

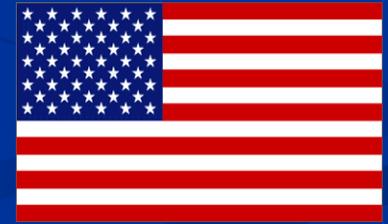


Tribal Lands and Toxic Releases: case studies along the US/Mexico border



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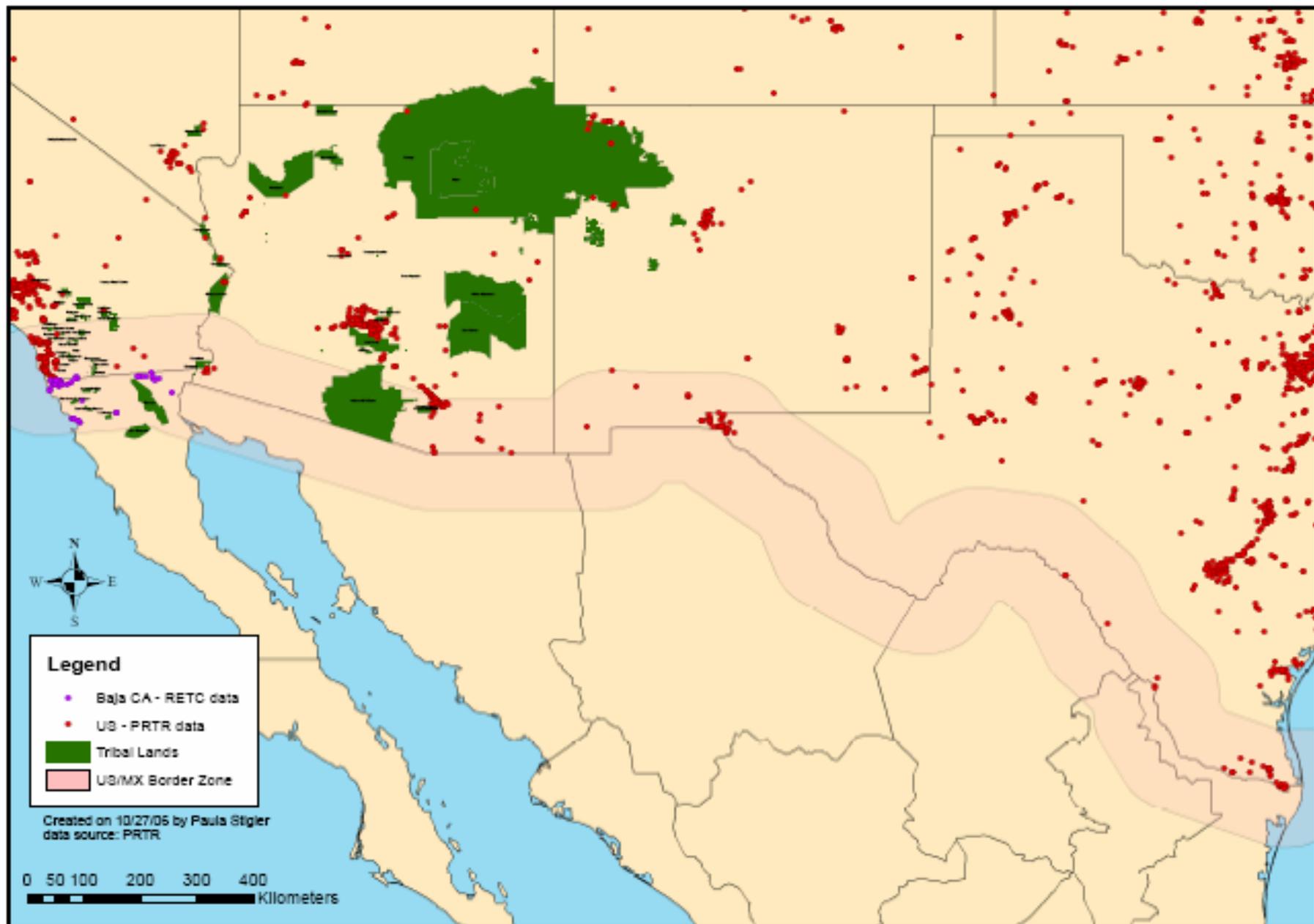
November 29, 2006



Tribes and Indigenous groups along the U.S. Mexico Border

- 26 federally recognized tribes in the US border region
 - 20 California
 - 4 Arizona
 - 2 Texas
- 4 native indigenous groups in the Mexico border region
 - Kikapu (Kickapoo)
 - Papago (Tohono O'Odham)
 - Cucapá (Cocopah)
 - Kumiai (Kumeyaay)

U.S./Mexico Border Region Tribal Lands and Toxic Releases

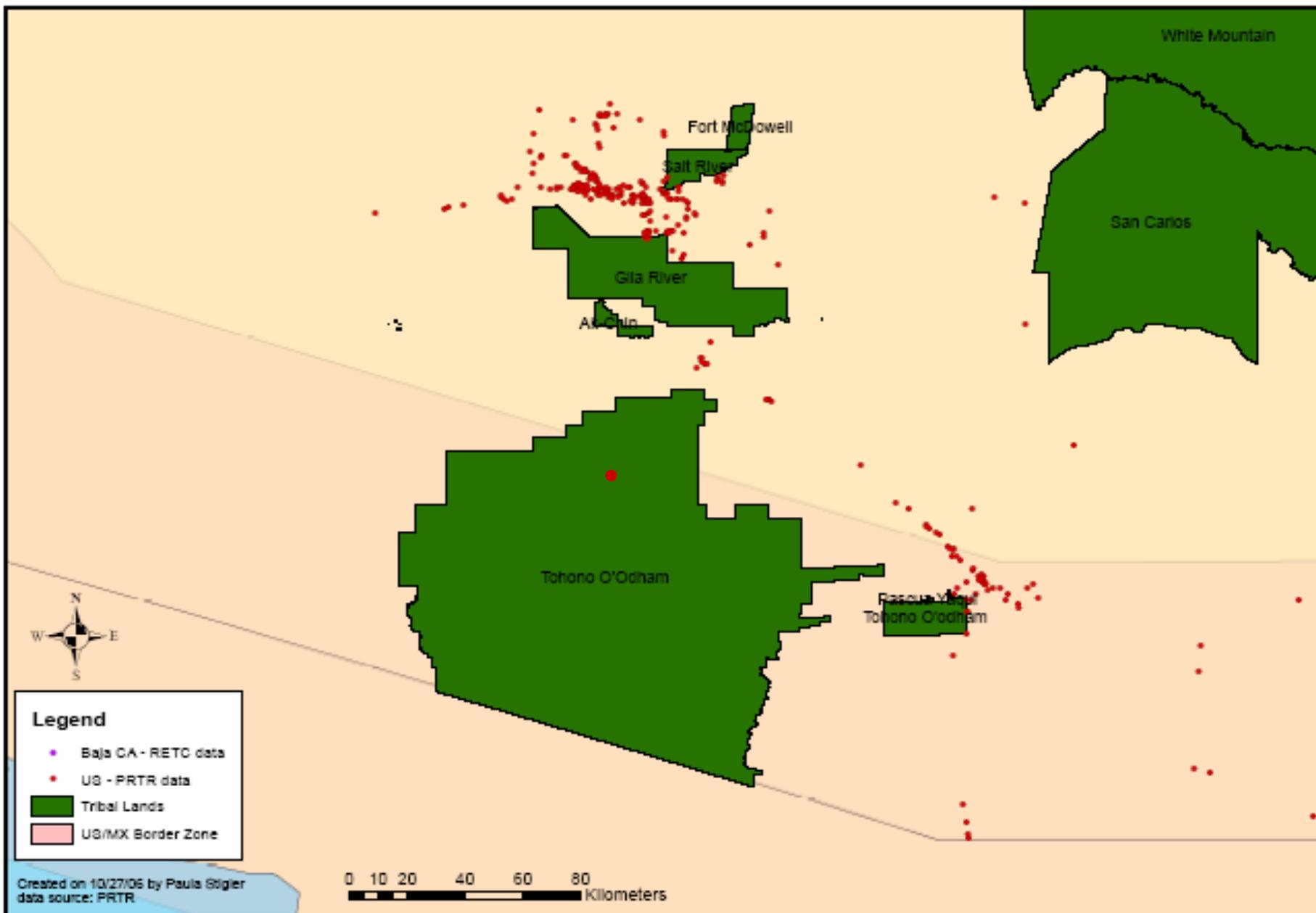


Overview of Sources

Utilizing PRTR database (i.e. Taking Stock)

- Mapped all facilities in border region utilizing Arcview 9.0
- Utilized www.nationalatlas.gov to identify individual facilities information
- Queried information for facilities in Taking Stock
- Looked at total chemical releases for chosen facilities
- Created an excel chart with information and identified if chemicals were carcinogenic

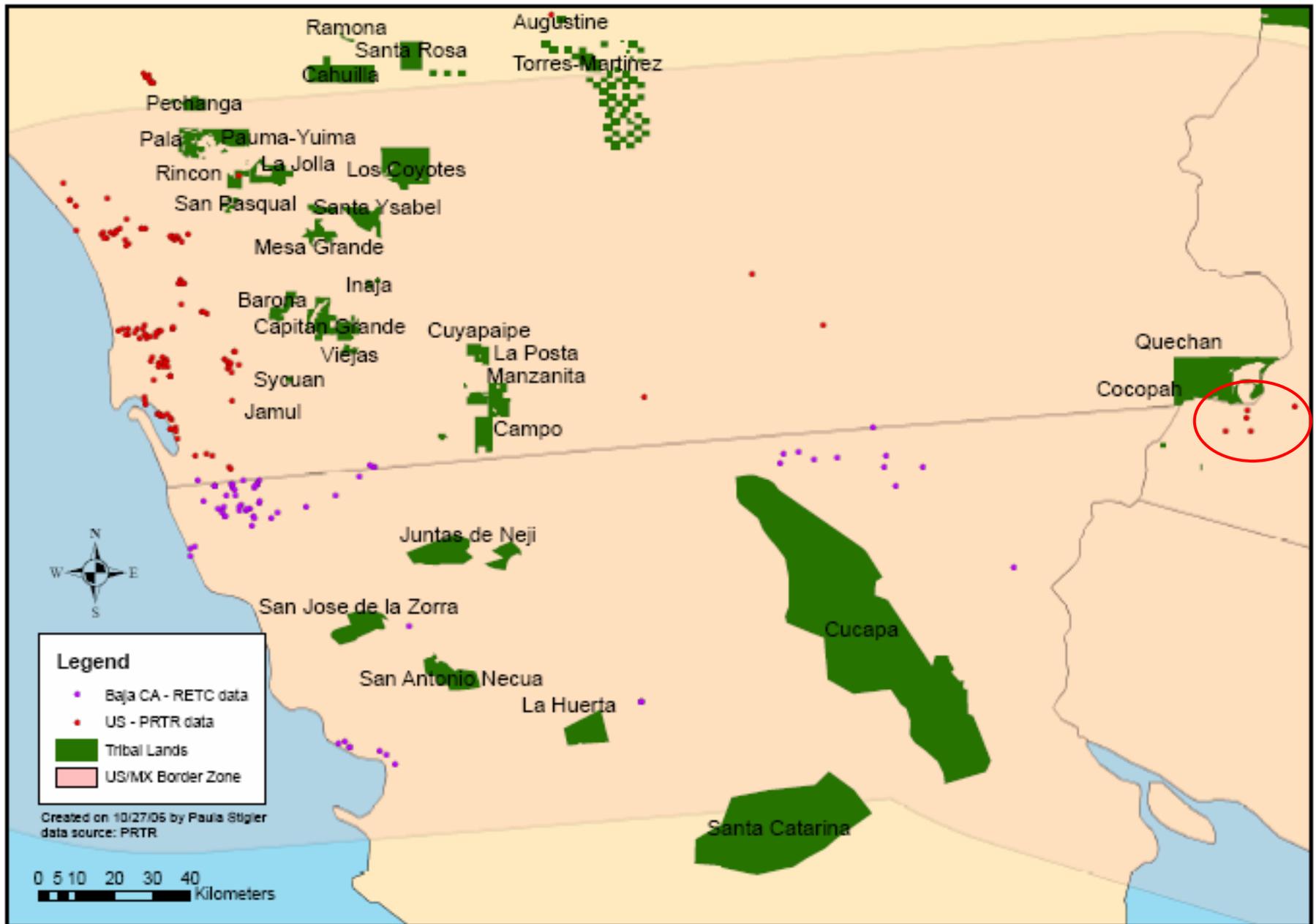
Arizona Border Region Tribal Lands and Toxic Releases



Tohono O'Odham and some nearby releases:

1. **Metal Products Company**
 - **PRTR ID:** 85034MTLPR1845E
 - Lead, off-site recycling and transfers, 7,780 lbs reported in 2003
2. **Irvington Generating Station**
 - **PRTR ID:** 85714RVNGT3950E
 - 2003 on-site air releases:
 - Hydrogen Fluoride 55, 834 lbs
 - Hydrochloric acid 26,863 lbs
 - Lead 7 lbs (3,400 additional lbs transferred to recycling/disposal)
 - Mercury 18 lbs
3. **Southwest Fiberglass**
 - **PRTR ID:** 85714SNDTP4798S
 - Styrene, on-site air releases, 16,387 lbs reported in 2003
4. **Valley Marble Company Lynne Company**
 - **PRTR ID:** 85714VLLYM3238E
 - Styrene, on-site air releases, 2,169 lbs reported in 1996
5. **Arizona Public Service Company Saguaro Power Plant**
 - **PRTR ID:** 85245RZNPBMILEP
 - Lead, transfers to recycling/disposal, 146 lbs reported in 2003

California/Baja California Tribal Lands and Toxic Releases



Cocopah/Quechan and some nearby releases:

1. Meadowcraft Inc.

- Glycol Ethers – 10,030 lbs on-site air releases, last reported in 1999

2. Carrier Heat Transfer Products

- Copper – 109,963 lbs transferred to CA recycling facility in 2004

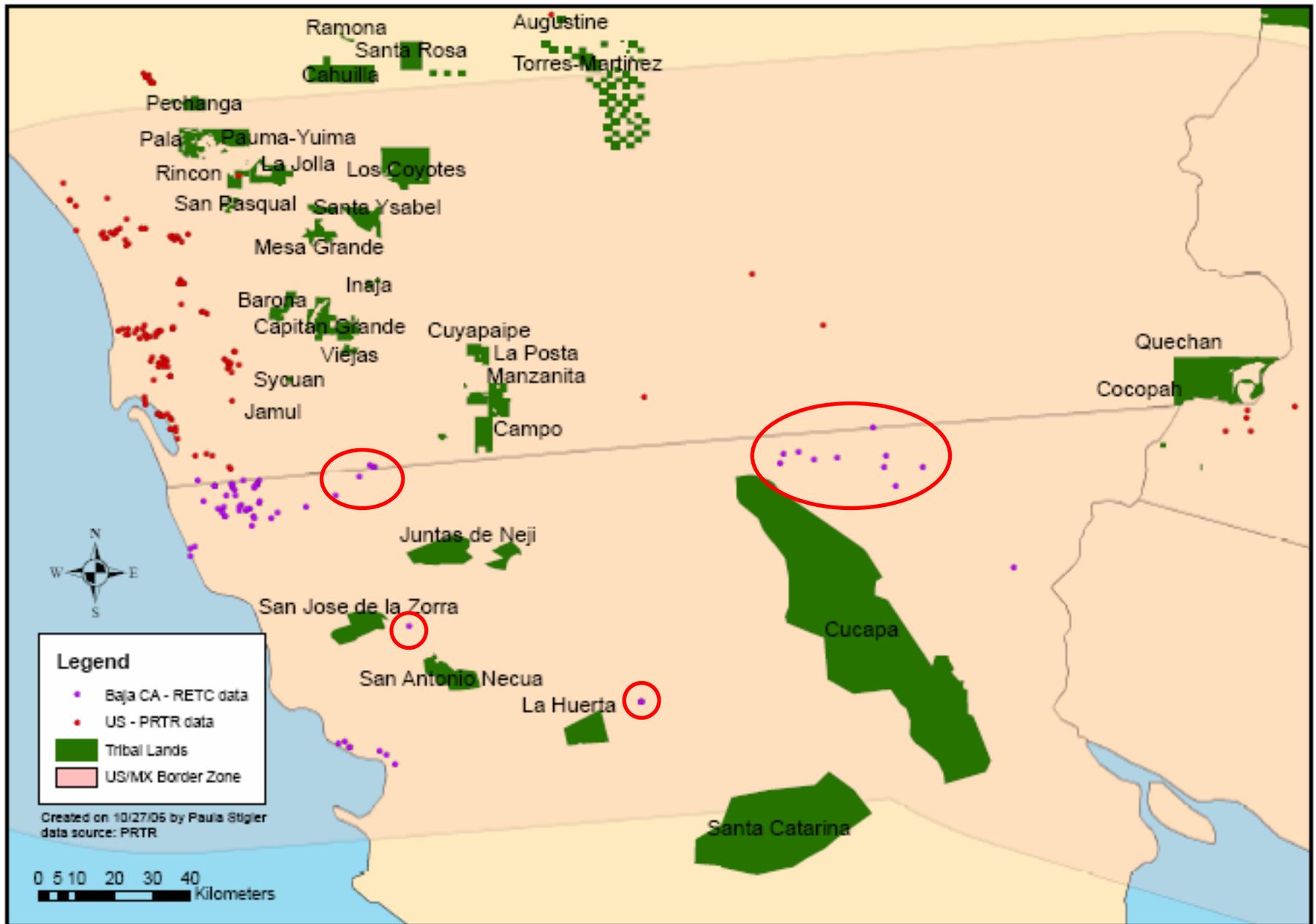
3. Automotive Parts Exchange

- **PRTR ID:** 85365TMTVP10395
- on-site air releases:
 - Toluene, 3,036 lbs, last reported in 1997
 - Styrene, 4,969 lbs, last reported in 1997

4. Rsa Microtech

- **PRTR ID:** 85365RSMCR3885E
- Zinc and Manganese, on-site air releases, 250 lbs of each released, last reported in 1999

California/Baja California Tribal Lands and Toxic Releases



Mexican Data (RETC) and Tribal Communities

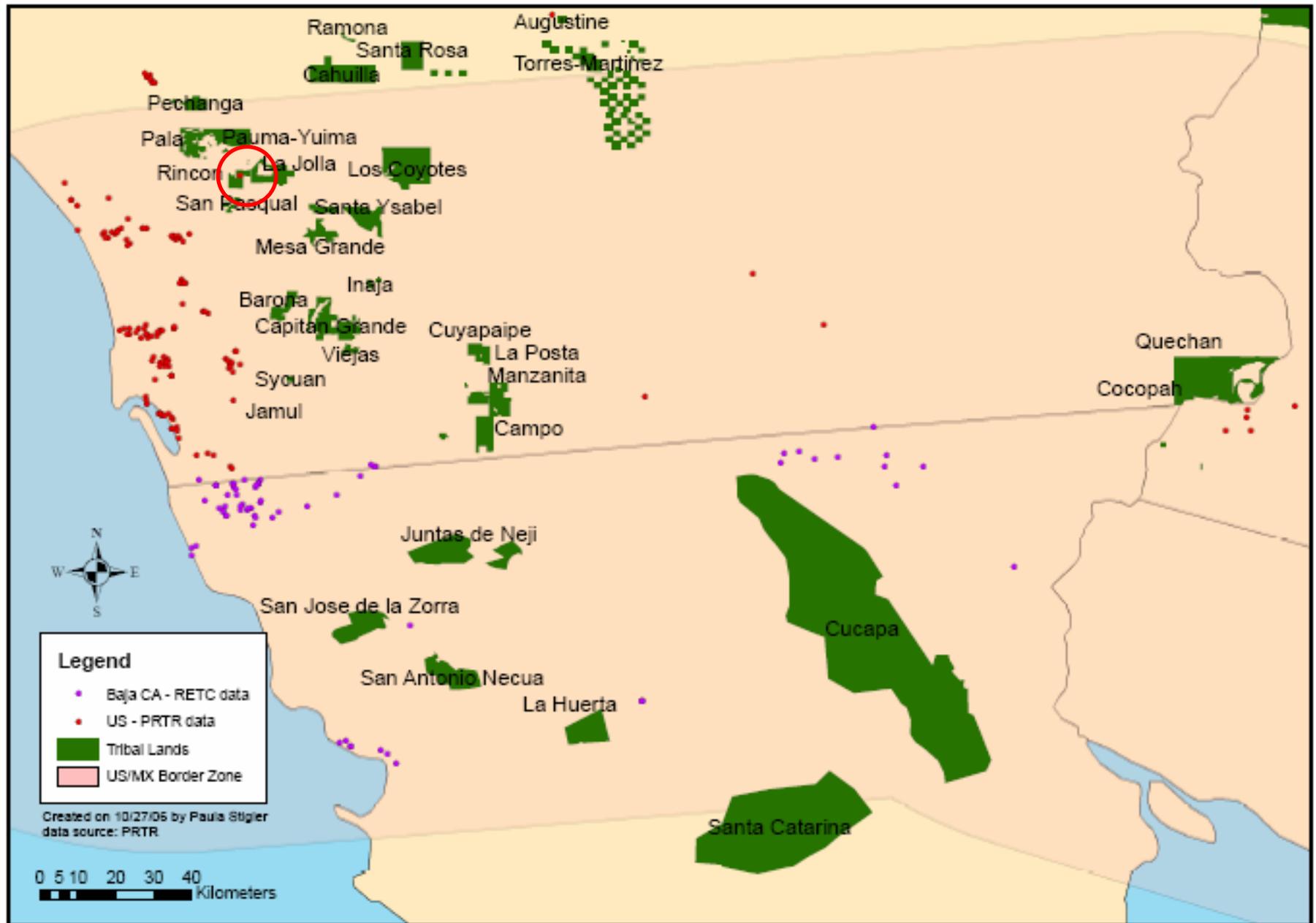
- Mexicali/Cucapa community and nearby releases:
 1. Energia de Baja California S. de R. L. d
 - Chromium released to water, 3 kg
 - Arsenic released to water, 6 kg
 2. Energía Azteca X S. de R. L. de C. V.
 - Cyanide released to water, 70 kg
 3. Termoeléctrica de Mexicali S. de R. L. d
 - Nitric Oxide, released to air, 578 kg
 - Cyanide, released to water, 159 kg
 4. Thomson Displays Mexicana
 - Cyanide, released to water, 37 kg
 - Arsenic, released to water, 5 kg
 - Chromium released to water, 522 kg
 - Nickel, released to water, 8 kg

Mexican Data and Tribal Communities, continued

- Tecate/San Jose de la Zorra community and nearby releases:
 - BC METAL AND SHADE S.A. DE C.V.
 - Cyanide, released to water, .2 kg
 - Nickel, released to water, 2 kg
- Tecate/ Campo, La Posta, Manzanita and nearby releases:
 1. CERVECERIA CUAUHEMOC MOCTEZUMA S.A. DE (1)
 - Carbon Dioxide, released to air, 35,342,360 kg
 2. CERVECERIA CUAUHEMOC MOCTEZUMA S.A. DE (2) treatment plant
 - Carbon Dioxide, released to air, 1,289,310 kg
 - Carbon Dioxide, released to water, 423,450 kg
 - Cyanide, released to water, 3kg
 - Arsenic, released to water, .2 kg
 - Chromium, released to water, 3 kg
 - Mercury, released to water, 1 kg
 - Nickel, released to water, 2 kg

Case Study: Southern California, Rincon Reservation

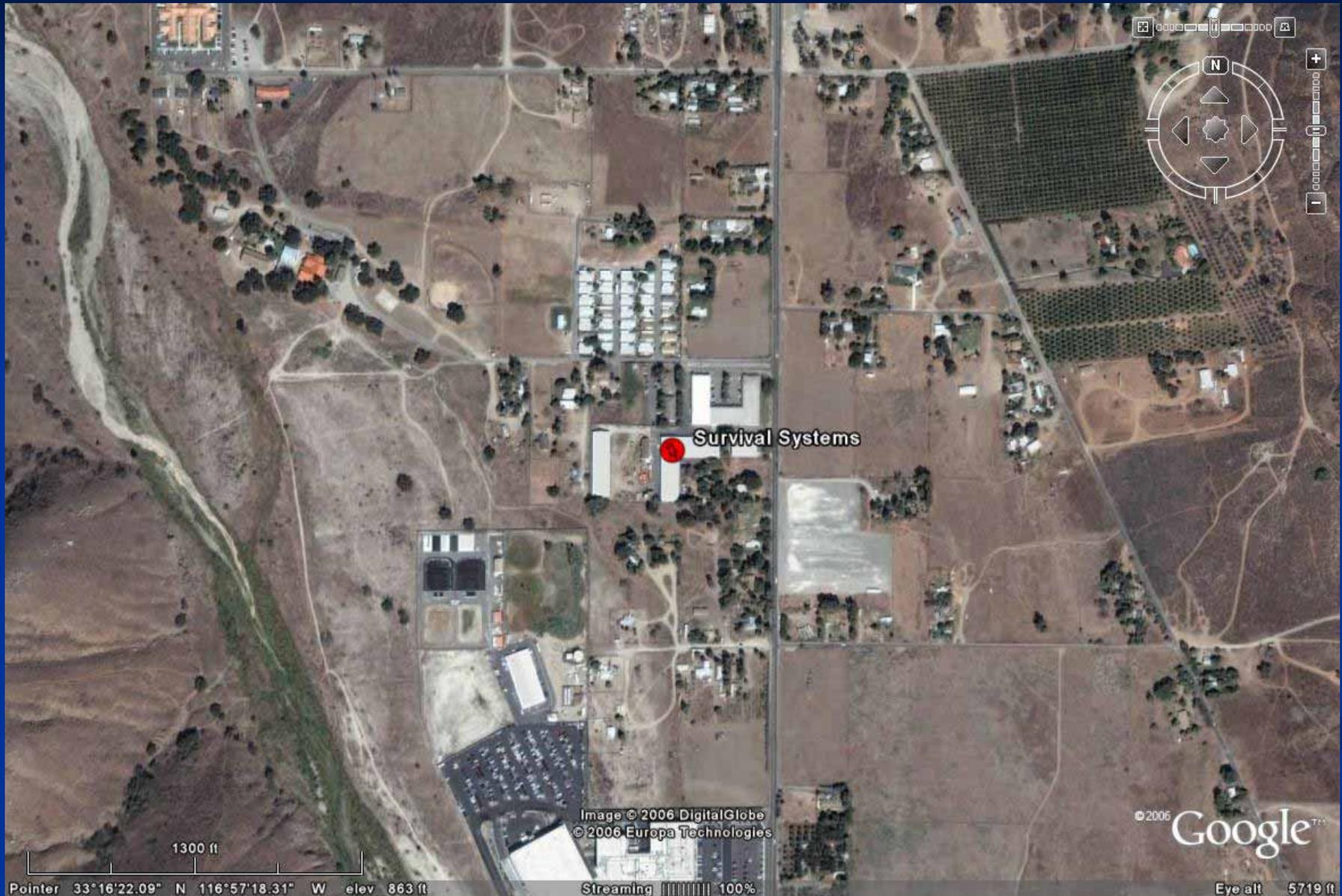
California/Baja California Tribal Lands and Toxic Releases



■ **Rincon Reservation**

- Luiseño
- Located in Northeast San Diego County
- Approximately 3,918 acres
- Population of approximately 1,495
- 651 tribal members
- Facility Name: **Survival Systems International Inc (SSI)**
- PRTR ID: 92082SRVVL34140
- Chemical of concern: **Styrene**
- On-site air releases reported in 2004 = 4,067 lbs (TRI database)
- Located near homes, apartments and a daycare
- Jurisdictional issues
 - On tribal fee land
 - Pays county taxes but county does not claim to have jurisdiction for inspections/regulation
 - Tribe currently does not have an air monitoring program
- Complaints regarding eye irritations and odor

Location of SSI and nearby residences



What is Styrene?

- Synthetic chemical also known as vinylbenzene, ethenylbenzene, cinnamene, or phenylethylene.
- Dissolves in some liquids but doesn't dissolve easily in water.
- Billions of pounds are produced each year to make products such as rubber, plastic, insulation, fiberglass, pipes, automobile parts, food containers, and carpet backing.
- Classified as a possible human carcinogen by the EPA.
- Volatile, highly flammable compound with a vapor that is heavier than air.
- Colorless liquid that evaporates easily and has a sweet smell and often contains other chemicals that give it a sharp, unpleasant smell.
- Can be smelled at very low concentrations and prolonged exposure to styrene reduces the ability to smell it.

Styrene Regulations

- The Clean Air Act Amendments of 1990 list styrene as a hazardous air pollutant.
- Styrene is classified as a possible carcinogen
- Under the 1986 Emergency Planning and Community Right-to-Know Act, releases of more than one pound of styrene into the air, water, or land must be reported annually and entered into the TRI.

Health effects of styrene exposure

■ Short term health effects:

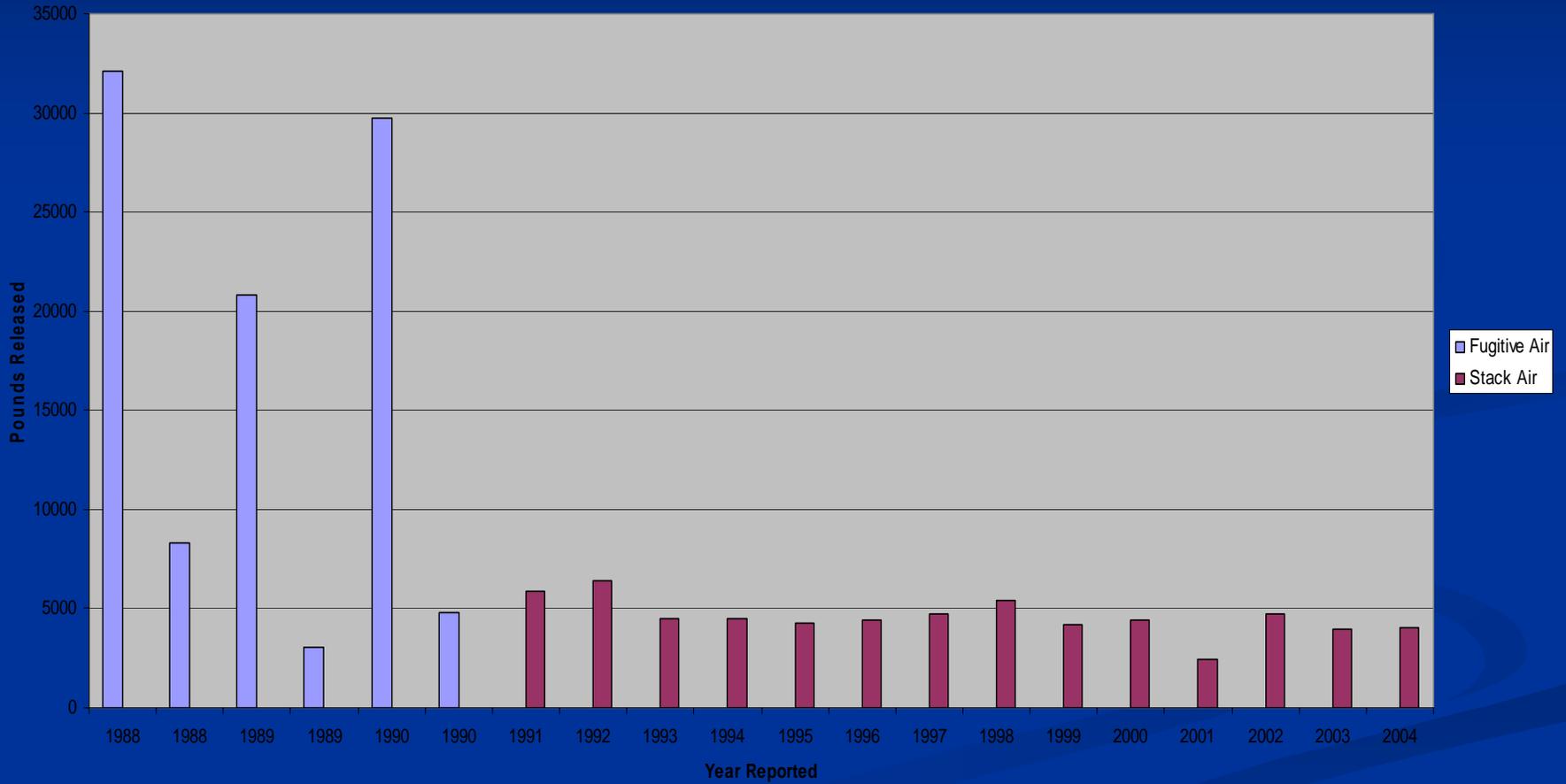
- Irritation of the nose and throat
- Eye irritation
- Gastrointestinal effects
- Symptoms such as headache, dizziness and fatigue
- Other symptoms such as slower reaction times, reduced manual dexterity, and impaired co-ordination and balance
-

■ Long term health effects:

- Slower reaction times
- Increased damage to the genetic material in one type of blood cell (lymphocytes)
- Effects on the central nervous system (CNS), such as headache, fatigue, weakness, and depression, CNS dysfunction, hearing loss, and peripheral neuropathy

Reported Data

Styrene Releases by Survival Systems Inc



How do I know if there is a problem?

- Conduct a community needs assessment
 - Talk to community members about health problems, concerns and observations
 - Conduct health surveys
 - Complete an environmental health assessment
- Generate maps with data (e.g. health, sources)
- Perform tests &/or monitor chemicals of concern if possible
- Speak with local health agencies or clinics
- Enter into dialogue with the facilities

Conclusion

This information can help tribes to:

- Plan (growth, housing, infrastructure, schools, etc.)
- Conduct outreach to community members and relay important information regarding public health
- Enter into dialogue with industry
- Present information to tribal leaders
- Emergency and disaster planning
- Enforcement and regulation
- Advocate for cleaner environments
- Protect public health