DRAFT 5/7/01

2001 CSTE ANNUAL MEETING

CSTE POSITION STATEMENT ENV-02

COMMITTEE: Environmental/Occupational

TITLE: Development of Environmental Public Health Indicators

POSITION TO BE ADOPTED:

CSTE supports and encourages the use of Environmental Public Health Indicators, which have been developed in collaboration with CDC's National Center for Environmental Health, for building state-based surveillance programs for environmental hazards, exposures, and adverse health outcomes.

BACKGROUND AND JUSTIFICATION:

In the last several years there has been increasing interest in the development of public health indicators for use by state and federal health agencies in tracking the occurrence of environmental hazards, exposures and adverse health outcomes. This interest has been stimulated by the recognition that there were critical gaps in our knowledge of the occurrence patterns of a large number of non-communicable diseases. A series of reports published by the National Academies (IOM, 1988; NRC, 1997,1999) provided recommendations and guidance for health agencies on how these knowledge gaps might be narrowed.

For the past several years CSTE has supported efforts to develop indicators for chronic diseases (Lengerich, 1999). By using the chronic disease indicators, CSTE believes states can bring consistency to their temporal analyses and comparisons between populations, and have data for use as benchmarks in chronic disease program assessment. More recently, CSTE has collaborated with the State and Territorial Injury Prevention Directors' Association to develop a set of injury indicators.

During 2000, CSTE, CDC, ATSDR and EPA have collaborated on the development of a set of environmental public health indicators, or EPHI. The goal of the EPHI project is to develop a set of indicators that can be used by local, state and national agencies to track hazards, exposures, and adverse health events related to the environment. In addition to state and federal agencies, several organizations have participated in EPHI development: the Association of State and Territorial Health Officers (ASTHO), the National Association of City and County Health Officers (NACCHO), and the Public Health Foundation (PHF).

In late 2000 the Pew Environmental Health Commission proposed a Nationwide Health Tracking Network, which could identify occurrence patterns of chronic diseases related to environmental factors. They recommended:

> "… nationwide baseline tracking of priority chronic diseases–asthma and chronic respiratory diseases; birth defects; developmental disorders; cancers; neurological diseases–and priority exposures, such as PCBs, and dioxin; heavy metals; pesticides and water and air contaminants." (Pew, 2000)

The candidate environmental public health indicators listed here should be used as a major part of the foundation of such a tracking program.

SUMMARY OF PROPOSED CORE ENVIRONMENTAL PUBLIC HEALTH INDICATORS:

Hazard Indicators (presence of contaminants or hazardous conditions)
Level of criteria pollutants in ambient air
Amount of hazardous and toxic chemicals released in ambient air
Proximity of population to areas not meeting ambient air quality standards
Vehicle miles driven
Noise complaints
Amount of pesticide used
Pattern of pesticide use
Level of residual pesticide in food
Chemical spills
Degree to which recreational waters meet water quality regulations or guidelines
Level of monitored contaminants in ambient water
Point-source discharges into ambient water
Level of contaminants in shellfish and sport and commercial fish
Degree to which drinking water systems comply with regulations or guidelines
Level of monitored contaminants in drinking water

Exposure Indicator (presence of biomarkers of exposure)
Elevated blood lead level (in children)

Health Effect Indicators (occurrence of morbidity or mortality attributed to exposure)
CO poisoning deaths
Temperature-attributed deaths
Hearing loss
Pesticide-related poisoning and illness
Unusual pattern of acute asthma events
Unusual pattern of cardiovascular and respiratory events (with environmental contribution)
Methemoglobinemia
Melanoma
Outbreaks attributed to consumption of ambient water contaminants
Outbreaks attributed to consumption of contaminated shellfish or sport and commercial fish
Outbreaks attributed to contaminated drinking water

Intervention Indicators (implementation of programs or official policies addressing environmental hazards)
Implementation of programs that address motor vehicle emissions
Level of alternative fuel use in registered vehicles
Availability of mass transit
Schools with indoor air policies that address environmental hazards
Jurisdictions with laws pertaining to smoke-free indoor air
Complaint-related indoor air inspections
Jurisdictions with emergency preparedness training programs, plans, and protocols
Jurisdictions that conduct annual multi-institutional exercises to prepare for response to disasters
Employee compliance with pesticide-related training standards
Fish or seafood consumption advisories
Activity restrictions (health-related) in ambient water
Implementation of sanitary surveys
Degree to which drinking water systems meet operational and maintenance standards
Boil-water advisories

Additional information:

Attached to this position statement is a list of proposed core and optional environmental public health indicators, along with background information for each indicator. The indicator list was developed to be consistent with CSTE efforts in chronic disease and injury indicators.

COORDINATION WITH OTHER ORGANIZATIONS:

Agencies for Response

National Center for Environmental Health, CDC
Agency for Toxic Substances and Disease Registry
Environmental Protection Agency
Association of State and Territorial Health Officials

Agencies for information:
Environmental Council of States
National Association of City and County Health Officials
Public Health Foundation
American Medical Association
American Public Health Association
National Environmental Health Association

References:
Institute of Medicine. The Future of Public Health, National Academy Press, Washingtion, DC, 1988.

Lengerich, EJ (ed.). Indicators for Chronic Disease Surveillance: Consensus of CSTE, ASTCDPD, and CDC. Atlanta, GA: Council of State and Territorial Epidemiologists, November 1999.

National Research Council. Assessment of performance measures in public health, substance abuse, and mental health. National Academy Press, Washington, DC, 1997.

National Research Council. Health performance measurement in the public sector: Principles and policies for implementing an information network. National Academy Press, Washington, DC, 1999.

Pew Environmental Health Commission. America's environmental health gap: Why the country needs a nationwide health tracking network. Baltimore, MD, 2000. http://pewenvirohealth.jhsph.edu/html/reports/pewtrackingtechnical.pdf

State and Territorial Injury Prevention Directors' Association. Consensus Recommendations for Injury Surveillance in State Health Departments. Marietta, GA. 1999.

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Attachment:

Environmental Public Health Indicators, May 2001