NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

02-02

STATEMENT OF POLICY

Pollution Prevention

Policy

The National Association of County and City Health Officials (NACCHO) urges national, state, and local health departments and related agencies to engage policymakers, government agencies, non-governmental organizations, businesses, and communities to produce and support policies, legislation, regulations, programs, research, and resources that prevent or reduce pollution.

NACCHO supports activities to prevent or reduce pollution, including the following:

- Eliminating or reducing pollution at its source, including the emission of greenhouse gases.
- Supporting renewable and least-polluting energy production.
- Supporting energy efficiency and conservation.
- Supporting the use of non-toxic or least-toxic materials.
- Supporting material efficiency, conservation, and reuse.
- Supporting accurate assessment and communication of the burdens of pollution on health, which include life cycle assessments (LCAs) that look at the continuum of cradle-to-grave use.[1]
- Supporting continued research on the health effects of emerging forms of pollution, which include greenhouse gases, pharmaceutical and personal care products, and hydraulic fracturing waste.
- Integrating pollution prevention into initiatives enhancing local public health system capacities to monitor, detect, and respond to public health threats.
- Supporting the implementation of Health in All Policies.[2]
- Supporting improved environmental management systems for government agencies, businesses, non-governmental organizations, and communities.
- Supporting the creation and maintenance of an adequately-trained public health workforce to support pollution prevention and control.
- Promoting local health departments' involvement in local, state, regional, and federal decision-making regarding pollution allowances, land-use planning, and other items impacting pollution prevention.

Justification

Pollution is the contamination of the air, water, or soil by substances harmful to health in some dosage.[3] Air, water, and soil pollution present numerous and serious threats to health through inhalation, ingestion, injection, and dermal absorption.[4] Sustainable, health-focused and evidence-based pollution prevention activities should be undertaken to protect public health from pollutants.

Air pollutants include, but are not limited to, carbon monoxide, ground-level ozone, lead, mercury, nitrogen oxides, particulate matter, radiation, sulfur dioxide, volatile organic compounds, [5] and the 187 Hazardous Air Pollutants (defined by the 1990 Clear Air Act Amendments).[6] Health effects of air pollution are both acute and chronic and include lung damage, asthma, respiratory disease, brain and kidney damage,[7] impaired fetal development, neurological disorders, cardiovascular disease, heart attack, cancer, and death.[8] Air pollution from greenhouse gases (e.g., carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)) is causing global climate change, which endangers public health.[9,18]

Water pollutants include, but are not limited to, "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."[13] An emerging area of concern is water pollution in the form of pharmaceuticals and personal care products, which may persist in the environment and have an impact on human health directly through potable water and indirectly through uptake in aquatic ecosystems.[14] Hydraulic fracturing, or fracking for natural gas is another growing concern that produces waste in the form of surface water and ground water contamination from dissolved solids, metals, radioactive materials, and fracking fluid additives.[15] Furthermore, [as advised by the Agency for Toxic Substances and Disease Registry (ATSDR) and the Department of Health and Human Services (HHS)] fracking sites are linked to illness in workers ranging from silicosis to lung cancer, as well as an increase in respiratory, neurological, and cardiac symptoms in residents within a fracking region.[19,20]

Soil can be polluted through a variety of sources, including wastewater treatment, industry, and agriculture.[16] Soil pollutants include arsenic, benzene, cyanide, lead, mercury, polychlorinated biphenyls (PCBs), toluene, trichloroethylene, and many others. Health effects from soil contaminants include nervous system effects, confusion, irritation of exposed skin and body, reproductive effects, and cancer.[3]

Agricultural pollutant runoff from fertilizers can also lead to an increased nutrient loading of waterways including lake, reservoir and coastal algal colonies, and the increased availability of phosphorous and nitrogenous compounds can lead to harmful algal blooms (HABs).[17] Phytoplankton are expected to respond to climate change very quickly due to their short generation times and longevity. This response will be both genetic adaptation making them more resilient and productive of harmful neurotoxins, and also a geographic spread as the algal population will move with currents to find new habitats that match their temperature, salinity, and turbulence requirements. This means that biotoxins—which are harmful for humans—entering the food chain may soon be a major global issue.[17]

The health burdens of pollution should not be disproportionately or inequitably based on socio-economic status, race, or any other attribute of diversity. Pollution has especially negative health consequences for vulnerable populations that include children, the elderly, those with existing chronic diseases, and populations in areas with disproportionately high pollution levels. In

supporting pollution prevention, the vulnerabilities of populations should be evaluated and addressed to ensure adequate protections against pollution in communities.

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Record of Action

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