

# Red Butte Creek Oil Spill



## Background

In the early morning of Saturday, June 12, 2010, a high-voltage electrical arc from an above ground power line followed a fence pole into the ground and to a Chevron crude oil transfer pipeline, creating a one-half inch diameter hole. An estimated 33,600 gallons of crude oil spilled into Red Butte Creek in Salt Lake City, Utah before the leak was detected and the pipeline shut down that evening. The crude oil traveled down Red Butte Creek and collected in Liberty Park Pond, with some sheen escaping downstream into the Jordan River. Red Butte Creek travels through residential, business, and Veteran's Administration properties in Salt Lake City, many of which were impacted by the spill.

Although remediation of the spilled oil and restoration of the creek has since occurred, many area residents remained concerned about acute and chronic health effects resulting from exposure to crude oil. Their concerns include exposures to contaminants in the water as well as volatile organic compounds (VOCs) in the air during and after the

spill. Residents voiced their concerns with the Salt Lake County Health Department (SLCoHD), who in turn requested that the Environmental Epidemiology Program (EEP), within the Utah Department of Health (UDOH), evaluate potential acute and chronic health effects, including cancer. These evaluations have been published in a public health assessment and a subsequent health consultation, both produced through a cooperative agreement with the Agency for Toxic Substance and Disease Registry (ATSDR). Most recently, a five-year update cancer incidence statistical review has been published and released to the public.

## Documents:

### **Cancer Incidence Statistical Review: Five-Year Update (2015)**



- This Cancer Incidence Statistical Review follows the recommendation found in the 2011 Public Health Assessment and updates the evaluation of cancer rates between 1983 and 2012 in the study area five years after the 2010 oil spill.
  - Of the 42 cancer categories assessed, only ovarian cancer during the final analytical time period (2008 - 2012) was meaningfully elevated.
    - Meaningful result: when the incidence of a cancer type is statistically elevated compared to the rest of the state for two or more consecutive time periods, or when the final time period has a statistically elevated incidence.
    - A statistically elevated incidence during the final time period may indicate an emerging cluster.
    - However, exposure to crude oil or its components is not known to be a risk factor for ovarian cancer.
    - The majority of known ovarian cancer risk factors are genetic or hormonal.
      - Click [here](#) to learn more about ovarian cancer.
  - Based on the EEP's review of cancer incidence in the Red Butte Creek area, the following actions are recommended:
    - The cancer incidence in the study should continue to be re-evaluated every five years, as additional cancer data become available.
    - The Salt Lake County Health Department is recommended to work with the Utah Cancer Control Program for screening and health education services that are available to the study area communities.

### **Public Health Assessment (2011)**



- **Public Health Assessment Factsheet**

- This Public Health Assessment evaluates the potential for long-term health impacts in the community from exposure to components of crude oil. It also addresses the crude oil contaminants and the environmental compartments that were impacted during the spill, specifically focusing on water and air.
- Based upon the available data regarding air and water contamination of the Red Butte Creek due to the Chevron oil spill, the EEP finds no immediate health hazard to the community.
  - Based upon EEP's review of the Red Butte Creek surface water and air data, as well as community concerns, the following actions are recommended:
    - The cancer incidence study specific for cancer types linked to crude oil exposure should be re-evaluated every five years, as additional cancer data become available.
    - Coordination with the Utah Department of Environmental Quality (UDEQ) will continue to assess future sampling data during the remediation process, including flush events.
    - Based upon the available data regarding air and water contamination of the Red Butte Creek due to the Chevron oil spill, the EEP found no immediate health hazard to the community due to VOC exposure.

## **Health Consultation (2011)**



- **Health Consultation Factsheet**
- This document is an extension of the public health assessment and addresses community concerns regarding exposures to polycyclic aromatic hydrocarbons (PAHs) in the water and creek soil sediment.
- Based upon the available data regarding water and soil contamination of the Red Butte Creek due to the Chevron oil spill, the EEP found no apparent health hazard to the community due to PAH exposure.
  - Based upon EEP's review of the Red Butte Creek surface water and air data, as well as community concerns, the following actions are recommended:
    - The cancer incidence study specific for cancer types linked to crude oil exposure be re-evaluated every five years, as additional data become available.
    - Coordinate with UDEQ to assess future sampling data to better guide further remediation if it is deemed necessary.

## **Documents**

- **Cancer Incidence Statistical Review: Five-Year Update (2015)**
- **Public Health Assessment (2011)**
  - **PHA Factsheet**

- [Health Consultation \(2011\)](#)
  - [HC Factsheet](#)

### **Additional Information**

- [Huntsman Cancer Institute Learning Center](#)
- [Community Presentation](#)
- [Map of Study Area](#)
- [What to expect from ATSDR](#)

### **Contaminants**

- [Benzene ToxFAQs](#)
- [Benzene ToxZine](#)
- [Ethylbenzene ToxFAQs](#)
- [Naphthalene ToxFAQs](#)
- [Polycyclic Aromatic Hydrocarbons \(PAHs\) ToxFAQs](#)
- [Toluene ToxFAQs](#)
- [Xylene ToxFAQs](#)

### **External Links**

- [Salt Lake City](#)
- [Salt Lake County Health Department](#)
- [Utah Department of Environmental Quality - Red Butte Oil Spill Updates](#)