



# GRIC/US EPA North Central Groundwater Project



Gila River Indian Community Department of Environmental Quality · US Environmental Protection Agency

Fact Sheet #1

June 2009

This fact sheet is the first in a series to inform the public of the investigation and clean-up activities associated with underground contamination discovered beneath and near the Lone Butte Industrial Park (Industrial Park). It also announces an opportunity for public comment and information sharing at a local Public Meeting.

The GRIC Department of Environmental Quality (GRIC DEQ) and the US Environmental Protection Agency (US EPA) are jointly overseeing the North Central Groundwater Project to address the soil and **groundwater\*** contamination caused by historical releases in the Industrial Park. The current focus area includes the Industrial Park, located at the northern edge of the GRIC, adjacent to the I-10 and just south of Chandler, AZ. It also includes the lands immediately west of the I-10 in the direction of groundwater flow from the Industrial Park (Figure 1).

### Questions/comments?

Please see contacts on back page.

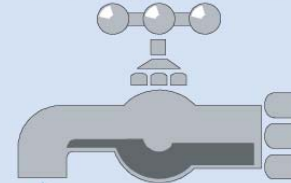
## Public Meeting

**When:** July 2, 2009, 1:00 pm-6:30 pm (open house format, come at your convenience)

**Where:** Anthony B. Shelde Building 5718 W. North Loop Rd. (East of Whirlwind Golf Club)

**Purpose:** to give the community the opportunity to ask questions and provide comments regarding the project.

## What about my drinking water?



All drinking water in the area of the North Central Groundwater Project is required to meet Federal drinking water standards.

## History and Discovery of Contamination

The GRIC DEQ discovered groundwater contamination during routine monitoring, and requested US EPA's assistance with the investigation and cleanup. The extent of the contamination indicates that the

contamination occurred approximately twenty (20) to twenty-five (25) years ago by companies (also known as potentially responsible parties) that are no longer operating in the Industrial Park.

US EPA is directing investigation and cleanup by two potentially responsible parties.

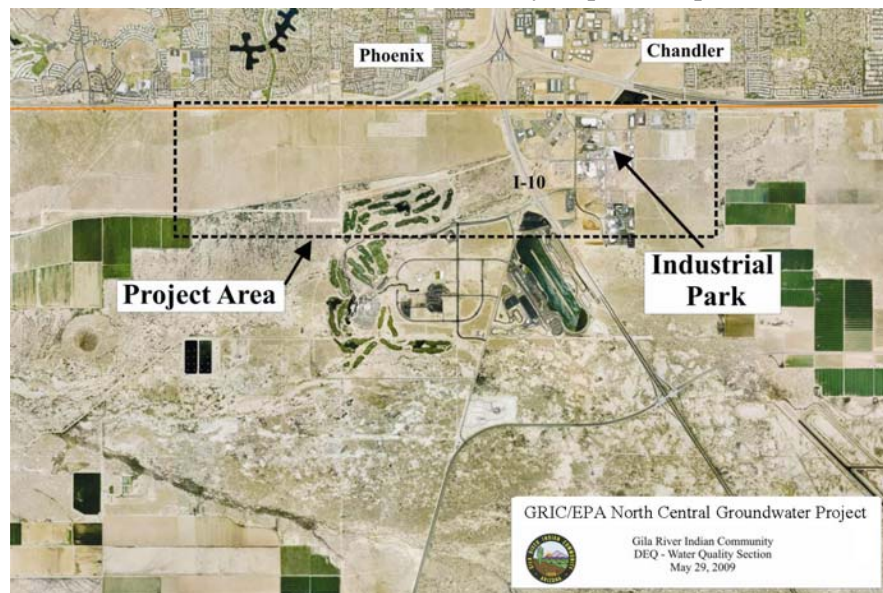


Figure 1: Location of GRIC/US EPA North Central Groundwater Project

\* Terms in **bold** are defined in the glossary on page 3

The contamination occurred due to leaks and spills of chemicals in the Industrial Park, which caused the chemicals to seep into the soil and groundwater.

## Location and Extent of Contamination

Contamination has so far been found beneath the Industrial Park and immediately to the west, in the direction of groundwater flow, which indicates that it is migrating west with groundwater movement. The farthest point where contamination was detected is approximately three and a half (3.5) miles west of the Industrial Park.

Current data show contamination in the upper portion of the regional groundwater **aquifer**, approximately eighty (80) to one hundred (120) feet below the ground surface. No contamination has been detected in the deeper aquifer (700 feet or greater), where nearby drinking water wells draw water. A clay layer separates the deeper aquifer from the shallow contaminated groundwater (Figure 2).

## Contaminants of Concern

Five contaminants of concern have been identified in the aquifer thus far. All five are or were common industrial solvents (cleaning agents) used through-

out the United States. The primary contaminants of concern are **trichloroethylene (TCE)** and **tetrachloroethylene (PCE)**. Additionally, low levels of **1,1-dichloroethylene (1,1-DCE)**, **1,4-dioxane**, and **acetone** have been detected.

## Health Risks

Current water quality data from drinking water wells demonstrate that the contaminants are not in the drinking water.

Drinking water in the area comes from a significantly greater depth than the depth at which contamination is present (see Figure 2). If these contaminants were to be present in drinking water, expo-

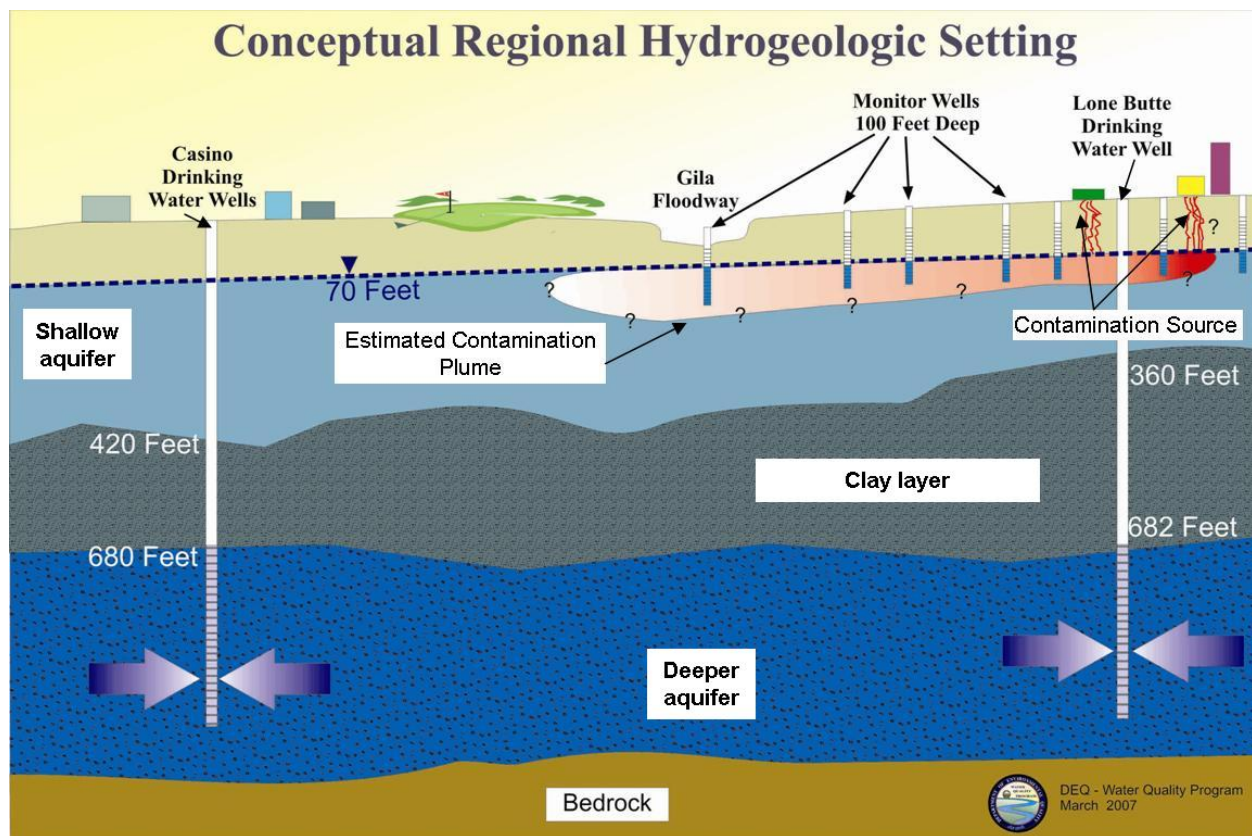


Figure 2: Cross-section showing soil, groundwater, drinking water wells and monitoring wells

sure for long periods of time (on the order of decades), even in very small amounts, could increase an individual's chances of getting cancer. The "small amounts" typically means several **parts per million** of the contaminant in the water. However, no such contaminant has been discovered, and the drinking water is being sampled on a regular basis.

## Investigation and Cleanup Actions to Date

The GRIC DEQ and US EPA have so far identified two source areas of contamination (i.e. where the contamination is coming from) within the Industrial Park. Investigation of other potential sources continues. Initial cleanup of the known sources of contamination by **soil vapor extraction** has already begun in order to prevent more con-

tamination from spreading through the soil and groundwater.

The agencies are also working with potentially responsible parties and other stakeholders to further define the nature and extent of the contamination and determine future cleanup steps.

## Community Outreach and Involvement

The GRIC DEQ and the US EPA will jointly generate a series of fact sheets on the progress of the project and conduct public meetings to inform and involve the public. The US EPA is currently developing a web site to post information and reports for the project. The web address for that site will be announced in the next fact sheet.

## Glossary

**Aquifer:** An underground layer of porous material, like sand or gravel, that stores groundwater.

**Acetone:** A chemical used to make plastic, fibers, drugs, and other chemicals. Also used as a cleaning agent because it dissolves other substances.

**Contaminant:** Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on people, air, water, or soil.

**Groundwater:** The water found beneath the Earth's surface that supplies wells and springs.

**1,4-Dioxane:** An organic chemical used as a stabilizer in solvents and for other purposes; a likely human carcinogen.

**1,1-Dichloroethylene (also known as 1,1-DCE or 1,1-dichloroethene):** A volatile organic compound used as a cleaning agent in chemical manufacturing; a likely human carcinogen.

**Parts per million:** Units commonly used to express contaminant concentrations. For example,

one part per million of a particular substance dissolved in water means one milligram of the substance dissolved in a liter of water. One part per million is illustrated by 1/4 cup of water in a typical 15,000 gallon backyard swimming pool.

**Tetrachloroethylene (also known as PCE, perchloroethylene or tetrachloroethene):** A VOC used primarily as a solvent and for dry cleaning; a likely human carcinogen.

**Soil vapor extraction:** Removal of contaminants in gaseous form from the spaces between soil particles by applying a vacuum.

**Solvent:** A liquid or gas substance that is used for industrial, commercial, and household products, such as paint thinners, nail polish, dry cleaning, and detergents.

**Trichloroethylene (also known as TCE or trichloroethene):** A VOC used primarily as a solvent to remove grease from metal parts; a human carcinogen.

**Volatile Organic Compounds (VOCs):** Primarily solvents most commonly used in dry cleaning, machinery degreasing, and metal plating industries.

# Contact Us

If you have questions or concerns about the GRIC/US EPA North Central Groundwater Project, please contact any of the following:

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