



CHAPTER NEWSLETTER APRIL 2008

April 2008

1

A&WMA Great Basin Chapter News



Board Members

Chair Steve Christiansen
(Par Waddoups Brown Gee & Loveless)

Vice Chair Steve Sands
(Kennecott)

Past Chair Lynn Menlove
(UDAQ)

Treasurer George Wilkerson
(MSI)

Membership Krista Kinsey
(Kleinfelder)

Secretary Reginald Olsen
(UDAQ)

Program Erin Hallenburg
(JBR Environmental)

Education Deanna Anderson
(SLCC)

Communications Kevin Ovard
(Holcim)

INSIDE THIS ISSUE:

- Annual Meeting
- Chairs Corner
- Events
- Scholarships
- Science Fair
- Kennecott Refinery

In 2006, Chairman Dave Jelmini explored the Chinese “Year of the Dog” in his annual Chair’s Corner article for the Great Basin Chapter (“GBC”) of the Air & Waste Management Association (“A&WMA”). I thought this would be a great theme for the Chair’s Corner article to follow again this year. I eagerly did some research to discover which noble animal we venerate this year as part of the twelve-year Chinese zodiac cycle. I learned that this year, 2008, is the “year of the Rat.” I thought about this a minute or two and decided we should follow another theme this year. Oh, well.

So, let’s try a story. There once lived a man near the River Indus--a Persian man named Al Hafed. Al Hafed owned a very large farm with orchards, grain fields, and gardens. He was a contented and wealthy man—contented because he was wealthy, and wealthy because he was contented.

Al Hafed had a close friend who visited one day and explained to him how the world was made. In particular, the friend explained about the vast wealth that could be found in certain parts of the earth in the form of mineral treasure—specifically diamonds. The friend told Al Hafed that with a mere handful of diamonds he could place his children upon thrones through the influence of their great wealth.

After Al Hafed heard about diamonds and how much they were worth, he went to his bed that night a poor man. He had not lost anything, but he was now “poor” because he was discontented and discontented because he thought he was poor.

Al Hafed decided he must have a diamond treasure. He contacted his friend and asked where he could go to find diamonds. The friend told him to look for a place where a river runs over white sand between high mountains. Al Hafed sold his farm, left his family in the care of a neighbor, and went his way in search of diamonds. He searched through the near East, in Palestine, and throughout Europe. He spent all his money in these travels. It is said he drowned in Spain never finding a single diamond.

Some years later, back home, the successor to his family farm took one of the camels previously owned by Al Hafed out to the River Indus to drink. The camel’s nose unearthed a black stone with an eye of light that flashed the colors of the rainbow. Subsequently, this and other similar stones were retrieved from the stream which Al Hafed’s close friend, who was visiting the area, correctly identified as diamonds. This is how the mines of Golconda were reportedly discovered containing some of the most rich diamond deposits in the world. This is the diamond mine from which the great Kohinoor diamond was taken.

The moral: We will sometimes search the whole earth in vain for riches and fail to see the treasure right in our own backyards. I believe that the Great Basin Chapter of the A&WMA is a treasure in our own backyards. This Chapter, backed by the rich resources of the national association, is a veritable diamond mine of information, education, people, and opportunity for professional development. Let me provide a few examples.

(continued on page 2)

CHAIRS CORNER (CONT).

by Steve Christiansen

First, GBC is an active organization offering worthwhile programs for local environmental professionals. We hold an annual dinner and meeting each and every year. This dinner offers prime opportunities for networking with other professionals. In addition, we hold lunch meetings and plant tours on a regular basis. Last year, we toured the Kennecott facilities near Magna, Utah. One of our lunch meetings featured Utah energy “czar”, Dianne Nielson, talking about climate change issues. Second, GBC offers scholarships and science fair prizes for bright, aspiring students across the State of Utah. Third, GBC includes a number of local people who are influential at the national level with A&WMA as well as in regulatory and academic circles. These include DEQ Executive Director Richard Sprott, currently serving as President Elect of the A&WMA national organization and

Delbert Eatough, (BYU) currently serving as a Vice President of national A&WMA and Chair of the A&WMA national Technical Council.

We should all be eager to get involved with A&WMA activities, professional development, and networking opportunities. The GBC annual dinner and meeting will take place at Little America in Salt Lake City on April 24, 2008. The A&WMA Annual Conference & Exhibition will commence on June 24, 2008 in Portland, Oregon and will feature numerous papers on the subject of climate change and other timely topics. Those desiring more information about GBC may visit our website at <http://www.metsolution.com/newawma/index.html>. In addition, those desiring information about the national A&WMA organization may visit <http://www.awma.org>. Please take the challenge and get involved with GBC and

EVENTS

The Great Basin Chapter (GBC) of the Air & Waste Management Association along with the ENREL Section of the American Bar Association sponsored a viewing and discussion on the teleconference program of *National Global Climate Change Legislation: How the Key Players View the Issues*. The Utah Department of Air Quality (UDAQ) opened up their conference room on December 7, 2007 to an audience of professionals for an in-depth look at key design issues for climate legislation. The program included diverse viewpoints of speakers from Capital Hill, industry, the environmental community and ‘think tank’ organizations. The panelist included experts from PNM Resources, the National Resource Defense Council and the National Commission on Energy Policy and was moderated by Dr. Marty Spitzer from the Heinz Center for Science, Economics and the Environment and Center for Clean Air Policy.

The Utah event was well attended with professionals from the regulatory, industry, consulting and legal community. The GBC would like to thank our sponsors for this event, all those who attended, and UDAQ for use of their conference room and audio/visual equipment. GBC is proud to sponsor such events and looks forward to providing educational venues in the future.

On December 11th, 2007 the Great Basin Chapter sponsored the A&WMA’s Webinar broadcast on *Greenhouse Gas Reporting and Initiatives*. With regulations pending in the United States at all levels of government, the broadcast discussed how smart environmental managers can determine current baselines and future estimates for facility greenhouse gas emissions. The Webinar reviewed current methodologies for inventorying emissions; discussed experiences businesses are having calculating greenhouse gases; and ideas for mitigative greenhouse gas emission strategies.

Paul McArdle of the U.S. Department of Energy’s Office of Integrated Analysis & Forecasting and Energy Information Administration, Jim Sullivan of the U.S. Environmental Protection Agency’s Office of Atmospheric Programs, and Peggy Foran, of the California Climate Registry were panelist. This GBC event was free to all of those who participated. We would especially like to thank our Utah Department of Environmental Quality for their sponsorship, use of their facilities and equipment.

ANNUAL MEETING

Annual Dinner Meeting - April 24, 2008

Time: 06:00 p.m. to approx 9:00 p.m.

Speaker: Pat Bagley

Location:

LITTLE AMERICA HOTEL

500 South Main Street

Salt Lake City, UT 84101

Menu: Italian Dinner Buffet

RSVP: Erin Hallenburg ehallenburg@jbrenv.com

More on our speaker Pat Bagley:

Pat Bagley is an award-winning editorial cartoonist from Utah, a state he describes as “that little metal thingy on the buckle of the Bible Belt.” He is the daily cartoonist for The Salt Lake Tribune and is syndicated in over 450 newspapers around the country.

Bagley reached a national audience with the popular Curious George parody, Clueless George Goes to War, which critics call, “a little gem of a book that distills the Bush mis-presidency down to its essence.”

Bagley grew up with politics. His father was mayor of a booming seaside community in southern California. He earned his degree from Brigham Young University in 1977 in History and Political Science.

Bagley’s first published cartoon was picked up by Time in 1977. His work has since appeared in Newsweek, The Wall Street Journal, The Los Angeles Times, and The Guardian of London. His work is also regularly featured on the popular cartoon site Cagle.com and the annual publication, The Best Editorial Cartoons of the Year.

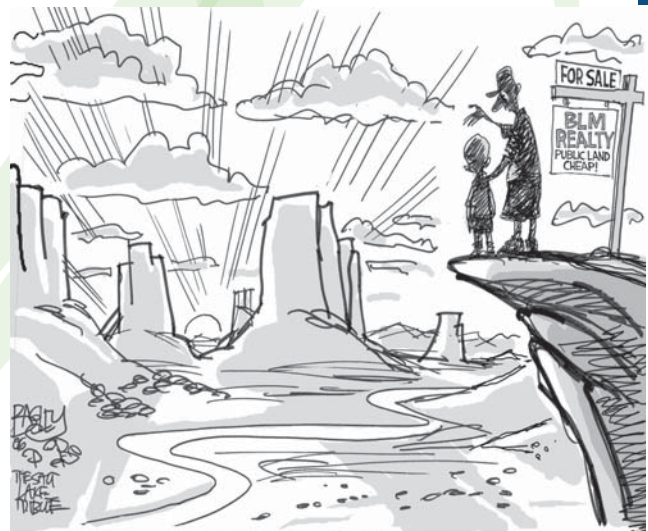
His latest book, Bagley’s Utah Survival Guide, is an interpretive joyride through the Beehive State.



April 2008

3

A&WMA Great Basin Chapter News



"SOMEDAY, SON, NONE OF THIS WILL BE YOURS..."

SCHOLARSHIPS

April 2008

4

A&WMA Great Basin Chapter News

December 11, 2007 - The Great Basin Chapter of the Air & Waste Management Association is pleased to announce that it has awarded \$1000 scholarships to the following three students enrolled in environmental programs at Utah Universities:

Tyler Greathouse, Brigham Young University, B.S. in Environmental Science 2009

Craig Emmett, University of Utah, PhD in Chemical Engineering 2009

Madalyn Lynch, Brigham Young University, B.S. in Environmental Science 2009

All three scholarship winners will also receive a one year student membership to the Air & Waste Management Association. Congratulations to the award winners!



Madalyn Lynch

Madalyn transferred to Brigham Young University from Fostoria Ohio. She is majoring in Environmental Science. She volunteers as a tutor in the Provo public schools programs, and the Children's Cancer Foundation. She also participates in the BYU Environmental Science and Eco-Response clubs. After her undergraduate degree is complete she would like to attend law school at UC Berkeley. Future career goals include working in federal or private sector consulting firms to create innovative solutions to end environmental degradation.



Tyler Greathouse

Tyler is majoring in Environmental Science at Brigham Young University. While attending Maori University in Whakatane, and participating in several field trips, he became interested in the local problems associated with the land and water use. It was after this learning opportunity that Tyler changed his education major to the environmental field. Future interests include graduate school, followed by environmental consulting. He is also interested in several science programs intent on developing policy, sustainability, guiding and leading in global environmental affairs.



Craig Emmett

Craig is a junior at the University of Utah in Chemical Engineering. Craig values his U of U education, but admits to be an avid fan of BYU athletics. Craig intends to pursue his PhD in Chemical Engineering following his undergraduate work. For the past year he has been an intern with the Hexel Corporation working on project management and process development. Craig's main interest of study is the human impact on the environment, specifically the effect of carbon emissions on the atmosphere.

Science Fair

AWMA awarded certificates and checks to:

Kalen Black 9th Grades

Midvale Middle School-- "Does Green Energy Cost?"

Kate Coursey West High School

(we are expecting to award two more winners)

EVENTS

April 2008

5

A&WMA Great Basin Chapter News

Abstract in Support of a Proposed DOCS Presentation Given by Steve Rasmussen at a local Meeting of the Local AWMA Chapter

The Digital Opacity Compliance System (DOCS) is an innovative technology that employs digital imagery technology for characterizing visible opacity. The DOCS uses commercial-off-the-shelf (COTS) digital cameras paired with ground-breaking software, to analyze the opacity of stationary and, more recently, fugitive emission sources. Development and validation of DOCS is funded by the Environmental Security Technology Certification Program (ESTCP). Hill Air Force Base serves as the lead agency for the advancement of this technology.

Certification costs and subjectivity associated with EPA Reference Method 9 led Hill Air Force Base to develop an alternative means of evaluating opacity. Using a few different brands of digital cameras and the recently-developed software, the EPA Emission Measurement Center in conjunction with EPA Regions VI and VIII, the State of Utah and the US Department of Defense, field tested the cameras and software to determine the accuracy and reliability of DOCS. Oversight was provided by the DOCS Regulatory and Advisory Panel that consisted of EPA and other regulatory authorities, Department of Defense members, and academic experts. The validation was a multi-stage process, the first of which occurred at EPA-sponsored Method 9 smoke schools, and involved validating the performance of DOCS against that of the smoke school transmissometer. Another preliminary component of testing involved the evaluation of regulated sources in Alaska. With encouraging results, the DOCS team continued validation under regulatory enforcement conditions at military and commercial industrial sites by evaluating its performance against that of certified Method 9 readers. The DOCS pilot study, another component of the validation

project, demonstrated that under regulatory enforcement conditions, the average difference in opacity measurement between the DOCS technology and EPA Reference Method 9 certified human observers was 1.12%. This opacity difference was found to be statistically significant at the 99% confidence level. The ESTCP Cost and Performance Report published on DOCS acknowledges “the aggregate annual savings to DoD [Department of Defense] in replacing Method 9 with DOCS could be as high as 15.3 million dollars per year. In addition to the benefit of cost savings, DOCS offers a more standardized, objective method of emission characterization, and a permanent record of each opacity evaluation which may be used in legal proceedings. Evidence supporting DOCS as a technically defensible and economically competitive alternative to EPA Reference Method 9 has led to: the publication of six scientific papers on the topic, an EPA proposed camera-based visible opacity measurement method, a draft ASTM test method for determining plume opacity using digital imagery, and the development of a fugitive emissions application.

The future looks bright for DOCS technology. DOCS is endorsed by the EPA Emissions Measurement Center, EPA Regions, and states. Software for the fugitive emissions application of DOCS is in the beginning stages of validation, with testing planned at various military installations including Hill and Edwards Air Force Bases, and Fort Hood, Texas. This period of testing could provide digital opacity evaluations throughout the DoD. DOCS commercialization opportunities, include gravel and refuse, unpaved roads, stripping and blasting, as well as other fugitive emission sources.

The DOCS team is also working to offer the plume software free of charge to Department of Defense facilities via the Air Program Information Management System—a primarily Air Force-used tool for managing air quality data. The stationary software should be made available to private industry for a nominal fee in the near future, thus extending the great benefits of DOCS to a wider audience.

KENNECOTT REFINERY TOUR



Great Basin Chapter's Fall facility tour of the Kennecott Refinery was a great success! The facility tour started around noontime on September 14, 2007. We had 20 members attend this informative site tour. Our host provided a delicious lunch, while the plant manager informed us about Kennecott's refining technology and process flow. After donning on hard hats and safety glasses, we ventured out into the refinery and were greeted by automation, robotic delivery carts and acres upon acres of cathodes and anodes. Kennecott guides pointed out how the robotic system worked and all the inherent safety features. They explained the process flow and the pollution prevention measures built into this facility. A&WMA would like to thank Denise Powers, Steve Sands, and Steve Vardiman for helping us set this up and conducting a great tour.

April 2008

6

A&WMA Great Basin Chapter News



A&WMA's LUNCHEON SPEAKER SERIES
OCTOBER 9, 2007
DIANNE R. NIELSON, Ph.D.
of the
GOVERNOR'S OFFICE ENERGY
"Utah's Energy Landscape- Challenges & Opportunities"

Dr. Nielson spoke to a full house on October 9, 2007 about the challenges of Utah's energy opportunities. Our luncheon meeting, held at the Sizzler's Restaurant downtown, provided an occasion for regulators, consultants and industry to hear first hand the directions, incentives, and consequences of providing energy to this State. Dr. Nielson's talk included a PowerPoint® presentation that showed past, current and future statistics on how Utahans get their energy. Energy to heat our homes, run our factories and power our economic engine. She talked about current initiatives and future incentives to curb our carbon footprint and ensure there is

enough energy to maintain our economic base and quality of life.

The presentation was followed by a Q&A period in which a lively discussion ensued. As a professional organization, A&WMA was very appreciative to have this opportunity to interact with the Governor's "right-hand (wo) man" on these critical issues. As an extra bonus, because Dr. Neilson had presented a similar talk to the Utah State Legislature the same day, the *Salt Lake Tribune's* front page headline article the next day was directly related to the Dainne's talk to A&WMA.

Dianne Nielson was appointed as Energy Advisor to Governor Huntsman for the State of Utah in June of 2007. Prior to that appointment, she served for 14 years as the Executive Director of the Utah Department of Environmental Quality and a member of DEQ's five policy Boards.

During her career in natural resources, Dr. Nielson directed the Utah Division of Oil, Gas, and Mining; served as a member of the Utah Board of Oil, Gas, and Mining; and worked as Senior Economic Geologist for the Utah Geological Survey. Prior to her work in state government, she conducted energy and mineral exploration with private industry.