

Indoor Air Quality in Northwest Schools

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

Spring 2005

"It will take time and money to address the issues and challenges we find, but the district very much wants to be proactive in response to problems or concerns."

Steve Dustrude

Leading by Example: Oregon school district updates IAQ program

*By Steve Dustrude, President,
Springfield Education Association
Springfield, Oregon*

In early March, the Springfield School District took advantage of an opportunity to update its indoor air quality program and get some on-site technical assistance and staff training. Rich Prill, an indoor air quality specialist from the Washington State University Extension Energy Program, with support from the Region 10 office of the U.S. Environmental Protection Agency, visited with the district to work on IAQ issues. The district has used the EPA's *Tools for Schools* Action Kit in a limited way for a number of years, but wanted to make our IAQ program more comprehensive.

During his three-day stay, Prill toured three schools with an enthusiastic team that included district administrators, building personnel, and maintenance, facilities, and risk management staff. The group visited Maple Elementary School, Briggs Middle School and Springfield High School. We used this visit as a unique hands-on skills training opportunity in our own buildings. Prill showed the team how IAQ assessments are performed; pointed out specific issues for our buildings and climate; and demonstrated the use of a variety of IAQ monitoring devices. These cooperative efforts gave a boost to the school IAQ efforts.

Since that visit, the Springfield School District has purchased instruments to measure carbon dioxide, temperature and moisture, and is planning to implement *Tools For Schools* in all our schools – or as many

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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.



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Leading by Example...

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as possible prior to the end of this school year. Those buildings that aren't surveyed this spring will be scheduled for next fall.

Once the baseline information is collected and the team debriefed, the district will be able to strategically plan how to follow up.

For example, as a result of Prill's visit, we diagnosed classroom heat-buildup problems at Maple Elementary, and ventilation problems in portable classrooms at Springfield High. It will take time and money to address the issues and challenges we find, but the district very much wants to be proactive in response to problems or concerns. Our experience this spring will also allow the district to make improvements over the summer.

The district's risk manager will lead Springfield's team, assisted by maintenance, carpentry and grounds foremen, and the deputy superintendent. We expect to have members from each building staff accompany the team as they make observations and measurements, document conditions, and discuss findings and solutions. This process will be essential to helping the district prioritize and make the most informed decisions on resource allocation; and will allow building occupants and facilities staff to discuss low-cost and no-cost efforts that often result in immediate improvements.

We envision a three-step process at each school:

- 1) A team led by our risk manager and building representatives collect data;
- 2) The team discusses the findings and briefs the building administrator and staff (or their representatives), and;
- 3) Participants develop a plan to address IAQ issues.

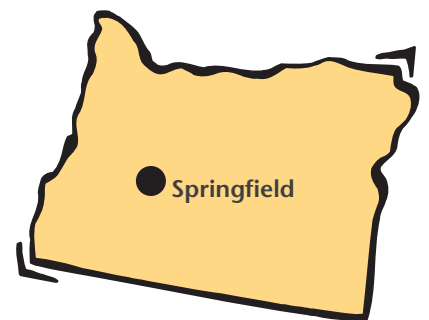
We believe this approach will pay off in increased staff awareness, renewed confidence in the district's IAQ approach, and ultimately a better learning and working environment for students, staff and the community.

Contact Steve Dustrude at: seaprez@mindspring.com, or 541-726-8388. ■

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May 2005



Oregon schools connect... and win!

At this year's *Tools For Schools* Symposium in Washington, D.C., representatives from Oregon schools met indoor air quality specialists Rich Prill, Dave Blake and Lindarose Allaway – a bit of a roundabout way to meet your neighbors, but the outcome has been spectacular.

This group immediately saw the opportunity to form a team to effectively bring indoor air quality awareness and technical expertise to schools in the mid-Willamette valley. In February, immediately after returning to the Pacific Northwest, James Sundell, Unified Services consultant for Oregon Education Association, Unit 423, in Albany, gathered the team together to share information, discuss roles and strategize. The team that emerged consists of: Sundell; Jennifer House of Riverview Elementary in the Lebanon Community School District; Kim Fandiño, Lebanon Education Association president from Lebanon Community High School; Carolyn Smith-Evans, chair of the National Education Association's Healthy Schools Caucus, of the Salem-Keizer School District; Allaway an asthma educator from Portland; Lina Mespelt of the Greater Albany Public School District; and Rich Prill of the Washington State University Extension Energy Program.

This was the beginning of a flurry of activity in the weeks that followed. Just days after the team meeting, Sundell gave school IAQ information and video presentations to the Three Rivers Educational Council (TREC) and Santiam UniServ Councils in Eugene and Albany respectively. He shared the *Tools for Schools* information with all UniServ staff in Oregon at their regular meeting in March.

The team arranged for Prill and Allaway to conduct a school IAQ hands-on training and walk-through in Lebanon Community Schools. Thanks to Fandiño's excellent organizational and diplomatic skills, this event, conducted at the high school, was a terrific success. In fact, Springfield Education Association President Steve Dustrude not only participated, but brought along a deputy superintendent of Springfield Schools, Steve Barrett. They were both impressed with the importance of this effort and the team's enthusiastic and practical approach. (See related article by Steve Dustrude on page 1.)

Next, Sundell arranged for Prill to meet with the principal at Pioneer School in Lebanon for an abbrev-

viated walk-through, an opportunity to share information and promote awareness. Also in February, the Unit 423 IAQ Team gave a presentation titled "*Indoor Air Quality and You*," at the Pacific Regional Leadership Conference in Portland. Representatives from eight states attended the conference.



Left to right: Lindarose, Kim, Jennifer, James, Carolyn at the Pacific Regional Leadership Conference in Portland

A brief overview of the symposium presentations:

James Sundell introduced the team and provided background information, delighting the crowd with a description of how members had to go all the way to Washington, D.C., to meet. He described how the team formed, what its goals and strategies were, and emphasized the critical importance of paying attention to indoor air quality in schools.

Sundell also shared information for Lina Mespelt of Periwinkle Elementary in Albany, Oregon, who was unable to attend. Mespelt, part of the Greater Albany Association of Classified Employees and the Greater Albany Education Association, is taking the lead on IAQ issues with the district administration. She will be coordinating training and school IAQ walk-throughs with Rich Prill.

Jennifer House of Riverview Elementary in Lebanon, Oregon, charmed the audience with her personal experiences in a brand new school that caused health concerns among the staff and students. She was told "nothing could be done." Unwilling to

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Oregon schools connect...

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believe that, House attended the U.S. Environmental Protection Agency's *Tools For Schools* IAQ symposium in December 2004. As she networked with others at the symposium and attended the presentations, she immediately recognized her quest for meaningful and practical solutions had been successful. She was eager to join the team and get started.

In February, House arranged for IAQ specialist Rich Prill to meet with her principal and the school's facility operator for a walk-through. Later, Prill met with House's Safety Committee and shared a wealth of first-hand experience with these representatives.

Thanks to House's efforts, all the stakeholders in her school are working together to find practical and effective solutions. House's advice to the leadership conference participants: "You can do something about your school's indoor environment!"



Jennifer House speaking to conference participants

Kim Fandiño of Lebanon High School, gave an excellent overview of how she helped the Lebanon School District through some difficult IAQ issues:

The story began with good news: Bond money was available for new buildings and major renovations at existing schools. This resulted in two new buildings and six renovations. Wonderful! However, all is not well if it doesn't end well: IAQ issues began to surface in the two new buildings.

The major wake-up call came from the high school. In the spring of 2004, teaching staff noticed custo-

dial staff working on what they knew were asbestos tiles. Custodians had removed splash guards that protected the fragile edge of old asbestos tiles in the classrooms.

Custodians removed the protective seal from asbestos tiles in the hallways to provide a rough surface on which to attach new tile.

All this happened while students and staff were in the buildings. Concerns about exposure to asbestos were confirmed when students and staff arrive one day to find a portion of the building sealed off.

Ignorance is not bliss. Students, parents, staff and community were not informed about the situation, which led to serious issues of trust and credibility. The Occupational Safety and Health Administration fined the district for three serious violations.

So, when the UniServ office sent information about EPA's *Tools for Schools* IAQ symposium, Fandiño and others were very interested.

Fandiño said the information, contacts and networking opportunities at the symposium were excellent. "The symposium made our decision to move forward with an IAQ preventive plan easy," she said, "but would the district agree?"

It's all in the approach. Sure, there are lots of good reasons to provide good IAQ:

- Healthy Schools
- Curriculum
- Achievement
- Performance
- Attendance
- Good public relations
- Liability

Find the hook that will meet your district's interests, said Fandiño. In Lebanon, student achievement and learning are the buzzwords of the moment, so Fandiño decided to approach IAQ from that angle. She involved science teachers from day one.

Upon returning to Oregon, she spent time in the labor/management meeting, discussed the information she had learned and showed the connection to current science classes and projects in the district.

Fandiño spoke again with the science teachers and the building principals about the IAQ projects and possibilities. She also obtained permission to bring in a specialist (Rich Prill of the WSU Energy Program) to train district staff in how to do a building walk-through.

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Oregon schools connect...

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“Our district felt a little pressure about having guests assessing our school, and our HVAC technology director decided to join us for the IAQ walk-through,” said Fandiño.

“And it was a great success!”

She had informally discussed school IAQ issues with her colleagues after returning from the symposium, but when they saw the team wandering the building, top to bottom, with strange gadgets and instruments their interest was peaked, she said. And so was the students! They asked many questions and received honest answers. On the whole, they were very receptive and positive about the experience.

“The final steps of your IAQ program are determined

by your building’s needs after you do the walk-through,” said Fandiño. “We still have a more formal walk-through planned, but we now have district support, staff buy-in, and student interest. And, I’m positive the community is behind this a hundred percent. We are on the way!”



Kim Fandiño describing her success story to the audience

Lindarose Al-
laway, a certified asthma educator from Portland, Oregon, provided a brief overview of asthma and allergy impacts that can result from school environments. She explained that children are different – they aren’t just little adults. Children grow rapidly and their developing systems are vulnerable. Children’s inhalation exposure is greater due to their smaller body size, and early exposure is a significant risk factor for development of chronic disease.

Children suffer from fatigue and are distracted by symptoms, which impacts achievement. Once sensitized to an allergen, very small exposures can cause a reaction.

Lindarose described asthma as an airway obstruction due to inflammation, which is only partially reversible, and is present even when symptoms are absent. Individuals with asthma exhibit increased responsiveness to a variety of stimuli: irritants, allergens, cold, exercise. Asthma triggers commonly found in schools include odors, fumes, animal dander, pollen, mold, chemicals and dust mites. Exposure to combustion byproducts, rodents and insects are also possible in some schools.

Currently, it is estimated that there are typically two students with asthma in the average classroom, and the U.S. Centers for Disease Control consider asthma to be of “epidemic” proportions.

Rich Prill of the Washington State University Extension Energy Program in Spokane, Washington, provided a “virtual” walk-through slide show that visually illustrated typical IAQ findings in Northwest schools. Prill explained the importance of adopting a customized IAQ program for every school. “Without a program there are no agreed-upon expectations for the indoor environment, and thus it’s a free-for-all and can be a black hole for resources (both time and money),” he said.

It’s best to have the district administration, the building occupants, and other stakeholders agree on a set of good IAQ practices that are practical, effective and affordable. These good practices should be specific and provide detailed guidance. An effective IAQ program should also outline expectations: what the occupants can expect from the district, and what the district expects from the occupants. Most important, is to get started, Prill said. Identify IAQ immediate needs and address them now.

How extensive should a program be? Prill explained that each building has its own set of IAQ challenges, therefore all programs will necessarily be somewhat individualized. Clearly, each school’s program should be organic, that is, it should naturally evolve over time as issues are resolved and new challenges arise, he said. Without a program or plan, IAQ can turn into expensive chaos.

Carolyn Smith-Evans, chairwoman of the National Education Association’s Healthy Schools Caucus, is from the Salem-Keizer School District. She explained that she was participating in the presentation informally, not as part of a team, and outlined her

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Oregon schools connect...

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activities related to IAQ and toxics. Her recent activities include:

- 1) Participation on the committee to write a constitution and bylaws for the caucus, to be ratified this summer at the National Education Association Representative Assembly;
- 2) Leading the budget campaign to raise additional funds for IAQ training;
- 3) Participation in the Pacific Regional Meeting on IAQ issues in February;
- 4) Holding a caucus meeting at the Oregon Education Association State Representative Assembly, and manning a caucus table on Tools for Schools, IAQ and toxics issues;
- 5) Requesting a session on IAQ at the Women's and Minority Conference preceding the National RA.

Smith-Evans is currently planning activities to raise money for IAQ trainings, and to raise awareness among women and minority caucuses. ■

Notes from the Field

GRANT AWARDED

The U.S. Environmental Protection Agency has awarded an Environmental Education Grant to the Idaho Environmental Health Education and Assessment Program. The grant will provide funds over the next two years to train teachers on environmental health issues in the state and how they can integrate the information into their existing curriculum. As part of the grant, EHEAP will distribute its award-winning Environmental Health Lesson Plans for Educators, train teachers to pilot and evaluate these lesson plans, sponsor workshops to educate teachers about local environmental health issues, provide support and resources for participating educators, and increase student and teacher awareness about how the environment can affect human health. For more information, contact Chris Corwin at 1-866-240-3553, or corwinc@idhw.state.id.us ■

New listserv offers student and teacher IAQ activities

The National Education Association and the U.S. Environmental Protection Agency have created a listserv dedicated to sharing information about ways to involve students of all ages in activities related to school indoor air quality. The listserv is moderated by EPA IAQ veteran Shelly Rosenblum, who encourages member participation, guides the discussion of issues and posts reference files to involve students and staff in IAQ activities.

It's easy to join and participate at a level that is comfortable for you – just “listen in” to postings from others, or contribute your own comments, stories and questions. EPA's *Tools for Schools* program is a commonsense approach to improving your school's indoor environment. Students can take the lead on implementing this program. Many teachers have already begun to involve students of all ages in IAQ activities. The NEA Health Information Network and EPA have established the listserv so teachers can exchange ideas and activities to improve the indoor environment, and achieve academic goals by involving students. Because we spend 90 percent of our day in buildings, the indoor environment is truly the human environment. Join the listserv now at <http://groups.yahoo.com/group/studentandteacheriaqactivities/>

Indoor Air Quality Tools for Schools National Symposium set for January

The U.S. Environmental Protection Agency will host its 6th Annual Indoor Air Quality *Tools for Schools* National Symposium on January 12-14, 2006, in Washington, D.C. This is a great opportunity to learn more about IAQ in schools. (Get the details at www.epa.gov/iaq/schools/.) It also provides a chance to share what you have learned with others in a positive, inspirational setting. (See the success stories in this publication from Oregon professionals who attended last year's symposium.)

Sessions addressing topics associated with implementing an IAQ program in a school setting 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 selections and maintenance; asthma management, and more.

The symposium attracts school board officials, school decision-makers, 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.

Winners of EPA's prestigious *IAQ Tools for Schools* Excellence Award will be recognized at an awards

luncheon. If you are making good progress on IAQ in your district, why not apply for an award? (See details at www.epa.gov/iaq/schools/iaqtfawards.html.)

Full scholarships to attend the symposium are available from partnering agencies and organizations. Check the EPA symposium website.

Registration opens July 1, 2005. Get details at www.iaqsymposium.com/. ■

Resources used in this issue:

EPA Website: www.epa.gov

NEA/EPA Listserv: <http://groups.yahoo.com/group/studentandteacheriaqactivities/>

EPA *Tools for Schools* National Symposium:

Information: www.epa.gov/iaq/schools/

Registration: www.iaqsymposium.com/

WSU Energy Program:

Rich Prill – (509) 477-6701 – prill@energy.wsu.edu

Springfield School District, Oregon:

Steve Dustrude – (541) 726-8388 – seaprez@mindspring.com

Idaho State Department of Health and Welfare:

Kara Stevens – (208) 332-7319 – stevensk@idhw.state.id.us

Chris Corwin – 1-866-240-3553 – corwinc@idhw.state.id.us

The Winding Road to Healthy Cleaning in Northwest Schools

By Erin Hamernyik, Washington State University Extension Energy Program

After leading a three-year federally funded program in Bellingham focused on asthma and cleaning, I was asked to create a healthy cleaning guide for Northwest schools.

Initially, I thought I would be reinventing the wheel, and sort of scoffed at the assignment. However, after some extensive background research, I didn't find a document or program that captured all of the necessary aspects of a multi-disciplinary healthy cleaning program for schools. There were great programs for specific aspects of cleaning, but none that corralled all the info, spelled it out, tied it with a bow and made it presentable – much less regionally adoptable. My task was to raise the bar a little higher and look for a way to combine all this talent into a program that could be nationally adopted.

It is clear that the challenges schools face in implementing such a program have been longstanding. Budget concerns probably rank the highest among those hurdles. But as we all know, budgets are based on needs and the perception of needs. As of late, schools are shifting to the perspective that “health is a necessity.” This growing acceptance is leading to the question: “How can we create healthy schools?”

As lead investigator on the Healthy Homes Program in Bellingham, funded by the U.S. Department of Housing and Urban Development, I learned it is best to start with the obvious and work toward the sublime. I have attempted to sketch out such a program, hopefully with the blessing of the contributors listed at the end of this article.

Working within a small budget, I have assembled what I hope is a first step in creating a healthy clean-

ing guide for schools. The work of many great contributors in the field has been organized into four categories of performance support.

1. Administrative Support Structure
2. Responsibilities of Staff
3. Cleaning Protocols
4. Cleaning Agents and Equipment

These four focus areas serve as the structure for the proposed “Healthy Cleaning in Schools Guidance.”

The main level of support must come from administrators who believe in the ideal of a healthy school. This vision permeates from top administrators, teachers, janitorial staff, all the way to the student level. Along with this vision, appropriate levels of funding and training are provided. Cleaning protocols are designed, and all cleaning agents are, of course, non-toxic. Ongoing assessment is integrated into the program.

The overall structure could follow the U.S. Environmental Protection Agency's Tools for Schools Program, or even the U.S. Green Building Council's Leadership in Energy and Environmental Design program approach, where there are various levels of commitment and cooperation. There are currently a few school districts poised to take on such a program. They already have what it takes, and are excelling in their current programs. It would be my hope that these “early adopters” could break the trail for those who will be soon to follow.

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A shoe-cleaning mat can do wonders for a school.

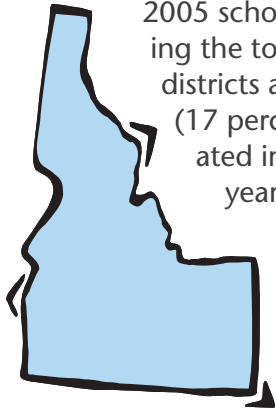
Northwest Notes

Idaho's IAQ school update

May 2005

Tools for Schools Update

The state Division of Health, Idaho Indoor Environment Program, and the Washington State University Extension Energy Program have provided IAQ evaluations in another 39 Idaho schools during the 2004-2005 school year, bringing the total to 19 school districts and 156 schools (17 percent) evaluated in the past five years. Comments received from school districts continue to be positive as we assist them in being



proactive rather than reactive when it comes to IAQ issues in schools. If you are interested in having an evaluation or would like more information, please contact Kara Stevens, Manager, Idaho Indoor Environment Program at 1-800-445-8647, or stevensk@idhw.state.id.us

Radon/IAQ Activities for Schools

The Idaho Indoor Environment Program has grant funds to provide radon test kits to a limited number of schools each year. There is no charge for the tests or the analysis. If you are interesting in having your school tested for radon, please contact the hotline at 1-800-445-8647.

Poster Contest Winners

The Idaho Department of Health and Welfare, Bureau of Community and Environmental Health, has awarded winners of the 2005 State Radon Poster Contest new Gary Fisher mountain bikes from World-cycle in Boise.

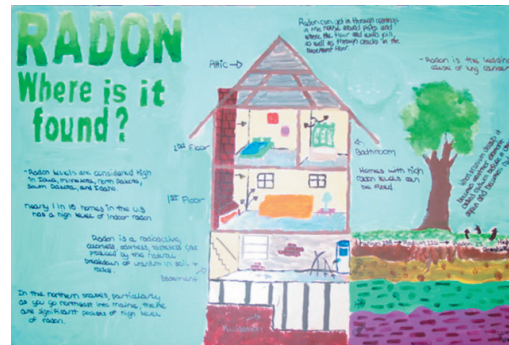
Katie Young and Shelby Soule from North Junior High in Boise teamed up to put together the grand prize winning poster in the non-computer generated category. The girls are neighbors and plan to share the bike. Amanda Nelson from Moscow Junior High School was the grand prize winner for the computer generated poster. Plans

are already in the works to hold the statewide poster contest again this fall in connection with the U.S. Environmental Protection Agency's National Radon Contest. Students from Idaho will compete regionally first and then at the state level. The two state winners will then go on to compete nationally for a trip to Washington, D.C.

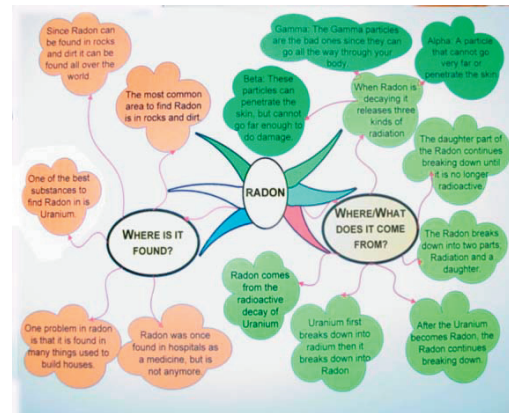
Book Cover Project

The Idaho Indoor Environment Program is in the process of developing a book cover for both K-6 and 7-12 grades, and an activity book for younger children. Both items should be available in time for the

upcoming school year and will include information, games, and activities on indoor air quality issues such as radon, mold and lead. If you would like copies for your school, please contact Stacie Golden, health education specialist, at (208) 334-4961.



Katie Young and Shelby Soule's non-computer generated poster.



Amanda Nelson's computer generated poster.

partnering with the Idaho Asthma Prevention and Control Program to implement the Healthy Homes, Head Start intervention with Head Start offices around the state. The goal is to reduce environmental exposure and asthma and allergy triggers in the homes of Head Start families. The program trains staff on how to conduct an in-home environmental assessment. The intervention training has been offered to Head Start staff in Fruitland, Caldwell, and Twin Falls, as

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The Winding Road to Healthy Cleaning...

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The following sources were used in putting this article together.

- “Standard Levels of Service,”* Vancouver, Washington School District
- “Helpful Hints for IAQ Coordinators,”* Adina Neal, Sagus Union School District
- “Cleaning Practices for the Home & Workplace,”* Stephen Ashkin, The Ashkin Group, (812) 332-7950
- “Environmental Quality TFS Supplement,”* WSU Energy Program
- “Shelburne Schools Report,”* Stephen Ashkin, The Ashkin Group

“Chemical Use Reduction for Improved Air Quality in Schools,” Commonwealth of Massachusetts

“Cleaning Makes Cents,” BOMA.org

“Chemical Use Reduction for Improved Air Quality in Schools,” Commonwealth of Massachusetts

“Housekeeping Survey Form,” The Ashkin Group

“Irritants and Allergens at School in Relation to Furnishings & Cleaning,” Greta Smedje & Dan Norback

“Custodial Manual,” Salem Kaiser Public Schools, Vonnie B. Good, (503) 399-3070 ■

Northwest Notes

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well as the Idaho Migrant Council Head Start Program in Nampa. A training for the Bear River Head Start Program has been scheduled in Preston later this summer.

Environmental Health Lesson Plans for Schools

The Idaho Environmental Health Education and Assessment Program recently finished its third update of “Environmental Health Lesson Plans for Educators.” These lesson

plans were developed to increase awareness of environmental health issues in Idaho schools. The plans are broken down into two grade levels, K-6 and 7-12. In addition to the lesson plans, EHEAP staff are available to come to your school to demonstrate lessons. Chris Corwin, health education specialist, has given several school presentations already, ranging from local environmental health issues to reducing exposure to household toxic chemi-

icals. For a free copy of the lesson plans, visit the website at www.healthandwelfare.idaho.gov/_Rainbow/Documents/Environmental%20Health%20Lesson%20Plans.pdf.

For more information, or to schedule a presentation, contact Corwin at 1-866-240-3553, or corwinc@idhw.state.id.us ■