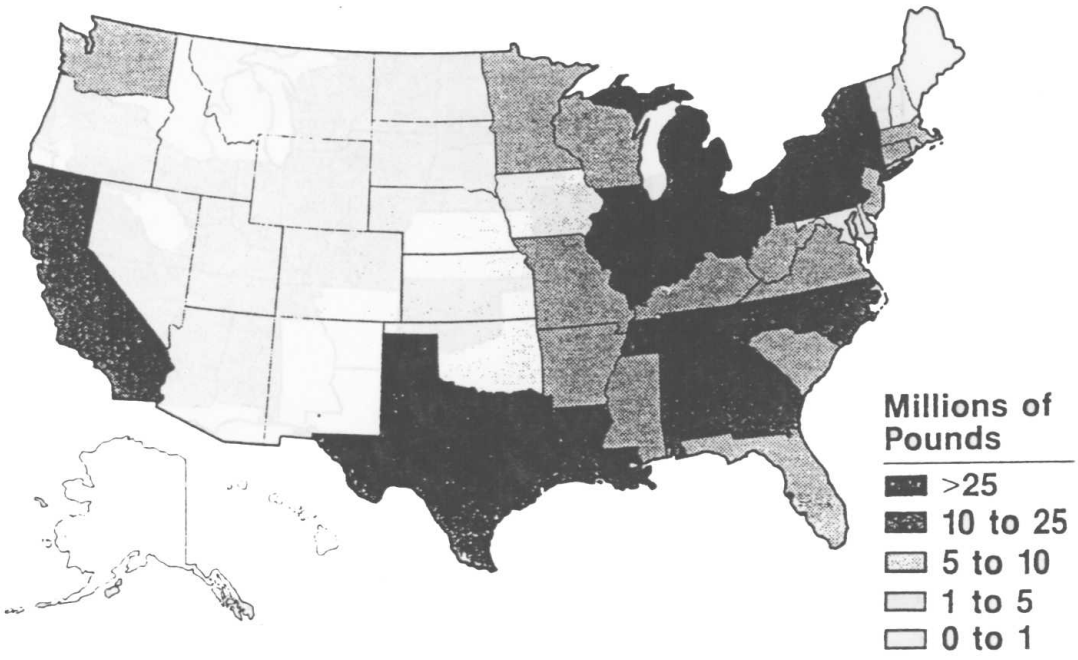

Figure 7.—Total releases and transfers of carcinogens.

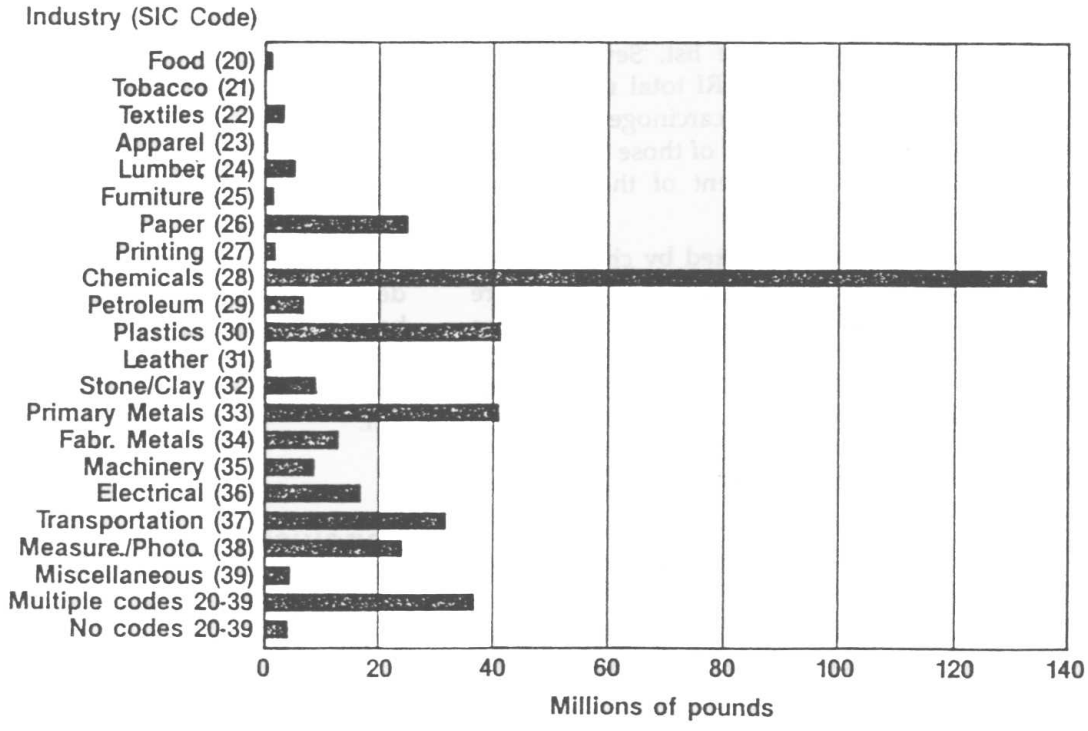

Figure 8.—Carcinogenic releases and transfers by industry: 1989.

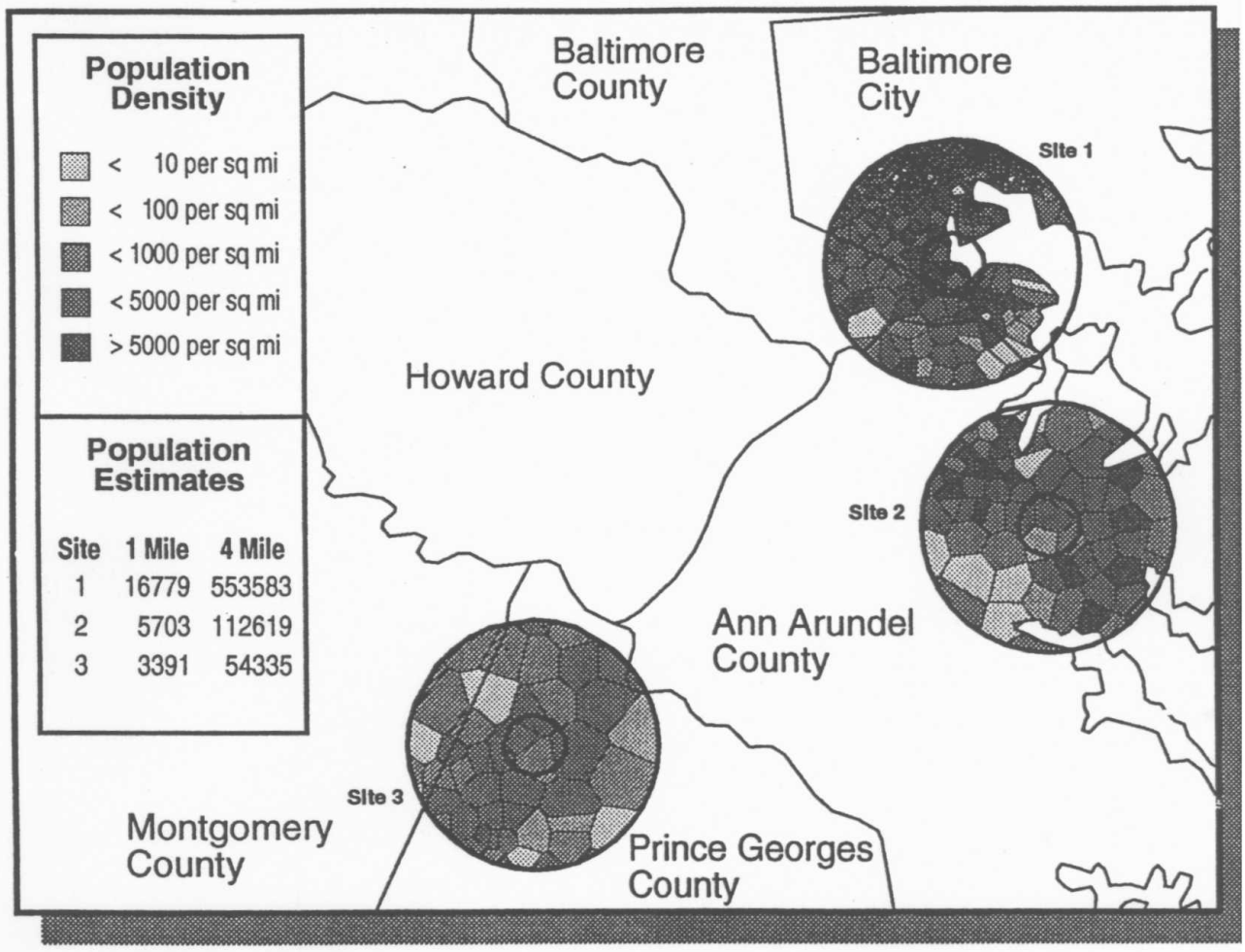

Figure 9.—Population estimates around selected TRI sites: one- and four-mile radii.

Other Perspectives on Toxics Release Reporting