

Want to know what's happening at the Phoenix-Goodyear Airport Superfund Site?  
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#### HOW TO USE

A QR-Code is a barcode that a Smart-phone camera can scan to show specific information. To use, download a free QR-Code Scanner/Reader from your Smart-phone App Store. The above QR-Code is for the Phoenix-Goodyear Airport Superfund Site. The direct link is:  
<http://epa.gov/superfund/phoenix-goodyearairport>

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## Site Repositories

### City of Goodyear Library

14455 West Van Buren St.  
Suite C-101  
Goodyear, AZ 85338  
(602) 652-3000

<http://epa.gov/superfund/phoenix-goodyearairport>

[http://legacy.azdeq.gov/environ/waste/sps/Phoenix-Goodyear\\_Airport\\_North.html](http://legacy.azdeq.gov/environ/waste/sps/Phoenix-Goodyear_Airport_North.html)

[http://legacy.azdeq.gov/environ/waste/sps/Phoenix\\_Goodyear\\_Airport\\_South.html](http://legacy.azdeq.gov/environ/waste/sps/Phoenix_Goodyear_Airport_South.html)

### EPA Superfund

Records Center MC SFD7-C  
95 Hawthorne St. Suite 403S  
San Francisco, CA 94105  
(415) 820-4700



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San Francisco, CA 94105  
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## Phoenix-Goodyear Airport Superfund Site: North and South Areas Update

October 2016

Cleanup activities at the Phoenix-Goodyear Airport Superfund Site, North and South Areas, continue. The U.S. Environmental Protection Agency (EPA), in conjunction with the Arizona Department of Environmental Quality (ADEQ), continues to oversee the enhanced groundwater cleanup activities for both areas. This fact sheet provides an update on progress and announces the date and time of the next Community Advisory Group (CAG) meeting.

## About the Site

The PGA Superfund Site was originally listed on the National Priorities List in September 1983 as the Phoenix-Litchfield Airport Area Superfund Site. After the airport was transferred to the ownership of the City of Phoenix, the Site was renamed the Phoenix-Goodyear Airport (PGA) Area Superfund Site. Based on groundwater investigations which later identified two different sources of contamination, the Site was divided into two areas, PGA-North and PGA-South, with different parties responsible for the cleanups.

## PGA-North – Phase I Remedial Action (RA) Underway

In the 2014 Record of Decision Amendment, EPA added the enhancement of the existing remedy to more aggressively address both contaminants of concern – trichloroethene (TCE) and perchlorate (ClO<sub>4</sub>) – in the shallow aquifer at the Main Drywells Source Area (Source Area). The enhancement is to reduce the contaminant mass in the source area using innovative remediation technologies and to shorten the time it will take to restore the aquifer.

Phase I RA is currently underway at the Site. Key stages of the Phase I remediation process consist of the following: (1) laboratory treatability study, (2) identification of target treatment zones, (3) dye tracer study, (4) installation of subsurface remediation infrastructure, (5) jet assisted injections, (6) anaerobic water treatment system and recirculation system operation, (7) performance monitoring, (8) anaerobic reductive dechlorination, and (9) maintenance of a current Conceptual Site Model.

In accordance with the 2015 Final Remedial Design/Remedial Action Work Plan Phase I Source Area Remediation, a Laboratory Treatability Study is being conducted as part of the initial implementation of the Phase I remedial activities. The main purpose of the treatability study is to develop needed design-related insights for the combined remedy of nanoscale zero valent iron (nZVI), micro scale zero valent iron (mZVI), and anaerobic reductive dechlorination (ARD). The Swette Center for Environmental Biotechnology, Biodesign Institute at Arizona State University in Tempe, Arizona has been chosen to perform the treatability study. The study will be conducted in two phases,



*Construction of the Infiltration Gallery*

a microcosm study and an aquifer sediment column study. The treatability study will take approximately nine months to complete. Sixty days after the completion of the treatability study the results will be presented and recommendations will be made for the Phase I Source Area Remedial effort.

During and after the implementation, groundwater monitoring for treatment effectiveness will be conducted. The hydraulic barrier along West Van Buren Street provided by existing groundwater extraction wells – including new extraction well EA-10 – will ensure that contaminants and treatment-related amendments will not migrate down gradient.

Main Treatment System (MTS) expansion activities at the Site included bolstering the hydraulic barrier along Van Buren Street in preparation of the in-situ source area remediation. In 2015, the

groundwater treatment system capacity was increased to accommodate the additional groundwater from extraction wells EA-10 and EC-02, to allow for increased flows from existing extraction wells, and to provide future treatment capacity. Vadose zone infiltration galleries were installed to reduce the volume of treated groundwater currently being injected into the MTS injection well field. Prior to the MTS expansion, perchlorate treatment capacity was 400 gallons per minute (gpm) and TCE treatment capacity was 850 gpm. After the MTS expansion, perchlorate treatment capacity increased to 1,500 gpm and TCE treatment capacity increased to 1,600 gpm.



*MTS Expansion*

Nine monitoring wells, EPA MW-64A through EPA MW-72A, have been installed in the southeast area to delineate the Subunit A (a shallow aquifer with limited use) TCE plume south of the former Unidynamics Facility. Extraction well MW-29 has been abandoned and replaced with extraction well EC-02 to better achieve hydraulic capture and containment as well as removal of TCE and perchlorate mass from Subunit C (a deeper aquifer more broadly used for water supply).

All added activities are intended to shorten the time necessary to complete the cleanup.

## PGA-South: Enhancements to the Clean Up

The cleanup at PGA-South has been operating for over 30 years with an overall system uptime of 94%. To date:

- More than 6,000 pounds of TCE have been removed through three groundwater pump and treat systems.
- More than 16 pounds of chromium have been removed through a groundwater pump and treat system on Well E-17.
- More than 2,500 pounds of TCE have been removed from the subsurface by the Soil Vapor Extraction system.

While there are no remaining source areas at PGA-South, and the contaminant plume has long been contained through treatment (since 1994), groundwater monitoring and optimization continues at the Site. Three new extraction wells, E-18, E-19 and E-20, were installed in September of 2014 in the southern portion of the Subunit A TCE plume; these wells replaced former extraction wells NE-01 through NE-04. One new Subunit A extraction well, E-21, was installed in December 2015 in the mid-plume area

of the Subunit A TCE plume to enhance TCE mass removal. These four new extraction wells have resulted in increased mass removal. A new extraction well in the northern Subunit C plume, E-103, replaced former extraction well E-102 in April 2014, resulting in enhanced plume containment and mass removal from the northern Subunit C plume.

The completion of a pipeline from new PGA-South remedy well E-103 and the Subunit C treatment system allows treated groundwater from the PGA-South northern Subunit C plume to be used for irrigation at the baseball fields west of the Phoenix-Goodyear Airport. The City of Goodyear's ability to irrigate using treated groundwater from PGA-South, free of charge, has resulted in significant cost savings. According to Goodyear Water Resources Manager Mark Holmes, the City saves an estimated \$200,000 a year by using the treated groundwater. Excess water flows to an irrigation channel and then to the Buckeye Water Conservation and Drainage District, where it is used for irrigation. Drinking water delivered by the City of Goodyear meets or exceeds EPA standards for drinking water quality.

## What Are the Next Steps in 2017?

PGA-North: The treatability study conducted by ASU will be completed. The results will be used to direct the source area treatment implementation. Groundwater monitoring will continue.

PGA-South: Monitoring, extraction and treatment of groundwater will continue with efforts to optimize mass removal in both Subunit A and Subunit C, concentrating on the northern Subunit C plume.

## How Can I Contact EPA and Get Involved?

EPA and ADEQ work hard to promote meaningful community involvement and our shared goal is to keep the community informed of current and planned Site activities. On November 3, 2016, the CAG will hold the next meeting at the City of Goodyear Justice Center at 6:00 – 8:30 pm. Residents of Goodyear, Avondale or Litchfield Park are welcome to attend.

EPA recently launched Facebook pages for the PGA-North and PGA-South Superfund sites. EPA is using this third-party site to share information in a different format that may be useful or interesting and is being provided for informational purposes only. Please share your thoughts and ideas. We'll review comments according to our comment policy:

<https://www.epa.gov/home/epa-comment-policy>.

<https://www.facebook.com/PGANorth>

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