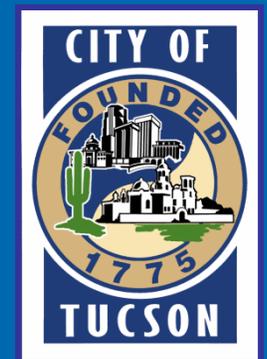


# Community Update on 1,4-dioxane



# Is my water safe?

Yes – our water meets all federal drinking water standards established by the U.S. Environmental Protection Agency (EPA).

Our water is safe for drinking, cooking, bathing and other uses.



# What is 1,4-dioxane?

- A colorless organic compound.
- A stabilizing agent used in industrial and defense related activities in the 1950s - 1970s.
- A solvent for cleaning and degreasing metal parts.
- It is NOT Dioxin – a toxic compound used in Agent Orange.



As a byproduct of manufacturing, may be present in cosmetics, shampoo, lotions and deodorant.

# Tucson's Past & 1,4-dioxane

- From the 1950s - 1970s industrial and defense-related activities released hazardous wastes into the environment, which contaminated groundwater.
- The source of contamination was Air Force Plant 44 (AFP-44) and the Tucson Airport Property.
- TCE and TCA – and 1,4-dioxane – were released into the environment.

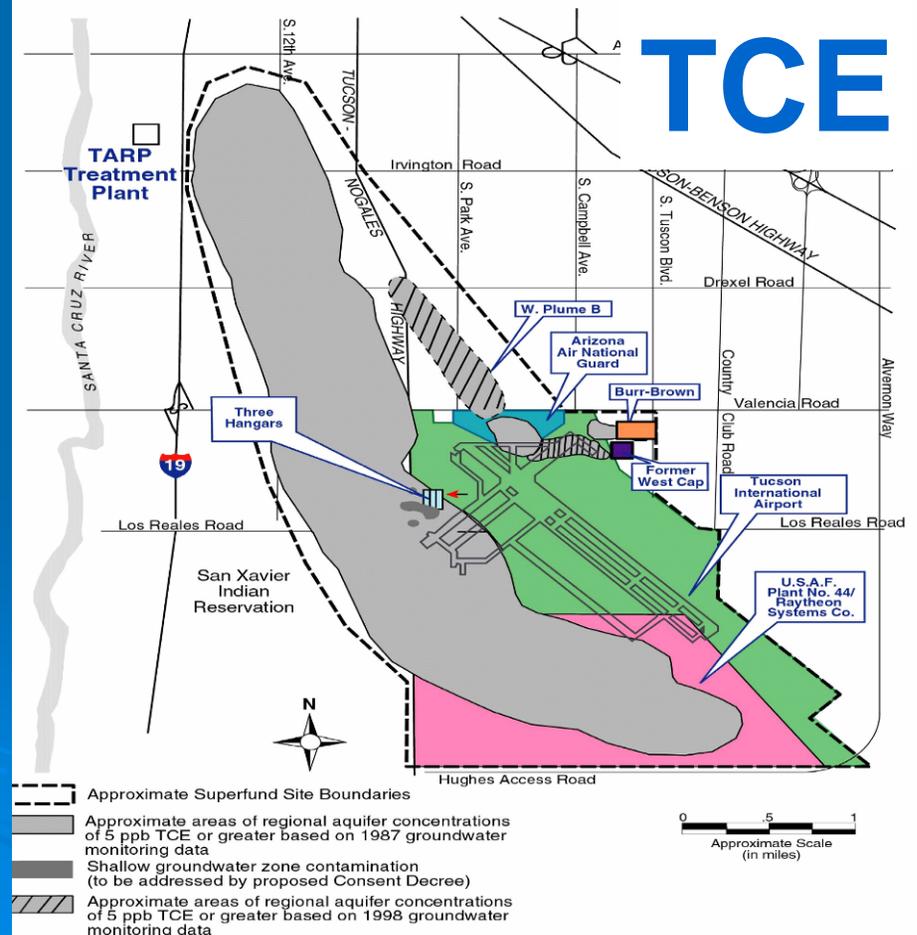
# Where is 1,4-dioxane Located?

- Groundwater plumes on Tucson's south side.
- Water is cleaned at the Tucson Airport Remediation Project (TARP) Treatment Plant.
- Since 1995, TW has treated for TCE at TARP.
- Current TARP plant does not remove 1, 4-dioxane.



## Region 9: Superfund

TUCSON INTERNATIONAL AIRPORT AREA SUPERFUND SITE



# 2002 - First Detection

- First detected at TARP when EPA notified water utilities nationwide that substance was appearing at Superfund sites.
- Tucson Water, US EPA, AZ DEQ, and Pima County DEQ discussed with Mayor & Council. Public notification followed.
- Immediate operational changes & monitoring initiated.



# Controlling 1,4-dioxane Levels

Blending reduces the 1,4-dioxane levels below the EPA's 3.0 parts per billion (ppb) – the current advisory level.



# The EPA & 1,4-dioxane

- August 1988 –Advisory level 3.0 parts per billion.
- October 2003 – EPA initiates new 1,4-dioxane assessment.
- August 2010 – New health assessment. Lower advisory level expected.

While EPA's advisory level provides guidance and is not a legal mandate, Tucson Water has been keeping levels below the current advisory level.

# How Much is a Part Per Billion (ppb)?

1.0 ppb = 1 teaspoon of dioxane in 1.3 million gallons of water

or

1.0 ppb = 1 inch in 16 miles

The smallest detectable level of 1,4-dioxane is  
1.0 ppb

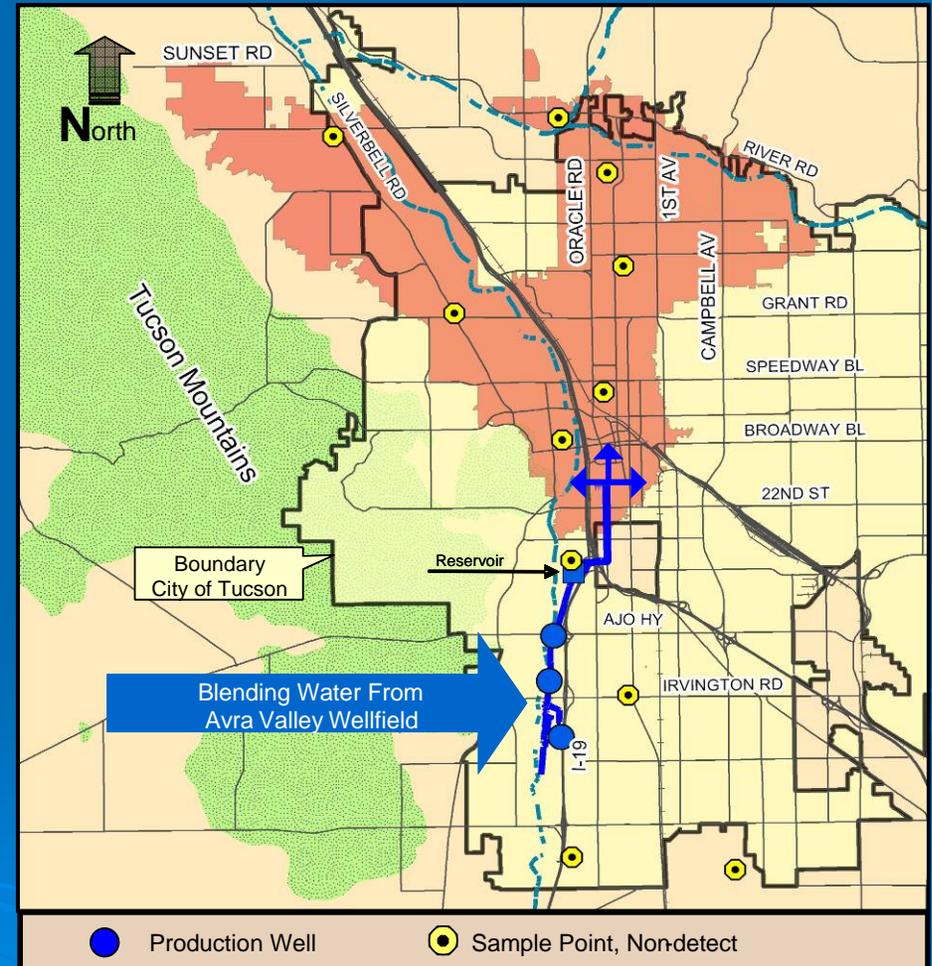
# What the 2010 EPA Assessment Means

- New risk assessment shows 1,4-dioxane is more likely to cause cancer than previous value.
- Future EPA advisory is expected to be lower than current 3.0 ppb.
- Tucson Water determining most viable & cost effective technology to respond to the expected new EPA advisory level.

# Ensuring Your Water is Safe

## Tucson Water has:

- Increased blending to keep 1,4-dioxane levels below any anticipated future EPA advisory level
- Increased monitoring in the delivery area to ensure the levels remain below detection limit.



# Community Outreach & Feedback

- Tucson Water reports to the Unified Community Advisory Board (UCAB) about TCE remediation and 1,4-dioxane levels.
- Formed in 1995, the UCAB is composed of area residents, regulatory agencies, and the “potentially responsible parties.”
- Tucson Water continues to work closely with UCAB on 1,4-dioxane.

## Get the facts on the environmental cleanup

Get up-to-date information on the environmental cleanup program at the Tucson International Airport Area (TIAA) Superfund site.

The Unified Community Advisory Board helps to raise community awareness of the ongoing environmental cleanup program at the TIAA Superfund site and to ensure that community concerns are part of the environmental cleanup decision-making process. Beginning this meeting, a **poster session** will be available before each meeting so that those attending can get answers from the experts about topics to be presented at the meeting.



## Next UCAB Meeting

**What:** Quarterly meeting of the Unified Community Advisory Board (UCAB) for the TIAA Superfund site.

**When:** Wednesday, April 21, 2010  
5:30 p.m. Poster Session  
6 - 8 p.m. RAB Meeting

**Where:** El Pueblo Activity Center  
101 W. Irvington Rd.  
Tucson, Ariz. 85714  
(Intersection of W. Irvington and S. 6th Ave.)

### Agenda:

- EPA Update
  - West Cap
  - Vapor Intrusion
  - Texas Instruments
- AFP 44 Update
  - HiPOx Treatment Update & July HiPOx Tour
  - Status of Focused Remedial Investigation and Shallow Groundwater Zone Remedial Process Optimization
  - Regional Groundwater Feasibility Studies
- Airport Property, Tucson Water TARP Facility & 1,4-dioxane, Library Repository, and High School TCE Curriculum Updates
- UCAB Co-Chair Election

### For details, call:

Martin Zeleznik, Government Cochair, 866-372-9378  
Ignacio Gomez, Community Cochair, 520-883-2730

# Community Outreach & Feedback

- Tucson Water offers a FAQ and PowerPoint presentation about 1, 4-Dioxane for customers.
- Tours of the TARP Facility and Water Quality Lab are also available
- Call 791-4331 for more information



# Water Quality Accountability

- Tucson Water reports water quality test results to the Arizona Dept of Environmental Quality (ADEQ).
- ADEQ oversees & enforces all EPA regulations in AZ.
- TW conducts tens of thousands of tests on samples at the Water Quality Laboratory at the Hayden-Udall Facility.
- Samples also sent to independent labs.



# Tucson Water is Proactive

- Operational changes have been made to further reduce 1, 4-dioxane levels in delivered water.
- Water quality monitoring for 1, 4-dioxane has been increased in the delivery area.
- Information and answers are being provided to customers.

# Next Steps

- Finalize pilot testing of treatment technologies that will remove 1,4-dioxane from water
- Assess viable treatment technologies
- Monitor EPA actions related to 1,4-dioxane
- Ongoing containment of TCE plume
- Increase public education concerning 1,4-dioxane

# For More Informaton:

520-791-4331

[www.Tucsonaz.gov/water](http://www.Tucsonaz.gov/water)

- Arrange to tour the TARP Facility or the Water Quality Laboratory
- Schedule a speaker for your organization

