



## Outline of Potential Programs and Strategies to Improve Children's Environmental Health in Arizona

July 31, 2003

Governor Napolitano's four immediate goals for the Children's Environmental Health Project are: ***Coordination, Assessment, Reduction and Education.*** Our recommendations are organized around each of Governor Napolitano's goals.

### ***I. Coordination - Proposed Structure for Arizona Children's Environmental Health Programs***

#### **A. Common Structures Children's Environmental Health Programs in Other States**

- Typically located in the state Health or Environmental Agency (Maryland, Minnesota, Indiana)
- Some states have placed the Children's Environmental Health Director in the Governor's Office for better coordination (e.g. California)
- Most states work formally or informally with an advisory panel or commission
- Budgets vary widely between states (California has made large investments in staff and research grants; Indiana has made moderate investments in staff resources; and Maryland has made only modest investments)

#### **B. Unique & Positive Features in Arizona**

- Current ADHS/ADEQ working relationship
- Existence of Governor's Children's Cabinet
- Other potential state agency allies (state department of Transportation, Health and Labor and local school districts) can be brought in through the Governor's Children's Cabinet
- Some historical precedent for asthma outreach
- Great deal of historical precedent for "cross-border" Children's Environmental Health programs
- University programs that focus on cross-border and children's issues already exist
- A successful pilot program on Integrated Pest Management has already been completed in Arizona

### **C. Recommended Structure for Arizona Children's Environmental Health Program**

We recommend that the Governor sign an Executive Order creating a Children's Environmental Health Office at ADEQ. The Executive Order could create a formal reporting relationship between the Children's Environmental Health Office with the Children's Cabinet through the Secretary of ADEQ. The Executive Order would also facilitate the deployment of resources from other state agencies (particularly ADHS in the absence of statutory authority for the Office and/or a budget line item for the Office). The Governor's Executive Order should also create an Advisory Committee to the Children's Environmental Health Office.

We recommend that the Arizona Children's Environmental Health Office should focus in the first six months on non-legislative "common sense" initiatives that achieve demonstrable results. In the longer term, Arizona Children's Environmental Health Office should pursue some of the legislative initiatives described in Section III below (the "Reduction" Section).

We envision the day to day activities of the Children's Environmental Health initiative functioning on three inter-related levels:

**First**, an **internal ADEQ Workgroup** should be established and include representatives from the Air, Waste and Water Divisions as well as representatives of ADEQ's Regional Offices. The internal ADEQ Workgroup should also include individuals involved with: 1) the South Phoenix Project; 2) the Cross-Border Commissions and 3) outreach/education efforts with Native American Tribes in Arizona. Given the difficulty we had in tracking down information about existing ADEQ programs that are related to Children's Environmental Health, we recommend that this ADEQ Workgroup meet once per week during the first six months of the project (regional and other remote office representatives can participate by phone) to facilitate communications.

**Second**, an **Inter-Agency Workgroup** should be established consisting of representatives from the ADEQ Workgroup, ADHS, the Governor's Office (Budget and/or Communications) and the Arizona Department of Transportation. Although participants from ADEQ and ADHS will carry out the bulk of the work, other relevant agencies should be encouraged to participate on a regular and/or as-needed basis. We recommend that this Inter-Agency Workgroup meet once every two weeks for the first six months of the project. Informal interviews with participants in Children's Environmental Health efforts in California, Arizona and Indiana indicate that these "Inter-Agency Workgroups" very quickly added "sub-Committees" focused on specific tasks such as indicators, data analysis and university outreach. We would expect the same thing to occur in Arizona.

**Third**, the Governor should create a **Children's Environmental Health Advisory Committee** modeled after the Maryland Children's Environmental Health Advisory Committee (created by MD HB 313 - 5/18/02).<sup>1</sup> Informal interviews with Children's Environmental Health officials in other states indicated that these advisory committees are reliant upon the expertise and resources of their participants. These Committees tend to accomplish tasks either as "a labor of love" by one of the participants or as a result of a mandate set by the legislature.

Please note that in the Indiana, California and Maryland Advisory Committee examples, legislators are included. In those three states, the legislators (and their staffs) do not participate in meetings on a regular basis. However, the communications opportunity (e-mail lists, meeting Agendas, presentations, Annual Reports, etc.) of legislative participation has proven to be a valuable mechanism for keeping legislative members (and their staffs) informed of accomplishments/activities. Based on informal discussions with officials in those three states, these ongoing communications have helped place requests for assistance from the legislature in context. Recently introduced legislation in Iowa (HB 282) may also provide a valuable guide to how the Arizona Advisory Committee should be structured.

The California Children's Environmental Health Program received significant funding (more than \$9 million) from the legislature. The Indiana Children's Environmental Health Program's funding has varied from year to year. Last year, the Indiana Program relied on approximately \$300,000 in funding and drew on the expertise of three full time equivalent positions from various offices and agencies. The Maryland Children's Environmental Health Program has virtually no line item funding and relies on less than one full time equivalent position.<sup>2</sup> The Maryland Program is currently applying for a CDC grant for next year so that it can establish a database of "Indicators."

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<sup>1</sup> In addition to the membership described in the Maryland program, the Arizona Advisory Committee should also include representatives of major academic institutions, the Native American, Hispanic and African American communities as well as ADEQ staff members working on "cross-border" initiatives. Finally, the attendee list of the May 30, 2003 Summit should be closely reviewed for potential participants on the Advisory Committee, particularly representatives of county and municipal government agencies.

<sup>2</sup> We have not received any information regarding ADEQ's budget for the Children's Environmental Health program. ADHS has indicated that they operated their programs related to Children's Environmental Health last year on a budget of approximately \$100,000 and less than 1 FTE.

## **II. Assessment - A Baseline of Arizona Programs Related to Children's Environmental Health**

### **A. Introduction**

On January 9, 2003 Governor Janet Napolitano signed Executive Order 2003-4 creating the Arizona Children's Cabinet "to focus attention and resources on problems facing Arizona's youngest citizens by collaborating and promoting coordinated policies and service delivery systems that support children, families and communities." On April 11, 2003 Governor Napolitano and Arizona Department of Environmental Quality (ADEQ) Director Steve Owens announced the kickoff of the Children's Environmental Health Project. Ms. Alice S. Wallwork, Special Assistant for Children's Environmental Health at ADEQ is the Director of the Project.

The purpose of this "assessment" is to identify programs and resources related to children's environmental health that are already in place in Arizona as a first step in "collaborating and promoting coordinated policies" at the state and local level.<sup>3</sup>

### **B. Arizona Department of Environmental Quality**

#### **Air Division Programs**

Title 49 of the Arizona Statutes grants ADEQ broad authority to regulate air emissions from mobile and stationary sources. There are no programs in the Air Division that are specifically designed to address Children's Environmental Health issues. However, there are two state and local programs that could have a significant impact on air quality issues associated with children's environmental health.

First, HB 2538 implemented some of the recommendations that grew out of Governor Hull's "Brown Cloud Summit." One program authorized by HB 2538 will help reduce diesel engine emissions, a significant source of particulate matter. Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. HB 2538 mandated that regulations for a "Permanent Roadside Diesel Testing Program" must be promulgated in final form in 2003. Because of the significant impact that PM has on children with asthma, other states with children's environmental health programs have focused on diesel engine emissions generally, and mandatory inspection programs specifically, as a method to reducing health risks for children.

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<sup>3</sup> This information in this "baseline" is based upon our review of Arizona statutes, Arizona regulations, materials from the ADEQ and ADHS web sites and materials provided by Alice Wallwork and Richard Tobin of ADEQ and Will Humble of ADHS.

Second, HB 2538 granted Pima and Maricopa counties the authority to enact ordinances regulating the idling times of diesel engine vehicles. In June 2002, Maricopa County enacted a vehicle idling restriction Ordinance limiting the amount of time that vehicles of 14,000 or more pounds may idle within county limits. However, the effectiveness of this ordinance is somewhat limited by several loopholes. For example, the Ordinance does not fully apply when ambient air temperatures are above 75 degrees Fahrenheit.<sup>4</sup> ADEQ provided the Maricopa County Environmental Services Department a \$100,000 grant to distribute education materials, purchase a vehicle and hire an enforcement officer. Several states have enacted “anti-idling” statutes to limit emissions from diesel engines (especially from school buses) to protect children’s environmental health.

### **Waste Division Programs**

The Waste Division carries out some environmental education programs in the recycling and pollution prevention areas. Perhaps the most significant is the **Green Schools Project**.

In 2002, ADEQ began the first phase of the **Green Schools Project** which collected and provided reliable information on the health and environmental benefits, performance, and economic feasibility of high performance schools to interested parties through conferences, networking, and speaking engagements. In 2002, the **Green Schools Project**:

- Staff gave presentations to the Arizona School's Facility Board and began to partner with them and the Arizona Department of Energy, as well as the Council of Educational Facility Planners International (CEFPI), headquartered in Scottsdale, on outreach activities to promote environmentally improved school buildings.
- Staff met with Environmental Management staff from the Hualapai Nation and presented Green Schools and LEED information. This outreach resulted in planning the new Mohave Accelerated Learning Center as a “green” school built to the LEED standards.
- Worked with school officials in Bullhead City, where high performance school features are being considered in designing the Hualapai tribe’s new Juvenile Development Center.

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<sup>4</sup> A copy of the Maricopa County Anti-Idling Ordinance appears as Attachment B to this report. We have also forwarded you a summary (recently prepared by the California Air Resources Board) of anti-idling statutes and regulations from other states.

- Staff made a Green Schools presentation at the *Renewable Energy Fair* and hosted a Green Schools exhibit booth at the City of Phoenix *Green Building Expo* in 2002.

The **Green Schools Project** hopes to continue and expand activities in 2003. Proposed activities include:

- Strengthen partnerships with CEFPI, Arizona Chapter of the USGBC, Arizona School Facilities Board, Hualapai Nation Environmental Management staff, ECOS, Arizona School Superintendents Association, Arizona Association of School Boards, Arizona Office of Public Instruction
- Gather and disseminate Green Schools information
- Sponsor Green Schools technical workshops
- Promote environmentally healthy child care facilities and pre-schools
- Participate / present at relevant conferences as allowable

### **Water Division Programs**

We are not aware of any programs related to children's environmental health in the Water Division.

### **Other ADEQ Programs**

**South Phoenix Project** - The South Phoenix Environment Initiative is a community-based environmental effort assisted by ADEQ. The initiative has been a success in matching agency resources and programs to specific community needs and priorities.

As a result of the project, a longstanding public health risk at a major brownfields site in South Phoenix has been eliminated and the foundation for economic revitalization and a safer neighborhood has been established. In addition, a joint EPA/ADEQ inspection sweep of every Treatment, Storage and Disposal (TSD) facility and Large Quantity Generator (LQG) in South Phoenix (51 facilities in a four-month period - March to July 2001) has provided a first-ever comprehensive baseline for compliance by hazardous waste facilities in the community.

The South Phoenix Project has relied upon a coalition of public/private partnerships involving local residents, neighborhood organizations, community and business leaders, the city of Phoenix, members of the state legislature and Phoenix City Council, local and state agencies, Phoenix area and statewide chambers of commerce, the private sector and Region IX of EPA.

The project will support the development and implementation of a multi-media toxics reduction plan for South Phoenix. The Toxics Reduction Plan will be based on EPA's Guidance for Local Areas to Reduce Toxics Levels and will include an inventory of emission sources, identification of specific toxic pollutants of greatest concern and the screening tools to evaluate community exposure as a means to set priorities for toxic reduction activities. The project will include the development of communication and public education/outreach plans to ensure maximum public participation; and, the identification and implementation of cost-effective strategies for reducing specified toxics pollutants/discharges and exposure, to the extent possible.

In partnership with the community of South Phoenix, the project will also implement a multi-media toxics reduction plan consisting of cost-effective actions that will decrease the overall toxic pollutants and emissions to the air, water and soil. The Project will also develop emergency response protocols for accidental toxic releases. Jay Spector (602-771-2216) is the Project Director for ADEQ. The project is funded with a \$270,000 grant from US EPA.

### **ADEQ's Border Programs**

The ADEQ Border Program/Team has executed a series of environmental initiatives to address trans-boundary environmental issues that affect the Arizona-Sonora border. The initiatives address issues such as coordination with NAFTA institutions; planning and related binational collaboration, institutional capacity, environmental infrastructure; transboundary environmental monitoring; and environmental studies and demonstration projects. The Border Program's Manager is Placido Dos Santos; E-mail: [dossantos.placido@ev.state.az.us](mailto:dossantos.placido@ev.state.az.us) and operates primarily out of **two regional ADEQ offices**:

#### **SOUTHERN REGIONAL OFFICE**

400 W. Congress, Suite 433  
Tucson, Arizona 85701.  
Telephone Number: 520-638-6735  
Fax Number: 520-770-3540  
Toll-free Number: 888-271-9302

#### **NOGALES BORDER OFFICE**

370 W. International Street  
P.O. Box 159  
Nogales, Arizona 85628-0159  
Telephone Number: 520-377-9077  
Fax Number: 520-377-9078

- **ADEQ Border Team**: In an effort to provide better services to communities in the border region, ADEQ has composed a specialized team of staff with technical backgrounds in air, waste, and water programs. The majority of the border team staff has been assigned to ADEQ's Southern Regional Office (SRQ) in Tucson to provide more efficient travel and access to the border communities. Also, because of the work load in the Nogales area, ADEQ in cooperation with the Arizona Department of Health Services (ADHS), has established a small Nogales Border Office to better implement its activities in that area.

- **Coordination with NAFTA Institutions:** ADEQ has been tracking, providing input and issue coordination with several institutions which were timed as a result of NAFTA or US-Mexico border environmental issues. Such institutions include the Commission on Environmental Cooperation, the Border Environmental Cooperation Commission (BECC), the North American Development Bank (NADBank), the Good Neighbor Environmental Board (GNEB), and the Southwest Center for Environmental Research and Policy (SCERP). This coordination is essential due to the impacts and potential border problem resolutions that these institutions have.
- **Planning and Related Binational Collaboration:** ADEQ has been coordinating and working with other US and Mexican governmental authorities, non- governmental organizations and the public in various border planning and collaboration activities including: 1) development and implementation of the US-Mexico Border XXI Program; 2) planning partners with Sonora's environmental and health agencies through organizations like the Arizona-Mexico Commission (AMC) to collaborate on the identification of mutual environmental issues/problems and in working on their resolution; 3) providing support to the Governor's Office in regard to the State's participation in the Border Governors Conference and the Western Governor's Association (WGA); and 4) coordination with other US border states in pursuing issue resolution of mutual interest.
- **Institutional Capacity:** ADEQ is collaborating with US and Mexican governmental agencies in an effort to develop or improve institutional and community capacity in the Arizona-Sonora border region including: 1) development of a binational emergency response/contingency plan for Ambos Nogales; 2) increased environmental (health education and public awareness programs by participating in health and environmental seminars and workshops held in border communities; 3) the AMIGO Project whose objective is to bring Arizona and Mexico industries together to share technologies that reduce waste and pollution while increasing profits, worker safety, and environmental health; and 4) development and implementation of training conferences and seminars on environmental regulations and enforcement, sampling activities, pollution prevention, and sustainable development.



- **Environmental Infrastructure:** ADEQ, in collaboration with the Arizona Department of Commerce (ADOC) and border communities, has been working on identifying and pursuing resources for needed environmental infrastructure (wastewater, drinking water, and solid waste facilities/system). A report has been developed itemizing approximately \$240 million in essential border infrastructure projects. Coordination with the BECC, NADBank, EPA, other state/federal agencies, and local communities is also taking place for those projects seeking BECC certification, NADBank finding, and EPA border environmental infrastructure funds.
- **Trans-boundary Environmental Monitoring:** ADEQ is responding to local community concerns regarding environmental pollution and other problems by collaborating with relevant US and Mexican governmental entities in several environmental monitoring projects along the Arizona-Sonora border including: 1) binational air monitoring for particulates and hazardous air pollutants (HAPs) in the communities of Ambos Nogales and Douglas; 2) groundwater monitoring in Nogales, Arizona/Nogales, Sonora to collect data on whether or not surface activities and discharges in the twin cities have significantly affected groundwater quality; 3) surface and ground water monitoring in Southeastern Arizona/Northeastern Sonora to evaluate potential environmental impacts on the San Pedro River basin; 4) monitoring of lead concentration in soil, air, and water in the Douglas Arizona area due to local concerns about a closed, copper smelter; 5) monitoring the quality (pesticide residues) of the Colorado River at the discharge point into Mexico; and 6) monitoring and tracking hazardous waste being transported from Mexico to the US by the maquiladora industry.
- **Environmental Studies and Demonstration Projects:** ADEQ is also responding to local community concerns and needs by collaborating with US and Mexican governmental agencies in the design and implementation of environmental, studies and demonstration projects including: 1) water supply studies in the binational Santa Cruz River watershed to evaluate the sustainability of water supplies in the regional aquifer on both sides of the border; 2) development of a drinking water wellhead protection program for Nogales, Arizona; 3) a study of asthma/air quality affecting 5th grade children, in Ambos Nogales; and 4) a small sustainable development wetlands wastewater treatment project in Sonora.

## **ADEQ's Delegated Authority Under Certain Federal Laws**

In 1996, Congress unanimously passed landmark pesticide food safety legislation supported by a broad coalition of environmental, public health, agricultural and industry groups. President Clinton signed the bill on August 3, 1996, and the Food Quality Protection Act of 1996 became law (P.L. 104-170, formerly known as H.R. 1627). Under this and previous Acts, EPA establishes tolerances (maximum legally permissible levels) for pesticide residues in food. Tolerances are enforced by the Department of Health and Human Services/Food and Drug Administration (HHS/FDA) for most foods, U.S. Department of Agriculture/Food Safety and Inspection Service (USDA/FSIS) for meat, poultry, and some egg products and the U.S. Department of Agriculture/Office of Pest Management Policy. States are allowed to petition US EPA to consider stricter limits on pesticides and contaminants of concern in their jurisdictions.

In addition, EPA regulates pesticides under Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). EPA registers pesticides for use in the United States and prescribes labeling and other regulatory requirements to prevent unreasonable adverse effects on health or the environment. ADEQ is the delegated state agency empowered to enforce certain aspects of FIFRA.

### **C. Arizona Department of Health Services (ADHS)**

#### **Asthma Coordination and Education Program**

In the past, the ADHS has implemented programs that specifically address asthma in children. In 1999, ADHS was mandated by HB 2480 to establish an asthma coordination and education program. Although state funding for these programs ceased in June 2000, several features of those programs are worth noting.

ADHS contracted with the Arizona Public Health Association (AzPHA) to implement the Arizona Asthma Awareness and Education Program ("Asthma Program"), with funding of \$119,000 for six months, from January 1 through June 30, 2000. Of the contract total, \$8,302 (7%) was allocated for administrative costs and \$110,698 for direct services. AzPHA served as fiduciary agent for the Arizona Asthma Coalition (AAC), which directly delivered the program services.<sup>5</sup>

The program had three objectives: 1) develop asthma public education and prevention; 2) disseminate asthma management best practices statewide; and 3) provide technical assistance and training to health professionals statewide.

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<sup>5</sup> Please note that state funding for this program expired in June 2000.

The Asthma Program provided services in two categories: 1) public education & prevention services and 2) the dissemination of asthma management best practices information & training to health providers.

These services included educating children on asthma management; asthma screening for children; the development of educational materials for school nurses, pharmacists, and osteopathic physicians; and training for school nurses and pharmacists. The Asthma Program's school educational efforts covered two areas:

**Open Airways for Schools** - Educated and empowered children with asthma to take control of their condition.

**Breathmobile** - Improved asthma diagnosis, management, and awareness among children and families.

The Asthma Program's provider educational efforts covered three areas:

**School Nurses: Asthma Best Practices Materials & Training** - Developed a resource kit, including a teaching manual, for use by school nurses to educate children, parents and school personnel on asthma identification and management. Developed a curriculum and tested it through pilot training sessions with school nurses on asthma management best practices and use of the asthma kit.

**Pharmacists: Asthma Best Practices Materials & Training** - Developed a brochure for use by pharmacists to encourage people with asthma to seek asthma management education from pharmacists and physicians; distributed brochures to pharmacies in high risk areas and pilot-tested the use of the brochure; developed and tested a curriculum through a pilot training course to teach pharmacists best practices and how to educate clients with asthma.

**Osteopathic Physicians: Asthma Best Practices Materials** - Distributed asthma best practices guidelines to osteopathic physicians in Arizona.

## **ADHS Indoor Air Programs**

**ADHS' Office of Environmental Health (OEH)** organizes and directs a wide range of environmental health activities and programs. Some of those programs focus on indoor air issues. For example, one mission of the OEH is: To prevent and control adverse health effects due to environmental factors including lead and pesticide poisoning. The Office Director is Will Humble, 602-230-5941 [whumble@hs.state.az.us](mailto:whumble@hs.state.az.us) (e-mail).

The OEH consists of four program areas, including the 1) Food Safety & Environmental Services program; 2) Investigation and Surveillance program; 3) Environmental Health Consultation Services program; and 4) the Environmental Health Sciences program. The following paragraphs provide a summary of the four programs and a fiscal year 2000 activity summary.

### **ADHS/OEH - Food Safety & Environmental Services**

The Food Safety and Environmental Services program directs the statewide public health sanitation program including food safety, bottled water, hotels and motels, trailer parks, children's camps, public schools, and swimming pool maintenance. The ADHS and the 15 county health departments work together to conduct these public health programs.

One-hundred-sixty-three sanitarians at the 15 county health departments and the ADHS conducted more than 100,000 inspections at the 47,300 regulated facilities in Arizona in FY 2000.

State and county sanitarians conducted approximately 70,000 food safety inspections at the 30,000 food establishments in FY 2000. Facilities and inspections increased 10% from FY 1999. The statewide inspection frequency goal was achieved, with an average of 2.6 inspections per food establishment.

### **ADHS/OEH - Investigation & Surveillance**

The Investigation and Surveillance program staff direct the lead and pesticide exposure registries for Arizona. The program staff develops local lead and pesticide poisoning prevention programs, maintains a statewide registry for recording cases with elevated blood lead levels, and conducts educational outreach activities.

Laboratories and health care providers reported 223 children with lead poisoning (10 Fg/dL) in 2000. Seventy-nine percent (79%) of the childhood cases (176 cases) were in the lower ranges of lead poisoning, 10 to —20 Fg/dL. The remaining 47 cases (21%) were 20 Fg/dL, the moderate to severe range of lead poisoning.

The ISS program contacted 93% of the cases' families by phone, mail, or in-person and provided lead poisoning prevention advice and educational materials. Cases that could not be contacted by any means were referred back to the medical provider and to their health plan.

Arizona physicians reported 247 adult cases with blood lead levels 10 Fg/dL in 2000. Fifty-four (22%) of these cases were 25 Fg/dL. The ISS program has identified 110 specific industries with a high risk of lead exposure. Industry education forums were conducted to help high risk industries to identify risk factors and implement prevention activities

The ISS program identified a total of 18 definite, probable, and possible pesticide poisonings in 2000. The majority of poisonings were from structural pest control applications.

The organophosphate pesticides accounted for 60% of the exposure application events and were the most commonly used pesticides. ISS staff performed investigations of all suspected pesticide poisoning cases. ISS staff recorded and analyzed the information, and worked with the Structural Pest Control Commission and the Arizona Department of Agriculture on prevention activities.

### **ADHS/OEH - Environmental Health Consultation Services**

The Environmental Health Consultation program staff conducts environmental health assessments and consultations for contaminated sites in Arizona. The program is operated under a grant from the US Agency for Toxic Substances and Disease Registry (ATSDR). The program works closely with the US Environmental Protection Agency (USEPA) to evaluate health hazards from environmental exposures at federally managed contaminated sites in Arizona.

### **ADHS/OEH - Environmental Health Sciences**

The Environmental Health Sciences program staff conducts environmental health risk assessments for contaminated sites in Arizona. The staff works closely with the ADEQ to evaluate potential health risks from environmental exposures. The Environmental Health Sciences (EHS) Risk Assessment Program was created on July 1, 2000 by A.R.S. 36-1691 through 36-1694. Program activities in 2000 included establishing the 3 positions in the program, developing computer infrastructure, and recruiting staff to operate the new program. A program manager was hired on January 2, 2001.

As mentioned above, in 1999, HB 2480 required the ADHS to establish an asthma coordination and education program. State funding for that program has been cut back dramatically and the program is now maintained at a low level of activity with federal block grant funds.

Another related program is the EHS Risk Assessment Program that was created on July 1, 2000 by A.R.S. 36-1691 through 36-1694. Program activities in 2000 included establishing the 3 positions in the program, developing computer infrastructure, and recruiting staff to operate the new program. A program manager was hired on January 2, 2001.

#### **D. Other Arizona Programs and Activities Related to Children's Environmental Health**

##### **Arizona Asthma Coalition**

The Arizona Asthma Coalition was developed with support from the Arizona Medical Association, Arizona Public Health Association, Arizona Department of Health Services and a grant from the Cooperative Actions for Health Program of the Robert Wood Johnson Foundation.

However, please note that funding levels have dropped significantly since the Coalition was first formed. The Arizona Asthma Coalition is housed at the Arizona Chapter of the American Lung Association and has a Board that meets periodically. The Arizona Asthma Coalition currently maintains some continuing education activities.

As noted above, state "line item" funding for the Asthma Program ended in June 2000. Since then, the ADHS' Division of Public Health Services' Office for Children with Special Health Care Needs has continued to support some limited educational and outreach activities (Approx. \$100,000) that include:

- Maintaining a statewide network of providers and community-based organizations for the distribution of materials, information about resources, opportunities for community education, posting notices regarding events and job openings; and requests for technical assistance.
- Funding two community-based public health programs that develop and maintain local asthma coalitions, conduct screening, offer information and referral; conduct lay and professional education; collect and analyze local data; and conduct outreach.
- Providing support and technical assistance to providers and community-based organizations.
- Working with providers to enhance systems of care; in particular to assure that children with asthma have a medical home.
- Serving as liaison to the CDC.

## **Kyrene School District - A National Leader in Integrated Pest Management**

With EPA funding and the support of the District's facilities manager, a pilot program was launched in 2000 to develop a Monroe County, Indiana style model school IPM program in three District schools.

An initial pest audit of the three schools' grounds and buildings was conducted to ascertain the extent of the pest problems. Based on the findings, a prioritized prescription was written for each of the pilot schools. Initially, the program received a skeptical reception since school faculty and staff had concerns regarding costs and increasing workloads.

As the year progressed and training classes ensued, the awareness and understanding of IPM increased. People at all levels began to embrace the program. Science teachers conducted classes on bugs with help from the IPM team. Students collected bug data from monitoring traps. Woodwork classes built owl boxes to house barn owls (gopher and rodent control volunteers) on the school grounds. A local IPM expert was instrumental in getting the District's cooperation to help fund several of the identified structural and maintenance issues.

The one year pilot program developed outcome measures on the number of pests trapped with the number of monitoring traps and the amount of chemical pesticides used. **The pilot program resulted in an 85 percent reduction in pests and, more significantly, a 90 percent reduction in the amount of chemical pesticides applied. The program has been awarded two national awards.**

The following school year, the IPM program was expanded to all District schools and support facilities. The District's IPM coordinator projects that it will take the District at least five years to implement all of the IPM recommendations because of budget and manpower constraints. The Kyrene School District has 18,500 students that are now being educated in a safer environment.

The program's success has resulted in numerous mini-research projects and related training opportunities. Subsequent programs have been initiated in other areas. A pilot program in the eastern half of the Navajo Nation is just concluding. This was conducted in cooperation with the Bureau of Indian Affairs (BIA), which has now decided to adopt IPM in all of their schools on the Navajo reservations. Programs are currently being initiated on the Hopi and Gila Indian Reservations. An excellent team is now in place, which incorporates the University of Arizona, Arizona Structural Pest Control Commission (SPCC), and BIA tribal Department of Environmental Quality and industry representatives.

The Kyrene model has the potential for expansion across Arizona as the University of Arizona now has an interdisciplinary IPM working group which is better connected with SPCC, other state offices, EPA, BIA, Intertribal Council of Arizona, and local media groups. The US EPA recently announced that it will be providing grant funding to expand this program to other school districts in Arizona.

For more information contact:

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Carl J. Martin, Arizona Structural Pest Control Commission, 9535 East Doubletree Ranch Road, Scottsdale AZ, 95258, 602-255-3664, ext. 2272, [cjmartin@sb.state.az.us](mailto:cjmartin@sb.state.az.us).

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## **E. Arizona/Mexico Border Programs**

### **Mariposa Community Center of Excellence in Women's Health**

The Mariposa Community Center of Excellence in Women's Health is a comprehensive women's healthcare program provided by Mariposa Community Health Center, a non-profit healthcare facility located in Nogales, Arizona on the Arizona-Mexico Border. Mariposa Community Health Center was one of three locations chosen by the United States Department of Health and Human Services to establish a program of healthcare continuum for essential health and social services for women that spans the life cycle. This program enhances services the Center already provides through its Mariposa for Women Division, Women-Infants-Childrens Program, Mariposa Prenatal Program, and the lay health community promotora program, Platicamos Salud. Jo Jean Elenes is a good contact at the Center (520) 281-1550.

### **South Eastern Arizona Health Education Center (Ambos Nogales area)**

The Southeast Arizona Area Health Education Center (SEAHEC) has provided continuous service to the counties of Cochise, Pima, and Santa Cruz along the Mexico border region of Arizona since its inception in 1984. This was the first center to be established by the Arizona AHEC System through a cooperative agreement with the Bureau of Health Professions, Health Resources and Services Administration of the Department of Health and Human Services (DHHS). This AHEC focuses on the unique health service and public health



needs of this border region. The scope of work during this last year has been largely directed toward the recruitment and retention of health professionals and health professions students in its underserved communities. Because these communities are largely Hispanic or Native American, this work stresses the importance of cross-cultural and cross-lingual experiences.

### **Ambos Nogales Binational Health Coalition, Environmental Health Subcommittee**

The Health and Environment Subcommittee of the Ambos Nogales Binational Health Council promotes the cause of environmental health issues on both sides of the border and focuses on issues in the community that affect the quality of life. Teresa Leal is the main contact 520-287-6317.

### **Sonora Environmental Research Institute**

The Sonora Environmental Research Institute is non-profit, tax-exempt organization, founded in 1994 to fulfill the need for unbiased research and technical assistance on environmental issues. The Institute works with communities facing environmental issues such as groundwater contamination, industrial pollution or urban sprawl and lack the information to make informed decisions. They provide technical expertise and conduct scientific research to attempt to find solutions to environmental problems. The Institute works towards improving the health and well being of Southern Arizona residents and the environment. Their phone number is (520) 321-9488.

### **Good Neighbor Environmental Board**

The Good Neighbor Environmental Board (GNEB) was created by the Enterprise for the Americas Initiative Act of 1992 to advise the President and the Congress about environmental and infrastructure issues and needs within the states contiguous to Mexico. The Act requires that the board membership include representatives from U.S. Government agencies; the governments of Arizona, California, New Mexico, and Texas; and private organizations, including community development, academic, health, environmental, and other non-governmental entities with expertise on environmental and infrastructure problems along the southwest border. ***The GNEB is currently drafting a report focusing on Children's Environmental Health.***

## **Border 2012**

On April 5, 2003, environmental officials from the U.S. and Mexico signed an agreement addressing environmental issues along the 2,000 mile border area. Binational environmental health commitments under Border 2012 focus on meeting the following objectives:

- **Air** – evaluate various measures of respiratory health in children that might be tracked to assess changes that may result from actions to improve air quality (by 2006)
- **Water** – evaluate various measures of gastrointestinal illness that might be tracked to assess changes that may result from actions to improve water quality (by 2006)
- **Pesticides** – complete an assessment and pilot program that explores the feasibility of harmonizing a binational system for reporting acute pesticide poisonings (by 2006)
- **Pesticides** – reduce pesticide exposure by training 36,000 farm workers on pesticide risks and safe handling, including minimizing exposure for families and children (by 2007)
- **Capacity Building** – establish a "distance-learning", post-graduate degree program to support advanced training on environmental health in conjunction with Pan American Health Organization regional offices and academic institutions (by 2006)
- **Capacity Building** – extend current efforts in binational environmental health training for 100 health care providers each for pesticides and water (by 2004)

## **Arizona-Mexico Commission - Committee on the Environment**

Steve Owens is the current co-chair of the Arizona-Mexico Commission - Committee on the Environment. At the June 2003 Plenary Session, the Environmental Committee adopted the following 4 recommendations:

- In order to promote the integration of related environmental activities while fostering broader environmental awareness throughout Sonora, the Secretariat for Urban Infrastructure and Ecology, in cooperation with the Arizona Department of Environmental Quality, will examine a proposal to establish a Center for Environmental Awareness, Research and Technology Development (CIASON).

- In order to enhance binational preparedness for environmental emergencies, the AMC Environment Committee will work with the Arizona Director of Homeland Security to facilitate binational emergency exercises through the four Border Emergency Preparedness Committees (BEPCs) in Douglas-Agua Prieta, Naco-Cochise County, Ambos Nogales, and San Luis-San Luis Río Colorado.
- Building on the success of the Border 2012 Arizona-Sonora Regional Workgroup meeting, which played an integral role at this plenary session, the Environment Committee recommends the continued integration of the Regional Workgroup into the Plenary Sessions and expresses support for the Border 2012 Task Forces that will be working to improve environmental conditions in the Arizona-Sonora border region. The five task forces that were established for the Arizona-Sonora region are Water, Air Quality, Emergency Response, Environmental Stewardship and Compliance, ***and Children's Environmental Health***.
- The Arizona Department of Environmental Quality and the State of Sonora's Secretariat for Urban Infrastructure and Ecology, together with other public, private and non-governmental stakeholders, will explore the possible development of a regional emissions registry and credit mechanism as an incentive for voluntary investment in emissions reductions and renewable energy projects.

**Arizona Programs Currently Funded by US EPA relating to Children's Environmental Health in the Cross Border Context:**

**Gotitas de Aire** (with Western Arizona Area Health Education Center). This project will train community outreach workers (promotoras) to educate community residents on health risk factors related to asthma. The project will conduct training for health professionals on environmental health risk assessment and effects on asthma on both sides of the border. It will also promote the American Lung Association's "Open Airways" Program, and will provide community awareness training for school staff, child care providers, and parent groups in Yuma and San Luis Rio Colorado, Sonora.

Amount of EPA grant: \$25 K  
Timeframe: Completed by FY'04

**Proyecto Medio Ambiente** - (Phase II in Ambos Nogales with Platicamos Salud Mariposa Community Health Center). Phase II of this binational project will promote clean air and proper solid waste disposal through pollution prevention, reduction and elimination in the communities of Ambos Nogales. The program will use educational modules to familiarize promotoras (outreach health workers) on environmental factors regarding air, water, and waste. This effort will help in their outreach efforts to educate people in homes and schools on environmental issues impacting their health. The project will continue to emphasize binational collaboration among health agencies to meet the project's goals.

Amount: \$25 K

Timeframe: Completed by FY'04

**Ambos Nogales Revegetation Project Expansion** (with Platicamos Salud Mariposa Community Health Center). This project will expand an existing pilot revegetation program to Nogales and Rio Rico, Arizona. Nogales High School, through its Ecology Club, already operates a nursery that will serve as a resource of both plants and education and outreach opportunities. In addition, Terra-Cycle Tech, an organic farm and composting facility in Rio Rico, will provide resources and expertise. A school will be selected to provide a site for a demonstration landscape and schoolyard habitat that incorporates environmental health into the regular curriculum.

The success of the project efforts will be measured using quantitative data on area of eroded and denuded land revegetated and qualitative data of increased awareness of the link between PM10 and respiratory illness. With the help of UA and the Instituto Tecnológico de Nogales (Sonora), students and faculty at each site will measure the area of their site and the vegetative cover at three month intervals in order to evaluate the success of their efforts. UA faculty and students will maintain detailed project logs and notes of project activity and prepare an evaluation report documenting the increased participation of new project partners and the success of the outreach and education efforts.

Amount: \$10K

Timeframe: Completed by FY'04

## **F. A Survey of Arizona Academic Institutions & Potential Partners**

ADEQ has several potential partners that it should invite to participate in research and data analysis related to Children's Environmental Health. There appear to be at least three projects already underway that ADEQ should contact as potential participants in the Children's Environmental Health Advisory Committee.

### **Arizona Prevention Center**

**Contacts** - Michael Lebowitz, Associate Head and Professor of Public Health - [mlebowit@u.arizona.edu](mailto:mlebowit@u.arizona.edu); Joel Meister, Research Associate Professor of Family and Community Medicine - [jmeister@azcc.arizona.edu](mailto:jmeister@azcc.arizona.edu); Mary Kay O'Rourke, Research Assistant Professor of Public Health [maryk@ipomea.hrp.arizona.edu](mailto:maryk@ipomea.hrp.arizona.edu); Mark Veazie, Research Assistant Professor of Public Health - [mveazie@u.arizona.edu](mailto:mveazie@u.arizona.edu).

**Recent Projects - Southwest Center for Community Health Promotion (SWCCHP).** Sponsored by the Centers for Disease Control, the SWCCHP serves as a health resource to communities in the U.S.-Mexico border region. The Center assists border communities in the implementation and evaluation of prevention projects addressing various health issues. All projects are linked to a multidisciplinary core research program that focuses on how communities organize to promote health. The goals of the Center are: (1) to develop a multidisciplinary research and education program as a resource to southwest border communities; (2) to build capacity and assist partner community's ability to implement, strengthen, sustain, and disseminate their strategies and interventions to improve health; and (3) to research and develop new models of community organization and participatory research appropriate for effective health promotion. The Center's projects were initiated in Douglas, Arizona, with a demonstration project to improve chronic-disease screening in Hispanic women through community health-worker outreach. Additional projects in areas such as childhood nutrition and school health are also being developed.

**Border 21/NAFTA Pesticide Initiative.** Researchers at the APC are involved in three studies examining pesticide exposure in the border region. Two studies are examining the effect of pesticide exposure on children in Yuma County, Arizona. A third study combines geographic information system (GIS) analysis of pesticide exposures in the border region with extensive pesticide exposure assessments.

**Children's Respiratory Diseases and Responses to Air Pollution.** The APC is also collaborating on a study of children's respiratory diseases in the U.S.-Mexico border region. The study is being conducted in Ambos Nogales, Douglas/Agua Prieta, and southwest Yuma County, Arizona. Through the project, researchers are examining the extent of respiratory diseases, including asthma, among children in the border region and the relationship between diseases and air pollution.

**National Human Exposure Assessment Survey (NHEXAS AZ)/Border Extension.** Under the direction of Michael Lebowitz and Mary Kay O'Rourke, the environmental and epidemiology units of the APC are conducting two studies to assess the exposure of populations in Arizona and along the U.S.-Mexico border to potential harmful environmental contaminants. The studies include monitoring air, house dust, dermal wipes, soil, water, food, and biological fluids of selected populations in the border region for metals, pesticides, and volatile organic compounds.

Other projects in which the APC has collaborated include a binational study on diabetes in Douglas/Agua Prieta; a binational cervical cancer project involving eight geographic sites in the U.S.-Mexico border region; a project on lupus in Nogales and Douglas, Arizona and Sonora; and several component projects of the Arizona-Sonora Task Forces focusing on pesticides, lead poisoning, and tuberculosis.

### **Selected Publications**

Gordon, S., P. Callahan, M. Nishioka, M. Brinkman, M.K. O'Rourke, and M.D. Lebowitz. 1998. "Residential Environmental Measurements in the NHEXAS Study in Arizona: Multimedia Results for Pesticides and VOCs." *Journal of Exposure Analysis and Environmental Epidemiology*.

Ibarra, J.M., G.A. Stephen, M.K. O'Rourke, C. Rosales, Y. Caruso, S. Rogan, and M.D. Lebowitz. 1999. "Douglass Asthma Study: Baseline and Follow-up of Fifth Graders." *American Journal of Respiratory and Critical Care Medicine* 159.

O'Rourke, M.K., A. Aguirre, and M.D. Lebowitz. 1998. "Exposure of Children to Pesticides." *Epidemiology* 9:S27.

Robertson, G., M.D. Lebowitz, M.K. O'Rourke, S. Gordon, and D. Moschandreas. 1998. "The NHEXAS Study in Arizona: Introduction and Preliminary Results." *Journal of Exposure Analysis and Environmental Epidemiology*.

Stephen, G.A., T. Flood, L. Ortega, S. Jin, C. McRill, M.K. O'Rourke, and M.D. Lebowitz. 1998. "Assessment of Respiratory Symptoms and Air Quality in a U.S.-Mexico Border Community." *Epidemiology* 9:S74

Contact Information: **Arizona Prevention Center** - 1501 N. Campbell Ave., Rm. 4332 Tucson, AZ 85724; Phone (520) 626-7083 Fax (520) 626-6093  
<http://ahsc.arizona.edu/apc/>.

**Mel & Enid Zuckerman Arizona College of Public Health - A  
Collaboration of the University of Arizona, Arizona State University  
and Northern Arizona University**

**Environmental Health Studies**

Environmental health studies are a major research area at the Arizona College of Public Health especially with regard to environmental exposures to sensitive populations, the role of biomarkers in early lung damage, and respiratory protection. Additional research is also conducted in health related exposures in industrial and occupational settings. Projects in these areas are listed below:

**Division of Epidemiology & Biostatistics**

<b>PRINCIPAL INVESTIGATOR</b>	<b>GRANT TITLE</b>	<b>YEARS</b>
Mike Lebowitz	Feasibility of Evaluation of Respiratory Effects of Air Pollution in Children Using NHANES III	99-01
Mike Lebowitz	Long Term Morbidity and Mortality Related to Exposures to Particulate Matter & Associated Air Pollutants**	99-01
Mike Lebowitz	NHEXAS Water Analysis**	99-01
Mike Lebowitz	Total Human Exposure in AZ Analyses	99-01

**Division of Environmental & Community Health**

<b>PRINCIPAL INVESTIGATOR</b>	<b>GRANT TITLE</b>	<b>YEARS</b>
Jeff Burgess	Biomarkers of Smoke Exposure Among Firefighters	99-01
Mary Kay O'Rourke	Border Health: Pesticide Study**	2001
Mary Kay O'Rourke	Exposure of Children to Pesticides**	99-01
Mary Kay O'Rourke	Gila River Indian Community: Respiratory Health & Exposures**	99-01
Jeff Burgess	Hayden-Winkleman Arsenic & Lead Survey**	99-01
Mary Kay O'Rourke	Integrated Epidemiological Study of Valley Fever	2001
Jeff Burgess	International Program for Mining Health & Safety	2001

Cliff Crutchfield	NIOSH IH Training Grant Projects	99-01
M. Eisenberg	Pima County Environmental Tobacco Smoke Survey**	2001
Mary Kay O'Rourke	Public Access to Environmental Monitoring Data in Tucson**	99-01
Jeff Burgess	Remedial Work Practice-Cleanup of Clandestine Labs	01-02
Mary Kay O'Rourke	Vulnerability of Young Children to OP Pesticides**	99-02

### **Udall Center for Studies in Public Policy**

Established in 1987, the Udall Center for Studies in Public Policy sponsors policy-relevant, interdisciplinary research and forums that link scholarship and education with decision-making. The Center specializes in issues concerning American Indian governance and economic development; environment, natural resources, and public lands; the U.S.-Mexico border; and related topics. The environmental & natural resources policy program at the Udall Center for Studies in Public Policy includes projects and publications related to environmental and public policy conflict resolution, community-based conservation, and water policy.

In the area of community-based conservation, the Udall Center researches and provides outreach on topics such as collaborative approaches to public participation and decision-making around natural resources and participatory research methods. The Udall Center manages two listservs and publishes a national newsletter for the Communities Committee of the Seventh American Forest Congress. In the water-policy arena, the Udall Center conducts research and outreach on water-resources allocation and use in the Southwest and transboundary water management.

Although Children's Environmental Health has not been a focus area for the Udall Center, they may be interested in participating in two subject matters of great interest to ADEQ:

### **US - Mexico Border Issues**

Much of the Udall Center's work on the U.S.-Mexico border policy also addresses environmental policy. The Udall Center's program in this area involves research and outreach on policy related to transboundary water management (particularly in the San Pedro and Sanata Cruz River Basins of Arizona and Sonora and the Lower Colorado River Basin and Delta), the role of public participation related to post-NAFTA environmental institutions (BECC, NADB, and CEC), and issues of borderwide significance. The Center promotes democratization of decision-making in the region through the pioneering use of electronic discussion groups (BECCnet and CECnet), and organization of public forums and workshops.



## **Indigenous Nations Policy Publications**

Through its Native Nations Institute for Leadership, Management, and Policy, the Udall Center focuses on research, executive education, and outreach related to tribal self-governance, economic development, natural resources and environmental issues, health, and aspects of relevant federal policy. The Center initiates research projects of its own and responds to requests or commissions from indigenous nations, the federal government, and other organizations.

## **Contact Information**

**Udall Center for Studies in Public Policy** - 803 E. First Street, Tucson, AZ 85719 - phone: 520.884.4393; fax: 520.884.4702.  
<http://www.udallcenter.arizona.edu/staff/staff.html>.

### **III. Reduction - *Proposals for Programs and Policies that Reduce Children's Exposures to Environmental Risks***

#### **A. Potential Near-Term Non-Legislative ADEQ Initiatives**

We recommend that the Children's Environmental Health Office focus on two or three non-legislative initiatives in the first six months. Each initiative should be simple, inexpensive, build on state/federal activities that are already underway and be measured with specific "indicators" to track progress. We believe each of the five following proposals meet those criteria and that you should chose two or three of these initiatives to begin implementation in 2003. Please note that all of these proposals are similar to voluntary or mandatory programs that have been enacted through legislation in other states.<sup>6</sup>

##### **1) *Announce An Arizona Pesticide Risk Reduction Project***

There is very little debate that pesticides are a significant source of indoor air pollution. There is also little debate that a potential area of exposure of pesticides to children is in schools and day care centers. Given the already successful implementation of the Kyrene Integrated Pest Management model (described above) in Arizona, we recommend that the Children's Environmental Health Office roll out a Pesticide Protection Program in two phases:

**First, ADEQ should endorse the Kyrene Integrated Pest Management (IPM) model and offer technical assistance and grant funding** (if available) to interested school districts and day care centers.<sup>7</sup> This would allow ADEQ to build upon and expand the success of the Kyrene model which has received US EPA grant funding for expansion to other school districts and to tribal facilities (such as nursing homes). ADEQ should immediately develop a simple tracking database to measure the number of schools, day care centers and/or nursing homes that are implementing the Kyrene IPM model and measure the amount of money saved and the amount of the reductions in pesticides use. ADEQ should add information about the IPM model to its Children's Environmental Health web site as well as start an award program for those schools and day care centers that have successfully implemented an IPM program.

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<sup>6</sup> For your ease of reference, we have developed a "database" of legislation enacted (not proposed) in other states that are related to Children's Environmental Health. We will also provide you with electronic and/or hard copies of legislation to which we refer in this research memo.

<sup>7</sup> Please note that according to Professor Marc Lane, when the Kyrene School District first approached ADEQ two years ago about its potential participation in the pilot program, ADEQ said "no thanks." However, Professor Lane believes that ADEQ support and assistance would still be welcome.

**Second, ADEQ should create a voluntary certification program for day care centers (and eventually schools) that adopt an IPM approach.** This voluntary program should then be expanded from the original IPM approach to include other environmental health and safety measures and be based closely on the Indiana “5 Star Program” which covers lead, pesticides and other potential sources of exposure. ADEQ/ADHS would provide training materials for and inspections of participating day care centers. The Indiana “5 Star program” has been implemented at a low cost and the results (i.e. the number of certified and/or participating facilities) have been easy to track. If successful, an Arizona “5 Star program” could be expanded from day care centers to primary schools after the first year.

**2) *Launch a Children’s Environmental Health Office Web Site Upgrade***

**Training - ADHS/ADEQ should immediately announce and undertake a major upgrade of the education and training materials available on the Children’s Environmental Health Office Web Site.** This initiative would not require an Executive Order and could borrow heavily from materials developed previously in Arizona as well as the Minnesota (Dept. of Health) and Indiana (IDEM) programs. For example, IDEM staff developed some of their training materials specifically so that other state programs could adopt them.

In addition, the Children’s Environmental Health Office Web Site should provide links and references to several US EPA training programs. **US EPA’s “tools for schools”** is just one example of already developed training programs that should be promoted in Arizona on the Children’s Environmental Health Office Web Site. The target audiences for these training materials should include:

- Nurse Practitioner/School Nurses
- Day Care Center Managers
- School Building Superintendents
- Primary Care Physicians
- Parents of children with asthma

The Children’s Environmental Health Office should work with the Arizona Asthma Coalition, school districts, medical professionals and other Advisory Committee member to promote the use of the web site training materials

**Real Time Air Quality Data** - This web site upgrade should also provide “real time” air quality data (and advisories on activities to avoid during bad air quality periods). This initiative will link existing county data bases on air quality and make that data available in “real time” on the ADEQ web site. This will allow citizens all over the state to obtain “ozone” or other “bad air day” warnings. This initiative can draw from the examples provided by Cal/EPA and California South Coast Air Quality District.

**Track & Analyze Usage** - The number of “hits” and downloads on the Children’s Environmental Health Office’s Web Site should be tracked each week to determine whether traffic to the web site is increasing and which resources are in the greatest demand. Software programs that provide this type of “usage data” are already available at ADEQ, so this tracking function can be performed at a very low cost.

**3) *Issue an Executive Order on School/Day Care Construction/Maintenance*<sup>8</sup>**

The Governor should issue an Executive Order on Schools & Day Centers. This Executive Order should focus on five issues related to the construction and maintenance of schools and day care centers. All of the measures in the Executive Order will be voluntary programs through which ADEQ/ADHS could provide local school districts with technical assistance and guidance on how best to implement the programs. As will be described below (and in the attached “database” of state legislation related to Children’s Environmental Health), similar programs have been implemented as mandatory programs in other states. To build legislative support for each program component, ADEQ/ADHS should keep an accurate account of the number of schools assisted.

We are cognizant of the sensitivity towards announcing what could be perceived as a new “mandate” for schools and school districts. However, we believe that the Executive Order could emphasize the voluntary nature of the program and the fact that ADEQ/ADHS will play a supportive role rather than an enforcement role. One excellent example of the type of technical assistance that the Children’s Environmental Health Office could provide to both schools and day care centers is the **Indiana Child Care Guidance Manual**. We recommend adopting that manual for use in Arizona (and a developing a companion piece for schools) should you decide to move forward with this initiative.

**Provide Free ADEQ/ADHS Environmental Inspections of New School And Day Care Center Construction Sites**

The Executive Order will direct ADEQ/ADHS to perform a full environmental “Phase I” audit of all locations for proposed new school or day care center construction. These audits will also be available to those schools that are adding “temporary” or “modular” classrooms at an existing school facility. This initiative could draw on existing expertise and resources at ADHS and could point to the California example where close to 15% of proposed school construction sites required remediation and cleanup activities. The service would be offered as a free, voluntary program for local school districts.

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<sup>8</sup> This Executive Order will create voluntary, technical assistance efforts in the areas described. Depending on the success of these programs, a legislative initiative could be developed to create a mandatory program in the long term.

### **Discourage The Construction of New Schools Near Major Highways**

The Executive Order could also discourage any school construction within 1,000 feet of a major highway. The Executive Order would require ADEQ and ADHS to provide any local school districts with proposed construction projects with information on the detrimental health effects of locating a school so close to a major highway.

### **Discourage Truck Idling and Smoking at Schools & Day Care Centers**

The Executive Order will also require ADEQ and ADHS to provide local school districts with suggested guidelines on pollutant control for school and day care centers. These guidelines would regulate any diesel truck or school bus idling within 1,000 feet of a school building and ban any smoking at or within 50 feet of the school building.

### **Discourage Mercury/Lead Use In School Buildings**

The Executive Order would also discourage the use of mercury filled thermometers in any school building. The Executive Order should ban the use of lead paint, lead pipes and lead products in new school construction projects. ADEQ/ADHS could develop an inexpensive Mercury collection system for local school districts. This collection system would provide a voluntary, safe collection and disposal system for old laboratory equipment containing lead. A similar program was implemented in Maryland in 2002 at a low cost.

### **Encourage the Implementation of US EPA “Tools for Schools” Program at Arizona Schools and Day Care Centers**

The Executive Order should refer to and promote the US EPA’s “Tools for Schools” program that is designed to help local school districts maintain environmentally safe indoor environments for students. Since the training materials have already been developed by US EPA, ADEQ/ADHS could provide technical assistance to local school districts at a very low cost.

### **4) *Make Water Quality Infrastructure a Focal Point For Cross-Border Programs and Outreach***

Section II described the numerous cross border programs currently being pursued by various non-profit groups, border committees and ADEQ’s South Regional Office and Nogales Border Office. We are also encouraged by the interest of US EPA Region IX on working with the Children’s Environmental Health office, particularly on “cross-border” issues. A great deal of progress has already been made in this area and therefore there is no reason to make dramatic changes in the Border Programs.

We believe that the Children's Environmental Health Office could help provide a focus to ADEQ/ADHS border programs by selecting a single program element to promote each year. We believe that the Children's Environmental Health Office's emphasis in 2003 should be on water quality and water infrastructure since those issues directly affect children's health and are already a priority issue for several agencies and associations.

The Children's Environmental Health Office should announce that clean drinking water for children will be its top priority for 2003/2004. By working with local agencies, the US EPA and other interested parties and by focusing on a few specific water infrastructure projects, the Children's Environmental Health Office will be able to point to a specific geographic area and a specific number of children who have benefited from its clean drinking water efforts.

#### **5) *Issue High Profile Fish Advisories for Mercury***

This initiative would develop consumer mercury alert notices to be distributed to all physician offices in the state. These notices will emphasize the health risks associated with pregnant and breastfeeding women from eating fish containing mercury. The notice will list the types of fish that typically contain higher levels of mercury. These notices will also be provided to all applicants for a fishing license in the state. Finally, the consumer notice will be posted on the ADEQ web site.

ADEQ could also work with ADHS on a proposal to require warning labels on all fish sold commercially in Arizona (both in supermarkets and restaurants). This warning label will emphasize risks to pregnant and breast feeding women and their children.

#### **B. *A Medium to Long Term Non-Legislative Initiative***

##### ***Develop A Children's Environmental Health Database***

**Real Time Air Quality Data** - As described above, this initiative will begin by linking existing county data bases on air quality and making that data available in "real time" on the ADEQ web site. This will allow citizens all over the state to obtain "ozone" or other "bad air day" warnings. This initiative can draw from the examples provided by Cal/EPA and California South Coast Air Quality District. Web access to relevant real time ambient air quality information will be particularly helpful to children with asthma.

**Measures of Success** - A critical component of the success of the Children's Environmental Health Office will be its ability to describe its activities to legislators and to demonstrate the success of those activities. For every activity undertaken, the Children's Environmental Health Office will develop an "Environmental Health Indicator" to track the program's impact. For example, should the Children's Environmental Health Office decide to launch a Integrated Pest Management initiative, it will have to track the number of schools assisted, the amount of money saved by those schools, the volume of the pesticide use that was reduced and the number of students who benefited. In this way, should ADEQ choose to propose legislation or request funding for an IPM program in the future, it can point to the relevant "Environmental Health Indicators" to support the proposal.

**Linking Health Data and Air Quality Data** - The long-term phase of the data base initiative will directed by Health Data Surveillance "Workgroup" consisting of staff from ADEQ, ADHS and the state's IT office. This Workgroup will be responsible for recruiting academic institutions in Arizona to participate in developing a database that links health indicators (hospital admissions for asthma, etc.) and air quality data. This workgroup will be charged with recommending an "institutional home" for the data and will also be directed to develop Arizona-specific "Children's Environmental Health Indicators" to track progress across the state.<sup>9</sup>

US EPA has already developed a framework for the collection and analysis of Environmental Health Indicators. Specifically the US EPA's Office of Children's Environmental Health is interested in working with states to help them collect and analyze data and jointly develop the appropriate Children's Environmental Health Indicators. Edward Chu is with the Office of Children's Health Protection at US EPA Headquarters. He is very knowledgeable in the areas of environmental health data and indicators and is particularly interested in working with states on collecting and analyzing relevant data. Mr. Chu has indicated that he may be available to provide technical assistance to Arizona. His phone number is 202-564-2196 and e-mail is [chu.ed@epa.gov](mailto:chu.ed@epa.gov).

The Workgroup will also be charged with soliciting funding and technical assistance from academic institutions in Arizona to develop an analysis of the health effects of environmental indicators on children in the Phoenix and Tucson metropolitan areas. During the 5/30/03 Summit in Phoenix, the University of Southern California presented research on the health effects of air pollution on children in the Los Angeles area. A similar study was completed in Indianapolis, Indiana in December 2001 and both studies will serve as a model for the Workgroup.

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<sup>9</sup> Two "Indicator Reports" - the 2003 Annie E. Casey Foundation Report and the most recent ASHTO Indicators Report have been forwarded to you for your review and information.

Finally, you should know that during the 2002 legislative session, the Virginia General Assembly enacted SB 610 to establish a pilot project to develop a standardized Geographic Information System (GIS) model for sharing data. The project, which will be conducted in conjunction with the Agency for Toxic Substances Disease Registry and the Centers for Disease Control and Prevention, will enable the state to share data related to the spread of airborne toxics and pathogens. The Arizona Health Data Workgroup will also track progress on this Virginia based study.

### **C. Potential Medium and Long Term Legislative Initiatives**

#### **Improve *Indoor Air Quality* at Day Care Centers and Schools**

As described above, we recommend that during the first six months of the Children's Environmental Health initiative, the Governor issue an Executive Order to reduce exposures to common, well know risk factors (second hand smoke, mercury from thermometers, lead paint and pesticides) at day care centers and schools. While we believe these Executive Orders promoting voluntary actions are worth pursuing in the short term as a means to "build a record of success," legislation will be required to expand funding and support for these efforts at day care centers and schools in the long term.

#### **Regulating the Use of Pesticides in Schools**

Since 2001, more than eight states have passed legislation related to controls or restrictions on the use of **pesticides in schools**<sup>10</sup>. These statutes have varied from state to state but the most common approach is to encourage the adoption of IPM practices and require that notice is given to parents of when pesticide application occurs. This was the approach taken in New Jersey's School Integrated Pest Management Act, which became effective on June 1, 2003. We believe that the Governor should propose an IPM bill for day care centers and schools based on the New Jersey model in 2004.

#### **Smoking Bans In Public Schools and Public Buildings**

Since 2001, several states have banned **smoking in public buildings and public schools**. California, Delaware, Georgia, Oklahoma, Rhode Island, South Dakota and Virginia have all imposed smoking bans. Some states have applied these bans to all public buildings. ***The Georgia smoking ban also applies to any car in which a child has been placed in a safety seat.*** We believe a narrowly crafted ban on smoking in day care centers and public school buildings would be effective and would be difficult to oppose. There also would be no budget impact from such a ban. We believe the Governor should propose a smoking ban for schools in 2004.

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<sup>10</sup> Summaries of the statutes described in this Section appear in the attached "Database of State Statutes." In addition, a copy of the New Jersey IPM statute has been forwarded to you.



## **Bans on Mercury Thermometers/Collection and Disposal of Mercury from Public and Private Schools**

Most policymakers agree that mercury poses a significant source of exposure to children. Although the single greatest sources of mercury exposure are coal fired power plants, most policymakers agree that mercury thermometers are a potential source of mercury exposure that is easy to eliminate given the inexpensive alternatives to mercury thermometers that are available.

Since 2001, more than seven states have banned the use of **mercury thermometers** in schools. California, Connecticut, Maryland, Massachusetts, Michigan, Minnesota and Rhode Island have banned the use of mercury thermometers in schools.

Some states have also **severely restricted the sale of any mercury thermometers**. We believe that Arizona should propose a similar ban on the sale and use of mercury thermometers in schools. There would be no budget impact from such a ban and low cost alternatives are available in the marketplace.

In addition, some states have mandated that **local school districts collect and dispose of old lab equipment and supplies of mercury in schools**. To facilitate this collection and disposal process, ADEQ could waive some of the more stringent hazardous waste disposal manifesting requirements and hire a single contractor to collect and dispose of equipment containing mercury at public schools. One state that accomplished this is Maryland, which disposed of more than 4,500 pounds of mercury collected from public and private schools in 2002/2003. In Maryland, the cost of the collection and disposal of mercury products for each school was approximately \$150, far lower than it would have been for individual schools if the program was not in place.

## **Criteria Assessment/Re-Assessment for Toxic/Hazardous Wastes**

Two states have passed legislation providing environmental agencies with general authority for setting cleanup and discharge standards based on the impact the contaminant may have on children. **We believe that ADEQ should eventually pursue legislation that grants general authority to set cleanup standards, discharge and emissions criteria based on the particular sensitivities of children**. However, because of the high costs of conducting the scientific research associated with criteria assessment, we believe that ADEQ should not pursue this in this authority in the 2003/2004. Instead, a working group of the Children's Environmental Health Advisory Committee should be assigned to review research from California, Minnesota and other states and make legislative recommendations at the end of 2004.

Minnesota has enacted legislation, SB 4a (6/29/01) that allows for children's exposure sensitivities to be considered when setting drinking water standards. California has enacted similar legislation that led to a re-evaluation of California's standards for particulate matter in the air. We believe that a similar legislative proposal should be developed for Arizona. However, there may be significant costs associated with this approach.

### **Approaches to Improve *Indoor Air Quality* in Homes - Lead**

More than ten states have enacted legislation designed to reduce the exposure of lead in homes. These programs vary widely from state to state, but we believe three state approaches represent low cost, high impact approaches to the problem:

Rhode Island SB 2813 (June 25, 2002) set up a notification and inspection requirement for lead hazards during the transfer of properties. This would require an inspection and/or notification when a home is being sold or an apartment is being rented. ADEQ and ADHS could also make sure that training guides and fact sheets would be available on their web sites. This would help buyers know how to identify lead problems and help sellers know how best to mitigate any problems.

The California Lead-Safe Schools Protection Act simply prohibits the use of lead based paint, plumbing and other potential sources of lead contamination in the construction or renovation of any school facility. We believe this is a very moderate, low cost requirement that should be applied to the construction of new homes and schools. We recommend that the Governor propose similar legislation in 2004.

Finally, because the "indoor air issue" is very complex and because the authority to regulate indoor air in schools is not clearly established within ADEQ or the Arizona Department of Education, we believe that legislation creating an Advisory Panel on Indoor Air may be helpful to pursue. One model is Maryland's SB 283 (5/18/01) which created an Indoor Air Task Force. The Task Force is currently developing a legislative report to recommend where the authority to regulate indoor air should reside. This approach may avoid potential conflicts with the Department of Education over how best to solve indoor air issues in schools.

### **Approaches to Improve *Outdoor Air Quality* - Diesel Emissions**

Governor Hull's January 2001 "Brown Cloud" Summit identified a number of strategies to improve air quality in Arizona. Some of the ideas proposed during the Summit made their way into HB 2538, but several recommendations were not acted upon. In addition, a number of the provisions of HB 2538 are set to expire in 2003.

## **Diesel Truck/Diesel Bus Idling**

We recommend proposing the re-authorization of those portions of HB 2538 that have proven to be successful. We also believe that statewide legislation on diesel truck idling should be enacted to close some of the loopholes in the existing **Maricopa County ordinance** and to make sure that the trucking industry will not face conflicting regulations within different jurisdictions in Arizona.

Diesel exhaust consists of the black smoke that we see, but also of particulate matter (PM), invisible specks of solid or liquid matter, including dust, ash and soot. Particulate matter, especially with particles of 2.5 microns or smaller, have been linked to such health problems as asthma attacks, coughing and difficulty in breathing, chronic bronchitis, decreased lung capacity, lowered resistance to infection, and premature death.

Small particles are dangerous because they can remain suspended in the air for long periods of time, increasing their chances of being inhaled, and of being transported by wind over long distances. Once inhaled, they are not filtered out by the nose, throat, and upper windpipe. They enter deep into the lungs, where they may irritate or otherwise damage the delicate membranes and air sacs.

**The Children's Environmental Health Project should make certain that the roadside emission testing program for diesel powered vehicles (as mandated by Section 10 of HB 2538) is fully implemented in 2003.** We have not received any information about the status of that program. The information posted on the ADEQ web site indicates that those regulations have been proposed and are moving towards final promulgation.

## **School Bus Idling**

School bus idling is a problem, because it exposes children to unnecessary diesel exhaust. We know that inhaling the fumes outside the bus is dangerous to our health, but it has also been found that exhaust levels inside the school bus are actually higher, especially at the back of the bus.

Several states have enacted legislation that sets forth procedures for reducing the amount of school bus idling particularly at or near schools. The Minnesota Children's Environmental Health Office has devoted a significant part of its resources to this issue. We recommend that ADEQ develop guidance for school districts on school bus idling (borrowing from the Minnesota model) before calling for legislation.

#### **IV. Education - *Developing a Communications Strategy Based Upon the Governor's Emphasis on Children's Issues.***

##### **An Annual Children's Environmental Health Report Card**

As discussed throughout Sections I - III, the success of the Arizona Children's Environmental Health initiative will depend in large part in how well the Children's Environmental Health Office educates legislators and the public about the effectiveness and practicality of the programs it announces over the next six months. The success of these first programs will draw attention (and perhaps funding) to more ambitious programs in the future. Based on the successful implementation of Children's Environmental Health programs in other states, there are good reasons to believe you will be successful in Arizona.

We believe the Children's Environmental Health Office should develop a "Report Card" for the legislature (which can also be posted on the web site) each year that describes: how much it spent in taxpayer dollars; what those funds were spent on; and what were the results of those activities. Establishing good baseline data and simple Children's Environmental Health "Indicators" will carry the day in this annual "Report Card." We have forwarded copies of the Annie E. Casey Foundation and ASHTO "Indicator Reports" to you as examples (both contain general state wide Indicators). We recommend that the "Report Card" contain "indicators" that are closely tailored to the programs you implement.

##### **Communications Devices Described in Sections I - III**

Given the budget situation, it would be imprudent to assume that there will be a large budget available to the Children's Environmental Health Office for advertising and public education. In Sections I - III, we recommended a number of low cost communication devices that have worked in other states:

- An updated and expanded Children's Environmental Health Web Site;
- The adaptation and distribution of training materials already developed in other states for use in Arizona;
- An endorsement of US "EPA's tools for schools;"
- The engagement of legislators, advocacy groups and Universities through the Children's Environmental Health Advisory Committee; and
- Reliance upon the existing networks of advocates and associations (i.e. such as those who attended the 5/30/03 Children's Environmental Health Summit) to distribute and promote training and educational materials.

### **The Governor's "Bully Pulpit"**

We believe the Children's Environmental Health Office should use the power of the Governor's "bully pulpit" as much as possible. There is no better forum for promoting the substantive programs that benefit children and there is no better opponent than those who are "against children's health."

We recommend that ADEQ assign a communications specialist to devote a significant amount of time in the next month developing a communications strategy for the Children's Environmental Health Office for 2003/2004. In addition to the executing the communications devices described in Sections I - III, this specialist should be assigned to work with the Governor's communications office on scheduling press events, Children's Environmental Health Summits, Executive Order signings and eventually, the proposal of legislation.

The Governor's interest in children's programs and the related activities of the Children's Cabinet are two assets that were not available in the other states that have implemented programs. We recommend that you take steps now to determine how best to use those assets once the Children's Environmental Health Office is up and running.

## Attachment A

### Maryland Children's Environmental Health and Protection Advisory Council 2001-02

<b>Maryland Senate</b>  The Honorable Nancy Jacobs Maryland Senate	<b>Licensed Pediatricians</b>  Cecilia T. Davoli, MD Kennedy Krieger Institute  Benjamin A. Gitterman, MD Children's National Medical Center
<b>Maryland House of Delegates</b>  The Honorable James W. Hubbard Maryland House of Delegates	<b>Allergy/Asthma Expert</b>  "VACANT"
<b>Department of Health and Mental Hygiene</b>  Maureen Edwards, M.D. MPH Maryland Department of Health and Mental Hygiene	<b>Parent or Guardian</b>  Tracy D. Newsome-Smith Center for Poverty Solutions
<b>Department of the Environment</b>  Richard Eskin Maryland Department of the Environment	<b>Environmental Epidemiologist</b>  Christopher A. Loffredo, PhD Lombardi Cancer Center Georgetown University
<b>Department of Agriculture</b>  Mary Ellen Setting Maryland Department of Agriculture	<b>Economist</b>  David T. Levy, PhD Robert G. Merrick School of Business University of Baltimore
<b>Department of Education</b>  Allen C. Abend Maryland State Department of Education	<b>Environmental Toxicologist</b>  David A. Jett, PhD National Institutes of Health

<b>Department of Human Resources</b>  Linda Heisner Maryland Department of Human Resources	<b>Maryland Association of Counties</b>  The Honorable Rochelle Spector Baltimore City Council
<b>Department of Housing and Community Development</b>  Joan Atkinson Maryland Department of Housing and Community Development	<b>Private Industry</b>  Judy S. LaKind, PhD LaKind Associates, LLC
<b>Office of Children, Youth, and Families</b>  Donna Behrens Governor's Office for Children, Youth & Families	

**Attachment B**  
**MARICOPA COUNTY**  
**VEHICLE IDLING RESTRICTION ORDINANCE**

**SECTION 1 - GENERAL**

- A. PURPOSE
- B. APPLICABILITY

**SECTION 2 - DEFINITIONS**

- A. COMBINATION OF DEVICES
- B. DISTRIBUTION CENTER
- C. GROSS VEHICLE WEIGHT RATING
- D. IDLING
- E. POWER TAKE OFF (PTO) MECHANISM
- F. PRIMARY PROPULSION ENGINE
- G. TRUCK STOP
- H. VEHICLE

**SECTION 3 – REQUIREMENTS**

- A. ORDINANCE
- B. VIOLATION
- C. SIGN

**SECTION 4 – EXEMPTIONS**

- A. TRAFFIC EXEMPTION
- B. EMERGENCY EXEMPTION
- C. MECHANICAL OPERATIONS EXEMPTION
- D. WARM UP AND COOL DOWN EXEMPTION
- E. PASSENGER COMFORT EXEMPTION
- F. HOURS OF SERVICE EXEMPTION



**MARICOPA COUNTY  
VEHICLE IDLING RESTRICTION ORDINANCE**

**SECTION 1 - GENERAL**

A. **PURPOSE:** The Vehicle Idling Restriction Ordinance restricts, from idling for more than five (5) consecutive minutes, any device or combination of devices that meets all of the following criteria:

1. designed with a gross vehicle weight rating of more than 14,000 pounds; and
2. required under Arizona law (Arizona Revised Statute [ARS] Title 28 Chapters 7 and 9) to be registered; and
3. designed to operate on public highways; and
4. powered by a diesel engine.

B. **APPLICABILITY:** This Vehicle Idling Restriction Ordinance applies to vehicle idling within Maricopa County.

**SECTION 2 - DEFINITIONS:** For the purpose of this ordinance, the following definitions shall apply:

A. **COMBINATION OF DEVICES** – The coupling of two or more pieces of equipment that consist of the device which contains the diesel engine and an attached piece of equipment, which includes but is not limited to a trailer, cement mixer, refrigeration unit or automobile.

B. **DISTRIBUTION CENTER** – A place with multiple bays where vehicles load or unload materials.

C. **GROSS VEHICLE WEIGHT RATING** – The maximum vehicle weight for which the vehicle is designed as established by the manufacturer. 1

D. **IDLING** – The operation of a diesel engine when the engine is not engaged in gear. 2

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1 Mirrors the definition in R18-2-1001.36.

2 Federal definition: "Curb-idle" means: (1) For manual transmission code light-duty trucks, the engine speed with the transmission in neutral or with the clutch disengaged. For automatic

E. POWER TAKE OFF (PTO) MECHANISM – A unit that provides power from the engine to a trailer or other equipment.

F. PRIMARY PROPULSION ENGINE – Any engine for which the primary function is to provide mechanical power to propel or direct a vehicle, regardless of whether that power is applied directly to the propeller shaft or indirectly by way of an electrical system.

G TRUCK STOP – A place of business that provides services to drivers and their vehicles in which the service time may exceed one (1) hour.

H. VEHICLE – Any device or combination of devices with a gross vehicle weight rating of more than 14,000 pounds, required under Arizona law (ARS Title 28 Chapters 7 and 9) to be registered, designed to operate on public highways and powered by a diesel engine. 3

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transmission code light-duty trucks, curb-idle means the engine speed with the automatic transmission in the Park position (or Neutral position if there is no Park position); (2) For manual transmission code heavy-duty engines, the manufacturer's recommended engine speed with the clutch disengaged. For automatic transmission code heavy-duty engines, curb idle means the manufacturer's recommended engine speed with the automatic transmission in gear and the output shaft stalled.

3 Note: AAC R18-2-101(69): "motor vehicle" means any self-propelled vehicle designed or transporting persons or property on public highways;

ARS 44-1301: "motor vehicle" means any automobile, motorcycle, truck, trailer, semitrailer, truck tractor and semitrailer combination or other vehicle operated on the roads of this state, used to transport person or property and propelled by power other than muscular power, but motor vehicle does not include traction engines, vehicles that run only on a track, bicycles or mopeds;

ARS 49-541(16): "Vehicle" means any automobile, truck, truck tractor, motor bus or self-propelled or motor-driven vehicle registered or to be registered in this state and used upon the public highways of this state for the purpose of transporting persons or property, except implements of husbandry, road rollers or road machinery temporarily operated upon the highway.

ARS 49-581: "Motor vehicle" means any self-propelled vehicle including a car, van, bus or motorcycle and all other motorized vehicles;

ARS 28-101(29): "Motor vehicle": (a) means either: (i) A self-propelled vehicle; (ii) For the purposes of the laws relating to the imposition of a tax on motor vehicle fuel, a vehicle that is operated on the highways of this state and that is propelled by the use of motor vehicle fuel. (b) Does not include a motorized wheelchair or a motorized skateboard. For the purposes of this subdivision: (i) "motorized wheelchair" means a self-propelled wheelchair that is used by a person for mobility. (ii) "motorized skateboard" means a self-propelled device that has a motor, a deck on which a person may ride and at least two tandem wheel in contact with the ground.

ARS 28-101(50): "Truck" means a motor vehicle designed or used primarily for the carrying of property other than the effects of the driver or passengers and includes a motor vehicle to which has been added a box, a platform or other equipment for such carrying.

ARS 28-101 (51): "Truck tractor" means a motor vehicle that is designed and used primarily for drawing other vehicles and that is not constructed to carry a load other than a part of the weight of the vehicle and load drawn.

ARS 28-101 (52): "Vehicle" means a device in, on or by which a person or property is or may be transported or drawn on a public highway, excluding devices moved by human power or used exclusively on stationary rails or tracks.

## SECTION 3 – REQUIREMENTS

- A. ORDINANCE – No owner or operator of a vehicle shall permit the engine of such vehicle to idle for more than five (5) consecutive minutes except as provided in Section 4 (Exemptions) of this ordinance.
- B. VIOLATION – Any owner or operator who violates this ordinance is subject to a civil penalty of \$100 for the first violation and \$300 for a second or any subsequent violation. 4
- C. SIGN – Each truck stop owner or operator and distribution center owner or operator shall erect and maintain a permanent sign(s) that is at least 12 inches by 18 inches in size indicating that the maximum idle time allowed in Maricopa County is 5 minutes. The sign(s) shall be posted in a conspicuous location, near the dispatcher, if applicable. In addition to the above, the sign shall at a minimum contain language outlining the following:
1. The County's vehicle idling information line, and
  2. The amount of money the violator will be fined.

## SECTION 4 – EXEMPTIONS: This ordinance shall not apply when:

- A. A vehicle is forced to remain motionless because of traffic or adverse weather conditions affecting the safe operation of the vehicle.
- B. A vehicle is being operated for emergency or law enforcement purposes.
- C. The primary propulsion engine of a vehicle meets all of the following criteria:
1. is providing a power source necessary for mechanical operations other than propulsion; and
  2. involves a power take off (PTO) mechanism, or other mechanical device performing the same function as a PTO; and

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ARS 28-101 (53): "Vehicle transporter" means either: (a) A truck tractor capable of carrying a load and drawing a semitrailer; (b) A truck tractor with a stinger-steered fifth wheel capable of carrying a load and drawing a semitrailer or a truck tractor with a dolly mounted fifth wheel that is securely fastened to the truck tractor at two or more points and that is capable of carrying a load and drawing a semitrailer.

R17-4-435: "Motor carrier" as defined in ARS § 28-5201 except a motor carrier transporting passengers for hire in a vehicle with a design capacity of 6 or fewer persons.

ARS 28-5201: "Motor vehicle" means a self-propelled motor driven vehicle or vehicle combination, except a lightweight motor vehicle, that is used on a public highway in the furtherance of a commercial enterprise. In research done by ADEQ, no definitions exist for "heavy duty motor vehicle," or "heavy duty diesel engine."

4 Attorney General's Office (AGO) interpretation is that ARS Title 28 allows any law enforcement officer to enforce ARS 11-876, which authorized this ordinance, on private and/or public property.

3. is powered by the engine for:

- a. loading and unloading cargo, or
- b. mixing or processing cargo, or
- c. controlling cargo temperature, or
- d. providing a mechanical extension to perform work functions.

D. The primary propulsion engine of a vehicle is being operated at idle to conform to manufacturer's warm up and cool down specifications, for maintenance or diagnostic purposes, or by manufacturers engaging the engines in testing for research and development.

E. The primary propulsion engine of a vehicle is being operated to supply heat or air conditioning necessary for passenger comfort/safety in those vehicles operating for commercial passenger transportation or school purposes up to a maximum of 30 minutes/hour. If ambient temperatures exceed 75 degrees Fahrenheit, passenger buses are allowed to idle up to a maximum of 60 minutes in any 90-minute time period.

F. The primary propulsion engine of a vehicle is being operated to comply with the U.S. Code of Federal Regulation 49 CFR Part 395 and the Arizona Department Of Transportation (DOT) regulation R17-5-202 referencing hours of service restrictions.