

US EPA ARCHIVE DOCUMENT

UPDATE ON CALIFORNIA-BAJA CALIFORNIA ENVIRONMENTAL HEALTH TASK FORCE

**Maura Mack, PhD, MPH,
Chief, California Office of Binational Border Health
Department of Health Services**

**Border 2012 Environmental Health Workgroup Meeting
March 16, 2006 – Brownsville, Texas**

California Members of Task Force

- **California Department of Health Services (CDHS)**
- **California Environmental Protection Agency (Cal/EPA)**
- **Pala Tribe**
- **San Diego State University**
- **Southwest Consortium for Environmental Research and Policy (SCERP)**
- **Imperial and San Diego Counties**
- **US EPA Region 9**
- **US Food and Drug Administration**

ACTIVITIES TO DATE

- Convened binational meeting on April 13, 2005 to
 - Identify pressing environmental health issues in California-Baja California border region
 - Discuss formation of task force
- Met with ISESALUD and SEMARNAT officials in Mexicali on September 28, 2005
- Convened three conference calls with CA members of Task Force between October 2005-February 2006

ACTIVITIES TO DATE

- Responded to US EPA Border 2012 Request for Proposals
 - Four Draft Project Recommendations submitted by Task Force members and presented at Border 2012 Regional Work Group Co-Chairs meeting in December 2005
 - One Final Project Recommendation submitted
- Updated document, Environmental Health Priorities in the California-Baja California Border Region: The California Perspective
- Met with ISESALUD officials in Mexicali on March 14, 2006 to discuss ISESALUD collaboration in formation of Task Force

Environmental Health Priorities in the California/Baja California Border Region

- Air Quality
- Lead Exposure
- Pesticides Exposure
- Water Quality

AIR QUALITY

- **Imperial County is serious non-attainment area for PM-10**
 - In 2003, ranked 2nd for PM-2.5 and 3rd for PM-10 air pollution in California
 - Likely impact of water transfer from Salton Sea to San Diego on air pollution due to shoreline and lakebed exposure
- **Non-attainment area for ozone**
 - Ranked 8th in California
- **City of Calexico is non-attainment area for CO**

AIR QUALITY

- Sources of air pollution in Imperial County:
 - Use of agricultural pesticides
 - Field burning
 - Unpaved roads
 - Truck border crossings
 - Power plant emissions
 - Fugitive dust from receding Salton Sea

AIR QUALITY

- In 2003, prevalence of asthma in children 1-14 years old in Imperial County is nearly 17% compared with 14% statewide
- Imperial County has highest asthma hospitalizations rates among children in California
 - 54/10,000 versus 17.7 statewide

AIR QUALITY

- Children are more vulnerable to negative effects of pollution given:
 - Continued lung development into adolescence
 - Rapid respiration rates
 - More time spent outdoors
- Recent studies have found links between air pollution and pre-term birth, and infant mortality

AIR QUALITY

- These issues point to need to:
 - Increase monitoring, surveillance, and health studies related to air quality and health
 - Advocate for cross-border approach to resolving air contamination

LEAD EXPOSURE

- In California border counties during 2001 – 2005, largest proportion of childhood lead poisonings cases involved Latino children
- Among new cases of blood lead poisoning in children
 - in San Diego County, 74 percent were Latino
 - in Imperial County, 75 percent were Latino

LEAD EXPOSURE

- Primary source of lead exposure is older housing containing leaded paint or lead-contaminated soil.
- Other sources of concern for border populations include:
 - certain ethnic folk remedies
 - imported lead-contaminated food products, such as some Mexican spices, candies, and fried grasshoppers (*chapulines*)
 - traditional glazed ceramics used for food preparation or storage
 - take-home exposures resulting from a family member's job

LEAD EXPOSURE

- Recent survey revealed:
 - 6% of Californians used Mexican ceramics to store, serve, or prepare food
 - 37% of Latino households reported eating Mexican candy, some of which is known to be lead-contaminated

LEAD EXPOSURE

- Recent California surveillance data indicates Latino home remedies (*azarcón* and *greta*) account for 10.4% of non-dust/paint/soil sources of lead poisoning
- Other potential sources of lead exposure include:
 - lead-contaminated sites (particularly in Tijuana)
 - export from California to Baja California of old doors and windows with lead paint

LEAD EXPOSURE

- Lead poisoning is the major preventable environmental health problem affecting children
- Short and long-term childhood lead exposure may cause damage to the central nervous system, resulting in compromised intelligence, learning disabilities and behavioral disorders
- New research indicates adverse effects may be seen with only small increases in blood lead levels

LEAD EXPOSURE

- **These issues point to need for:**
 - More investigation on importance of various exposure sources that contribute to elevated blood lead levels in Latino populations
 - Culturally appropriate outreach and education strategies targeted at families and health care providers on both sides of border to reduce lead poisoning among Latino children and other border-area residents

PESTICIDE EXPOSURE

- California is leading agricultural state in the U.S.
 - Generates \$28 billion annually in revenues
- Estimated 1.6 million agricultural workers and families
 - More than 90% born in Mexico
- In 2004, about 705 million pounds of pesticides sold in California
 - About 180 million pounds applied by commercial applicators and were restricted use pesticides

PESTICIDE EXPOSURE

- Agricultural workers are at particular risk of exposure to pesticide products.
 - In 2004, Department of Pesticide Regulation (DPR) reported that of the 828 cases recognized as definitely, probably, or possibly related to pesticide exposure, 390 (47%) involved use of pesticides for agricultural purposes

PESTICIDE EXPOSURE

- Persistent problems:
 - Underreporting of pesticide-related illness among agricultural workers and others
 - Lack of awareness among farm workers of hazards and proper handling of pesticides
 - Lack of access to health care
 - Limited training of health care providers to recognize, manage, and report pesticide-related illnesses

PESTICIDE EXPOSURE

- California law requires that a physician who knows, or has reasonable cause to believe, that a patient has a pesticide-related illness must report to the local health officer by telephone within 24 hours
- For work-related pesticide illness cases, physicians also must send a copy of the “Doctor’s First Report of Occupational Injury or Illness” (DFR) to the local health officer within seven days

PESTICIDE EXPOSURE

- In a typical year, most pesticide-related illness cases (67% to 75%) are identified through review of DFRs
- < 1/3 of cases identified through physician reporting
- Without complete information, difficult to determine:
 - if proper care was received
 - which individuals are repeatedly becoming sick from exposure
 - trends with respect to pesticide-related illnesses

PESTICIDE EXPOSURE

- These issues point to need for:
 - Valid and reliable means of monitoring pesticide-related illness to:
 - Identify problems that may occur with different uses of pesticides
 - Determine whether risk assessment and management practices are effective in preventing hazardous exposure incidents
 - Training of health care providers to improve recognition, management, and reporting of pesticides illnesses
 - Awareness raising among farm workers about safe use of pesticides

WATER QUALITY

- Rapid population growth in border region
- Many new arrivals live in unserviced *colonias*
- Safe drinking water and sewage treatment often not available for 7-14 years
- Leaking sewer pipes pollute surface and ground waters

WATER QUALITY

- Higher than average gastro-intestinal diseases and other water-associated diseases
 - Hepatitis
 - Cryptosporidium
 - Giardia
- Other contaminants of concern
 - Agricultural runoff
 - Arsenic
 - Poisons from groundwater wells

WATER QUALITY

- Interventions to address water quality issues include:
 - Monitoring (both water quality and health)
 - Modeling (i.e., correlation of levels, exposures, and effects)
 - Minimization of pollutant levels
 - Mitigation (i.e., nutrient trading)
 - Water quality management (both surface and ground water).

NEXT STEPS

- Convene binational meeting in spring 2006 to formally establish California-Baja California Environmental Health Task Force
- Develop work plan, time line, and evaluation measures for Task Force activities
- Continue to seek funding support for activities

FOR MORE INFORMATION

- Please contact:
 - Maura Mack
 - mmack@dhs.ca.gov
 - 619-692-5558
- Please refer to:
 - <http://www.dhs.ca.gov/ps/dcdc/COBBH/>