

## 7th Avenue and Bethany Home Road Water Quality Assurance Revolving Fund (WQARF) Site January 2009

*This fact sheet is a publication of the Arizona Department of Environmental Quality (ADEQ) to inform community members near the 7th Avenue and Bethany Home Road Water Quality Assurance Revolving Fund (WQARF) Site of current site activities in Maricopa County. Italicized terms are defined in the glossary located at the end of this fact sheet.*

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### **SITE HISTORY AND INVESTIGATION**

The site is located at 540 W. Bethany Home Road or the northeast corner of 7th Avenue and Bethany Home Road (See map on page 3). The property was originally developed into a small shopping center in 1952 which included a market, a variety of commercial shops, and a dry cleaning facility. The dry cleaning facility began operation in 1953 at the shopping center. Between 1952 and 1960, the shopping center was connected to an on-site septic system. In 1960, the shopping center was connected to the Phoenix sewer system and discharge to the septic system is believed to have terminated.

Three previous site investigations by outside parties have taken place at the site between 1995 and 2001. The results of these investigations confirmed the presence of *tetrachloroethene (PCE) contamination* in soil and *groundwater* beneath the site.

The Arizona Department of Environmental Quality (ADEQ) conducted a preliminary investigation at the 7th Avenue and Bethany Home Road Site located in Phoenix and placed the site on the *Water Quality Assurance Revolving Fund (WQARF) Registry* in August 2004.

ADEQ initiated an *early response action (ERA)* evaluation at the site in Oct. 2004 to collect data necessary to characterize the source area of PCE

contamination below the site. The ERA evaluation consisted of drilling and sampling ten soil borings to 125 ft. below ground surface (bgs) and installation of five *soil vapor extraction (SVE)* wells and two *groundwater monitor wells* at the site. Based on the results of the ERA evaluation, a soil vapor extraction system was designed and constructed at the site. Operation of the SVE system began in June 2005 and the system was shut down in Jan. 2006. Over this timeframe, approximately 380 lbs. of PCE were removed from the subsurface soils. To determine if the *volatile organic compounds (VOCs)* remaining in the soil warranted further operation of the system, a rebound test was conducted in April 2006. The results of this test indicated there were not enough extractable VOCs remaining in the soils to warrant further operation of the system. Also in 2006, confirmation borings were drilled and sampled in the area of the SVE system confirming the concentrations of PCE remaining in the soils at the site are below residential *soil remediation standards and groundwater protection levels*.

Three off-site groundwater monitor wells were installed in Sept. 2005 to begin to define the extent of groundwater contamination downgradient from the site. An additional off-site monitor well was installed in April 2007. To determine the depth of contamination at the site, a deep monitor well was installed in Oct. 2006 to a depth of 218 ft. No contamination was detected at that depth. Groundwater in this area is present at approximately 85 bgs and flows to the north-northeast. Groundwater contamination appears to be present in the upper portion of the aquifer with concentrations of PCE on-site as high as 1,000 micrograms per liter ( $\mu\text{g/l}$ ) or parts per billion. This concentration is above the *Arizona Aquifer Water Quality Standard (AWQS)* for PCE of 5  $\mu\text{g/l}$ . Groundwater monitoring is being conducted on a quarterly basis.

Previous investigations at 6022 N. 7th Ave., located across from the 7th Avenue Site, indicated a former dry cleaning business may have released PCE to a dry-well, sump and septic system. From 1990 to 1992, contaminated soil was removed from the property.

However, groundwater monitor wells were never installed to investigate the impact to groundwater.

ADEQ completed an evaluation of the 6022 N. 7th Ave. property in March 2008. Results of the soil and *soil vapor* investigation indicate the PCE contamination is not presently above regulatory levels in the soils at the site. Results of the initial groundwater samples collected from two monitor wells at the site indicate the groundwater is impacted with PCE at concentrations ranging from 7 to 22 µg/l. *Trichloroethene* (TCE) and *vinyl chloride* are also present above the AWQS of 5 µg/l and 2 µg/l, respectively in monitor wells at this property.

### WHAT IS WQARF AND THE REGISTRY?

The WQARF Program was established by Arizona law to conduct statewide surface and groundwater monitoring, study health effects of contamination, perform emergency *remedial actions*, and conduct long-term remedial action programs. The WQARF Program is funded with state monies, civil and criminal penalties, and funds recovered from parties responsible for contamination. ADEQ has established a Registry of sites in Arizona where groundwater and/or soil contamination are known to be present. Sites appearing on this Registry qualify for funds available from the state for investigation and/or cleanup of contamination. The 7th Avenue and Bethany Home Road Site is included on this Registry. Sites on the Registry are given a numeric score based in part upon the type of contaminant(s) present, the location of the contaminant(s) and the number of people that may be affected by the contaminant(s). Scores are used to help determine relative risk at the site and do not necessarily mean that there is a direct risk to humans or the environment. The score of the 7th Avenue and Bethany Home Road Site is 29 out of a possible 120.

For further information on this site or other WQARF sites, please visit ADEQ's Web site at [www.azdeq.gov](http://www.azdeq.gov). Click on Waste Programs, then Superfund/WQARF, and follow the prompts for the information you need. If you or anyone you know is interested in obtaining more information about the 7th Avenue and Bethany Home Road Site and would like to continue to receive site information mailings, please complete and mail the mailing card on the insert in the middle of this notice.

### WHAT ARE THE CONTAMINANTS AT THIS SITE?

Groundwater at the site is contaminated with VOCs, specifically the solvents called PCE and TCE. These man-made solvents are commonly used in dry cleaning and metal degreasing operations. In addition,

PCE may degrade to TCE and vinyl chloride in the environment. PCE, TCE and vinyl chloride are present in the groundwater at levels that exceed the AWQS.

**See map on page 3.**

### WHAT ARE THE RISKS ASSOCIATED WITH THIS CONTAMINATION?

There are no City of Phoenix wells in the area of the plume and the groundwater at this site is currently not used as part of the public drinking water system. The City of Phoenix, the public water provider, is required by law to provide water that meets all federal and state drinking water standards. The City of Phoenix conducts regular testing of the drinking water to ensure standards are met and to ensure safe drinking water is delivered to the community.

The majority of risk associated with groundwater contaminated with PCE, TCE and vinyl chloride comes from long-term direct exposure to the water by ingestion. People who drink water containing PCE, TCE and vinyl chloride in excess of the regulatory level over many years could experience problems with their livers, kidneys or nervous system, and may have an increased risk of getting cancer. For more information on your water quality, please contact the City of Phoenix water services at (602) 262-6251.

If you have a private well near the site, you should avoid drinking the water or using it for potable activities. If you have a private well near the site, please call Scott Goodwin, ADEQ project manager, (602) 771-4452.

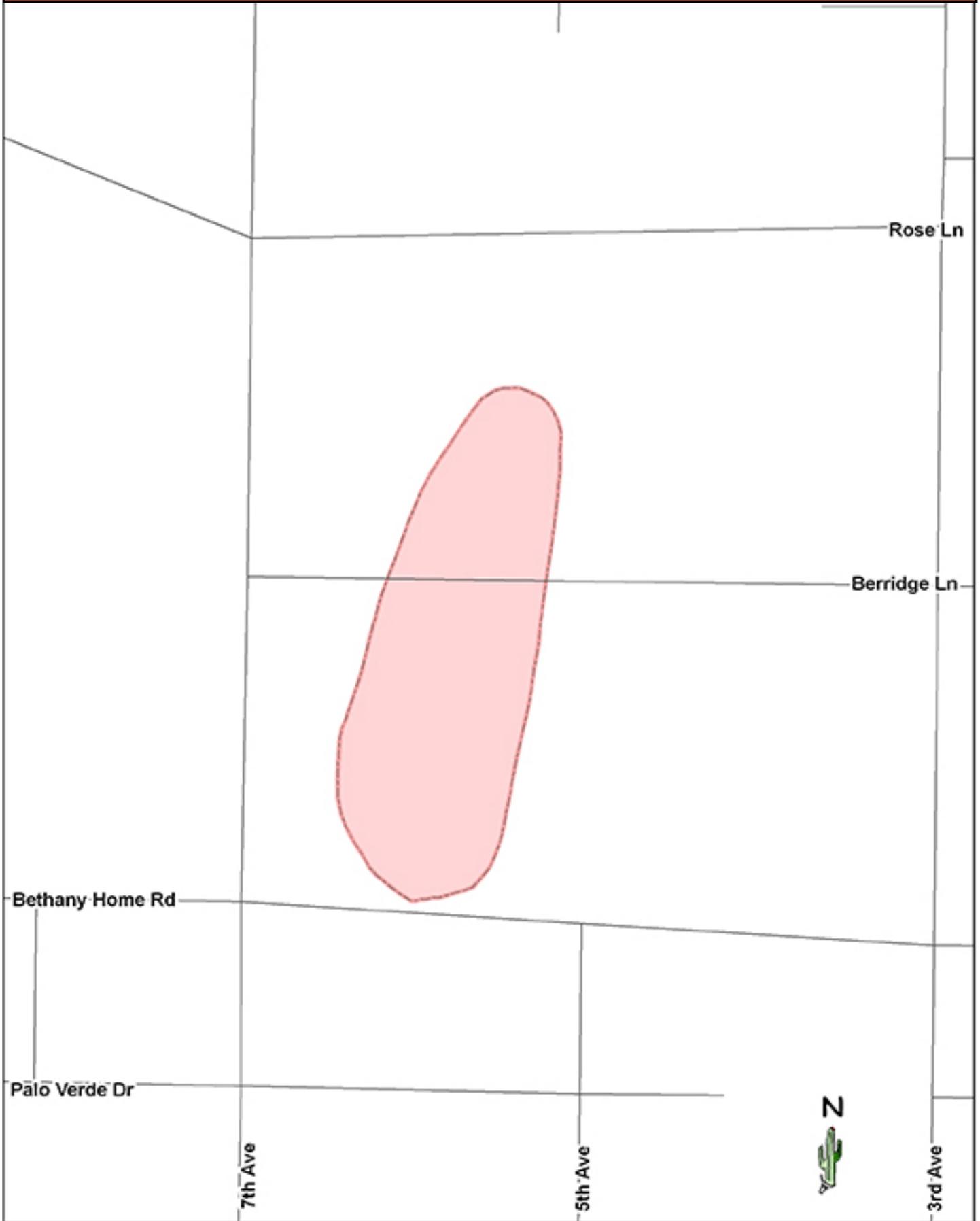
### WHAT ARE ADEQ'S FUTURE PLANS AT THIS SITE?

ADEQ's current plans for the site are to begin the *remedial investigation* (RI) phase of the project. Most, if not all, of the site characterization work is completed at the site. ADEQ will consolidate all the existing site characterization data, combined with a study of land and water uses in the area, into an RI Report. The site will then proceed through a *feasibility study* that will analyze potential cleanup methods for achieving the cleanup goals determined during the RI.

#### Scope of Work, Outline of Community Involvement Plan, and Fact Sheet

*Availability Notice Pursuant to A.R.S. §49-287.03 (c) (d), ADEQ is announcing the availability of the scope of work, outline of a community involvement plan and fact sheet. A public meeting may be called to address any comments. To obtain copies, contact Felicia Calderon at (602) 771-4167.*

# 7th Avenue and Bethany Home Road WQARF Site



## **PUBLIC INVOLVEMENT**

ADEQ is in the process of establishing a community advisory board (CAB) for this site. ADEQ is currently looking for members of the public to serve on the CAB. The CAB will advise ADEQ and the public of issues and concerns related to the clean up at the site. The purpose of the CAB is to:

- Provide comments to ADEQ on various remediation techniques, and other issues related to the site;
- Participate in outreach to the community;
- Provide assistance in planning and facilitation of public meetings and open houses;
- Assist in distributing information from ADEQ to the community; and
- Ensure that the opinions and concerns of the residents are accurately understood by ADEQ.

## **CAB MEMBERS NEEDED!**

As progress continues at the site, ADEQ will help form a selection committee to choose CAB members.

- Are you concerned about the environment and protecting public health?
- Do you live, work, own property or a business in the area of the site and/or are you interested in the site?
- Do you have a minimum of two hours a day four times a year to volunteer?

If you answered yes to any of the questions above and would like to serve on the CAB or would like to

be notified of the CAB meetings, please contact Felicia Calderon, Community Involvement Coordinator at (602) 771-4167. You may also fill out and return the CAB application included in this notice.

## **INFORMATION REPOSITORY**

Interested parties can review site information at the ADEQ Records Management Center. With 24 hours notice an appointment to review related documentation is available Monday through Friday from 8:30 a.m. to 4:30 p.m. at the ADEQ Records Management Center, 1110 W. Washington St. in Phoenix, AZ. Please contact (602)771-4380, (800) 234-5677 ext. 771-4380 or TDD line (602) 771- 4829 to schedule an appointment to review these documents.

## **ADEQ CONTACTS:**

### **Scott Goodwin**

ADEQ Project Manager  
(602) 771-4452 or 1(800) 234-5677, ext. 771-4452  
e-mail: [sdg@azdeq.gov](mailto:sdg@azdeq.gov)

### **Felicia Calderon**

ADEQ Community Involvement Coordinator  
(602) 771-4167 or  
1(800) 234-5677, ext. 771-4167  
e-mail: [fmc@azdeq.gov](mailto:fmc@azdeq.gov)

Hearing impaired persons may call our TDD line at (602) 771-4829.

## **GLOSSARY ON NEXT PAGE**

## GLOSSARY

**Aquifer Water Quality Standard** - State of Arizona maximum levels for contaminants which apply to groundwater in aquifers designated for drinking water use. For example, the AWQS for tetrachloroethene (PCE) is 5 micrograms per liter (µg/L).

**Contamination** - Any hazardous or regulated substance released into the environment.

**Early Response Action (ERA)** - Refers to a remedial action performed prior to the final remedy, and often prior to the remedial investigation. An ERA addresses current risks to public health, welfare, and the environment; protects or provides a supply of water; addresses sources of contamination; or controls or contains contamination where such actions are expected to reduce the scope or cost of the remedy needed at the site. Also referred to as an interim remedial action.

**Feasibility Study (FS)** - A process to identify a reference remedy and alternative remedies that appear to be capable of achieving the remedial objectives for the site. It is often done as part of a two-phase investigation in conjunction with a remedial investigation (RI/FS).

**Groundwater** - Water located beneath the ground surface in soil pore spaces and in the fractures of geologic formations. A formation of rock or soil is called an aquifer when it can yield a usable quantity of water.

**Groundwater Protection Levels** - A concentration of a contaminant left in soils that will not cause or threaten to cause contamination of groundwater exceeding a regulatory standard.

**Monitoring Wells (Monitor Wells)** - Wells installed for the purpose of collecting samples such as groundwater and soil gas. Analytical results from samples are used to characterize the extent of contamination, the direction of groundwater flow, and the types and quantities of contaminants present in the groundwater.

**Remedial Actions (RA)** - Any action taken to investigate, monitor, assess and evaluate the release or threat of release of hazardous substances or contaminants to the environment. It may also refer to the actual "cleanup" of the environment by various removal, treatment, monitored remediation, or corrective actions. The term cleanup is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

**Remedial Investigation (RI)** - Establishes the nature and extent of the contamination and the sources; identifies current and potential impacts to public health, welfare, and the environment; identifies current and reasonable foreseeable uses of land and waters of the state; and obtains and evaluates any information necessary for identification and comparison of alternative remedial actions.

**Soil Remediation Levels (SRLs)** - A pre-determined risk-based standard protective for residential or non-residential use based upon the total contaminant concentration in soil. In addition to meeting the SRLs, it must also be shown that soil contaminant levels do not:

- 1) Cause or threaten to cause a violation of Water Quality Standards that are protective of aquifer water quality and surface water quality;
- 2) Exhibit a hazardous waste characteristic of ignitability, corrosivity, or reactivity; and
- 3) Cause or threaten to cause an adverse impact to ecological receptors. SRLs have replaced what were known as Health-Based Guidance Levels or HBGLs.

**Soil Vapor (Soil Gas)** - Gaseous elements and compounds that occur in the small spaces between soil particles. Such gases can move through or leave the soil or rock, depending on changes in pressure.

**Soil Vapor Extraction (SVE)** - A commonly used technique for cleaning up contaminated soils. This process physically separates contaminants from soil in a vapor form by exerting a vacuum through the soil formation; removes volatile and semi-volatile organic compounds from the ground surface.

**Trichloroethene or Trichloroethylene (TCE)** - A colorless liquid used as a solvent, metal degreasing agent, and in other industrial applications.

**Tetrachloroethene or Tetrachloroethylene or Perchloroethene (PCE)** - A clear, colorless, liquid with a chloroform or sweet odor and a low boiling point; a solvent used for dry-cleaning; degreasing and drying metals and other solids; dissolving waxes, greases, oils, fats, and gums, and in other industrial applications. PCE is a potential occupational carcinogen. Evaporation of PCE increases as temperature increases.

**Vinyl chloride** - A flammable, colorless gas at room temperatures. It is used to make polyvinyl chloride (PVC), which is used to make plastic products. Also, vinyl chloride is often an end product when tetrachloroethene (PCE) and trichloroethene (TCE) chemically decompose in the environment.

**Volatile Organic Compounds (VOCs)** - A large group of carbon-containing compounds that are easily dissolved into water, soil, or the atmosphere and evaporate readily at room temperature. Examples of VOCs include tetrachloroethene, trichloroethene, benzene, toluene, ethylbenzene and xylene (BTEX). These contaminants are typically generated from metal degreasing, printed circuit board cleaning, gasoline, and wood preserving processes.

**Water Quality Assurance Revolving Fund (WQARF)** - Also known as the State Superfund. WQARF is the program and funding which is used to address hazardous substance releases within the state that are not covered by other specific programs.



# Water Quality Assurance Revolving Fund Mailing List Form and Community Advisory Board (CAB) Membership Application

[Fondo Rotativo para la Garantía de la Calidad del Agua Formulario para la Lista de Correo y Solicitud para Membresía en el Consejo Comunitario de Consulta]

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Site Name: 7<sup>th</sup> Ave. and Bethany Home Rd. WOARF Site  
[Nombre del Sitio]

If you would like to be added to the site mailing list, please fill out the top portion of this form and return it to ADEQ. If you would like to apply to serve on the CAB, please also complete the bottom portion of this form. [Si usted quisiera estar en la lista de correo para el sitio, favor de llenar la parte de arriba de este formulario y devolverlo a ADEQ. Si usted quisiera entregar una solicitud para servir en el CAB, favor de también completar la parte abajo de este formulario.]

First Name [Nombre]: \_\_\_\_\_ Last Name [Apellido]: \_\_\_\_\_

Organization / Association [Organización / Asociación]: \_\_\_\_\_

Address [Dirección]: \_\_\_\_\_ Zip Code [Código Postal]: \_\_\_\_\_

Mailing Address: (if different from above) Dirección de Correo [si es diferente de la anterior]: \_\_\_\_\_

Zip Code [Código Postal]: \_\_\_\_\_ Email Address [Correo Electrónico]: \_\_\_\_\_

Occupation [Ocupación]: \_\_\_\_\_ Employer [Empleador]: \_\_\_\_\_

Phone Numbers [Números de Teléfono]: (home/domicilio): \_\_\_\_\_ (work/ trabajo): \_\_\_\_\_  
(mobile/celular): \_\_\_\_\_ (other/otro): \_\_\_\_\_

## Application for CAB Membership (Solicitud para Membresía en el CAB)

How long have you lived in or near the Site? [¿Por cuánto tiempo ha vivido usted en o cerca del Sitio?] \_\_\_\_\_

Are you willing to make a commitment to serve on the CAB for at least 1 year? [¿Está usted dispuesto(a) a comprometerse a servir en el CAB por lo menos un año?] \_\_\_\_\_

Are you able to attend at least 4 meetings a year? [¿Puede asistir por lo menos a cuatro reuniones por año?] \_\_\_\_\_

What day(s) / time(s) would be best for you to attend meetings? [¿Cuáles día(s)/hora(s) serían las mejores para que usted pudiera asistir a las reuniones?] \_\_\_\_\_

Please explain why you would like to serve on the CAB (attach a separate sheet if needed) [Por favor explique por qué quisiera participar en el CAB (adjunte otra hoja, si es necesario)]:  
\_\_\_\_\_  
\_\_\_\_\_

Return this application to (Devuelva esta solicitud a): ADEQ, Outreach Unit, 1110 W. Washington, Phoenix, AZ 85007 or fax to (602) 771-4138. For more information, visit ADEQ's Web site at [www.azdeq.gov](http://www.azdeq.gov) or contact Felicia Calderon at (602) 771-4167. [Para más información, favor de visitar la página del Internet de ADEQ al [www.azdeq.gov](http://www.azdeq.gov) ó llame a Felicia Calderon, al (602) 771-4167.]

After completion please fold and tape this form before mailing (no staples). Thank you for your interest.

[Después de llenar la solicitud, por favor de doblarla y sellarla (no grapas) antes de enviarla. Gracias por su interés.]

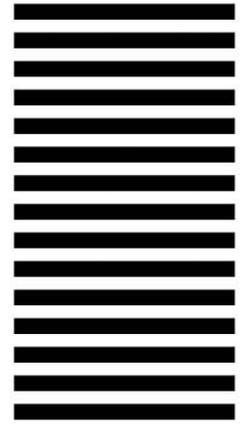
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COMMUNITY INVOLVEMENT COORDINATOR  
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PHOENIX, AZ 85007-9973



**Community Advisory Board Members Needed!**