

Indoor Air Quality in Northwest Schools

An electronic newsletter for school Indoor Air Quality (IAQ) exclusively for Northwest schools

Fall 2005

"... participants hope documented improvements in indoor environmental quality will be reflected in similar improvements in student health. "

Glen Patrick
See page 6

Indoor Air Quality News from the U.S. Environmental Protection Agency, Region 10

• EPA is now accepting Asthma Award applications. The awards are designed for a health care provider or health plan offering management of environmental asthma triggers as part of a comprehensive asthma management program. More information about the awards is at www.asthmaawards.info. The deadline for applications is February 1, 2006.

**Deadline
Alert**

Last year's winners were: Optima Health Plan in Virginia and Children's Mercy Hospital in Nebraska, Oklahoma, Kansas and Missouri. Details on last year's winners are at www.epa.gov/asthma/leadership_award_winners.html.

• EPA's Environmental Education grants program is now accepting applications. More information at www.epa.gov/enviroed/grants.html.

• The California Air Resources Board recently released a report that links environmental tobacco smoke to a variety of health effects ranging from asthma, sudden infant death syndrome and increased incidence of breast cancer in nonsmoking pre-menopausal women.

The review panel recommends that environmental tobacco smoke be listed as a toxic air contaminant, which would necessitate public meetings and assessment of the need for control measures.

The full report is available at www.arb.ca.gov/toxics/ets/finalreport/finalreport.htm

This information was provided by Susan Titus of the EPA Region 10 Indoor Air Program. She can be reached at 206-553-1189, or titus.susan@epa.gov.

School Indoor Air Quality Newsletter for Northwest Schools

A quarterly electronic newsletter exclusively for Northwest schools.

Please circulate this subscription opportunity throughout the Northwest to those who may be interested.

There are two ways to subscribe:

1) To view the newsletter, click here: www.energy.wsu.edu/projects/building/iaq_nl.cfm

The newsletter contains a link for subscription information.

2) Or, send a blank email message to: subscribe-iaq@listserv.energy.wsu.edu

You will receive a confirmation message. When you reply to that message you will be subscribed and will receive all future postings. You can easily unsubscribe at any time.

This broadcast email list not only provides automatic delivery of the quarterly School IAQ Newsletter, but includes announcements about news of interest, training events, grant opportunities, and other information useful to school districts, agencies, and stakeholders involved in school IAQ and operations and maintenance.

The newsletter is an opportunity for all interested parties to communicate, and add to the collective wisdom.



More IAQ News from the U.S. Environmental Protection Agency, Region 10

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New asthma publication from the U.S. Environmental Protection Agency

EPA's Office of Radiation and Indoor Air has released a new publication titled "Implementing an Asthma Home Visit Program: Ten Steps to Help Health Plans Get Started." The document is based on the experiences of several health plan organizations that implemented home visit programs as part of their comprehensive asthma management programs. It provides a step-by-step framework that any health plan organization could follow to design, implement, and evaluate an asthma home visit program. The document is available on EPA's asthma Web site at www.epa.gov/asthma/pdfs/implementing_an_asthma_home_visit_program.pdf. To order free print copies call 1-800-438-4318. Ask for publication number: EPA 402-K-05-006.

The following three items are reproduced, with permission, from the December 2005 issue of County Indoor Air Quality News, a publication of the National Association of Counties.

Seneca County completes 2005 model county IAQ grant project

The Seneca County General Health District (SCGHD) in Ohio received a \$5,000 grant in 2005 as a new National Association of Counties (NACo) IAQ Model County and Coalition Grant recipient to address the issue area of radon. The County initiated a program of targeting 6th grade students with age-appropriate education on radon, and gave them the opportunity to conduct short-term testing on their own homes and appropriate explanation of test results and follow-up.

Twelve presentations were given to six separate sixth grade classes on radon. The presentations used a Power Point presentation and a "radon house" to show the middle school students a model of how radon can enter the home. Aircheck short-term radon test kits to all interested students who had a permission slip to receive them were also distributed.

A total of 230 sixth grade students were presented with radon information. The students were taught about what radon is, the health effects of exposure to residential radon and how to properly use the short-term and long-term radon test kits that were being offered. 114 short-term test kits were distributed and after the results were

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Federal agency to monitor mold product claims

The U.S. plans to propose its first requirements linking label claims that a product can fight mold with product effectiveness. The full story is available at InsideEPA.com's Environmental Newsstand http://epa.iwpnewsstand.com/epanewsstand_today.asp. The Newsstand is a pay-per-view service, but new users get three articles free for registering. Scroll to headlines for Friday, November 18, 2005, and select "EPA Eyes Requiring Efficacy Tests In First-Time Mold Labeling Rule."

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More IAQ News...

Continued from page 2

received and explained to the students free follow-up testing was offered to any interested homeowner.

Radon promotional Frisbees were distributed to every student, with the Seneca County Health Department's address and phone number.

Boulder County completes another year of IAQ model county work

In 2005, Boulder County, Colorado, was awarded a grant through the National Association of Counties (NACo) IAQ Model County and Coalition Grant program, to address the issue area of air quality in schools. As a previous recipient, the county received \$2,000 this year to continue its "Healthy Indoor Air Project" addressing air quality in schools by covering IAQ in middle school health classes.

Approximately 917 students have been educated on prominent IAQ issues such as radon, biological pollutants, environmental tobacco smoke, carbon monoxide and asbestos through the program this year. Twenty-nine presentations covering these issues took place in schools across the county.

The students also submitted public service announcements for a newspaper ad contest focusing on reducing

indoor air pollution from hazardous waste fumes or pesticides.

The two winners of the contest had their ads printed in the two largest Boulder County newspapers, reaching an estimated audience of 59,000 people.

Children's environmental health awards 2006

The U.S. Environmental Protection Agency's Office of Children's Health Protection is accepting applications for the 2006 Children's Environmental Health Excellence Awards from now through December 15, 2005. The awards are designed to recognize ongoing and sustainable dedication to, and notable leadership in, protecting children from environmental health risks at the local, regional, national, and international level. Excellence Award winners will be invited to a reception in Washington, D.C. Excellence awardees will also receive the right to use the children's environmental health excellence awards logo, recognition on EPA's Web site and in a press release, and photos with a senior EPA official.

**Deadline
Alert**

To learn how your county can apply for the 2006 awards visit <http://yosemite.epa.gov/ochp/ochpweb.nsf/content/news2.htm>

What about FREE don't you understand?

By Dave Blake, Northwest Clean Air Agency

Free DVD: "Mold in Your Home: Causes, Prevention, Cleanup"

The Northwest Clean Air Agency has produced a 12-minute DVD designed to acquaint homeowners and renters with basic information about mold, as the DVD title implies. The DVD includes websites and phone numbers for more detailed information. It is free of charge. It is not copyrighted, so copying and sharing is encouraged. Although geared to residential structures, the mold principles discussed certainly apply



to school and other indoor environments as well and may be useful as a learning tool for staff or for classroom instruction. To order your DVD, contact Northwest Clean Air Agency at 360-428-1617 ext. 212, or dave@nwcleanair.org.

Free software available

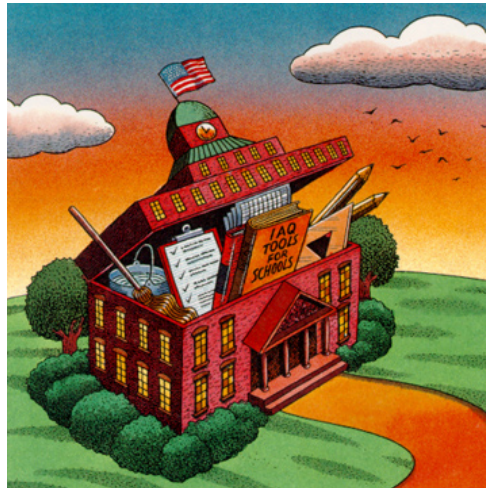
Check out the beta testing of the new Healthy School Environments Assessment Tool (SEAT) software program at www.epa.gov/region8/humanhealth/children/SmithFirstImpressionsHealthySEAT.pdf

IAQ Symposium Set

The U.S. Environmental Protection Agency's **Indoor Air Quality Tools for Schools symposium** is set for January 12-14 at the Grand Hyatt Hotel in Washington, D.C.

Mark Your Calendar

In 1995, the U.S. Environmental Protection Agency (EPA) introduced the Indoor Air Quality Tools for Schools (IAQ TfS) Program to help schools recognize the importance of managing school facilities to maintain a healthy indoor environment. IAQ TfS is a nationwide initiative to help school officials assess, resolve and prevent IAQ problems and reduce exposure to asthma triggers and other harmful pollutants in school facilities. The IAQ TfS Symposium highlights efforts schools can take to implement IAQ TfS and maintain a healthy school environment.



Every year, asthma accounts for an estimated 14 million missed school days by students and staff. According to a 1999 National Center for Education Statistics report, 43 percent of America's public schools – about 33,800 schools – reported at least one unsatisfactory environmental condition. Research reports suggest that students attending schools in poor condition score 11 percent lower on standardized tests than students attending schools in good condition. Mold, re-circulation of contaminated air, restricted fresh air intake, and pest infestation can create poor indoor air quality. Exposure to contaminants can trigger asthma and allergic sensitivities among students and staff.

The symposium features innovative sessions addressing various topics associated with implementing an IAQ program in a school setting. They include: Communicating IAQ issues among stakeholders in the local community; designing, building and maintaining healthy schools; school commissioning; mold and moisture; IAQ litigation; sustaining IAQ practices; materials selection and maintenance; asthma management, and more. Winners of EPA's prestigious IAQ TfS Excellence Award (www.epa.gov/iaq/schools/iaqtf awards.html) will be recognized at an awards luncheon.

Symposium participants include: school board officials; school decision makers; school administrators; architects; school nurses; teachers; facility managers; school and health association members; parents, and others interested in maintaining good indoor air quality in our nation's schools.

Registration opened July 1, and the symposium fee is \$300. More information is available at www.iaqsymposium.com.

Need some more good reasons to attend the symposium? Check out these quotes from your Northwest colleagues, who have attended this excellent gathering of the minds:

"The symposium brought us together with others from our region – these new relationships have helped us form a wonderful IAQ team in our area of Oregon. The progress we've made likely wouldn't have happened – at

least not as quickly – if we hadn't met and joined forces at the symposium.

This is also a very positive way for a local [education] association to show the school districts and the communities that it is possible to work together to improve the learning and working environment in the schools with little or no cost. It is a win-win process."

– James Sundell, Oregon Education Association UniServ Consultant, Albany, Oregon

"The information was invaluable. I would never have known how easy it is to rectify most air quality issues. The students really enjoyed seeing how their actions impacted the air quality. One girl had placed her slippers on the heating vent to dry, but when the students realized that their clean air had to get through her slippers to get to them, well you can imagine, the slippers were moved immediately!"

– Kimberly Fandiño, Spanish teacher, Social Systems Academy, Lebanon High School, Lebanon, Oregon

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Washington School Committee for Indoor Air Quality

By Dave Blake, Northwest Clean Air Agency

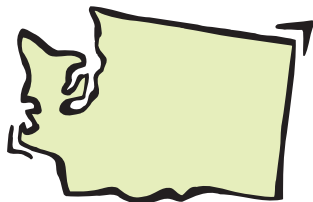
Washington School Committee for Indoor Air Quality promotes and supports action to improve and maintain air quality in schools. The WSC-IAQ is composed of representatives from agencies and associations concerned with school issues across the state. This collaboration has improved communication among these entities and allows for important issues to be discussed by upper management representatives who can readily turn discussion into action. The WSC-IAQ has been meeting quarterly for more than three years and projects generated by this ad-hoc group have already had a positive impact in school districts across the state.

The committee met initially to explore means of expanding two successful local programs statewide. The "Rehab the Lab" program directed by Dave Waddell focuses on identifying and removing unnecessary, dangerous chemicals from school labs. The other program was the Northwest Clean Air Agency's indoor air program in Mount Vernon, which has helped many schools implement their own formal indoor air programs with written policies and procedures.

The committee used a 2003 grant from the U.S. Environmental Protection Agency to train five local health departments on how to do school IAQ walk-through evaluations and provide follow-up assistance to school districts in the process of implementing customized IAQ programs.

In the spring of 2003, WSC-IAQ sponsored "High Performance Green Cleaning" workshops on both sides of the North Cascades, led by Steve Ashkin of The

Ashkin Group. In the Northwest corner of the state, 14 schools in five districts embarked on a Green Cleaning Pilot Project for 2003-2004. This was the first attempt nationwide to implement green cleaning programs into multiple school districts simultaneously. All 14 schools successfully used up their former stockpiles of toxic cleaning chemicals and transitioned to healthier supplies, each meeting at least the equivalent of "Green Cross" certification.



EPA funding is no longer available, so funding is a regular topic on WSC-IAQ meeting agendas. We feel much more can be accomplished in our state using existing resources. Each meeting provides an opportunity to share ideas and discuss IAQ issues. We also try to add a solid educational component to each meeting with a presentation from an individual with poignant experiences to share on an IAQ topic. Washington State has a national reputation for our progress regarding IAQ in schools and the committee hopes to continue to promote improvement.

The WSC-IAQ seeks to get more school districts and local health departments involved in the dialogue. While the meeting is based in Burien, school staff can access

the meeting via the K-20 video conferencing system throughout Washington. The next meeting will be held November 16 from 9 a.m. to noon. For information on how to participate, contact Tim Hardin at the Washington State Department of Health, 360-236-3363 or tim.hardin@doh.wa.gov.



Dave Blake checks out the air quality.

Tools for Schools Roadmap for Success

By Rich Prill, WSU Energy Program

Okay, you've been meaning to get a Tools for Schools program off the ground in your school, but it's just too overwhelming. EPA suggests following this "Roadmap."



1. Make the commitment to improving IAQ and preventing future problems and then review the contents of the TfS Kits. Avoid disappointment and/or burnout by setting realistic goals.
2. View the TfS video and the School Walk-through video.
3. Browse through the Kit's IAQ Coordinator's guide to help you get organized.
4. Market and gain a commitment from administration, staff, and parents.
5. Assemble a team of interested people to help lend a hand and add their own expertise to the process.
6. Distribute individual TfS checklists to the appropriate people – provide a due date and a polite follow-up.
7. Compile findings from the checklists and conduct a walk-through to gain perspective on the issues and reinforce the school's commitment for progress.
8. Use the findings and observations from the checklists, walk-through, and any measurements to prioritize a list of action items.
9. Fix priority items immediately and ensure no unintended consequences arise from these fixes.



Student health and indoor air quality in our schools

By Glen Patrick, Washington State Department of Health

The Washington State Department of Health is looking into the relationship between student health and indoor air quality in our schools. The project is intended to support standardized student health and indoor environmental quality data for use by schools in improving the learning environment and student health. The project is funded by a grant from the Centers for Disease Control and Prevention, Environmental Public Health Tracking Network program.

A diverse committee of people very experienced in IAQ work in Washington schools gathered in Spokane in March to hammer out details of what could be reasonably expected of schools in terms of initial baseline IAQ survey data collection and what should be re-checked on a periodic basis. The outcome of this effort is for the group to agree (to the extent possible) on a set of recommendations/guidance for schools, to gather and submit information and measurement data related to environmental asthma triggers.

Long term, participants hope documented improvements in indoor environmental quality will be reflected in similar improvements in student health. Anyone who has tried to access student attendance data knows this is not easy. Record keeping systems vary among school districts. Confidentiality issues are very sensitive. Past records are often destroyed annually. We will try to keep you posted on progress with this interesting project.

Glen Patrick, an epidemiologist with the state Department of Health, is directing the IAQ project. He can be reached at 360-236-3177, or g.patrick@doh.wa.gov.

Bleach use in schools

By Jim Kerns, Educational Service District 101, Spokane, WA

I have recently received several inquiries regarding the use of bleach in schools.

I contacted the [state] Department of Health and spoke with Janet Anderberg, the food service supervisor, and asked her to reply to this question. Attached is her reply. Please share this information, e.g. the home economics teacher and other staff members who might need this and sanitize wrestling mats, etc.

Please note the words "...properly mixed with cold water..." and "... bleach water (again, when properly prepared)..." in Ms. Anderberg's reply. Depending on the application, bleach needs to be mixed in the proper proportions.

While it might go into the washing machine full strength, it is almost never used as a sanitizer in full strength. As a sanitizer, it might be used in a 5 percent to 10 percent solution, depending on the application. (1 oz. of bleach per 10 oz. of water is a 10 percent solution. 1 oz. per 20 oz. is a 50 percent solution.)

Another consideration is the strength of the product. Most bleach, sold in grocery stores, is a 5.25 percent solution of sodium hypochlorite. However, some of the newer "super bleach" products are a 6 percent solution. Using 6 percent bleach will increase the strength of the solution. As with all chemicals, READ THE LABEL!

Bleach is NOT A CLEANER. It is a SANITIZER! It may be used to SANITIZE an object or a place after that object or place has been cleaned.

Finally, bleach, in any concentration, must be clearly labeled and kept in a secure place, and must be kept away from food items.

Sodium hypochlorite (common bleach) is a wonderful product that is used throughout our environment, including our homes, to sanitize our clothes in the washer, to wipe germs off items, to sanitize our swimming pools and hot tubs, etc.

If misused, it can also be a dangerous product that can take the color out of our clothes, damage our skin or eyes, or be poisonous if ingested. Bleach should be kept away from children at all times

James T. Kerns, CSHM, CPEA
Director of Risk Management
Educational Service District 101

Subject: RE: Use of Bleach in
Public School Environments?

"Jim,
Household bleach is an acceptable ingredient in sanitizing solutions in Washington State. Bleach, properly mixed with cool water is an effective and inexpensive sanitizer. Based on our Food Code and on rules established for schools, the use is bleach water (again, when properly prepared) meets our standards. Let me know if you have any follow up questions."

Janet Anderberg, R. S.
Washington State Dept of Health
Division of Environmental Health
Food Safety Program

Northwest Notes

Green Cleaning Pilot Project: Year Three Update

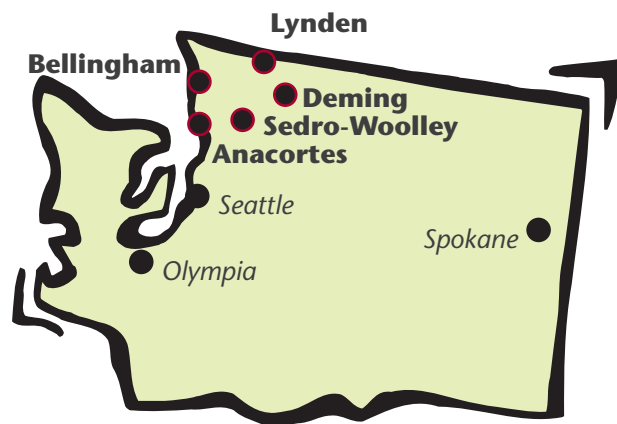
In 2002, the Washington Schools Committee for Indoor Air Quality used grants to hire Steve Ashkin of the Bloomington, Indiana-based Ashkin Group to provide several workshops across Washington State to promote high performance green cleaning in schools.

The workshops generated enough enthusiasm to inspire 14 schools in five school districts to create a green cleaning pilot project, now is in its third year. This fall, every school in each of the five participating school districts has switched over to green cleaning chemicals, a total of more than 50 schools.

In **Anacortes**, head custodians Von Storme and Bill Faulkner have transitioned their schools from a mix of chemicals and cleaning compounds to acknowledged green products, with great success. In response to their efforts, the district has set a policy that all schools in the district will follow their lead. Another outcome of the green cleaning pilot project was Storme's idea of involving elementary school children in the deep cleaning process as a competition among classrooms. This has been a real hit (see the Winter 2004 issue for more information). The U.S. Environmental Protection Agency recognized the Anacortes School District with an EPA IAQ Tools for Schools Leadership Award last year.

In **Lynden**, the Lynden Christian School campus (which includes an elementary, middle school and high school) went green in 2002 and their superintendent is a strong proponent of the merits of green cleaning and paying attention to indoor air quality.

In **Bellingham**, the school district's Mike Anderson and Chris Dean report: *The Bellingham School District has 25 sites with approximately 1.5 million square feet of buildings to clean and maintain. In 2002, we took steps to introduce environmentally friendly cleaning chemicals to enhance our on-going air quality program and meet our goal of achieving safety and comfort for students and staff.*



The implementation of the new green cleaning chemicals was phased in slowly starting with a few sites. This allowed custodial staff to evaluate the new products and answer the questions, "Are they effective? And do they make a difference?"

At monthly staff meetings, the custodial staff was trained and their concerns and questions on the new product were discussed. One concern was the initial start-up cost. What would happen with existing chemicals? Would the money spent on some of those be wasted?

To phase in the new product efficiently and cost effectively, we removed all existing chemicals from our initial sites and brought in the new green chemicals. The cleaning chemicals removed from these initial sites were transferred to schools ahead of the green cleaning program to be used till gone. This process continued until the only remaining chemicals were at the final site to be changed over. After 18 months we were able to completely change our inventory at all sites to green products.

The building administrators have been supportive of the EPA Tools for Schools program and have welcomed new cleaning products as an effective tool in maintaining a safe and healthy environment for students and staff.

In 2003, the Bellingham School District received an EPA Excellence Award for indoor air quality efforts.

In **Sedro-Woolley**, the school district joined the pilot project with one school only, not wanting to be left out, but also not wanting to over-commit. Big Lake Elementary School's successful transition to green cleaning compounds has since led to the entire district making the switch. Now, the vast majority of old-line chemicals have been used up. Mike Riddle, director of maintenance and grounds (and EPA 2000 IAQ TFS Excellence award winner) reports that, without any budget increase, the district has "gone green." They have also established a three-person crew that does

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Green Cleaning Pilot Project...

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project cleaning unless they are needed to substitute for absent custodial staff. In the old days, carpets only got cleaned in the summer. Now, the project cleaning crew concentrates on flushing and restoring carpets in rooms requiring priority attention throughout the school year, whenever the students have a day off. Riddle is very pleased with progress in the district and happy to share details. Contact him at 360-855-3505, or mriddle@swsd.k12.wa.us.

In **Deming**, Mount Baker School District's Frank Cain reports, "we switched over long ago and you know it is just a way of life for everyone. Custodians like the way all the materials, whether it be cleaners, polishers or sanitizers, get the job done more easily and especially that there is no caustic reaction to their hands or offensive smell. Overall folks are happy with the switch."

IAQ Symposium

Continued from page 4

"The best school IAQ conference I have attended. Top instructors from throughout the country, and the audience included all of the players: administrators, teachers, nurses, and facilities, maintenance and custodial staff."

– **Jim Kerns**, Risk Manager, Educational Service District 101, Spokane, Washington
(Kerns is a recipient of EPA's Indoor Air Quality, Tools for Schools, 2001 Special Achievement Award.)

"Fellow School Professionals: I've gone twice now, and both times have brought back great ideas and put them to work. The first year I attended there was a real push to get school nurses involved in IAQ programs. This really works, as most people/staff listen to and respect the school nurse, while they often disregard recommendations from maintenance staff and even safety staff."

To me the most beneficial part of the symposium was the simple discussions and collaboration time I had with other IAQ professionals located throughout the nation. I learned so much about so many different IAQ topics."

– **Larry Hagel**, School District No.81, Spokane, Washington