Superfund Research Program
The University of Arizona

Dean Carter Binational Center
for Environmental Health Sciences

The University of Arizona Superfund Research Program: ENGAGING ARIZONA COMMUNITIES NEAR CONTAMINATION

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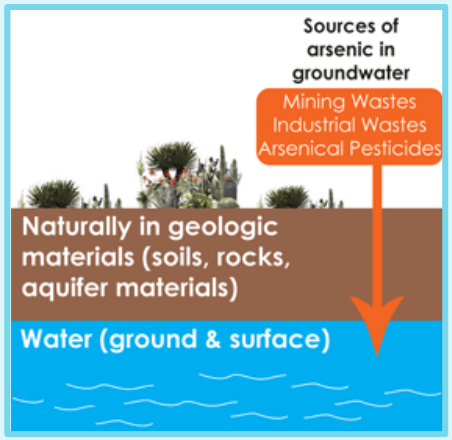
ARIZONA

Superfund Research Program

UNIVERSITY OF ARIZONA SRP



✧ Arsenic ✧ Chlorinated solvents ✧ Mine Tailings ✧

✧ 9 Research Projects ✧ 5 Support Cores ✧

RESEARCH TRANSLATION / COMMUNITY ENGAGEMENT CORES

✧ Disseminate information ✧ Increase human capacity ✧
✧ Inform decisions ✧ Empower communities ✧

✧ Communities in the Arizona, Mexico, and Border region ✧
✧ Federal, State, Local, and Tribal Agencies ✧

UA SRP RT/CE Core Coordinators
EPA-TCU conference, June 2011

Local Mayor, US EPA and UA SRP personnel
Agua Fria Festival, October 2009

INFORMATIONAL MATERIALS

Community member
Dewey-Humboldt Community Health Talk, June 2011

UA SRP CE/RT Core Coordinators
El Rio Health and Safety Fair, March 2012

✧ Bilingual ✧ Region-specific ✧ Culturally-relevant✧

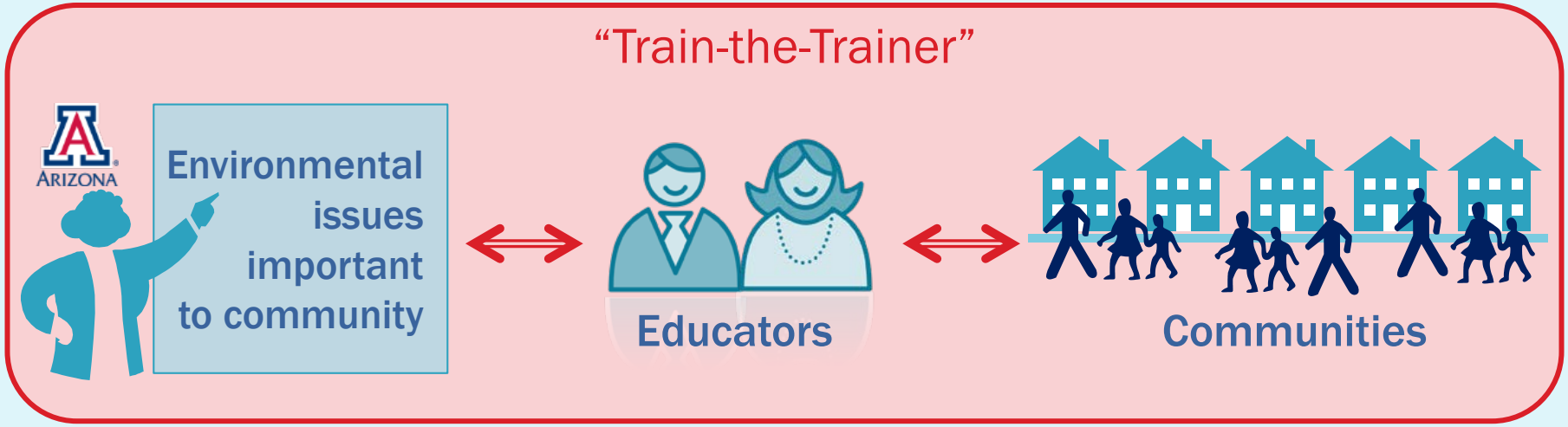
✧ Printed ✧ Videos ✧ Modules ✧ Website

✧ Community Information Sheets ✧

✧ Water Resources ✧ Scientific Bulletins ✧ Textbook ✧

EDUCATIONAL MODULES

✧ Accessible ✧ Relatable ✧ Adaptable ✧



✧ Survey ✧ Develop ✧ Pilot ✧ Assess ✧

✧ Flexible ✧ Culturally-relevant ✧

EDUCATIONAL MODULES: *PROMOTORA* MODEL

Tucson, July 2011

Yuma, November 2011

Nogales, June 2012

✧ Arsenic ✧ Pesticides ✧ Contaminant Fate and Transport ✧ Toxicology ✧ Health Risks from Environmental Exposures ✧

EDUCATIONAL MODULES:
CURRICULUM DEVELOPMENT

Next steps:
Tribal Community College curriculum development

Tohono O'odham Community College
1998

✧ Mining Processes and Impacts ✧

MAINTAINING A PRESENCE IN THE COMMUNITY

✧ Meeting ***face-to-face*** is critical ✧

✧ Community events ✧ Requested presentations ✧

✧ Distribute materials ✧ Answer questions ✧ Act as liaisons ✧

UA SRP personnel
Agua Fria Festival, October 2011

UA SRP Investigators
Linden Park Neighborhood Association, March 2008

SUPERFUND COMMUNITIES

✧ Build upon existing infrastructure ✧

✧ Community Groups ✧ US EPA ✧ Maintain a presence ✧

US EPA, ATSDR, AZ Dept of Health Services, and UA SRP personnel
Iron King Mine Humboldt Smelter Community Meeting, April 2012

US EPA personnel and community members
Motorola/52nd Street, March 2008

✧ Provide neutral, scientifically-accurate information ✧

SUPERFUND COMMUNITIES: CHLORINATED SOLVENT CONTAMINATION

Tucson International Airport Area TCE plume

✧ Tucson International Airport Area ✧
✧ Motorola/52nd St ✧
✧ Phoenix-Goodyear Airport ✧
✧ Indian Bend Wash Area ✧

UA SRP personnel and TAG advisor/recipient
Motorola/52nd Street, March 2008

SUPERFUND COMMUNITIES: MINING ISSUES

✧ Iron King Mine Humboldt Smelter ✧

UA SRP personnel and community members
Gardenroots garden tour, May 2012

UA SRP Investigators
and Representative's aide
Community Health Talk, Jan 2012

UA SRP Investigators and community member
Agua Fria Festival, October 2011

NON-SUPERFUND COMMUNITIES

✧ Communities impacted by environmental contamination ✧

UA SRP personnel and community members
Sahuarita community meeting, Sept 2010

UA SRP Investigator and community members
Valle Verde community meeting, June 2007

NON-SUPERFUND COMMUNITIES

- Valle Verde community in border town of Nogales
  - Contaminated drinking water concerns

Valle Verde Water Co. truck outside affected well housing
Nogales, Feb 2008

UA SRP Director and community members
Nogales International Forum, June 2007

NON-SUPERFUND COMMUNITIES

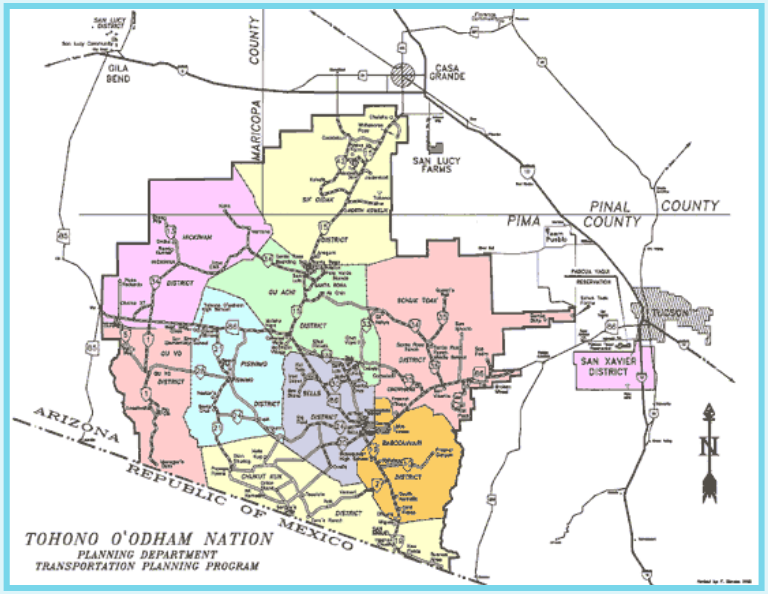
- Sahuarita retirement community
  - Mine tailings concerns

Concerned citizens
Community meeting, March 2010

UA SRP and Pima Dept. of Environmental Quality personnel, community members
Community meeting, Sept 2010

NON-SUPERFUND COMMUNITIES

- Tohono O'odham Nation
  - Hazardous waste landfill concerns



¿Qué son los Residuos Peligrosos?

Los residuos que pue
salud de los humano
se conocen como re
residuos pueden ser
una combinación de
variedad de fuentes
les que normalmente
gros.

La Ley de Recupera
Recursos (RCRA por
los Estados Unidos
identificación, el ma
seguimiento, y la dis
peligrosos. De acue
sidera que una su
posee una o más de
cíficas que se enlista

• Inflamabilidad
material se encier
petróleo o los solvent
• Corrosividad –
tancia química de de
ejemplo, los ácidos y
• Reactividad –
producir emisiones
ejemplo, los solvente
• Toxicidad – capa
muerte a plantas, an
ejemplo, los pesticida

Además de estas car
considera que una s
aparece en una de
diferentes tipos de
químicos. También e
definición de la RCRA
entre otras, a los
domésticos y las agu
ares. Para mas detal
excepciones, dirigirse

www.epa.gov/epaos

What is Hazardous Waste?

Waste that may be harmful to human health or the environment is called hazardous waste. It may be a solid, liquid, gas or a combination of these. Hazardous waste is usually produced by a variety of industrial and commercial sources.

The Resource Conservation and Recovery Act (RCRA) in the United States regulates the production, identification, management, treatment, tracking, and disposal of hazardous waste. According to RCRA, a substance is considered to be a hazardous waste if it has one or more of the specific characteristics listed below:

- Ignitability – ease by which a material catches on fire (e.g. oil or solvents)
- Corrosivity – capacity to chemically destroy material (e.g. strong acid or strong base)
- Reactivity – ability to cause emissions or toxic fumes (e.g. solvents)
- Toxicity – capacity to cause death or harm to plants, animals and humans (e.g. pesticides or metals)

In addition to these characteristics, a substance is also considered to be hazardous if it appears on one of four lists for different types of wastes or chemical products. There are also exclusions to the definition provided by RCRA which encompass household waste, domestic sewage, and irrigation return flows to name a few. For details on hazardous waste lists and exclusions see:

www.epa.gov/epaoswer/hazwaste/id/id.htm

OUR SUCCESSES

✧ Cultural and regional approach ✧

✧ Neutral and science-based = *trusted* ✧

✧ Successful partnerships ✧

✧ Requests for support ✧

UA SRP Directors, Investigators, Coordinators, and students with Dr. Bill Suk, Director of SRP
Superfund Research Program Annual Meeting, October, 2011

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THANK YOU!