

### *Potentially Contaminated/Cleanup Sites*

Cleanup sites are areas polluted with hazardous substances that must be cleaned by the property owner or the government. Cleanup sites pose a potential health risk to humans and the environment. Humans can be harmed by contact with hazardous materials on a contaminated site via exposure to contaminated land, air, surface water, and ground water (Environmental Protection Agency, 2021). Potential cleanup sites include property transfer programs, federal remediation programs, state remediation programs, urban site remediation programs, and discharge authorization and enforcement programs. Cleanup sites include Resource Conservation & Recovery Act (RCRA) Corrective Action facilities and abandoned brownfield cleanup sites. RCRA requires facility owners and operators to clean up properties that have treated, stored, or disposed of hazardous waste at their facility. Voluntary remediation programs in Connecticut under Connecticut General Statutes (CGS) sections 22a-133x and 22a-133y.

People who live near these locations are more likely to experience pollution exposure than those who live further away. According to several assessments, cleanup locations are often in low-income communities and have a higher proportion of persons of color than other areas (California Office of Environmental Health Hazard Assessment (OEHHA), 2022). Research shows that residents living in areas near industrial contaminated sites have higher mortality and morbidity rates from a variety of conditions, including cancer, cardiovascular disease, and respiratory disease. These consistent findings from several epidemiological techniques support the need to identify and complete environmental cleaning efforts (Pirastu et al., 2013).

**Indicator** This indicator represents the tracts ranked by their percentile proximity to cleanup sites that can include property Transfer Program, federal remediation programs, state remediation program, urban site remediation program, general permit, discharge authorization and enforcement. Cleanup sites include Resource Conservation and Recovery Act (RCRA) Closure and Corrective Action, Voluntary Remediation Connecticut General Statutes (CGS) sections 22a-133x and 22a-133y and abandoned brownfields cleanups.

**Data Source** 2021 CT DEEP Hazard Waste Inventory, [Remediation Department](#)

**Method** Potentially contaminated sites were selected from the Hazard Waste Inventory spreadsheet was provided by DEEP and geocoded. From each point, buffers were established, intersecting these buffers with the adjacent census tracts. Buffer weights were determined based on their proximity to each site. Those within 250 meters were assigned a weight of 1, those within 250-500 meters received a weight of 0.5, tracts within 500-750 meters were assigned a weight of 0.25, and a weight of 0.1 was given for tracts within 750-1000 meters. Tracts beyond the 1000-meter radius were assigned a weight of 0, i.e., not close to the pollution source. The cumulative weight score was then computed by adding up the weights of each buffer located within each census tract.

The corresponding percentile for each census tract was designated based on these total weight scores. The percentiles are normalized into impact rank scores between 0 (least impacted) to 10 (most impacted). The map was segmented into ten equally sized

sections between the 0 and 10. When there are a lot of census tracts with No Data (weight assigned 0, i.e. not close to the pollution source) is available, the rank range table do not display ten equally sized rank ranges. The value in the table below represents the sum of site proximity weights for each census tract.

Min Value	Max Value	Min Percentile	Max Percentile	Min Rank	Max Rank
0	0	0	0	0	1
0.1	0.1	38.57	38.57	3	4
0.2	0.25	43.57	44.82	4	5
0.3	1	50.17	57.79	5	6
1.25	1.5	79.07	79.41	7	8
2	2	81.8	81.8	8	9
2.5	10	91.58	99.89	9	10

## Works Cited

- California Office of Environmental Health Hazard Assessment (OEHHA), 2022. Cleanup Sites [WWW Document]. Oehha.ca.gov. URL <https://oehha.ca.gov/calenviroscreen/indicator/cleanup-sites> (accessed 3.28.23).
- Environmental Protection Agency, E., 2021. Contaminated Land: What are the trends in contaminated land and their effects on human health and the environment? [WWW Document]. EPA. URL <https://www.epa.gov/report-environment/contaminated-land> (accessed 3.28.23).
- Pirastu, R., Comba, P., Iavarone, I., Zona, A., Conti, S., Minelli, G., Manno, V., Mincuzzi, A., Minerba, S., Forastiere, F., Mataloni, F., Biggeri, A., 2013. Environment and Health in Contaminated Sites: The Case of Taranto, Italy. *J. Environ. Public Health* 2013, 1–20. <https://doi.org/10.1155/2013/753719>