



# COUNTY OF RIVERSIDE

## DEPARTMENT OF ENVIRONMENTAL HEALTH

JEFF JOHNSON, DIRECTOR

---

Environmental Health collected three (3) samples of standing flood waters at the following locations:

1. Entrance to Vargas Mobile Home Park at Pierce Street (south of Lawson Dump site)
2. Intersection of 69<sup>th</sup> Avenue and Pierce Street (southwest of Lawson Dump site)
3. Near Jonathan Street (northwest of Lawson Dump site)

A fourth sample was obtained in standing water elsewhere in the Coachella Valley, as a control sample.

Analysis of samples were requested for volatile organic compounds (VOCs), metals, polycyclic aromatic hydrocarbons (PAHs), and dioxins/furans.

Environmental Health received laboratory test results indicating no detection of VOCs or PAHs in all samples. This means these compounds were not present in the flood water samples. In addition, metals were detected below California's hazardous waste thresholds.

Environmental Health provided the laboratory test results for dioxin and furans to the California Office of Environmental Health Hazard Assessment (OEHHA). The following were included in OEHHA's analysis:

- The samples were analyzed for dioxins and furans and reported as total toxicity equivalencies.
- OEHHA performed a risk model based on the highest concentration detected (Sample 3) based on the Total Toxicity Equivalency.
- The model assumed a health-protective exposure of 14 days based on the estimated time it took for the water to dry up or recede based on the account by County officials.
- The model used dermal (skin) absorption as the relevant route of exposure. OEHHA used a dermal permeability model with chemical properties from Environmental Protection Agency's regional screening level. Exposure assumptions were a single exposure of 10% of the body surface area daily for 14 days.
- Dioxins and furans were detected in the background (Sample 4) at lower levels.
- Dioxins and furans are known to be bound to soil particles and may have been present in the soil prior to the event based on detections in the background sample.

OEHHA estimated the risk from exposure to the flood waters to be 1.6 excess cancer cases per 1 million exposed persons. The chemical of concern was total toxicity equivalencies of dioxins and furans. This is based on health protective assumptions of the estimated cancer risk from dermal absorption. This estimate is just above the de minimis level of 1 cancer case per 1 million exposed persons and within the normal range of 1 in a million to 100 in a million where risk management decisions would guide the course of action.