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Contents

- Air Standards Protect Kids, Asthma Study Says
- Menu of Energy Options Sent to the Governor
- NRC Audit Finds Radiation Program Satisfactory
- Report a Risk: DEQ Risk Committee Committed to Workplace Safety
- Seven DEQ Employees Receive Manager Certification

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Donna Kemp Spangler, Editor

Air Standards Protect Kids, Asthma Study Says

School kids playing outside during recess on hazy winter days can breathe a little easier in the wake of a Department of Environmental Quality (DEQ)-participating study.

Preliminary findings of a 2006-07 pilot study at Greenville Elementary in Cache County suggest that it maybe Okay for schools to allow children to play outside for a 15- to 20-minute recess on days when the air quality is less than perfect.

“Although the results need to be verified, this is good news,” said Cheryl Heying, air quality director for DEQ. “The results of this study suggest that the federal air quality standard for fine particulate pollution is protective of public health.” This past winter tougher new federal standards for fine particle pollution went into effect, triggering an alert to the public when the daily average of fine particles known as PM_{2.5} reaches 35 micrograms per cubic meter (ug/m³) of air – a 24-hour exposure threshold considered to be harmful to public health.

Health officials and scientists who conducted the study are cautious about drawing over simplified conclusions from it because of a number of factors that weren’t considered, such as long-term exposure and its potential impact on children’s lungs. The study was done during a relatively mild Cache Valley winter that had few days when the fine particle pollution exceeded the Environmental Protection Agency (EPA) standards. And, the study focused on just a 15-20 minute outdoor recess exposure, not longer.

Even so, the study does provide some observations, noted Steven Packham, toxicologist for DEQ’s Division of Air Quality and member of the Utah Asthma Task Force, which spearheaded the effort with the University of Utah, Department of Health, State Office of Education, and the Bear River Health Department. “The data does not prove that the current guidelines should be relaxed but it does suggest that the current guidelines are very protective.”

The study is a larger-scale version of a similar one conducted at Hawthorne Elementary in Salt Lake City, where DEQ collected data from air-quality monitors placed inside and outside the school from December 2004 to March 2005. The results showed the air quality inside the school was about three times better than the outdoor air. Then last year, pediatricians measured the lung function of 26 students for three months to determine the effect air quality has on schoolchildren's developing lungs. The study was a pilot and did not have sufficient power to draw any significant conclusions, so researchers expanded it to Cache Valley where 100 students participated.

"The study was designed specifically around recess guidance," said Dr. Nicole Frei who worked with Dr. Karen Buchi, professor of pediatrics at the University of Utah Medical School, the principal investigator of the study. "It was not designed to look at the accumulative effects of poor air quality over multiple winters. We also want to emphasize the fact that certain kids are more sensitive than others to pollution. But it is a balancing act when weighing other factors such as childhood obesity and other adverse physical and psychological effects of indoor recess or no recess."

The 100 children involved in the study ranged from ages 7 to 12. Half of the children had asthma. They were questioned on a daily basis concerning their outdoor activity levels during noon-time recess. The children blew into an instrument called a spirometer that measured their lung function before recess and then after recess looking at the effects of a 15-20 minute exposure to measured outdoor levels of air particulate.

The conclusion: No notable effect of a 15-20 minute outdoor recess on asthmatic and non-asthmatic children's abilities to breathe, even on days when the air quality wasn't very good.

The findings are preliminary, and still need to be peer-reviewed before they are published. The results of this study may suggest that more studies are needed to determine whether Utah schools should change their current guidelines on when to allow children to play outside during recess or keep them indoors.

But the study is good news to parents and teachers.

"It shows that the current practice of keeping children indoors when air quality is deteriorating appears to be at least protective of children's lung health and leaves school administrators some room for individual variation when deciding at which point children should be kept indoors during recess," said Dr. Edward Redd, medical officer with the Bear River Health Department.

Menu of Energy Options Sent to the Governor

Governor Jon Huntsman will be able to select from among 70-some options on how to reduce greenhouse gas emissions (GHG) in the state. The Governor's Blue Ribbon Advisory Council on Climate Change (BRAC) concluded its work in August by ranking a list of measures that range from energy conservation to developing renewable energy to address global warming.

"We want to make sure the Governor has a road map that thoroughly weighs the various routes he can take to devise a strategy on how to reduce greenhouse gases," said Dianne Nielson, energy adviser to Huntsman, who chaired the 24-member group that included industry, government and public interest.

The package includes a report by an eight-member science panel that took an objective look at how global warming is affecting the state. The report, "Climate Change and Utah: The Scientific Consensus" concluded that the average temperature in Utah was higher during the past decade than any comparable period of the past century and that could mean more severe droughts, less snowpack and more wildfires.

The report is available at:

http://www.deq.utah.gov/BRAC_Climate/docs/Full_Report_BRAC_073107.pdf.

Huntsman plans to develop a state GHG reduction goal by June 2008, a commitment he made in May when he joined the Western Climate Initiative (WCI), a pact of six states and two Canadian provinces that have devised a regional initiative to reduce emissions by 15 percent by 2020.

Governor Huntsman intends to use a process that involves stakeholders to establish targets for GHG reductions based on economic factors and consideration of all sectors of the economy that generate greenhouse gas emissions. He also will use the BRAC's list of recommendations to develop new policy goals.

The options, available at: http://www.deq.utah.gov/BRAC_Climate/docs/Final_Vote_high_to_low.pdf., include:

- Planting more trees
- Developing more mass transit
- Encourage carbon sequestration
- Tax credits and incentives for renewable-energy development
- Promote production of biomass fuels
- Reduce vehicle travel
- Promote green buildings
- Preserve open space
- Promote low-carbon fuel vehicles
- Develop a renewable portfolio standard

NRC Audit Finds Radiation Program Satisfactory

State oversight of radioactive materials in Utah adequately protects public health, according to the preliminary audit findings of the U.S. Nuclear Regulatory Commission (NRC).

"We are very satisfied with the results," said Dane Finerfrock, director of the Division of Radiation Control (DRC). "It shows that we are doing a good job to protect the public from the potential hazards associated with the use of radioactive materials in the state."

From June 11-15, the NRC evaluated the DRC's radioactive materials program as part of a routine four-year audit to determine if there are any deficiencies that need to be corrected. Because Utah is part of an Agreement State program with the NRC, the state has primary oversight of the 183 radioactive materials licenses, including EnergySolutions' low-level radioactive waste disposal facility, and three uranium mills in the state. If an NRC audit found significant deficiencies it could take steps to turn the program over to the federal government.

An NRC review team, headed by James Lynch of the NRC, looked at the way the state conducted inspections, issued licenses and responded to violations over a four year period, from June 28, 2003 to June 15, 2007, and found the state is doing a good job and should continue its oversight.

“The review team’s proposed recommendations are that the Utah Agreement State Program be found adequate to protect public health and safety and compatible with NRC’s program,” wrote Lynch in a letter to Rick Sprott, executive director of the Department of Environmental Quality.

In general, the NRC found DRC’s performance to be satisfactory – the highest performance rating possible – but recommended on-site investigations of complex incidents to fully evaluate the potential safety factors and establish a more comprehensive inspection program for uranium mills.

The state agreed with the findings.

“We have already instituted a more comprehensive inspection program for uranium mills,” said Finerfrock. “As for the on-site investigations, the NRC review team recommends that we go directly to the licensee when there’s a question about an incident rather than contacting them by phone. Either way, we do thoroughly investigate incidents and make sure to follow up on any corrective actions.”

After the preliminary findings are reviewed, the NRC is expected to issue a final report in September.

Report a Risk: DEQ Risk Committee Committed to Workplace Safety

Accidents are a fact of life but the Department of Environmental Quality’s Risk Management Committee is working to make them a whole lot less common.

In the ten years since the Risk Management Committee has been in existence, the improvements have resulted in an annual 15 percent rebate – the highest possible – on the Department’s property and liability insurance.

“This has been achieved by maintaining the Risk Management Committee, performing self-inspections and attending Risk Management training,” said Daryl Cramer, facilities coordinator for DEQ. “Through annual self-inspections the Department has identified safety issues commonly found in the office environment and worked to correct them. Through Driver Education Training and the Committee’s efforts, along with those of the Office of Human Resource Management, has kept preventable accidents at a record low.”

For instance, during routine inspections the Risk Management Committee found some extension cords posing possible fire hazards, Cramer said. “Carpet snags were fixed to prevent people from tripping and other fire hazards were removed.”

Human Resources Manager Brooke Baker said it’s important to make sure employees are aware of the Committee’s roles and responsibilities to help minimize risks in the workplace.

“The basic task of the Risk Management Committee is to create and maintain a safe environment for all employees,” she said. “If an employee discovers an unsafe condition or practice, we encourage that person to report it to the Committee. We want to make sure DEQ is an accident-free environment.”

The Risk Management Committee meets quarterly, or as needed, to address the Department's risk management issues.

Members of the committee are:

- Chairman Lynn Menlove, Division of Air Quality;
- Risk Coordinator Daryl Cramer, Office of Support Services;
- Dale Urban, Division of Environmental Response and Remediation;
- Dale Jorgenson, Office of Support Services; and
- Brooke Baker, Office of Human Resource Management.

More information on Risk Management can be found at the Division of Risk Management's website at: www.risk.state.ut.us.

Please report any potential hazards to Lynn Menlove at lmnlove@utah.gov or 536-4185.

Seven DEQ Employees Receive Manager Certification

Seven Department of Environmental Quality employees graduated from the Utah Certified Public Manager (CPM) Program in July after completing a comprehensive course that provides them the leadership skills to become effective managers.

The graduates are: Doug Bacon and Doug Hansen of the Division of Environmental Response and Remediation (DERR); Eileen Brennan and Nando Meil of the Division of Air Quality; Michael Grange and Rich Peterson of the Division of Drinking Water and Blake Robertson of the Division of Solid and Hazardous Waste.

Participants found the course valuable.

"The program provided a skills base to further increase my professional growth," said Bacon, the Kennecott Superfund project manager for DERR.

"The friendships built and the knowledge gathered made the time spent worth it to me."

The CPM increases the professional performance of current and future government managers. It is a professional designation granted by nationally accredited programs in state and federal governments. Graduates of the program enhance leadership skills while participating in hands on learning directly related to public sector management proficiencies.

Fall classes start the week of September 3. For more information on the program visit: www.cpm.utah.gov.