Overview of Methamphetamine Cleanup Guidelines

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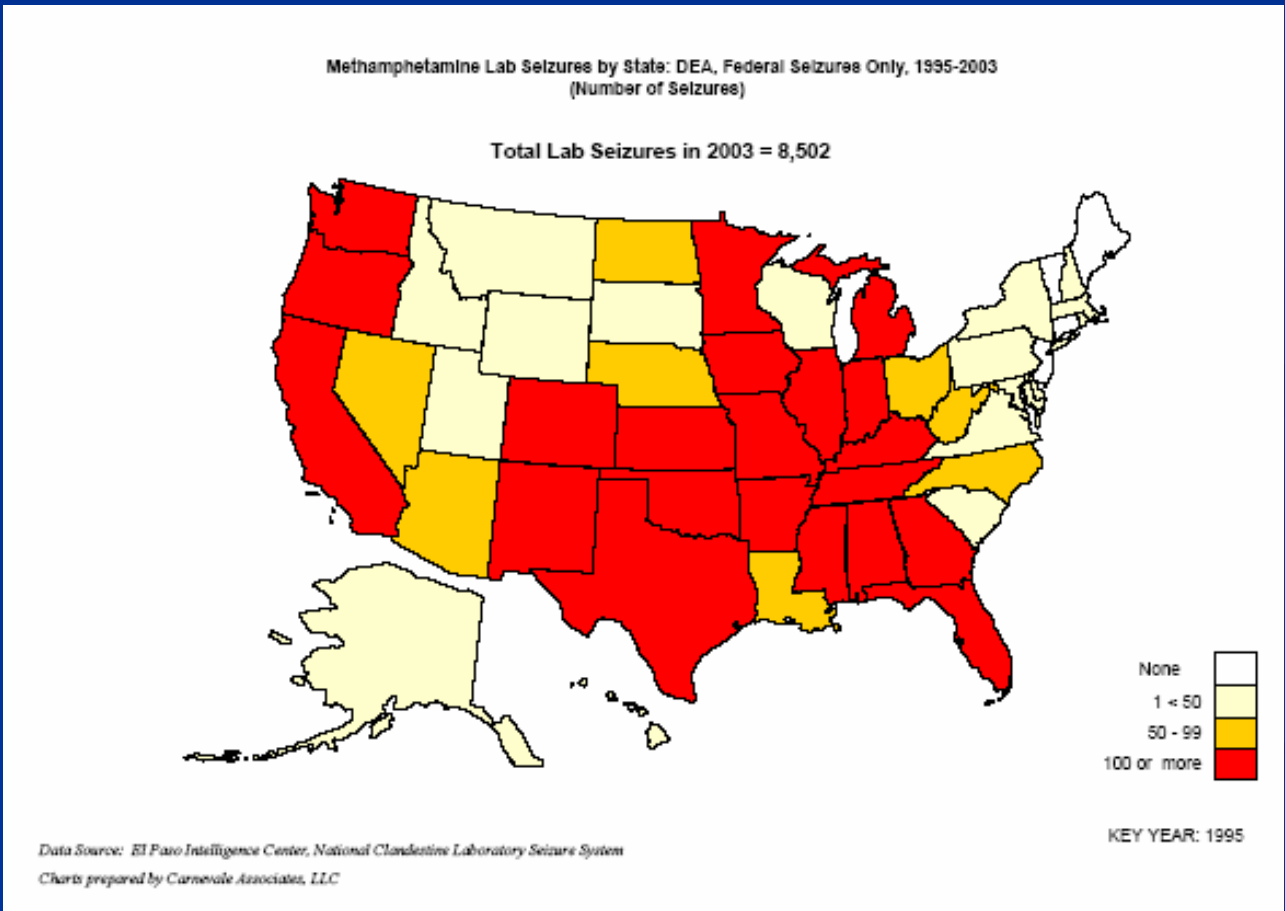
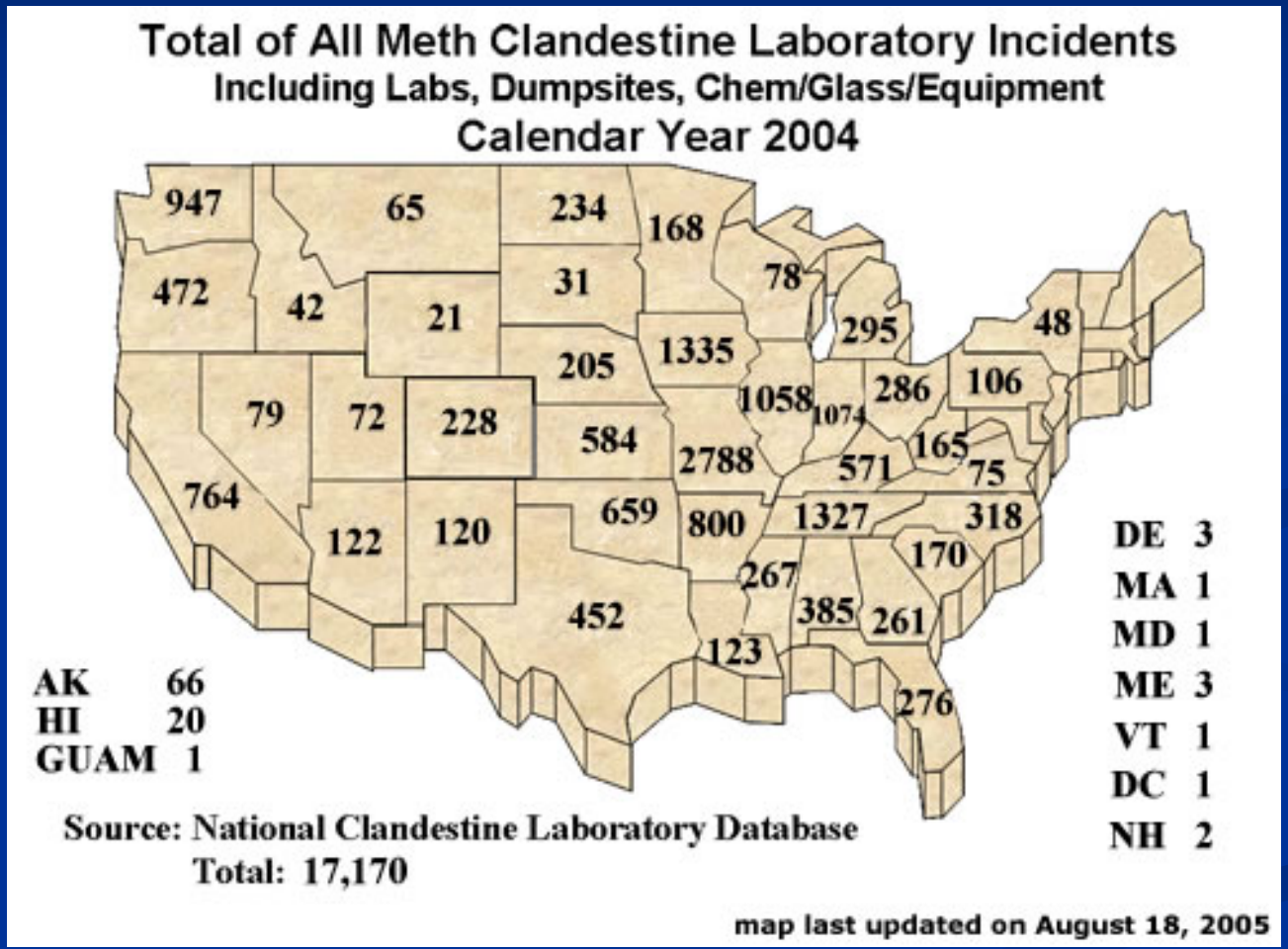
Methamphetamine Labs in U.S. Communities

- The number of clandestine methamphetamine laboratories (meth labs) has increased exponentially over the past ten years. In 2003, enforcement agencies seized 14,908 meth labs and dump sites.



Meth Labs in 2004



Methamphetamine Labs in Communities

- Clandestine meth labs range from crude makeshift operations to highly sophisticated facilities. They are often found in private residences, trailers, automobiles, campgrounds, and hotel and motel rooms.

- All of the processes that produce methamphetamine use a variety of chemicals including explosives, solvents, metals, salts, and corrosives.

Meth Labs Produce Hazardous Waste

- Meth cooks often pour left over chemicals and sludge down household drains, household plumbing, storm drains, or directly onto the ground.
- Solvents and other toxic byproducts used to produce meth pose long-term hazards because they can persist in the soil and groundwater for years.
- Meth labs are extremely harmful to the environment; production of one pound of methamphetamine produces an estimated five to seven pounds of hazardous waste.
- Americans consumed approximately 22 tons of methamphetamine in 2001, thereby introducing approximately 110-154 tons of hazardous waste into our environment.

Cleanup Guidelines

- Currently there are no national standards or guidelines for the cleanup of meth labs because the methods used to make meth vary greatly.
- EPA defers meth lab cleanup to the states, however, EPA representatives provide technical assistance to states and the agency is involved with several workgroups who are trying to answer the "how clean is clean" question.
- Many states have developed their own guidelines.

Overview of State Guidelines

- 13 states have adopted numeric guidelines that generally are consistent with one of two meth cleanup guidelines:
  - Surface contamination must be ≤ 0.1 to 0.5 μg/100cm^2
  - Surface contamination must be ≤ 1 to 5 μg/ft^2
- Some states have also adopted cleanup guidelines for pollutants associated with meth production (e.g., volatile organic chemicals, mercury, lead)
- These cleanup guidelines are risk-based rather than health-based because currently there is insufficient research available on the health effects of meth
- Guidelines may be found in regulations, agency guidance, or policy

Spotlight
Washington State Meth Initiative

- The initiative is a statewide, coordinated approach launched in 2001 that has been used by other states when developing their own meth lab cleanup guidelines
- The Washington State Legislature first enacted legislation to address properties contaminated by illegal drug manufacturing activities in 1989
- Washington State Cleanup Guidelines:
  - Threshold meth contamination level triggering cleanup is any surface sample measuring > 5 $\mu g/ft^2$
  - Post-cleanup air guidelines for reoccupancy of property
    - VOCs, < 1 ppm
    - Lead < 20 $\mu g/ft^2$
    - Mercury < 50 ng/m^3

State Meth Cleanup Guidelines Across the Nation

- **Alaska (2004)**
  - Meth: 0.1 µg/100cm^2
  - VOCs (Air): <1 ppm
  - Pb: < 2 µg/100cm^2 or 20 µg/ft^2
  - Hg (Air): < 50 ng/m^3
- **Arizona (2003)**
  - Meth: 0.1 µg/100cm^2
  - VOCs (Air): <1 ppm
  - Pb: 4.3 µg/100cm^2
  - Hg (Air): 3.0 µg/100m^3
- **Arkansas (2005)**
  - Meth: 0.5 µg/ft^2

State Meth Cleanup Guidelines Across the Nation

- **Colorado (2005)**
  - Meth: 0.5 μg/100cm^2
  - Pb: 40 μg/ft^2
  - Hg (Vapor): 1.0 μg/m^3
  - Iodine: 22 μg/100cm^2
- **Michigan (2006)**
  - Meth: 0.5 μg/100cm^2
- **Minnesota (2006)**
  - Meth: ≤ 10 μg/ft^2
  - VOCs (Air): <1 ppm
  - Pb: < 40 μg/ft^2
  - Hg (Air): < 0.3 μg/m^3

State Meth Cleanup Guidelines Across the Nation

- **Montana (2005)**
  - Meth: $\leq 0.1\ \mu g/100cm^2$
- **North Carolina (2005)**
  - Meth: $0.1\ \mu g/100cm^2$
  - Pb: $4.3\ \mu g/100cm^2$
  - Hg: $0.3\ \mu g/m^3$
- **Oregon (2004)**
  - Meth: $0.5\ \mu g/ft^2$
  - Pb: $0.05\ \mu g/ft^2$
  - Hg: $10\ \mu g/ft^2$

State Meth Cleanup Guidelines Across the Nation

- **South Dakota**
  - Meth: 0.1 μg/100cm^2
- **Tennessee (2005)**
  - Meth: 0.1 μg/100cm^2
  - VOCs (Air): <1 ppm
  - Pb: < 40 μg/ft^2
  - Hg (Air): < 50 ng/m3
- **Utah – Salt Lake Valley (2001)**
  - Meth: < 0.1 μg/100cm^2
  - Pb: < 20 μg/ft^2
  - Hg (Air): < 50 ng/m3

States Without Numeric Meth Cleanup Guidelines

States with meth cleanup guidance, but no numeric remediation levels as of February 2006 include:

- California
- Georgia
- Idaho
- Illinois
- Iowa
- Kansas
- Missouri
- North Dakota
- West Virginia
- Wisconsin
- Wyoming