



Health Studies Fact Sheet NORTH INDIAN BEND WASH

The North Indian Bend Wash Superfund site in Scottsdale is an area where the groundwater underlying some parts of the site contains industrial chemicals called volatile organic compounds (VOCs). The North Indian Bend Wash site is generally located between Scottsdale and Pima Roads to the west and east and bordered by McDonald Drive on the north and McKellips Road on the south. These chemicals, including cleaners and solvents like trichloroethylene (TCE), are detected in groundwater far below the ground surface. People who live and work in the area do not come into contact with these VOCs.

Government agencies have conducted independent health studies and reports, which have all concluded that groundwater at the site presents no current health risks to people who live and work in the area.

The following are independent government reports about the site, along with a summary of their findings. This information is provided by Motorola Solutions as a public service to our community and neighbors.

U.S. PUBLIC HEALTH SERVICE

Health Assessment for North Indian Bend Wash

In April 1989, the Agency for Toxic Substances and Disease Registry (ATSDR), a part of the U.S. Public Health Service, published its official health assessment of North Indian Bend Wash. That study evaluated whether people in the area were being exposed to substances like TCE.

Overall, the study concluded that human exposure to TCE does not appear to be occurring at the site. In particular, the study noted that houses in the area are constructed on poured concrete slabs. Therefore, it is also unlikely that people could be exposed to soil gases in their homes.

[ATSDR Site Review and Update](#)

In September 1993, the ATSDR updated its review of the North Indian Bend Wash Area. The ATSDR confirmed its earlier conclusion that no one is being exposed to contaminated groundwater.

[U.S ENVIRONMENTAL PROTECTION AGENCY](#)

[North Indian Bend Wash Remedial Investigation/Feasibility Study Report, Public Comment Draft](#)

In April 1991, a study of North Indian Bend Wash was prepared for the U.S. Environmental Protection Agency (EPA) by its own contractor. Overall, the study indicated that the area did not pose a current risk to public health because local municipal and domestic water supply wells do not pump water from the contaminated area. The study also found no significant human health risk from exposure to soils contaminated by chemicals such as TCE. Finally, the study pointed out that sampling by the EPA in 1988 did not detect any significant chemical contamination in the water, fish, or pond sediments in the area.

[Record of Decision, North Indian Bend Wash Superfund Site](#)

The EPA's official "Record of Decision" on North Indian Bend Wash was issued in September 1991. The EPA concluded that no one receiving their drinking water from the local municipal distribution systems are exposed to compounds like TCE at levels above the strict federal standards. In addition, the EPA found that neither direct exposure to contaminated soil and soil gas, nor exposure to surface water in the area, posed significant cancer or non-cancer risks.

[Indian Bend Superfund Site Fact Sheets](#)

In April 1991, the EPA issued a fact sheet on the NIBW. Even though the EPA used risk analysis methods with conservative assumptions and safety factors that tended to overestimate the risk, the EPA still concluded that North Indian Bend Wash did not present a threat to human health or the environment. In its January 1992 fact sheet, the EPA indicated that the soil contamination at North Indian Bend Wash does not present a significant health threat through direct contact or accidental soil ingestion.

These fact sheets, in addition to fact sheets published in November 1991 and September 1992, contained assurances from the EPA that, since 1981, no one in the area has received drinking water that contains TCE or other contaminants above the strict state and federal limits.

ARIZONA DEPARTMENT OF HEALTH SERVICES

Incidence Study of Childhood Cancer in Maricopa County 1965-1986

In April 1990, the Arizona Department of Health Services (ADHS) released the results of a study of leukemia and cancer incidence among children residing in Maricopa County. Although primarily designed to calculate incidence rates of childhood leukemia for another part of Phoenix, the study also provided data for the North Indian Bend Wash area. The study indicated that there were no elevated rates of cancers or leukemia in the North Indian Bend Wash area.

Follow-up of Childhood Leukemia Incidence Rate in Maricopa County

In January 1993, the ADHS conducted a follow-up to the April 1990 incidence study, covering the period from 1987-1990. Like the first study, this study was designed to calculate incidence rates of childhood leukemia for another part of Phoenix. However, it also provided data for the North Indian Bend Wash area. The study indicated that the childhood leukemia rates in the North Indian Bend Wash area were significantly lower than expected.

Report on Mortality in Maricopa County 1966-1986

In August 1988, the ADHS reported on mortality rates throughout Maricopa County from 1966-1986. The report indicated that during the 1966-1986 period there were not enough leukemia deaths in the North Indian Bend Wash area to calculate a mortality rate. In addition, the overall cancer mortality rate in the North Indian Bend Wash area was not significantly higher than the overall United States rate.

The study observed that mortality rates due to congenital anomalies for residents of the North Indian Bend Wash area were lower than the rate for the rest of Maricopa County and the United States. The results also indicated that middle-aged adults and the elderly in the North Indian Bend Wash area experience significantly lower risks of the death from cardiovascular disease than their national counterparts.

EPA FIVE-YEAR REVIEWS FOR THE NORTH INDIAN BEND WASH SITE

In 2006, the EPA determined that the NIBW Site was “construction complete”. This designation indicates that all components of what EPA considers to be the “Final Remedy” are installed and operating. This designation also started the process for periodic Five-Year Reviews of the remedy.

2011: First Five-Year Review for the NIBW Site

In the [2011 First Five-Year Review](#) for the NIBW Site, the EPA concluded, “The remedies at the IBW Site are currently protective of human health and the environment, and exposure pathways that could result in unacceptable risks are being controlled. The groundwater extraction and treatment systems which comprise the NIBW remedy are removing VOC mass from the three groundwater zones, reducing VOC concentrations in groundwater, and treating VOC concentrations to below the maximum contaminant levels. The groundwater plume is contained as demonstrated by analysis of groundwater data and predicted by groundwater modeling.”

2016: Second Five-Year Review for the NIBW Site

In the [2016 Second Five-Year Review](#) for the NIBW Site, the EPA concluded that, “The NIBW remedial actions are contributing to restoring groundwater for beneficial use. Treated groundwater is supplied to the City of Scottsdale and Paradise Valley potable water system, is delivering treated water to Salt River Project for irrigation use, and to shallow injection wells that recharge the UAU aquifer and provide hydrological containment. The groundwater extraction and treatment remedy is controlling exposure to contaminated groundwater, and preventing lateral migration of VOCs in groundwater.” The Second Five Year Review included a screening evaluation of vapor intrusion potential from groundwater contamination; this screening evaluation again concluded that vapor intrusion from groundwater contamination is not a pathway of concern. However, it did not consider the potential for vapor intrusion from residual volatile contamination located in the vadose zone (soil vapor) at the source areas. The report also recommended that ambient air sampling around the treatment facilities and a vapor intrusion assessment be conducted to evaluate protectiveness relative to new vapor intrusion criteria developed since the 2011 Five Year Review.

2021: Third Five-Year Review for the NIBW Site

In the [2021 Third Five-Year Review](#) for the NIBW Site, the EPA concluded that, “The North Indian Bend Wash remedy is currently protective of human health and the environment.”