CEHA
POINT SOURCE
WINTER 2006
Colorado Environmental Health Association
www.cehaweb.com

# Statewide Onsite Study is Under Way

*By Susie Gallaudet, Front Range Precast*

Onsite wastewater treatment systems are proven technology for protecting water quality. Growing in demand, onsite systems provide municipalities and home-owners safe and effective means for treating wastewater. According to the National Onsite Wastewater Recycling Association (NOWRA), onsite systems now provide more than 40 percent of the wastewater treatment services to residential areas, communities, shopping centers and commercial businesses nationwide. With population concentrations across the country expanding into more rural "exburb" areas, the need and desire for effective regulations and the promotion of practices that protect public health is also increasing. This is certainly the case in the State of Colorado.

In our state, the need for developing effective regulations and understanding industry practices is the driving force behind the CORE Study that was launched in September 2005. The CORE study, which will take place over the next two years, seeks to define and develop OWS standards and foster leadership and support among local and state officials. Through evaluation and analysis of current, statewide practices and environments—who is doing what in what county, what are the recurring challenges, complaints, and criticisms, where are the "hot spots" in Colorado and what do we know about them—a knowledge foundation will be established.

The first phase of the project includes surveying county regulators from all 64 counties about wastewater practices in each county. Because onsite practices and regulations vary, in some cases widely, from one county to another, documenting statewide practices is the first step in developing an informed outlook for future planning.

A peer review committee including onsite professionals (industry, regulatory and academic) worked together to establish the CORE survey questions and topics. This peer committee will remain active throughout the project and will review and critique data analysis. Once data has been collected and fully analyzed, a broadview assessment of Colorado counties can be made.

The survey covers a wide range of issues including documentation and record-keeping practices, number of permits issued annually, use of aerobic vs. anaerobic treatment systems, training and education requirements of installers, service agreement requirements, and application fees. The survey also seeks to gain insight on how to streamline processes and build communication among counties. Released in the third quarter of 2005, the majority of participants have completed the survey and initial data analysis has begun.

The second phase of the grant will be to focus on how to create a training and educational model that will support and foster best practices among installers, excavators, and maintenance personnel of onsite wastewater treatment systems. Development of practical applications of standards and code will be ongoing throughout 2006 and will include regular peer review and input.

Summary of county-by-county and statewide analysis will provide a starting point for future recommendations and establish an effective means for accommodating historical practices and necessary remediation. Planning and adoption of model codes will focus on ensuring onsite wastewater practices that will accommodate growth and changing industry technologies. Summary findings and recommendations from the CORE study will support the state in integrating recognized wastewater treatment standards into county- or statewide practices.

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# LETTER FROM THE PRESIDENT THERESE PILONETTI-HALL

As President of the Colorado Environmental Health Association, I am lucky to have a Board of Directors and an Annual Education Planning Committee comprised of such enthusiastic, dedicated individuals. So many of the accomplishments that CEHA will achieve will be the direct result of their hard work and commitment to serving the members of this organization.

I would like to introduce to you our newest Board members. Dan Collins of Tri-County Health Department now serves as our Treasurer. Dan has already shared numerous great ideas on our annual budget and financial security. Nicole Grisham, Colorado Department of Public Health and Environment, is our new Secretary. Nicole has done a great job keeping the Board focused and on track with action items and detailed records of our Board meetings. Carmen Vandenbark, Northeast Colorado Health Department, now serves as our Northeast Representative. Carmen has already contributed a multitude of ideas and opinions that are right in line with CEHA's mission. Last but certainly not least is Julie McCaleb, the Environmental Health directors' appointee. Julie also hails from Northeast Colorado Health Department, and we are very happy to have her as she is especially well-qualified to keep us updated on legislative issues. I am grateful for these additions, and of course all of our energetic board members and volunteers.

To give you a glimpse of the exciting challenges CEHA has been working on, I'll start by saying that the fabulous weather and ever-present wildlife of Estes Park made for the perfect backdrop for last year's Annual Education Conference. Overall we had over 130 attendees, 15 exhibitors, and 34 presenters. The 8-hour OSHA refresher and the NEHA Epi-Ready Team training drew around 80 additional attendees, for a record year. The planning committee also received a great deal of feedback that will guide us in the planning of this year's conference. Thank you to those of you that took the time to comment and make suggestions.

The planning committee is already working diligently planning for the 2006 Annual Education Conference. Preliminarily, we are exploring an opportunity to partner with the Colorado Public Health Association and the Environmental Protection Agency's Region 8 Children Environmental Health Summit for a week of environmental public health in late September. Due to the size of such an event, we are focusing our efforts on properties in Vail and Beaver Creek. If feasible, this venture will draw nationally renowned presenters with regional appeal for both public and environmental health professionals. As we continue to plan, watch the website for updates.

A great way to get involved and influence the direction of this great organization is to volunteer as a member of the Annual Education Conference planning committee. This committee typically meets once a month, picks the location and venue, negotiates contracts, explores pertinent topics and works directly with experts around the nation to develop a timely and relevant agenda for our membership. **This year, we are in desperate need of an On-Site Wastewater section chair that would be willing to head the OSWS track, coordinate speakers and moderate the session.** The planning committee also organizes the many networking opportunities such as the volleyball tournament, the awards banquet, the knowledge bowl and silent auction. This is a fun and energized group of volunteers that enjoys the challenge of organizing such an event. To volunteer, just contact me directly at therese.pilonetti-hall@cehaweb.com.

Every year CEHA has new Board vacancies, another great opportunity for you to get involved. This year terms will expire for our Western Slope and Southeast Representatives. To run for either of these positions, you must be a member in good standing for one year and work in the specified boundaries for that position. If no candidate is available from the area, the position is opened to candidates from other parts of the state. Each year CEHA elects a new President-Elect. To run for President-Elect, you must be a member in good standing and have served on the board for one year. All term years run from one annual business meeting to the next. Contact Carmen Vandenbark at Carmen.Vandenbark@cehaweb.com or your local representative to find out more about joining the Board of Directors.

CEHA also produces Point Source, our quarterly newsletter. In order for this publication to have value, we need articles from you that champion the breadth of knowledge and significant environmental public health accomplishments that happen everyday right here in the State of Colorado. To contribute articles, send them directly to the CEHA Editor Danica Harmon at editor@cehaweb.com.

I ask that you take the time to contribute to this amazing association in some small way. We need your help and welcome contributions on every level, from suggestions for one-day trainings, to candidates for board positions, to anyone willing to help coordinate one of the many activities we will be planning this year. Get involved and help make this organization the best it can be!

Therese Pilonetti-Hall, REHS

# LETTER FROM YOUR NEHA REGION 3 VICE-PRESIDENT

## Sustaining Members: Vital to NEHA's Existence

According to our bylaws, "a sustaining membership is any business, company, or corporation of such firms with a general interest in NEHA and its objectives." NEHA currently has 55 sustaining members out of the 4,500 total members. Although this membership group is one of the smallest, they can have the greatest influence by educating members in technological advancements and by maintaining the association financially.

We see these companies and firms exhibiting at the AEC, displaying the latest technologies in on-site wastewater, food protection, drinking water, G.I.S., air quality, computer programs, hazardous waste cleanup, swimming pools and other environmental health programs. This is a wonderful time to meet with the company or firm representative to ask questions and to gather literature. I specifically remember meeting with the representative of a firm regarding "advanced treatment" for onsite wastewater at the 2003 Reno AEC. I gathered several packets of information on different types of nutrient reducing systems. Shortly after the conference, I referred to the packet while working with a new owner of several cabin units on the Big Thompson River. The site was only 80 feet from the river and groundwater was at five feet. Using the knowledge I gained from visiting with the firm and the packet, I was able to steer the owner into using advanced secondary treatment on an environmentally sensitive site.

Sustaining members provide enormous financial support to the association. The 2005 AEC was a financial success partially due to the generous support from our sustaining members. In fact, company sponsorships help offset some of the costs for speakers, conference rooms, audiovisual needs, brochures, professional notebooks, and entertainment. Also, the yearly popular UL sponsored event is always a treat for the conference attendees.

To all sustaining members and sponsors: thank you for your past and continued support of our association. Since environmental health is such an evolving profession, I believe the environmental health professional has an obligation to stay abreast of the advancements in technology. I believe the interaction between environmental health professional and sustaining members is vital to the advancement of environmental health and NEHA.

Kindest Regards,

Thomas R. Gonzales, R.E.H.S.
Region 3 Vice President
tgonzales@larimer.org
Representing *Colorado, Utah, Montana and Wyoming*

# New CEHA Board Members

*Last fall, four CEHA members were elected or appointed to the Board to fill newly vacant positions. Dan Collins of Tri-County Health Department was elected Treasurer, Nicole Grisham of the Colorado Department of Public Health and Environment was elected Secretary, Carmen Vandenbark of Northeast Colorado Health Department was elected Northeast Representative, and Julie McCaleb of Northeast Colorado Health Department was elected Environmental Health Directors' Representative.*

*Dan Collins was awarded the Commanders Award (with metal!) from the US Army in 2005. It is the highest honor given by the Army to civilians.*

Dan Collins graduated from Bemidji State University in Bemidji, Minnesota (home of the Bemidji Beavers), with a Bachelor of Science in Environmental Studies in 1980. After watching "Mork & Mindy" one evening, he and his bride Pat were lured to Colorful Colorado, and Dan was hired by Tri-County Health Department as an Environmental Health Sanitarian in 1982. Dan joined CEHA in1984 and passed the NEHA REHS in 1986. As TCHD became involved with the clean-up of the Rocky Mountain Arsenal (RMA) in Adams County, Dan developed a private well monitoring program for the Army and began working on the RMA program full time in 1990. To pass the time, he passed the NEHA Registered Hazardous Substance Professional (RHSP) test in 1996 and completed a Masters in Organizational Management in 2000. After a short sixteen years of working on RMA activities, he's back in Environmental Health as TCHD's EH Manager for Douglas County in the Castle Rock Office. For the past two years, Dan has been part of the AEC planning committee. In his free time, he keeps busy with the activities of his three children, including girl/boy scouting, marching band, church youth group, and goes hunting/fishing whenever and wherever he can.

Many of you know me as Nicole Venhorst, however I recently married to a wonderful man named Todd and am now Nicole Grisham…moving up in the alphabetical world! I am an Environmental Protection Specialist in the Consumer Protection Program with the Colorado Department of Public Health and Environment. I am our lead foodborne illness investigator and also represent my division on the state retail food plan review committee. The programs that I am involved in include retail food, child cares, schools, non-community groundwater, external training, and milk plant inspections. Prior to this I worked as an Environmental Health Specialist in the Consumer Protection Program with Larimer County Health Department for nearly four years and worked as an Industrial Hygienist for a large consulting firm before that. I graduated with a Bachelor of Science degree in Environmental Health from Colorado State University and worked in Hazardous Waste and Radiation Safety during my schooling. I have been an active member of CEHA since 1999 and have provided the Annual Knowledge Bowl as a volunteer on the Annual Education Committee for the past two years. I am also an active member of NEHA and have my REHS and CFSP. In my free time I like to be outdoors doing such things as hiking, boating, camping and snowshoeing. My husband and I enjoy bringing our Harley with us on our adventures…gotcha…Harley is our dog! However we do both own Harleys as well…mine is named Layla. Yes, I am a Harley chic, and Layla and I have conquered quite a few miles of road together! I also enjoy traveling overseas and experiencing different cultures. I enjoy my involvement with CEHA and promote the enhancement of education, communication and networking within our profession. I look forward to serving as Secretary and helping CEHA prosper.

# New CEHA Board Members

Hi, I'm Julie McCaleb, and I'm the Environmental Health Director at Northeast Colorado Health Department. I started as an Environmental Health Representative in Logan and Sedgwick counties, then moved to the Yuma county office, and then took the position as Environmental Health Director in July of 2004. I have a Bachelor of Science degree in Agriculture-Business that I received from Colorado State University. I am married and have three daughters (including one set of twins). I formerly worked for Horton Cattle Companies of Fort Collins and the Natural Resource Conservation Service in Washington County, Colorado. I have a rural background and am very proud that agriculture is the oldest profession that has been concerned with the stewardship of the land. I believe that education is the key to changing people's perception of what is good for the environment. I believe that being involved in your community and organizations helps others value your ideas. I have been involved in numerous organizations. One of the high points of my life was serving the State of Colorado as the Secretary for the FFA Association, and I believe that my experience with this large youth organization in planning educational seminars, conferences, and motivating will be an asset for the Colorado Environmental Health Association. Please feel free to call or email me anytime so that I can hear your comments about what will make the AEC a benefit for you.

I am Carmen Vandenbark, and I am the new CEHA Board member representing the Northeast Region. I graduated from Colorado State University with a Bachelor of Science degree in Environmental Health in 1990 after finishing an internship at Excel Beef Packing Plant in the Quality Assurance division. I then worked on a cow/calf ranch for a year and half. In 1992 I started working for the Northeast Colorado Health Department (NCHD) as an Environmental Health Representative. At NCHD we are all generalists, so I work in the septic, child care, retail food, water quality, body art, and the HCSFO programs. In February 2005, I took the position of Consumer Protection Coordinator and am now the supervisor of the retail food, child care, and body art programs, in addition to my duties in the other programs.

My husband, three children and I live on the eastern plains about 30 miles east of Sterling. Our family has a trucking business and we raise crops of wheat, millet, and corn. In addition we also have a cow/calf operation. When we can find time to get away, we like to ski (or more accurately for me, tumble down) at Winter Park. We keep busy with the many activities that our 14, 7, and 2-year-old children are involved in.

As a new board member and the Nominations Chair, my goal is to encourage more CEHA members to run for office and get involved in the organization and to recognize those members that work hard to make CEHA the great organization that it is. If you have any ideas or concerns that you would like to have the Board consider, please free to contact me. Here's to great things in 2006!!

# CEHA Past-Presidents:

## An Interview with Ray Mohr

By Danica Harmon, Denver Department of Environmental Health

*CEHA's Board members are constantly striving to provide the membership with relevant articles which are informative and interesting. We hope to make an interview with a CEHA past-president a continuing feature in Point Source. A special thanks to Ray Mohr for his willingness to be the first interview in this series.*

Ray Mohr was the President of the Colorado Environmental Health Association from 1976-1977.

**PS: You were President of the Colorado Environmental Health Association from 1976-1977. What have you been up to since then?**

During the time I was active in CEHA, I was working for the Denver Department of Environmental Health. In 1978, I left the City and County of Denver to work in the Air Pollution Division at the Colorado Department of Public Health and Environment. I was hired at the Division as the state was developing its air pollution plans for those areas that were not complying with the federal Clean Air Act (Denver, Colo. Springs, etc.). At that time, many areas throughout the state, especially Front Range metropolitan areas, were classified as "non-attainment" areas due to non-compliance with federal clean air standards. I worked on developing the Air Quality plans to resolve the high carbon monoxide levels in non-attainment areas.

After that, I went into different policy areas and worked on a program here called Clean Air Colorado. It was basically a follow-up to the Denver Better Air Campaign which was a program to voluntarily encourage driving reductions in the Denver metropolitan area. I went to work on developing ways to make community-based programs to help solve localized community air problems, like the steel mill in Pueblo. I worked on developing a number of these community air programs in Grand Junction, Delta, Boulder County, and Pueblo.

For the past few years, I've been working on developing our state regional haze program to improve the air quality in national parks and classroom wilderness areas in Colorado and throughout the west.

**When you were President of CEHA, what were the most prominent issues that CEHA's board dealt with?**

At the time I was most involved with CEHA, I was working in Denver's Department of Environmental Health. A number of people in Denver's department were active in the National Environmental Health Association. It came to our attention at the time that there were some questionable decisions being made about NEHA's appropriation of resources by the Executive Director. CEHA's Board decided to compile the information we had and present it to NEHA's Board of Directors at their national conference. As a result of these efforts, in part, the Executive Director resigned from his position at NEHA.

Another big issue of the day was registration for all sanitarians. At the time, the state had a Sanitarian Board that administered the Registration exam for sanitarians. At that same time Governor Lamm had implemented the "Sunset" Bill for those Boards and Commissions that were not fulfilling their statutory role or not protecting the citizens of the state. After a review of the Board, the state audit determined that the Board was not serving the state adequately because its sole purpose was to register sanitarians and it had not pursued any poor performance issues with the profession. As a result, the

Sanitarian Board was disbanded. I believe the equivalent of that certification today would be the REHS, and I think the REHS is probably a more extensive professional assessment than what we had back then. In the 70s, there weren't any standards for establishing continuing education and other requirements.

**Can you talk a bit more about CEHA's involvement in NEHA's Executive Director's resignation?**

It caused a lot of controversy at the time. As a Board, we became more and more concerned about the direction of the national organization under the direction of the Executive Director . As a Board, we decided to put together a package of information that would establish our concerns for NEHA's Board and membership. We put together a notebook detailing the suspect accounting practices and questionable allocations of NEHA resources, and we presented at NEHA's national meeting. We wanted to get the issues out in the open so that people could discuss them, and we thought the executive management of the organization should be watched more closely by the Board of Directors. We were revolutionaries of the 70s, and in our day we were pretty much flaming radicals for taking on an issue like this. *[Editor's Note: Since the early 1980s, NEHA has hired outside auditors to monitor their finances to prevent any such situations from recurring.]*

Again, the loss of the state Sanitarian Board was probably the second thing that was a concern to us. Professional development and accreditation is one thing we have to hang our hat on in the scientific field. Looking at the standards of the day, I think there have been some major strides in the level of professionalism in the Environmental Health field between then and now. I think we should take pride that the level of professional expertise and skills are very high now.

**What were the biggest Environmental Health issues at the time you were CEHA president?**

The Big Thompson Flood in 1976 caused many environmental clean-up problems. Other Environmental Health projects at the time included the Two Forks Dam, the C-470 Project, and the Brown Air cloud in Denver. Air quality was a big issue at the time in Denver. The presence of Plague in squirrels in Denver parks was a surprisingly big issue. It was the first time that they tied Plague transmission to red squirrels. It has always been associated with mice and rats before that, but never squirrels.

**What advice would you give to young professionals in Environmental Health?**

Learn as much as you can about areas outside of your field. As we're seeing in environmental health programs, it's integral to understand relationships between different areas of Environmental Health. You need to certainly get an advanced degree in management and planning, and you have to develop your communication skills. That's the one thing I didn't really do in Denver, and it's very important to be able to talk to the public and explain to them what you do. If you want to move out of the enforcement/regulator paradigm towards policy, planning, and management, you have to think about the way you talk about issues and present yourself as a professional.

**What do you see as the biggest Environmental Health issues today?**

In terms of public health, obesity is becoming a huge problem. I see so many people who just haven't eaten right or don't have an understanding about their nutrition. I look at pictures of myself and my peers in the 60s, and even though we may have not had a great diet, we ate pretty well. Clearly a looming Public Health problem is the issue of obesity.

In terms of the environment, issues with air quality emissions and pollutants might not be as clearly connected to health, but I think they will have a very large impact in the long-term. The tools we have now to assess and measure risk are tools that make a number of limited assumptions about pollutants. The biggest environmental problem is the long-term exposure to pollutants and our inability to properly assess this problem. I think I've been in the Air Quality field long enough to see that the Brown Cloud has gotten a lot cleaner in the last twenty years or so. People seem to be starting to think, "we can remove these programs," and to a degree you have to do that, but you also have to be able to develop programs with a broader perspective. We have to keep in mind those initial health problems, and also the exposure to products of energy combustion. We have this problem with energy by-products and I think to link up the energy issues to the environmental issues is something we started to work on towards the end of the 70s. But with changes in national administrations, we moved away from that. If we continue that path we started with President Carter—fuel efficiency and energy efficiency—we would be in a better position.

**What do you see as being the biggest Environmental Health issues of the future?**

We need to look at the best forms of alternative energy solutions—wind power and solar power, for example—because if we continue to rely on fossils fuels, we will have an ongoing problem with hydrocarbon-related emissions that will affect the environment and our health. The long term responsibility of our environmental regulators is to be aware of these problems. If oil costs are going to stay this high, it will cost a lot to conduct business. I think people will naturally move more toward these alternative energies because it will become more and more



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## An Interview with Ray Mohr

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difficult to sustain an economy dependent on hydrocarbons.

Other issues that are going to be critical in the future are water quality and air quality issues. We need to look at waste management issues too and how those fit in. If I was asked this question in the 70s, I would probably not have given you the answer I just gave you. I would have said the biggest problem we have to address is getting rid of the high emission cars on the streets. We have a number of things we need to be aware of – water quality, the amount of water we use, and the use of dangerous chemicals around the house. These issues sound kind of bland right now, but they are things that are important in the Environmental Health field.

**Do you have any other thoughts you'd like to share as you look back?**

Looking back at working at the city and at the state—people talk about a career in government as being boring, but it's been a really interesting job. We are working on the things that people are concerned about and that people want to know about. People want to know what you're doing, and you need to be able to tell them so that they understand it. If you don't enjoy or love what you do, you shouldn't be doing it. I think we worked on some things in Colorado that have set a framework for problem solving—like reducing the Brown Cloud and working on local Air Quality programs. To be a part of that is something I have really enjoyed over the past 20-plus years.

I sort of dropped out of CEHA after I came to work at the state, and the reason that I did was because the areas the Board and membership was focused on were general Environmental Health. Over the past years, I have noticed a revitalization of the linkages in air quality and other environmental issues with the local chapter. I think that's a positive change. So I think making that kind of strides to be inclusive in the membership and increasing the educational range of materials that the association presents is a good thing. You're landing on one of the key areas that I mentioned earlier, learning as much as you can.

You really don't have to know everything about a particular Environmental Health discipline; you just need to know who to talk to find out. It's important to continue to network, to find out what people are involved with, so that when something comes up and you don't have the answer, you know who to talk to.

## Supplemental Student Scholarship A Success

*By Mark McMillan, CDPHE*

Helping students get the training and support they need to become effective leaders in environmental health is a primary goal of CEHA. Since 2004, with the support of the CEHA members and its Board, several hundred dollars have been raised through the CEHA Supplemental Student Scholarship Fund. These donations are meant to supplement and support preexisting scholarships and the students to whom they are awarded. In support of the very best in our young professionals, contributors to this important endeavor for 2005 include:

- Auto-Chlor Systems, Denver
- Joe Beck, Eastern Kentucky University
- Kenneth Blehm, Colorado State University
- Jim Devore, Larimer County
- David Gilkey, Colorado State University
- Danica Harmon, City and County of Denver
- Paul Klug, CDPHE
- Mark McMillan, CDPHE
- Dick and Susan Parachini, CDPHE

Many thanks to these generous members for their ongoing support. If your contribution to the Fund was overlooked here or if you would like more information about supporting this Fund, please contact Mark McMillan. You may mail your support to the CEHA Student Scholarship Fund, P.O. Box 460726, Glendale, CO 80246 or look for information on your membership renewal form. Again, thanks to all of you in helping CEHA meet its mission to support our profession.

# Wanted!

## 2006 Sustaining Members.

Do you know a company that is engaged with the public health business community? Let's get them to support CEHA through sustaining membership.

## Grant Opportunities

Do you know of a grant opportunity CEHA or other public health agencies should pursue?

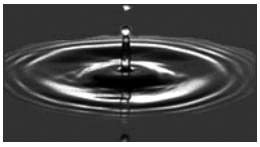
*Please contact any CEHA Board member with company or grant information and we will follow your leads! Great rewards to be heaped upon anyone whose lead pans out!*

## Visit www.cehaweb.com for information on our Sustaining Members

**Auto-Chlor System**
5650 Pecos Street
Denver, CO 80221

**Biological Mediation Systems, Inc.**
PO Box 8248
Fort Collins, CO 80526

**Decade Software Company, LLC**
4201 W. Shaw Avenue
Suite 102
Fresno, CA 93722



**EnviroTec Systems, Inc.**
4973 Isabell Ct.
Golden, CO 80403

**Front Range Precast Concrete, Inc.**
5439 N. Foothills Hwy
Boulder, CO 80302

**Garrison Enterprises, Inc.**
PO Box 690426
Charlotte, NC 28227

**Geoflow, Inc**
506 Tamal Plaza
Corte Maders, CA 94925

**Glo Germ Company**
P.O. Box 189
Moab, Utah 84532

**Hoot Aerobic Systems, Inc.**
2885 Highway 14 E.
Lake Charles, Louisiana 70607

**Infiltrator Systems, Inc**
5311 Blue Bonnet Ct.
Castle Rock, CO 80109

**Integrated Water Services, Inc.**
636 Cheyenne Drive, Suite 10
Fort Collins, CO 80525

**National Swimming Pool Foundation**
224 E. Cheyenne Mt. Blvd
CO Springs, CO 80906

**Orenco Systems, Inc**
814 Airway Ave.
Sutherlin, Oregon 97479

**OtterTail Environmental, Inc**
1045 N Ford Street
Golden, CO 80403

**Peak 2 Peak Sales**
7126 South Willow
Englewood, CO 80112

**Regional Institute for Health and Environmental Leadership**
2211 South Josephine Street
Denver, CO 80208

**Rocky Mountain Water Env. Association, Inc**
3401 Quebec Street, Suite 4050
Denver, CO 80207

**SCG Enterprises, Inc.**
P.O. Box 1411
Conifer, CO 80433

**Urecon Insulation Ltd.**
5010 43 Ave.
Calmar, Alberta Canada
TOC OVO

**Valley Precast, Inc.**
P.O. Box 925
Buena Vista, CO 81211

**Weston Solutions, Inc.**
143 Union Blvd, Suite 810
Lakewood, CO 80228

# Healthy People 2010:

## The National Agenda to Integrate Environmental and Human Health through Public Health Promotion

*By Monica Buhlig, Denver Department of Environmental Health*

Environmental health and public (human) health – these phrases are often used separately, rather than together in their strongest form - ***public health***. Additionally, we often forget to highlight the strategies through which they have the most strength – ***collaboration*** and ***health promotion, or disease prevention*** – establishing *unique partnerships to prevent problems before they occur*. As public health professionals, each of us has committed to ensuring a safe environment for the public, and the public is safest when problems do not arise, and when we work in concert with the public to prevent problems. As we do this, we are demonstrating not only our commitment to our professions but also to the national goals for health.

Our nation has committed to a public health agenda, one that addresses environmental and human health through public health promotion. This agenda, *Healthy People 2010*, encompasses goals and objectives to be achieved by the year 2010 set by the Federal government in collaboration with an alliance of federal agencies, 250 State health, environmental, mental health, and substance abuse agencies and 350 national membership organizations. This agenda was designed to guide Federal, State and community public health plans. It can be used by States, communities, professional organizations, and individuals to develop programs to improve health through *prevention*.

The national Healthy People 2010 goals are to 1) *increase quality and years of healthy life*, and 2) to *eliminate health disparities*. These larger goals surround 28 different health focus areas within Healthy People 2010 which have been further pared down into Ten Leading Health Indicators. Each Leading Health Indicator addresses one or more health focus area within Healthy People 2010. They include: *environmental quality, physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, immunization* and *access to health care*. These indicators were selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues.

The Ten Leading Health Indicators demonstrate the importance each indicator has within public health. No indicator works in isolation; each interacts with the others to impact the overall health of our environment and the public. For example, *environmental quality* includes air quality, which is affected by *tobacco use, physical activity* (an increase in physical activity as a form of transportation leads to reduced automobile use), and *injury and violence prevention* (people are more likely to use alternative transportation in a safe environment). Poor air quality can lead to negative health outcomes, including respiratory disease and cancer, each of which can be identified at an early stage and treated to prevent long-term health consequences if an individual has *access to health care*. Therefore, not only are environmental scientists strong contributors to improved air quality, but they have partners in obesity prevention, smoking cessation, public safety and health care programs.

Why is familiarity with Healthy People 2010 and integration of health focus areas important? It helps public health professionals to strategically design programs to have a greater impact, align with the national agenda, and generate resources for our programs. Healthy People 2010 was designed to be implemented by many different entities with a potential impact upon health within their states, counties, cities, and communities. Healthy People 2010 does not have direct funding sources; however, Healthy People 2010 is being integrated into federal agencies' funding opportunities. Strategies looked upon favorably in proposals addressing Healthy People 2010 include those that integrate a variety of professionals and community organizations with a potential impact upon focus area(s) in a direct or indirect manner. Collaboration among many different entities is essential to successful promotion of health. We as public health professionals must identify those entities with a potential impact upon health, create unique partnerships, and identify strategies to prevent problems through individual behavior change, environmental change, and public policy. A good place to begin? Within our own public health profession, as environmental and human public health professionals focusing on the prevention of problems before they occur in order to have the greatest impact upon the public's health.

For more information about Healthy People 2010, go to: www.healthypeople.gov. In addition, the City of Denver Department of Environmental Health has committed to the importance of Healthy People 2010 and to the collaboration and health promotion strategies through the Denver Healthy People 2010 Program. For more information about this program, go to: www.denvergov.org/hp2010.

# Environmental Programs Connect Through New Data Systems at CDPHE

*By Susan Nachtrieb, CDPHE*

The Colorado Department of Public Health and Environment (CDPHE) has launched an innovative approach to enhance its ability to collect and share environmental data. By partnering with the U.S. Environmental Protection Agency and the National Environmental Information Exchange Network, CDPHE has obtained significant grant funding to participate in a nation-wide environmental data integration effort. The environmental divisions of CDPHE have utilized the funding provided by the grants to upgrade the computer system infrastructure to allow successful participation in the national data exchange project.

## Vision

CDPHE's vision for an integrated data system is to create a working environment that addresses specific environmental program data needs while assessing data across the environmental programs to more effectively protect the health and environment of Colorado.

## Goals

CDPHE's goal is to connect its data systems throughout the environmental divisions in ways that supply information to all users with the ease and transparency expected based on advances in technology.

The environmental divisions of CDPHE consist of the Air Pollution Control Division, the Consumer Protection Division, the Hazardous Materials and Waste Management Division, the Sustainability Program, and the Water Quality Control Division.

By linking the data systems from each of these divisions, and making the data available internally across all environmental programs, CDPHE expects to achieve the following efficiencies:

1. Improve effective decision-making at the program level by allowing a comprehensive multi-media set of data to be available to the decision maker;
2. Increase cross-program tracking and remediation of pollutants;
3. Enhance inspection, enforcement, and compliance assistance programs;
4. Improve communication of processes and performance to the public; and
5. Continue streamlining permitting processes.

To accomplish these efficiencies CDPHE applied for several EPA grants and has obtained over $1.8 million in funding from these grant opportunities to upgrade its data systems, simplify the process of transmitting data from the regulated community to oversight agencies, and to develop a high degree of connectivity between environmental program data systems.

## Sharing and Reporting Results

CDPHE is committed to sharing environmental data both internally within the environmental divisions and externally with regulatory agencies and the public. To accomplish this goal, a Three-Year Data Management Plan was developed for the reorganization of data coordination efforts throughout the environmental divisions. CDPHE reorganized their previous Data Integration Committee into the Environmental Data Group (EDG), which is headed by the Environmental Business Process Manager. Managers and key staff from each division participate on the EDG. The group drafts and adopts standards for new data system development and data processes, and it approves system business rules. The group also creates specific Task Groups to focus on implementation of new projects and documentation of business rules and data systems. The current Task Groups include:

## Electronic Permitting and Data Reporting Group

CDPHE will implement new technologies to allow it to launch its e-commerce efforts beginning with automated data reporting from regulated facilities and electronic permitting. The focus of this data group will be to improve the efficiency of data reporting to and from CDPHE and to develop streamlined electronic permitting processes to serve customers and improve staff efficiency.

## Spatial Data Group

This group will manage the policies and standards necessary to the collection, evaluation, reporting, and storage of spatial data for all environmental programs. This group will serve as in-house experts for spatial data projects. The group will also maintain and manage the documentation and processes for EcoMap and GPS usage.

## Field Data Collection Group

This group will manage the policies and standards to acquire field data using electronic instruments or handhelds entry devices. These field data instruments include direct reading meters, GPS, laptops, tablets, and handhelds. The resulting data transfer and storage is also a focus of this group.

Some of the recent accomplishments of the EDG include the development of a CDPHE Node. A node is a mechanism that allows electronic data to flow in and out of CDPHE data systems. The software to operate the node was developed in cooperation with the State of Washington and is the backbone of CDPHE's data exchange efforts.



*Continued on Page 15*

# Going One Step Beyond:
## A Neighborhood Scale Air Toxics Assessment in North Denver

*By Gregg W. Thomas, Denver Department of Environmental Health*


**SUMMARY**

Hazardous air pollutants, also known as air toxics, have received increased attention over the past decade because of their potential carcinogenic and/or reproductive effects on humans based on long-term exposures to low-level concentrations. In 1999, the Denver Department of Environmental Health (DEH) began a cumulative urban air toxics assessment for the six-county Denver metropolitan region. The baseline assessment was completed in 2004.

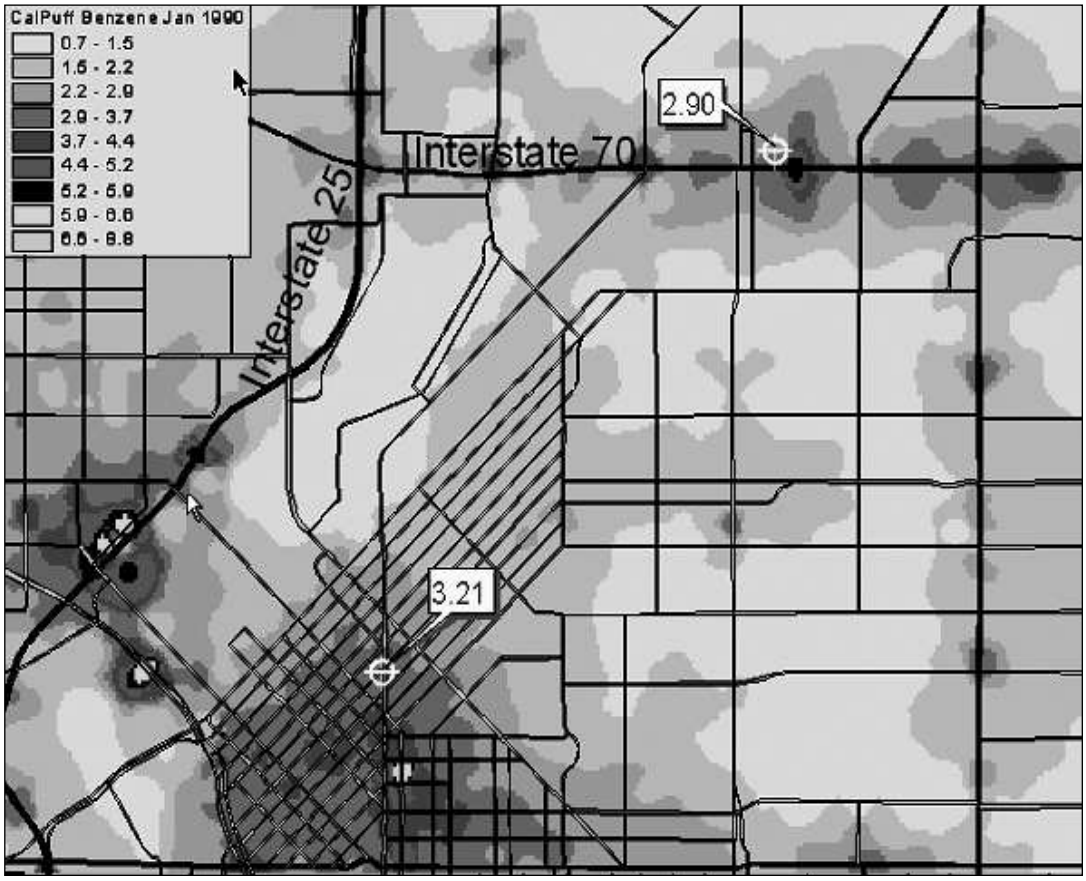
Air emission data from point, area, and mobile sources was collected and processed using existing and newly developed methodologies. A Geographical Information System (GIS) was utilized throughout all phases of the assessment and proved to be an extremely valuable tool for modeling on an urban scale. Area and mobile source emissions were assigned to the census block groups using various surrogates. This is one of only a few detailed air toxics assessments conducted on a regional scale in the U.S.

The Industrial Source Complex (ISC3) air dispersion model predictions were compared with long-term monitoring data to evaluate model performance and also to judge the relative accuracy of the emission inventories. DEH has also conducted numerous sensitivity analyses and made refinements to both the modeling framework and the emission inventories.

The results are very good, as the model tends to under predict by a factor of 2-2.5 in the urban core. For air dispersion modeling, model-to-monitor ratios within a factor of 10 are acceptable, but within a factor of two are excellent. More importantly, the air model correctly predicts the spatial variation in concentrations as compared to the measured (i.e. actual) concentrations.

As a result of this work, several grants have been obtained by DEH to incorporate additional detail in the model methodology and also to obtain air toxics concentrations for additional model validation. Newer, more complex models such as CalPuff have also been utilized to determine whether improvements can be made in estimating exposures to air toxics throughout Denver County.

The preliminary results from the second generation modeling are presented in Figure 1. The color plots indicate predicted concentrations and the crosshairs indicate measured concentrations for the same year. The model-to-monitor ratios are very close to 1, indicating excellent model performance for this particular pollutant. Additional data points are desirable for further model validation. DEH hopes to expand the focus area boundary to incorporate other monitored data, but the process is very resource intensive. This work greatly benefits the citizens of Denver.

# Musings on Cross Contamination, Hand Washing, and Gloves

*By Jim Dale, DVM, MPH, MBA, Jefferson County Department of Health and Environment*

I believe that disease agents are transmitted from a source to a susceptible individual by what I call the Big Fs – *Fingers, Feces, Food, Fluids, Flying things, and Fooling around* (some have urged me to include *Fomites* on this list). Whether we are considering a healthcare setting or a food facility, contaminated *Fingers* come out the "winner" (or should I say "loser") as the most commonly associated transmitters of disease agents. *Fingers* can become contaminated from feces or food (particularly raw animal origin food not uncommonly contaminated with the feces of that animal) that contain pathogens commonly referred to as enteric or food-borne. Furthermore, *Fingers* can become contaminated with pathogens in fluids going out of the body's various orifices through touching, coughing or sneezing, or touching something someone else has contaminated with agents, including respiratory disease viruses or norovirus, like a doorknob or door push-plate.

We live and deal with contaminated fingers everyday. We are probably fortunate that on many, many occasions the fingers are not contaminated with a sufficient infectious dose of a disease agent to complete a chain of infection and cause disease. However, such low infectious dose agents as norovirus, 0157 H7 E.coli, and Shigella should make us pause and think.

So what are we to do to prevent *Finger* transmitted disease? We ought to try to preclude touching contaminated surfaces and we should do what Mom told us to do – wash our hands. CDC and the National Center for Infectious Disease point out that it is especially important to wash your hands:

- Before, during, and after you prepare food
- Before you eat
- After you use the bathroom *(and maybe even before using the bathroom and then there's that bathroom doorknob* – added by the author)
- After handling animals or animal waste
- When your hands are dirty, and
- More frequently when someone in your home is sick.

They also suggest the correct way to wash hands:

- First wet your hands and apply liquid or clean bar soap. Place the bar soap on a rack and allow it to drain.
- Next rub your hands vigorously together and scrub all surfaces.
- Continue for 10 - 15 seconds or about the length of a little tune. It is the soap combined with the scrubbing action that helps dislodge and remove germs.
- Rinse well and dry your hands.

Yes, they are saying *10-15 seconds* and, yes, they are saying to *remove germs not to kill them*.

But we are also faced with situations where we need to handle things that we can't effectively or efficiently handle with utensils or instruments, and thus we use gloves – sometimes to protect others and sometimes to protect ourselves. The problem with gloves is the same as the problem with fingers: Once proper technique is compromised and contamination occurs we need to decontaminate – wash the hands and change the gloves. My observations are that many glove wearers must think that gloves are contaminaticidal (a new word maybe) because they go from task to task as if contamination could or does not occur.

So what is the purpose to all this "musing?" Maybe appropriate hand washing and glove use requires a lot of good ole common sense and not extensive regulatory guidance. My recommendations are:

- If your hands get "dirty" wash them
- If your gloves get "dirty" change them

# CDPHE's New Environmental Agriculture Program

*By Phyllis Woodford, Colorado Department of Public Health and Environment*

If you tell me, I will forget. If you show me, I will remember. If you let me do it, I will understand. This old proverb gets to the heart of the Colorado Department of Public Health and Environment's new Environmental Agriculture Program (Ag Program).

For over 30 years, regulatory agencies have permitted and enforced environmental laws on a single medium (air quality, water quality, hazardous and solid waste) basis. Such compartmentalized thinking limits the department's ability to address environmental issues on a holistic level. For example, a mandated control technology for a refinery prescribes that a scrubber be implemented to remove air pollutants from a stack. This technology is 98-99 percent efficient in removing nitrogen oxides and other pollutants from the stack. In order to operate, a scrubber utilizes a significant amount of energy and water, and creates a waste by-product that must be managed as a hazardous waste. A catalytic converter, on the other hand, is a technology that achieves an approximate 85 percent reduction in air pollution emissions, but without the energy and water inputs, and the hazardous waste outputs. Thus, when all media (air, water and waste) are considered together, the catalytic technology is less environmentally damaging than the scrubber.

In few other disciplines are problems addressed in isolation of taking into account the entire system, such as with professions involving medicine, automobile mechanics, landscaping, construction, etc. For regulatory agencies, forging an innovative or non-traditional path can often feel like swimming upstream; the going is slow and arduous, and the rewards are often slow to materialize. For the department, creating a centralized program for agriculture is outweighing the risk. Why? Because agriculture is different than other industries the department typically regulates. Livestock and row crop producers, for instance, work with a biological system that is interconnected, and farmers and ranchers like simplicity, not cumbersome rules and prescriptive technologies. Tell a producer what the regulatory standard is, and he/she will figure out the best and most cost effective way to achieve it.

Thus, bundling air, water, waste and other land use concerns together into one program provides a single point of contact within the department as well as encourages producers and regulators to think about the impact of all activities together, not medium-by-medium. For example, if a producer wants to control odor or reduce the volatilization of nitrogen into the air, he/she may decide to apply manure to a field via underground injection. Such a practice will reduce odor, but must be done at agronomic rate to avoid leaching nitrates into groundwater. In order to balance these environmental issues, additional land application area(s) will be needed, or a high nutrient demanding crop will need to be planted to sufficiently uptake nutrients while also reducing odor or the volatilization of nitrogen.

This is but one example that helps demonstrate the department's belief that a cross media approach to agriculture is the right thing to do. At the department we believe it is time to stop talking about innovation and what the future of environmental regulation might look like and start doing it. If done properly, a cross media approach can achieve greater environmental results than the way sources are currently regulated. Because change involves more than seeing in order to believe, the department is stepping headlong into the future. If successful, this initiative will lead the way for the Environmental Protection Agency and states to regulate and work with other sectors such as oil and gas, sand and gravel, drycleaners, mining, etc., on a cross media basis.

## New Data Systems at CDPHE

*Continued from Page 12*

CDPHE has also standardized its process to electronically receive drinking water data for incorporation into the data system and transfer to federal systems. This project is called EcoData.

EcoMap has been developed which allows CDPHE to utilize geospatial maps to locate permitted facilities and environmental cleanup sites. EcoMap will soon be accessible internally, by state agencies outside CDPHE, and by the public.

EcoTrack is being developed to track permitting, inspection, and enforcement information across environmental programs.

EcoStatus will produce cross-program reports and graphs of emergency activities such as spills, as well as facility inspections, and enforcement actions. The information in EcoTrack and EcoStatus will also be geospatially enabled through EcoMap.

The environmental programs are very supportive of the changes taking place within their data systems. The programs are now experiencing a degree of connectivity that did not previously exist. Program staff continues to look for ways to enhance their programs and are currently collaborating on how to develop environmental indicators to utilize the data to measure the success of their environmental programs.

# Enhancing Your Environmental Health Leadership Capacity

*Compiled from RIHEL resources and submitted by Mark McMillan, CDPHE*

There is currently a great need for new leadership approaches as the challenges to environmental public health have never been greater. To address this need, the Leadership Training Program of the Regional Institute for Health and Environmental Leadership (RIHEL) has developed a year-long program of group and self-directed learning led by experts in leadership, communication and the health and environment disciplines.

The program orients the participants, or "Fellows," to lifelong leadership learning. The objectives of the Leadership Training Program are to augment the leadership skills of the Fellows and to build an interdisciplinary team of leaders committed to the improvement of health and the environment in the Rocky Mountain region.

Long-time CEHA visionary Tom Dunlop has long been involved with RIHEL. CEHA had the chance to ask Dunlop about his experiences with the Institute. He indicated that "as a life time member of CEHA and as a supporter of RIHEL, he finds the connection between the two organizations inseparable."

The program is designed for professionals who work in the areas of health and environment in either the public or the private sector, and similarly placed professionals who do not work in the health or environment industries but who wish to lead their organizations toward better health and environmental outcomes. The goals of the program are to:

- Augment the leadership skills and potentials of health and environment professionals,
- Develop an ongoing broad-based corps of dedicated health and environment leaders and to enhance their professional development, and;
- Build relationships among professionals in the different sectors of the environmental public health field.

Fellows in the program must commit the time required to complete assignments and participate in four on-site "events" of three days' duration. The on-site events occur at various venues around the Rocky Mountain region, and are typically held in August, October, January and May. In between the events, the Fellows read books on leadership, complete self-assessments, participate in on-line discussions, and work on projects that require their leadership.

Tom Dunlop continues, "RIHEL provides a mechanism to insert environmental public health practitioners into the workforce with graduate level leadership training. CEHA members and the public are served benefits beyond measure by what a RIHEL scholar brings to the profession."

Applications for the 2006-2007 class are being accepted now through April 30, 2006. For more information or for details regarding the application process, please see the RIHEL website at http://rli.uchsc.edu/rli/ or contact Dr. Kathy Kennedy, RIHEL Director, at kkennedy@du.edu or 303-871-3483.

In addition, CEHA will be offering a limited number of scholarships to active CEHA members. Details can be found at http://www.cehaweb.com/ under "Scholarships."

## Statewide Onsite Study

*Continued from Page 1*

By first quarter 2007, a comprehensive look at Colorado's onsite landscape will be established and a foundation for a self-sustaining onsite wastewater performance improvement plan will be in place. Final recommendations and development of an implementation plan will take place during second and third quarters of 2007, with regular input from regulators, private and public sector onsite professionals.

*Funded by a StEPP grant application made by Jefferson County, the CORE Study (Colorado Onsite Research and Evaluation Study) is being conducted by Brian Scheffe, Front Range Precast Concrete. For information on the study please contact Brian at 303-442-3207 or via e-mail at brians@flxx.com.*

## Upcoming Environmental Public Health Events

**2/23/06**
Advanced Food Safety Seminar- Metro Region
sponsored by CDPHE

**3/7/06**
Advanced Food Safety Seminar- Western Slope
sponsored by CDPHE

**3/24/06**
Regional Institute for Health and Environmental Leadership's (RIHEL)
Fundraising event: An Evening with John Fielder.
See http://rli.uchsc.edu/rli for more information.

**4/7/06**
Colorado Asthma Coalition Conference at National Jewish Medical & Research Center, Denver

# CEHA MEMBERSHIP APPLICATION
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**Active:** Any person who is employed in any environmental health field, any registered environmental health specialist or any individual with a general interest in the objectives of CEHA is eligible to become an active member . . . . . **$25**

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