

“Don’t forget that old-fashioned liquid cleaning products can involve risks for respiratory disorders.... ”

Jan-Paul Zock,
Centre for Research in
Environmental
Epidemiology,
Municipal Institute of
Medical Research,
Barcelona, Spain

See page 7.



Indoor Air Quality in Northwest Schools

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

Fall 2007

Sustainability, K-12 Schools and the Sustainable Oregon Schools Initiative

The concept of sustainability is recognized internationally. A commonly used definition stems from the United Nation’s Brundtland Commission:
Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainability is More than Green

Sustainability is about more than just reducing our negative impact on the environment. It requires that we look at systems, how the system operates, what is in the system, and how our actions can cause change to the system. “Being Green” means taking a look at specific activities and finding opportunities to reduce their environmental impact. It doesn’t necessarily consider whether the activity should happen in the first place, what the impact of that activity is on its surroundings or on social well-being, or how it might touch those in the larger global community. Table 1 compares “green” to “sustainability.”

Table 1.
Comparing “Green” to “Sustainability”

Green	Sustainability
• Detail-focused	• Whole systems focus
• Tactical	• Strategic
• Ecological	• Triple bottom line
• Lacks common definition of success	• Capable of defining success

All facets of school district activities play a role toward sustainability. While achieving full sustainability is not possible in the short term, recognizing the issues and getting started is the first important step. When our schools begin, they are not only improving their operations, they are also starting tomorrow’s leaders on the journey. The student learns from the way the school is operated, as well as through integrating the concepts of sustainability into all subject areas of instruction.

See **Sustainability** on page 9

Table of Contents

Sustainability, K-12 Schools and the Sustainable Oregon Schools Initiative	1
HealthySEAT Version 2 is now available	2
News from the Washington State Department of Health	3
What to Do About MRSA in Schools	4
Proper Disposal of LCD Projector Bulbs.....	5
News from Idaho Department of Health and Welfare	6
Latest Asthma Statistics for Oregon Available.....	6
In the News	7
• Spray Cleaner Caution	
• School Lighting	
News from the Oregon Education Association	8
Latest <i>Shop Talk</i> Now Online.....	8

© 2007 Washington State University Extension Energy Program.
This publication contains material written and produced for public distribution. You may reprint this written material, provided you do not use it to endorse a commercial product. Please reference by title and credit the Washington State University Extension Energy Program.

WSUEEP-07-023 • November 2007

HealthySEAT Version 2 is now available

Manage ALL of your school environmental health and safety issues with this fully integrated, flexible, and free software tool from the U.S. Environmental Protection Agency. HealthySEAT Version 2 includes these new features:

- Ability to create multiple custom checklists and associated notification letters
- An Example Starter Checklist with a streamlined number of assessment standards
- Easy update process retains all of your Version 1 facility, guidebook, and assessment data
- A new optional Default Corrective Action field
- Email functionality
- Easier navigation
- Updated User's Manual



You can download Version 2 at www.epa.gov/schools/healthyseat

While you're on the web site, check these out:

- Webinar schedule
- Case study of the Los Angeles Unified School District's Safe School Inspection Program

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

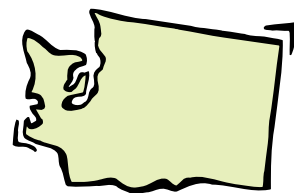
You will receive a confirmation message. When you reply to that message you will be subscribed and will receive all future postings. You can easily unsubscribe at any time.

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.

News from the Washington State Department of Health

By Paul Marchant, Public Health Advisor
School Environmental Health & Safety Program
Washington State Department of Health



IAQ Monitoring Equipment Available on Loan

The Department of Health's School Environmental Health & Safety Program (DOH) has new equipment to loan to schools. The equipment consists of 17 indoor air quality monitoring stations attached to transportable carts. Participating schools will be able to measure key indoor air quality parameters (CO₂, CO, six particle sizes, humidity, and temperature). DOH has positive feedback from several school districts that used similar IAQ monitoring equipment during a previous pilot project.

DOH staff introduced the program in September at an Educational Service District (ESD) Worker's Compensation Trust Loss

The new IAQ monitoring equipment and carts are now available for loan.



Control Meeting in Yakima. At the meeting Eric Dickson, Educational Service District 101, shared IEQ sampling equipment that he uses during school investigations. DOH hopes to partner with ESD's worker's compensation/loss control representatives to solicit participation from schools.

DOH sends thanks to Eric for contributing his expertise and sharing his personal experiences, and to Rich Prill, WSU Energy Program, for his assistance in coordinating and assembling the monitoring stations and for his ongoing technical assistance.

The loan program is free and is strictly voluntary. DOH is in the process of working out details of the loan program, although several IAQ stations have already been placed in schools. For more information about the equipment loan program, contact Paul Marchant at 360-236-3363.

Other Washington State Highlights

DOH conducted its third annual Fall School Environmental Health and Safety Workshop series between October 24 and November 7, 2007. Workshops were held in nine cities throughout the state and were designed to provide school administrators and local health jurisdictions with current information on environmental health and safety issues.

Presentations included:

- Indoor Air Quality Complaint Investigations
- Hidden High Hazard Chemicals
- Healthy, Sustainable, Safe Cleaning Options, Solutions, Challenges
- Developing an IAQ Program for your District
- Responding to IAQ Concerns
- School Integrated Pest Management
- MRSA (Methicillin-resistant Staphylococcus aureus) in Schools
- DOH IAQ Monitoring Equipment Loan Program
- Update on Emerging School Environmental Health & Safety Issues
- Updates on the State Board of Health Rule Revision

Materials from the workshops can be downloaded from the DOH website. <http://www.doh.wa.gov/ehp/ts/School/wkshops.htm>

DOH staff members were invited to speak at a number of other conferences and meetings this fall. Among them were:

- Washington Federation of Independent Schools meeting, Spring Valley Montessori School, November 15. Paul Marchant and Laura

See **New Program** on page 11

What to Do About MRSA in Schools

By Jill Smith, RN, MN
Tacoma-Pierce County Health Department

Preventing infectious disease in school settings is fundamental to maintaining a healthy learning environment. Outbreaks of MRSA (Methicillin-resistant *Staphylococcus aureus*) skin infections are occurring across the country. Implementing some basic preventive measures are key to stopping the spread of MRSA and other infectious diseases in schools.

What is MRSA? MRSA (mur-sa) is a type of “staph” infection that is resistant to many antibiotics, including penicillin, and frequently causes skin infections.

What do MRSA infections look like? Often a MRSA infection will look like a spider or insect bite, a boil, abscess or infected turf burn.

How is MRSA spread? MRSA skin infections are generally spread by skin-to-skin contact or by direct contact with the infected wound drainage. MRSA may also be spread by contact with contaminated surfaces or objects such as sports equipment or personal items. MRSA skin infections are not spread through the air.

How is MRSA treated? By a healthcare provider who may drain the infection and/or prescribe an appropriate antibiotic.

How can students and school staff avoid infection? Good hygiene and hand washing practices are the best protection

from infectious diseases including MRSA. Remind students and staff to wash their hands frequently with soap and water or use 60% or greater alcohol-based hand sanitizer if soap/water is not available. Encourage student athletes to shower and wash with soap and water immediately after practice, competition and training. Remind students to not share personal items such as towels, razors, clothing and water bottles. Instruct them to avoid contact with skin infections of others.

What do I do if I think a student has a skin infection?

Early treatment is key to prevent spread and serious harm. Refer the student to the school nurse or to a health care provider as soon as possible. All draining wounds should be covered with a clean, dry bandage taped on all four sides. Exclude athletes with skin lesions from wrestling until completely healed and consider excluding athletes with skin lesions from other contact sports such as football.

What are the key recommendations for students and staff?

- Wash your hands. Make frequent hand washing with warm, soapy water a priority for everyone!
- Practice good hygiene. Strongly encourage showering with soap and water immediately after physical education class

and athletic practice, games, and trainings.

- Keep personal items personal. Do not share personal items such as towels, razors, clothing or water bottles.
- Clean and disinfect hand touch areas. Hard surfaces and equipment such as tables, desks, handrails, light switches, door handles, and athletic areas should be cleaned and disinfected on a routine basis.
- Keep your hands to yourself. Remind students not to touch other peoples’ skin infections and remind staff to use disposable gloves when providing first aid.
- Report skin lesions. Encourage students to report potential skin infections to the school health team.

Are there resources about MRSA available for schools?

The Tacoma-Pierce County Health Department was partially funded by the Centers of Disease Control (CDC) and Prevention to develop a toolkit for schools and their athletic departments. You can access the “What to do about MRSA” school toolkit at www.tpchd.org. Put “MRSA toolkit for schools” in the search function. You’ll also find a link to materials specific for elementary schools. For more information on MRSA

See **MRSA** on page 5

MRSA

Continued from page 4

in your county, contact your local Health Department.

What do MRSA skin infections look like?

- Spider bite (all the looks and feel of a bite)



Source: Los Angeles County (California) Health Department

- Infected skin and/or wound



Source: Centers of Disease Control (CDC)

- Impetigo (a skin disease characterized by pustules that burst and form thick yellow crusts)
- Boil/abscess

Jill Smith, RN, MN is a Public Health Nurse Consultant with the Tacoma-Pierce County Health Department in the Communicable Disease Program. She can be reached at 253 798-4715 or jsmith@tpchd.org.

Proper Disposal of LCD Projector Bulbs

By Karl Paulson, Program Associate Library/Media Support Services Salem-Keizer Public Schools (Oregon)

As the bulbs in your LCD projectors begin to fail, please remember that they are considered hazardous waste and should be disposed of accordingly. Note that this applies to the more expensive, high-tech bulbs used in LCD projectors and not to ordinary overhead projector bulbs.

Generally school custodians already arrange for disposal of fluorescent light tubes, which



contain small amounts of hazardous materials.

Custodians in each of our district's schools are also prepared to dispose of the LCD projector bulbs, which contain small amounts of mercury.

Help your district keep LCD bulbs out of the waste stream by collecting them for removal by school maintenance staff.

News from Idaho Department of Health and Welfare

By Jim Faust,
Idaho Department of Health and Welfare

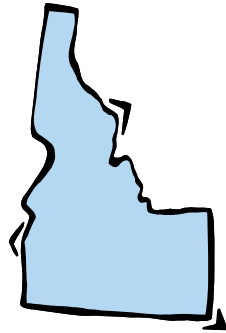
Over the summer several schools eliminated serious IAQ problems by removing “problem” carpets, and according to reports from teachers the results have been very satisfactory. Old or new it seems like ALL carpets are PROBLEM carpets when located in high traffic areas.

Several other schools replaced leaky roofs this past summer, helping solve water problems as well as IAQ problems, which of course compound when there are constant moisture problems.

I recently returned from an EPA-sponsored conference in Washington, DC for state IAQ contacts. We found out that ALL states have old, worn down, and even dilapidated schools that are in dire need of repairs – with no available money to make these repairs and upgrades. It was almost impossible to believe the stories we heard about the shape of our country’s schools: 100+ year old buildings, worn out floors, worn out furnaces, moisture and mold problems, ventilation systems that could be included in a “Friday the 13th” movie. And these are just a few of the IAQ problems mentioned.

Some good news, though. Several states now have mandatory “green cleaning” laws for school maintenance departments to

implement. Also, it is probably just a matter of time before EPA mandates that all schools, day care and Head Start facilities do radon testing.



ABC television’s *Extreme Home Makeover* program broadcast on Nov. 4 focused on radon. The program actually tore down a house “due to a radon problem,” which is a bit EXTREME – but

that is the name of the program! The Idaho Department of Health contacted the local ABC affiliate station in Boise to add a tag to the show that included where to call to get free radon tests, Idaho-specific statistics, how to do radon mitigation, and radon-resistant new construction (RRNC) practices.

Jim Faust is the Indoor Environment Program Manager for the Idaho Department of Health and Welfare’s Environmental Health Section in Boise. For more information contact him at faustj@dhw.idaho.gov, or (208) 334-5717.

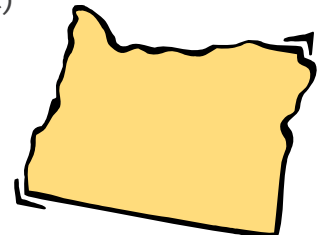
Latest Asthma Statistics for Oregon Available

By Tracy Carver, MPA
Oregon Asthma Program

Between 2004 and 2006 Oregon child asthma prevalence increased from 7.2% to 9.0%. You can find Oregon data on asthma in the Asthma Surveillance Report. <http://oregon.gov/DHS/ph/asthma/datastat.shtml>

Oregon’s child asthma prevalence was below the national average and about in the middle compared to other states. You can find this information on the Centers for Disease Control and Prevention (CDC)

website. www.cdc.gov/asthma/brfss/default.htm#04/



It is also important to note that Oregon continues to have considerably higher adult asthma prevalence, compared to the national average. In 2005, the Oregon adult prevalence was 9.9%, compared to the U.S. average of 7.9%.



Spray Cleaner Caution

As reported in *HealthDay News* (October 12, 2007), new research found that use of household cleaning sprays as little as once a week increased the risk of developing asthma by nearly 50 percent.

More than 3,500 people with no history of asthma or asthma symptoms at the beginning of the European study were followed up with after 9 years. They were asked about the types of cleaning products they use, how often they use them, and study participants were given lung-function tests.

While liquid multi-purpose cleaners were also frequently used, researchers didn't find any association between asthma and properly used liquid cleaners.

However, the study's lead author, Jan-Paul Zock, a research fellow at the Centre for Research in Environmental Epidemiology at the Municipal Institute of Medical Research in Barcelona, Spain, added this caveat: "Don't forget that old-fashioned liquid cleaning products can involve risks for respiratory disorders as well. The most notorious example is bleach, particularly when mixed with other cleaners -- something that should never be done."

The most important thing consumers need to know, cautioned Zock, is that "cleaning sprays – for sale in all supermarkets – are not harmless, and their use may involve serious health risks."

The full story:

www.healthday.com/Article.asp?AID=609089

School Lighting... Check Out These Recent Publications

Removing PCBs from Light Fixtures: Protecting Students from Hidden Dangers (PDF file)

www.epa.gov/region09/toxic/pcb/pdfs/pcbmain.pdf

(U.S. Environmental Protection Agency, Washington, 2006) The U.S. Environmental Agency recommends removal of all pre-1979 fluorescent light ballasts in schools to prevent accidental exposure of occupants to highly toxic polychlorinate biphenyls (PCBs). This guide provides step-by-step instructions for identifying, properly managing, and ultimately replacing PCB-containing light ballasts in schools. 10 pages.

"Learning, Lighting, and Color" (PDF file)

www.designshare.com/articles/1/133/fielding_light-learn-color.pdf

Fielding, Randall (DesignShare.com, 2006)

Integrated Classroom Lighting System: Light's Great, Less Billing (PDF file)

www.esource.com/public/pdf/cec/CEC-TB-1.pdf

(California Energy Commission Public Interest Energy Research Program, Sacramento, 2004) Describes energy-efficient, flexible lighting for today's classroom needs. The Integrated Classroom Lighting System (ICLS) consists of a combination of direct and indirect light, assisted by 96 percent reflective material in the fixtures, and easy-to-use controls. 2 pages.

News from the Oregon Education Association

By James Sundell, Uniserve Consultant
Oregon Education Association

I believe we are gaining momentum within the Oregon Education Association (OEA) for a greater level of member involvement in the area of Indoor Environmental Quality. We continue to provide training and information for our members who are interested in this important advocacy for the employees and children who spend so much of their time in our schools.

The big news for OEA is that we have a 10-member team accepted to attend the EPA Tools for Schools Symposium, December 5-8 in Washington, DC. Four team members will be funded by the National Education Association's

Health Information Network (NEA-HIN), two will be partially funded by OEA, and the remaining team members will secure funding from other sources.

The Oregon School Indoor Air Quality Partnership recently provided the following information and outreach:

- The Oregon School Indoor Air Quality Partnership presented IAQ information at the "Joint Conference for Literacy and Leadership" in Portland, August 6-8.
- Karyl Gothe, James Sundell, and Carolyn

Smith-Evans presented a breakout session on IAQ at "OEA's Advocacy Conference" on September 29 in Portland.

- Karyl Gothe, Rich Prill, and James Sundell presented two breakout sessions at "OEA's Energize for Action" In-Service Day for Classified employees in Salem on October 12.

Contact James Sundell, OEA UniServ Consultant, in Albany, Oregon, at (541) 967-1801 or his email at James.Sundell@oregoned.org

Latest Shop Talk Now Online

By Bob MacKenzie, Plant Operations Support
Washington Department of General Administration
GA-WSU Team

The Fall 2007 edition of *Shop Talk* (www.ga.wa.gov/plant/SHOPTALK/FALL07.pdf) has hit the shelves and has a NEW look celebrating the program's recent partnership with the WSU Extension Energy Program. It also provides an insight into what Plant Operations Support (The Consortium) is all about.

Learn about how the University of Washington has responded to the Gould Hall and Virginia Tech tragedies to buttress their emergency disaster preparedness plans; meet the new president of

APPA, the much-lauded association of higher education facilities officers; find out how members saved big on greenhouses and associated equipment; read about how all Washington state community colleges have selected and implemented a major computerized maintenance management system; meet new and welcome back returning Consortium members... and more!

This issue is filled to the brim with member wins and best practices. Most importantly, it chronicles



how you all do good things for your stakeholders and our taxpayers... innovatively, diligently, with limited resources!

Contact Bob MacKenzie, Plant Operations Support, GA-WSU Team at (360) 956-2055.
Email: mackenzieb@energy.wsu.edu
Web: www.ga.wa.gov/plant/

Sustainability

Continued from page 1

The School Facility

The school facility itself provides a great example of an interconnected system that impacts sustainability in multiple ways, both through its own existence and operation as well as through its use as a teaching tool. This system includes the building itself, the surrounding natural resources and ecosystems, the occupants, the local community, transportation options for accessing the facility, the construction and operating cost and global conditions.

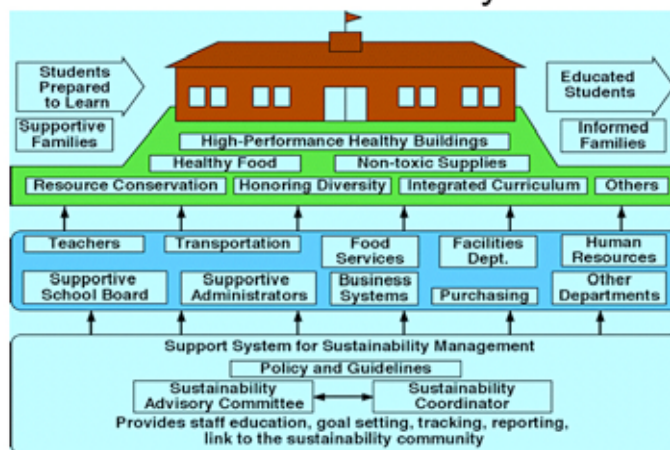
SITE

- Wise selection and use of a site can provide outdoor educational opportunities to study natural ecosystems, monitor stream quality or learn about native cultures.
- Selecting a site on public transportation lines and with bike and foot access will encourage transportation choices that support personal health, while also avoiding greenhouse gas production.
- It's critical to consider past uses of the site and be realistic about any past uses that might have left contamination. It has happened that an entire school was built, and then subsequently found to be uninhabitable after discovering unacceptable levels of toxic materials in the ground.

DESIGN (new or remodel)

- The building design can incorporate materials with a low environmental impact by designating items that are reused, contain recycled content, or are renewable. These avoid the cost, energy and pollution of extracting virgin materials and leave ecosystems intact.
- Selecting local materials will support the local economy while also avoiding transportation-caused air pollution and fuel use.
- A high performance facility will greatly reduce energy and water needs over its lifetime, avoiding considerable costs and environmental impact. It's critical to recognize that while the initial cost of a high performance building may be somewhat higher, it will be more than made up for with lower operating costs.

The Sustainable School System



- A design that provides adequate air flow and avoids materials that give off toxic substances will provide a healthy indoor environment. This leads to healthier occupants, thus supporting student and teacher performance.
- Incorporating natural lighting and outdoor views has been demonstrated to enhance occupant performance.
- The building design can also encourage community involvement, for example by including space for a community or local governmental organization to co-locate.

OPERATION

- The building should be commissioned (or re-commissioned) to ensure that it is actually performing as efficiently as it was designed. There are many examples of new buildings that were found to be expensive to operate because the equipment was never set up properly.
- EPA studies indicate that indoor pollutant levels may be 2-5 times higher than outdoor levels. The cost and effort needed to prevent most indoor air quality problems is significantly less than the cost and effort required to resolve problems after they develop. It's important that facilities be adequately maintained. Use of finish surfaces that are easy to clean and maintain, and ensuring a regular cleaning schedule will reduce asthma triggers.
- Only non-toxic materials should be utilized, whether for cleaning, maintenance or

See *Sustainability* on page 10

Sustainability

Continued from page 9

landscaping. This reduces the toxic burden on the occupants as well as for the workers that manufactured the material, and on the environment.

- Involving students in the facility operation and monitoring can teach them about building design, indoor environmental quality, their local ecosystem, global interactions and more. It can be incorporated within diverse subject areas such as mathematics, science, health and social studies.

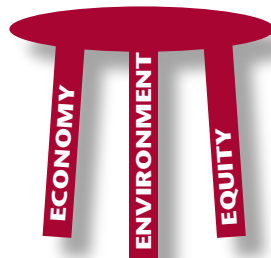
Sustainability is a strategy to be applied with an understanding of the entire system. It ties together environmental, social and economic factors, which are all part of the interconnected system. These are often referred to as the 3-legged stool of sustainability, the 3 E's (Environment, Economy and social Equity), or the triple bottom line.

Sustainability frameworks such as "The Natural Step" help to define what success means. The Natural Step framework was developed by Swedish oncologist Dr. Karl-Henrik Robèrt in 1989. He began to question the increase in some cancers and the environmental factors that must be at play. He brought leading scientists together to consider what was happening and how to address it. They eventually all agreed on four sustainability principals that must be honored if we want to maintain life on earth as we know it, over time.

The four Natural Step System Conditions state that:

In a sustainable society, nature is not subject to systematically increasing:

1. concentrations of substances extracted from the earth's crust (such as heavy metals);
2. concentrations of substances produced by society (such as bio-accumulative toxins);
3. degradation by physical means (such as eliminating bio-diversity);



and in that society...

4. people are not subject to conditions that systematically undermine their capacity to meet their needs.

A sustainability planning process such as the following steps recommended by The Natural Step will guide the way, helping to provide a shared mental model for all to work together.

A – Awareness

What do you know about sustainability and why it matters?

B – Baseline Mapping

What does your organization look like today?

C – Clear and Compelling Vision

What does your organization look like in a sustainable society?

D – Down to Action

How will you manage and prioritize steps to sustainability?

The Sustainable Oregon Schools Initiative

The Sustainable Oregon Schools Initiative (SOSI) is a new and unique program that provides a focal point for sustainability information, resources and activities in Oregon, and will be generally applicable in other states as well. It will address operations issues including the facility itself, resource use, transportation, food, procurement, indoor environmental quality, community and culture issues, as well as student and staff education about sustainability. It's being created now with input from interested stakeholders, and with guidance from a Steering Committee.

A stakeholder group will be convened for each of the above topic areas, to:

- Define the sustainable vision.
- Identify key indicators for sustainability within that area, including metrics.
- Identify and create resources to help school districts and schools progress.

See Sustainability on page 11

Sustainability

Continued from page 10

The initiative will:

- Increase knowledge of school personnel and supporting organizations about sustainability practices and opportunities, through training, events, a comprehensive website and an annual awards program.
- Create a practical toolkit for school districts and schools to assess their sustainability, access resources and implement projects that increase their sustainability.
- Reach out to school districts to inform them about these resources.

Incorporating sustainability concepts into operations and classrooms will save money, protect student and staff health, support academic success, protect our ecosystems, and prepare today's students to be wise leaders tomorrow. The Sustainable Oregon Schools Initiative will help Oregon be a national leader in sustainability, providing a unique model for the nation.

SOSI is managed by the Zero Waste Alliance, a program of the nonprofit International Sustainable Development Foundation. This Portland-based group supports organizations in creating a more sustainable future by following nature's model.

The SOSI website will have information and resources suitable for schools themselves, as well as for parents, students and outside organizations that are working with or would like to support schools on these issues. www.sustainableschools.org

The best way to connect with SOSI and learn about upcoming opportunities and events is to subscribe to the monthly electronic newsletter. To subscribe to the newsletter, learn more about the initiative or support it with your membership, visit the website or contact Lori Porter Stole, lstole@zerowaste.org, 503-307-4067.

The Indoor Environmental Quality team is meeting now, and has several meetings yet to go. It is developing a model for a sustainable indoor environment, utilizing a proactive, integrated approach. If you would like to become involved with this team, contact Lori Stole, lstole@zerowaste.org. The final products from this group's efforts will be presented in a future issue of this newsletter.

New Programs

Continued from page 3

- White presented information on asthma and environmental triggers and on the indoor air quality equipment loan program.
- 14th Annual Joint Conference on Health in Yakima. Laura White and several other DOH environmental health staff participated in a DOH panel presentation entitled "Air Quality & Health: Collaborative Efforts to Decrease Risks and Improve Communication." Nancy Bernard also presented at the conference on the topic "Environmental Health and Safety in School Building Siting and Design."
- Washington Resource Conservation Manager meeting, Washington Middle School, Olympia. Paul Marchant and Glen Patrick gave a presentation and overview of the IAQ monitoring equipment loan program. Tim Byrne, Capital and Construction Supervisor for Olympia School District, gave a tour of the school. The building was one of the Washington Sustainable Schools pilot projects, and Tim was project manager for the major remodel.
- Clark County's first Fix-it Fair, Clark College, Vancouver, October 27. The fair was modeled after Oregon's very successful annual Fix-it Fairs. Separate workshop tracks provided information about energy savings, principles of a healthy home, composting and gardening, well and septic system; household hazardous material management, recycling, identify theft protection, emergency preparedness, and more. A presentation by Laura White highlighted the link between housing, indoor air, and health. She discussed mold, asthma triggers, lead, ventilation, formaldehyde, flame retardants (PBDEs), radon, carbon monoxide, ozone generators, consumer chemicals and pesticides, and integrated pest management.