

**ACTION PLAN TO IMPROVE
CHILDREN'S ENVIRONMENTAL HEALTH
IN ARIZONA**



Arizona
Children's
Environmental
Health
Project

**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CHILDREN'S ENVIRONMENTAL HEALTH PROJECT**

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ARIZONA CHILDREN'S ENVIRONMENTAL HEALTH ACTION PLAN

On April 11, 2003, Governor Janet Napolitano directed the Arizona Department of Environmental Quality (ADEQ) to work with the Arizona Department of Health Services (ADHS) and other agencies to give priority to the protection of children's environmental health in Arizona. In response to Governor Napolitano's directive, ADEQ initiated the Children's Environmental Health Project. The Project's mission is to develop and implement practical ways to protect Arizona's children from environmental risk exposures where they live, learn and play. As part of the Project, ADEQ has developed a Children's Environmental Health page on its website at www.adeq.state.az.us.

Contaminants that can affect the health of children may be found in air, water, food, and soil. Moreover, children often face multiple exposures in these different media. Identifying and reducing these risks is one of the most important things we can do for our children.

On May 30, 2003, ADEQ sponsored Arizona's first Children's Environmental Health Forum at the State Capitol. The Forum – entitled “Making the Connections” - provided the Project's starting point for its focused, statewide effort to improve and promote children's environmental health protection. It brought together policy makers, state and local leaders, community agency representatives, university researchers, private research foundations, parents, teachers and individuals to discuss existing challenges and make recommendations to improve children's environmental health in Arizona. Because of the very high asthma rates among Arizona's children and the link between air pollution and asthma, reducing children's exposure to environmental asthma triggers was a primary focus of the Forum.

This Action Plan is the result of the input and discussion from the Forum, as well as subsequent work, research and evaluation by ADEQ. The Action Plan reflects and follows the four-step “CARE” strategy -- Coordinate, Assess, Reduce and Educate -- outlined in Governor Napolitano's April 11 announcement. This Action Plan continues the momentum from the Governor's announcement and the Children's Environmental Health Forum and sets a course for ADEQ and its partners to address the environmental factors that adversely affect children's health in our state.

The underlying premise of this Action Plan is to encourage a collaborative approach that facilitates agencies, communities, schools, and parents working together, sharing information and maximizing resources to make Arizona a healthier place for our children.

CHALLENGES

There are many challenges in protecting children from environmental health risk exposures. Children are uniquely vulnerable to environmental contaminants. They are not little adults. They are growing and developing. Their bodies are more sensitive to chemicals, and their activities may result in more extensive and unanticipated exposures. Effectively protecting our children from environmental risks requires that communities, schools, parents and others have the tools they need to identify risks and reduce or prevent children's exposures. Below is a discussion of some of the challenges we face in protecting our children's health from environmental risks.

ASTHMA

Asthma is a disease of the lungs that can cause wheezing, difficulty in breathing, and chest pain and can lead to death without proper management and medical intervention. Arizona has the second highest rate of asthma in the nation, and our young people are hit especially hard. Asthma is the most prevalent health condition among all Arizona children having special health care needs. Although the cause of asthma in children is uncertain, environmental factors are thought to contribute to the development of asthma or trigger attacks.

AIR POLLUTION

Children are especially susceptible to the adverse health effects of air pollution. There are *acute*, or short term, and *chronic*, or long term, health effects of air pollution. These may include asthma and other respiratory ailments, cancers, and neurological problems such as learning disabilities and hyperactivity. Beyond ADEQ's overall efforts to reduce air pollution for the population in general, special attention must be given to reducing air pollution risks to children because of the high asthma rate among Arizona's children and the link between poor air quality and asthma and other childhood respiratory illnesses.

PESTICIDES

Pesticides are a diverse group of chemicals, and excessive exposure to pesticides can cause a variety of harmful effects in children, including damage to the nervous system, liver and kidneys. Children's exposure to pesticides may be higher than adults because of children's diets, which typically include more foods treated with pesticides, and because pesticides are routinely applied at schools and childcare facilities where children spend their days.

MERCURY

Mercury is a heavy metal that can have harmful effects on the nervous systems of children and developing fetuses, causing developmental and learning

problems. Mercury can accumulate in lakes and rivers and is transformed into methyl mercury by bacteria in soil and aquatic sediments. Methyl mercury can move up the food chain, accumulating in fish, which, when eaten, are a major source of mercury exposure for children.

LEAD

Lead is a heavy metal used in many materials and products that can damage the brain and nervous system, result in lower intelligence and cause behavioral and attention problems in children when absorbed into the body at even relatively low levels. Because lead can be found in paints and water pipes in buildings constructed prior to the 1970s, children face potential lead-contaminant exposure from paint chips, dust and drinking water in these buildings.

SUMMARY OF CHALLENGES

Asthma, air pollution, pesticides, mercury and lead are some of the specific environmental factors forming the foundation for this Action Plan to Improve Children's Environmental Health. Arizona faces other challenges, as well, in protecting our children's environmental health. Key among these are collecting, evaluating and using available health and environmental data to identify and reduce children's risk exposures.

RECOMMENDATIONS AND ACTION STEPS

The May 30 Forum on Children's Environmental Health produced several consensus recommendations about ways to promote and improve children's environmental health in Arizona:

- **Strengthen the cooperation and collaboration between Arizona's health and environment agencies in protecting and improving children's environmental health.**
- **Integrate a focus on children's environmental health into ADEQ's programs and increase ADEQ's outreach activities directed at improving children's environmental health.**
- **Bring together policy makers, health care providers, researchers, educators, parents and citizens on a regular basis to develop practical approaches to protecting Arizona's children from environmental health risks.**
- **Develop community support and resources to protect children from environmental health risks in Arizona.**

- **Improve the collection, evaluation and dissemination of data on issues affecting children’s environmental health in Arizona.**
- **Encourage Arizona schools, childcare and preschool facilities to play a greater role in protecting and promoting children’s environmental health.**

ADEQ studied these recommendations and developed the following specific **ACTION STEPS** consistent with the Governor’s “CARE” strategy:

COORDINATE THE MANY INTERESTS INVOLVED WITH CHILDREN’S ENVIRONMENTAL HEALTH ISSUES.

These actions will bring together the people, groups, and agencies involved with children’s environmental health in Arizona.

1. Establish an ADEQ/ADHS Children’s Environmental Health Workgroup that will advise the Directors of ADEQ and ADHS, enhance cooperation and collaboration between the agencies and expand the exchange of information on issues affecting children’s environmental health. The Workgroup will also be a resource for the Governor’s Children’s Cabinet.
2. Establish a Children’s Environmental Health Advisory Council, made up of citizens involved with children’s health and environmental concerns from throughout Arizona, to work with and advise ADEQ on children’s environmental health issues.
3. Establish an internal ADEQ Children’s Environmental Health Workgroup made up of members from ADEQ’s program divisions.
4. Establish a Children’s Environmental Health Task Force for the Arizona-Sonora region to address children’s environmental health issues along the Arizona-Mexico border.
5. Coordinate with existing groups and community coalitions addressing children’s asthma and other children’s environmental health issues to leverage resources and reduce duplication of efforts.
6. Establish a communication network with school districts, boards, officials, associations and related groups and representatives to promote environmental health conditions and practices in schools.
7. Foster public-private partnerships to develop resources and provide services related to children’s environmental health needs in Arizona.

8. Hold an annual Arizona Children's Environmental Health Forum to identify and prioritize children's environmental health issues in Arizona.

ASSESS AND PRIORITIZE THE ENVIRONMENTAL HEALTH FACTORS AFFECTING ARIZONA CHILDREN.

These actions will help ADEQ identify, evaluate and prioritize the many environmental issues that may impact children in Arizona.

1. Work with ADHS and the public health community to identify data currently being collected that provide indicators for children's environmental health in Arizona, determine additional data needs and develop strategies for meeting those needs.
2. Work with ADHS and the public health community to assess the extent to which specific environmental factors are related to asthma incidents.
3. Review placement of air quality monitors to facilitate the collection of data regarding children's exposures to air pollution.
4. Work with ADHS and the public health community to increase efforts to identify children with lead poisoning from environmental exposures.
5. Assess children's potential exposure to wood play sets and other structures treated with chromated copper arsenate, an arsenic-containing preservative.
6. Update ADEQ's Action Plan to Improve Children's Environmental Health in Arizona on an annual basis.

REDUCE THE NUMBER AND TYPES OF CONTAMINANTS ADVERSELY AFFECTING ARIZONA'S CHILDREN.

These actions will help reduce children's exposures to environmental health risks in Arizona.

1. Reduce the potential for children's exposure to pollutants by developing guidelines for reviewing permit applications or requests for plan approvals for facilities proposed to be sited near schools.
2. Reduce children's exposures to hazardous air pollutants (HAPs) through the development and implementation of regulations for HAPs in Arizona.

3. Reduce children's potential exposure to mercury in the environment by developing a mercury assessment and reduction strategy.
4. Reduce children's exposure to hazardous pollutants in diesel exhaust by working with school districts, boards, officials, associations and other appropriate groups to develop and implement policies regarding school bus idling.
5. Reduce children's exposures to environmental risks and environmental asthma triggers in Arizona schools by expanding the number of schools using the U.S. EPA's "Tools for Schools."
6. Reduce the use of pesticides in schools by encouraging and supporting Integrated Pest Management programs that use non-chemical techniques to control pests and eliminate pest pathways in schools.
7. Reduce children's exposure to harmful ultraviolet rays by working with ADHS to expand the number of schools participating in the "Sun Wise" Program.
8. Reduce children's environmental health risk exposures in schools by expanding ADEQ's "Green Schools" Program and encouraging consideration of children's environmental health in the design and construction of new schools and in school renovations.
9. Reduce exposure to air pollution by disseminating air quality forecasting information in ways that help people take actions to protect children's health and minimize children's exposure to air pollution.

EDUcate CITIZENS ABOUT ENVIRONMENTAL HAZARDS AND HOW TO REDUCE CHILDREN'S EXPOSURES TO THEM.

These actions will help raise public awareness and education levels in Arizona relating to children's environmental health issues and exposure prevention strategies.

1. Organize workshops and roundtables throughout Arizona on children's environmental health issues.
2. Work with ADHS and the public health community to increase medical provider awareness and education relating to children's environmental health issues.

3. Work with the American Lung Association to promote the “Open Airways” program that helps schools educate individuals and families about ways to better manage children’s asthma.
4. Develop an Internet-accessible children’s environmental health resource in conjunction with ADEQ’s Children’s Environmental Health Project web page.
5. Work with ADHS and other entities to develop and implement a strategy to educate the public on potential contaminants, including particularly mercury, in foods that may be consumed by children.
6. Provide information on the relationship between pollen-producing plants and childhood asthma.

SUMMARY

This Action Plan outlines important first steps that we can take toward making Arizona’s environment healthier for our children. There is a clear need to better coordinate efforts and maximize resources to protect children’s environmental health in this state. We can improve the types and quality of health and environmental data that we collect relating to children’s health and expand the ways we use that data to protect our children. We can focus reduction efforts on the places where children spend their time. And we can continue to identify the environmental health risks to our children and prioritize our efforts to reduce them. By taking the steps outlined in this Action Plan, we can begin to develop a solid foundation for protecting and improving children’s environmental health in Arizona.