

Support Shivwits Band of Paiute Health & Wellness and Oppose Unsafe Golf Courses Near Band Member Homes

What are the Health Effects?

- Wastewater-irrigation is known to contain dangerous Forever Chemicals (PFAS), microplastics, pharmaceuticals, pesticides, and other chemicals-of-emerging concern (CEC). Large-scale use of pesticides and insecticides will be needed to maintain the proposed golf courses. ***Long term exposure to these from golf courses near to Shivwits residential homes and wells will be devastating for the health of Shivwits Band Members and their families.*** The large volume of pesticides and reuse-irrigation wastewater applied to Black Desert's golf courses will cause quantifiable and demonstrable health risks to nearby Shivwits tribal members.
- In a critical analysis of international scientific literature published since 2013, ***a strong link was established between pesticide exposure and over twenty pathologies, including brain and motor development disorders in children and neurodegenerative diseases and cancer in children and adults.***
- A recent study of 137 golf courses published in the prestigious Journal of the American Medical Association indicated that ***living within one mile of a golf course is associated with a 126% increased risk of developing Parkinson's disease***, with odds decreasing in those living more than six miles away. Pesticides were found to have leached into the groundwater and drinking water near golf courses. *In addition to Parkinsons, Band Members living close to the golf courses will be at increased risks for cancer, Alzheimer's, diabetes, heart and lung disease, birth defects, and autism.*
- Research shows that wind can carry pesticide and chemically contaminated wastewater particles from evaporation or spraying for many miles. The secondary wastewater irrigation provided to Black Desert's Shivwits golf courses by Washington County Water District, contains dangerous amounts of health-harming forever-chemicals, pesticides, microplastics, nano-plastics. *Once native plants and soil are displaced, golf course chemical pollution will drift in air of the Red Mountain area's frequent strong and gusty winds and pose significant health risks to people in nearby homes, especially children and elders.*
- ***The EPA describes many harmful effects from this kind of particle pollution, including increased mortality in infants, increased hospital admissions for heart attacks and strokes, increased hospital admissions and emergency department visits for chronic obstructive pulmonary disease, and increased severity of asthma attacks and hospitalizations among children.***

What are the Health Hazards?

- **Valley Fever:** Valley fever is a serious, life-threatening, and sometimes fatal respiratory infection caused by a rare fungus in soil which becomes airborne when disturbed by construction. It affects the lungs of exposed individuals. Constructing a resort, multiple golf courses, and an airport on Shivwits Lands will inevitably cause an increase in Valley Fever cases, just like it has near Black Desert's other Ivins golf course resort.
- **Chronic exposure to pesticides:** The protective genes people need for DNA repair to help them recover from pesticide exposure are weakened from chronic exposure to pesticides, chemicals, and the other contaminants in golf course irrigation wastewater. Chronic pesticide exposure can activate certain diseases by turning on a genetic switch in people like the way smoking turns on a person's genetic risk for lung cancer or radiation exposure turns on their risk for developing thyroid cancer or leukemia.
- Long term cumulative exposure increases that risk dramatically: The larger the toxin dose, the greater the quantity, and the longer the exposure, the worse it is for people living nearby. Unlike those who acknowledge the significant health risks of smoking but choose to smoke anyway, neither Shivwits Members nor their neighbors have any choice about living right next to Reef Capitals golf courses. ***Chronic toxic pesticide and chemically contaminated wastewater exposure will affect all of these people for generations, just as exposure to the Nevada's test site atomic testing has affected downwind Shivwits survivors and their children for generations.***
- **Ever Increasing Exposure to Forever Chemicals:** Forever chemicals (aka PFAS), which are leftover and even increased by the sewage treatment process and present in the wastewater used for golf course irrigation, cause health problems including: *an increased lifetime incidence of heart disease, lung disease, diabetes, cancer, autism, low birth weights, birth complications, decreased bone growth, liver problems, developmental defects, diabetes, a lowering of childhood IQ, and reproductive dysfunction.*
- The extensive health impacts of forever-chemicals are of serious concern to all Tribal Nations, including the Shivwits Band of Paiutes who already suffer systemic health disparities, and, like other Native Americans, are "disproportionately burdened by diseases and experience lower life expectancy compared to non-Native individuals."
- ***EPA finds forever chemicals to be so toxic that "there is no safe level" in humans. Health care providers are being asked to measure levels of PFAS in patients suffering from associated diseases, in order to better quantify risks. Many residents in communities adjoining the proposed golf courses plan to follow EPA recommendations and have their blood drawn before and after Black Desert golf course construction, and at regular intervals thereafter. Worsening health, increased disease, and related lawsuits will surely follow.***